

# Single Ring Setup

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Many of us here at Bikeman are using a single front chainring on our mountain and cyclocross bikes. Partially for simplicity, partially for a little extra clearance, and mostly because it just makes sense. We will get into the math a bit later but first lets see what modifications you will need to convert your stead to a single front chainring.

The single ring conversion is pretty straight forward. First of all we need to remove the front shifter, front derailleur and all the cables associated with them. This is a very basic process that will require the use of a few allen wrenches, depending on your current shifter and front derailleur selections.

The next step is to remove your outer and inner chainrings. This will require you to take the drive side crank arm off the bike to access and remove the inner ring. Tools required for this process vary according to what crank arm you are using. If you have questions on what tool will aid in the removal of your crank arm you can E-mail me and I'll send you a link to the correct tool.

Once the drive-side crank arm is removed you can go ahead and unbolt and discard your inner chainring and it's mounting bolts. You can then remove the middle and outer chainring. The outer chainring can also be put away for safe keeping. It will be replaced by a chainring guide or Bashring. You don't need to use an outer guide for this setup, however I do recommend it and here is why.

## Reasons for using an outer guard

1. Keeps the chain from derailing to the outside: This isn't a common problem, especially on a single-speed with a properly set up chainline, but it can happen. A geared bike will be more prone to this as the chain can slacken at the top and be bumped off in rough terrain. (reasons for the chain slack at the top are sticky freehub body, a tight link in the chain that catches in the derailleur) The use of an outer guard prevents the possibility of this happening.
2. Protects the chain: The outer guard protects the chain from rocks, logs, and roots. Without an outer chainring the middle-ring and more importantly your chain hits the obstacles you roll over first. A properly sized bashring will extend above the chain and make contact with a miss-timed obstacle. It can actually be alot of fun and you may find yourself trying to roll over terrain that you wouldn't do before for fear of bending your outer ring.
3. Allows you to use your existing chainring bolts: Sounds basic but if you use a bash ring or guard you can use your existing chainring bolts, and don't need to shell out the coin for a single-ring bolt set.

## Bash Ring vs. Chainring Guide

You have two options either a bash ring or a chainring guide. A bashring will be made of thicker stock aluminum and is made to take the hits of rocks and logs. A bashring is the best protection for your chain. You may also choice a simple guide. This will be thinner aluminum and is designed with the sole purpose of keeping your chain from falling off the front chainrings. The guide is generally lighter in weight. For cyclocross the guides also come in carbon but are the worst at protecting your chain. I cracked mine hopping a log during a trail ride last fall. To the right are examples of guides and a bashring. You can also use the images above and to the right as reference for each of the items below.

You can now setup your crank with the middle ring in its normal place and a bash ring, guard, or nothing at all on the outside. If you choose noting you will need to purchase a set of single-ring chainring bolts. These bolts and backing nuts are cut shorter to accommodate a single chain ring setup with no outer guard. Once you have your crank setup bolted together you can set it aside for the moment. We are now ready to set up our inner chain guide.

The inner guide is another optional but I feel necessary piece of equipment. It prevents the chain from jumping off to the inside. They are can also be used in conjunction with a front derailleur as often seen on cyclocross bikes. Currently there are two popular styles of chain checkers, the plastic Third Eye (pictured in setup images top right) or Deda Dog Fang and the N-Gear Jump Stop. They all produce the same results, keeping the chain from falling inboard of the chainring. The pictures on the top right show the use of a Third Eye chain checker, however many at Bikeman prefer the aesthetic appeal of the N-Gear Jump Stop. Too each his own, but if you are running a single ring with gearing in the rear pick and use one.

One note when ordering, the Third Eye is a one size fits all guide while both the N-Gear and Deda need to be purchased in the size of your seat tube. If you aren't sure on the size you can check the inside clamp of your front derailleur, it should be stamped in the clamp.

Install the inner guide loosely so that you can adjust it later. Now you can go ahead and reinstall your crank arm. Before installing the crank arm be sure to wrap your chain over the bottom bracket shell, easier than stretching it over the crank

arms later. Once the crank arm is installed and the chain is in place you can go ahead and adjust the guide. You will want to keep the top of the guide at the same level as the top of the chain. The guide should be positioned about 1-2mm inside of the chain. Run the chain to the largest cog in the back to make sure the chain won't rub in the most extreme position. You can now tighten it all down and get ready to ride.

But why use 1-chainring when we have the option for 3

Beyond the extra clearance and simplicity the single ring setup is a more reliable setup for mountain bike applications. No longer will you have to worry about front shifting issues relevant to many fullsuspension bikes (ie Klein Palamino). Chainsuck, what's that? And there are some weight savings but the real deal maker is in the math.

Using a 34 tooth front chainring with a 11-34 cassette you will be losing all of 3 gears on the top end. The 34 x 11-tooth would be like riding in the 42 x 15-tooth. Now off-road I am not using the 42 x 15-tooth anyway, so maybe I'm not going to be the fastest guy on the road but it hasn't affected my speed off-road at all.

I realize that this may not work for everyone. Maybe you live in an area where you routinely use the granny gear for long, steep climbs. Or maybe you can ride smooth fire roads in the big ring for hours on end. But where we ride, and I venture to guess where many of you ride, there is no reason to use your left hand for anything but front brake control.

Below is a gear inch calculator. Use it and decide for yourself.