Chainring Mounting and Setup Instructions:

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Mounting WickWërks Shifting Chainrings

Video Instruction at: WickWerks.com/Quick-Fix-Videos

1. **Remove Existing Chainrings From Crank.** Note the position and orientation of the original chainrings so you can set the new ones in a similar way.

   (Some rings will come off without removing the crank from the bike, others require the drive-side crank arm to be removed. See crank manufacturers directions.)

2. **Clean Inspect All Existing Hardware** especially those items to be reused – like BB bearings, bolts, seals, etc.. Replace any parts that are damaged or bad.

3. **Align the Rings to the Crank:**
   - Drive side Crank Arm   -   with
   - Pin on BIG ring   -   with
   - Alignment tab (or marking) on SMALL ring(s).

   Note: WickWërks chainrings mount so the logos face out. See the illustration next page.

4. Mounting examples are illustrated in the pictures.

   Note that Mountain double and Mountain 2x10 are similar to the Triple, except the big ring is not used. In some cases, bolt tabs are used in place of the big ring to make a 2X conversion.

   Single chainring mounting is similar, but with one ring.

5. **Bolt New Chainrings to the Crank** in the same way the previous rings were attached.

   - Some rings sandwich the crank spider fingers;
   - Some chainrings bolt directly to the crank spider;
   - Some bolts are in pairs (male and female);
   - Some bolts thread into the ring or the spider.

6. **Tighten chainring bolts,** but do not strip threads. See bolt recommendations next page.

7. **Remount the crank** (if needed), according to the crank manufacturers instructions. A bit of grease is usually a good idea. Check the BB for cleanliness and proper spacing while you're at it.

8. **Set the Chain Length.** Even if the new chainrings are replacing rings of the same size, set the proper chain length. See instructions following. We recommend a new chain with new rings.

9. **Clean and Lube the Chain.** Especially with new chains, we recommend a thorough cleaning of the chain before installation. After cleaning (and drying), lube the chain completely. This will minimize noise and wear, but also enhance shifting.

10. **Adjust the Front Derailleur** as needed for the new chainrings. (See that follow.)
Recommended Equipment for Use with WickWerks Chainrings

Most standard bicycle equipment – like front derailleurs and chains – work well with WickWerks chainrings – of course, with proper specification – (9 / 10 / 11 speed). However, for maximum performance the following equipment ideas should be considered:

Crank:

Most cranks work with WickWerks chainrings – provided the bolt circle and hole sizes match. Some size and bolt pattern combinations are not yet available. Be sure the crank and BB are properly mounted with spacers as recommended by the manufacturer.

Chainrings Bolts:

When replacing chainrings, inspect the chainring bolts for any signs of distress. Replace the bolts if they are damaged in any way. Most steel bolts can be reused many times. Many aluminum bolts should be replaced. Inspect to determine.

Note about Bolts: Use proper length bolts. There are many lengths available, some made for single rings, some for doubles, some for direct mounting, some for sandwich mounting. Make sure the bolts are long enough (should have min. 3 full threads of engagement), but not too long (must not bottom-out in the hole).

Front Derailleur:

Use a Front Derailleur with a stiff derailleur cage. Light duty cages may bend (bow out slightly) with the shift pressure of fast shifts. If the cage bows, shift quality deteriorates. Typically, a cage that is not flat on the outside (something with a stamped contour) will work best.

Chains:

Most bicycle chains work well – again, with the right specification (ie. 9 / 10 / 11 speed). We generally recommend higher-end chains for finish considerations (longer chainring life), flexibility and shift performance.

Note about Chains: In dirty environments, we have seen issues for chains with lightening holes in the inner link side plates. Those holes collect debris, which has been linked to troubles – like chain suck. That does not mean the chain will automatically have trouble, but it’s worth noting when choosing a chain. See image.

Lube:

With every new chain, we strongly recommend a good cleaning (to remove the rust inhibitor that they are packaged and shipped with) and to set the chain up for quiet, awesome shifting. Nearly every chain will shift well out of the box, but proper lubrication will keep it that way for a long time. See WickWerks.com for lube recommendations.
Set Proper Chain Length

Chain tension is one of the keys to smooth, accurate shifting – both front and rear. The rear derailleur sets tension, but to do it, chain length must be correct. Set the length by placing the chain on the big ring in front, the biggest cassette cog in the rear, (and through the derailleurs). Stretch the chain as tight as it will go, then back off a couple links (for hard tails, road and 'cross bikes). Back off a couple more links (as specified by the bicycle manufacturer) for full suspension bikes. For more info and a video demonstration, please see: WickWerks.com/Quick-Fix-Videos

A chain that is too long may cause shift problems, chain jumping, overshifting, and other issues.

Adjusting the Front Derailleur for WickWerks Chainrings

Front Derailleur adjustment is critical for shift performance. The following are guidelines, but adjustments vary by derailleur type (top swing / bottom swing), by derailleur stiffness and by bike geometry. These are typical set-up techniques with notes on variations for some situations to achieve optimum performance. Use the following suggestions as appropriate for your bike and situation. Consult a skilled bike mechanic for assistance if needed.

See also: WickWerks.com/Quick-Fix-Videos and WickWerks.com/TroubleshootingTips.html

1. Mount the derailleur so vertical spacing from the derailleur to the big ring is 2-4 mm (~1/8") clearance. (Measure to the tall teeth, not the short ones.)
2. Set the derailleur cage parallel to the big ring outside surface or as typical for the bike. This is a starting point, as some minor adjustment may be required.

Sometimes a derailleur will need Toe-in or Toe-out for optimum performance on a particular bike. See “Troubleshooting Tips” or “Quick Fix Videos”

3. With the derailleur in the small ring position, set the derailleur stop so the chain doesn’t touch the cage when running in the largest rear cog – then, adjust the cable so it is just barely not tight in this position.

4. Move the chain to the large ring, and adjust the outbound derailleur stop – for the large ring – so it allows some (just a little) overshoot.

Explanation: When the shifter is pushed all the way, the derailleur moves to the stop. When force is relaxed, the derailleur moves back slightly. This gives positive shift pressure – chain against ring – when shifting, then relaxes for proper chain line setting as the shift completes. Adjust for individual performance (it’s different for each bike).

Warning: Too much overshoot and the chain may shift right over the ring – obviously not acceptable. This adjustment may take some finessing.

5. Set the big ring chain line via cable adjustment.

Note: This cable adjustment may offset the adjustment done in step 3. If a lot of adjustment is needed, reevaluate conditions and be sure other settings are correct. Proper adjustment is a balance of all the various possibilities.

6. With the bike on the stand, turn the crank and shift. Remember, shift deliberately; don’t baby it. Adjust the cable and stops as needed for perfect, quick shifts.

7. Learn the optimum shifting paradigms.

Depending on your habits, it may take time to get used to shifting with intent. As you enjoy reliable front shifts, it will become easier and you’ll improve riding skills by choosing the right gear for the situation.

8. Additional fine tuning may be needed to maximize performance when riding the bike.

Taking time to perfect adjustments will pay big dividends in shift performance.

9. For more info, see WickWerks.com/Quick-Fix-Videos and WickWerks.com/TroubleshootingTips.html

10. If Shift Performance degrades over time, check your derailleur cage for damage, then fine tune these adjustments. Also, check out the Recommended Equipment descriptions.

A Note About Front Derailleur Adjustment

Adjustments to fine tune the Front Derailleur can be tedious. Sometimes it works easily, and sometimes not. If you have trouble, please see your local bike shop for help. Also, please realize that not every mechanic has this skill. Because one is “trained” does not mean they are master. Some customers have had one mechanic struggle, then another solved it easily to make the bike shift perfectly. This is true of all chainrings, not just WickWerks – though you may notice it more with WickWerks because you expect better shifting. If you have trouble, don’t give up.

There are many really great bike mechanics that know their stuff. Hopefully, you won’t have trouble finding one.
Proper Shift Technique for Optimum Performance with WickWërks Chainrings

For best performance, we recommend **Shifting with Intent**. Other manufacturers have taught us to baby the front shift. Those days are gone. If you baby the shift, it will cause the chain to clang, pop and sometimes over-shift. In essence, you’ll miss the true performance available with WickWërks rings. We recommend a little aggression – **Shift Like You Mean It**.

While pedaling, shift in one quick, smooth motion, hold for a moment and let the rings do the rest. When derailleur adjustments are dialed in, and shift technique is correct, the shifts on these rings are fast and smooth.

> “I found that if I shift hard and fast I get a guaranteed good shift with the WickWërks system. After discovering this, I haven’t missed a shift since.”
>  
>  
> – Andy Schultz – Pro Mountain Biker – Team Kenda

Shifting Under Power

Some have said you can shift WickWërks chainrings under full power . . . While this is true . . . the rings will, but often the chain won’t – and it may break, or worse, be damaged and let you down in a dramatic way later. We’ve done this many times, and so have other customers. We **DO NOT** recommend shifting under power. It’s a huge risk to safety and to equipment. Proper technique is to back-off the power, keep spinning, and make the shift – punch it and go. This will make components last longer and perform better over time. That being said, WickWërks rings will shift with more power than the competition.

Truly, if the object in shifting under power is to keep power to the ground, WickWërks rings are perfect because they shift much faster than the competition so you can get the power back to the ground quickly.

WickWërks Z-Rings – (Singles)

WickWërks line of single front chainrings – the Z-Rings – for both Mountain and Cyclocross are mounted similar to other single ring applications. Mounting instructions for those are available on separate documentation. Read more about Z-Rings at WickWerks.com

Troubleshooting Tips

This information, and a lot more – including Troubleshooting Tips, Setup Demonstrations, Explanations and Performance Enhancement ideas – in print and in our growing library of instructional Videos – are available at: WickWerks.com/Quick-Fix-Videos and WickWerks.com/TroubleshootingTips.html

Enjoy the Ride!