



GNÄRVANA

★ **THE SMASH** ★

TRAIL PISTOL

MEGATRAIL

SHRED DOGG

**Modular Frame Platform
Owner's Manual**

Introduction

So you wanna go fast? You've come to the right place and picked the right bike. Here at Guerrilla Gravity we want to make mountain biking more awesome and your new bike is going to make you even more awesome.

This guide is designed to help you get acquainted with your new bike and carry you through the long-term maintenance requirements needed after a much-loved season of riding.

If you have any questions about your bike setup, assembly, maintenance, or want to point us in the direction of some rockin' tunes, hit us up!

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Rider Program

We want to celebrate all of you that made the choice to ride a GG bike so we automatically enrolled you in the Guerrilla Gravity Rider Program!

This means that you'll automatically receive:

- 10% off products and services in the Retail Shop (bikes excluded)
- 25% off in-store demos
- A \$50 referral credit for when your friend buys a bike
- Access to the opt-in Racer Program that provides additional discounts and credits
- Preferred access to info on events and specials

Be sure to show off how much fun you're having on your bike by tagging @RideGG and #RideGG!



Setup - Setting Sag

What is sag?

Sag numbers are obtained by measuring the suspension travel used to statically support your weight.

How do I measure sag?

To measure sag, set the damper settings relatively soft, sit on the bike in climbing position, with the seatpost at full height and your hands on the bars. This method produces the most usable and repeatable measurements.

Lightly bounce up and down to break any seal stiction, return to the seated climbing position and push the fork and shock O-rings against the shock/fork seals. Carefully dismount and measure the distance between the o-ring and shock/fork seals to determine sag.

Coil shocks will not have o-rings to measure travel so you will need to measure the eye-to-eye distance to find sag. This is the distance between the centers of the front and rear shock bolts.

Important details to note when setting sag:

- Weigh yourself wearing your standard kit, helmet, and shoes.
- Include water weight in your pack.
- Use the buddy system. Setting sag is much faster with a friend.

Recommended sag:

- Fork: 20%
- Shock: 30%

Setup - Measured Sag

	Fork Length (recommended)	Fork Sag (20%)	Shock Size (Metric)	Shock Sag (30%)	Shock Sag (eye-to-eye)
Trail Pistol	130 mm	26 mm	210 x 50	15 mm	195 mm
Shred Dogg	150 mm	30 mm	210 x 55	16.5 mm	193.5 mm
The Smash	150 mm	30 mm	230 x 60	18 mm	212 mm
Megatrail	170 mm	34 mm	230 x 65	19.5 mm	210.5 mm
Gnarvana	170 mm	34 mm	230 65	19.5 mm	210.5 mm

Setup - Sag Tips

Putting it all together:

- When adjusting air sprung suspension, cycle the suspension a few times after making a pressure adjustment to equalize the air pressure in the negative chamber.
- You may need to check sag and adjust spring rates a few times to find a front-to-rear balance that you like.
- Use the spring to support the rider and the damper to control the spring.
- Bottoming out even when sag is correct? Add volume spacers to increase the bottom-out support.

Setup Tips: MRP Ribbon Air

- MRP's Ramp Control technology gives you 16 clicks of speed-sensitive adjustment over your fork's spring curve. Dialing up (clockwise) Ramp Control will result in a more progressive feel and reduced likelihood of bottoming-out on large and high-speed hits.
- MRP's FulFill system gives you independent control of positive air pressure (valve on top of fork crown) and negative air pressure (valve on bottom of fork)
- Release all air pressure from the negative chamber before making any changes to the positive air chamber.

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Setup - Damper Tips

“The spring supports your weight and should be optimized first.” - Matt, Chief Engineer

Rebound:

- Rebound damping controls how fast the suspension returns to the sag point from being compressed.
- In general, the fastest rebound setting that doesn't allow wallowing works best.
- Too slow of rebound will not allow the suspension to return to the sag point before the next hit and will “pack down” over repeated hits.
- Rebound damping is a function of spring stiffness, so if spring rate is increased, rebound damping will need to be proportionally increased as well.

Compression:

- Compression damping controls dive speed, or how quickly the fork/shock cycles through its travel.
- Insufficient compression damping makes the bike dive under braking and feel unstable in hard cornering.
- Excessive compression damping diminishes small bump compliance and can lead to poor ground tracking.

Advanced tuning:

- Low and high speed adjustments refer to damper shaft speeds, not ground speeds.
- Low speed compression controls body weight shifts on the fork or shock.
- High speed compression control the bike's response to big hits or square-edged obstacles.
- Low speed rebound controls recovery on small hits, high speed rebound controls recovery on big hits.

Modular Frame Platform - GeoAdjust Headset

Revved bikes come equipped with our proprietary two-position GeoAdjust Headset. With the GeoAdjust Headset you can quickly and easily adjust the reach and wheelbase of your frame by +/- 10 mm. This allows you to dial in your fit and optimize the handling for your local terrain.

How to use your GeoAdjust Headset: Loosen the stem, drop the fork, flip the cups around, and torque the top cap to 5-7 Nm and you're done! Typically you wouldn't torque a headset, so tighten it down to the point where you feel the bearings begin to bind and back off a little bit.



GeoAdjust Headset
in Long position



GeoAdjust Headset
in Short position

Gnarnivore's Tip: *If you're a tinkering type, leave a 10 mm spacer above the stem. This will provide plenty of room to change your GeoAdjust headset cup orientation without needing to fully remove the stem.*

Modular Frame Platform - Gnarvana

Gnarvana pairs 160 mm of Freedom Linkage-controlled travel with 29" wheels to create a bike fast enough to outrun your professional distractions and release yourself from terrestrial bonds.

Wheel size: 29"

Max tire clearance: 29 x 2.50"

Front travel: 170 mm (160 - 170 compatible)

Rear travel: 160 mm

Head tube angle: 63.7°, w/ 170 mm fork

Seat tube angle: 76.0° (effective)

BB height: 13.7" / 349 mm

Chainstay length: 17.7" / 450 mm



Modular Frame Platform - The Smash

The rebel spirit of Joe Strummer lives on in The Smash, inspiring riders to choose their own path, no matter what stands in your way.

Wheel size: 29"

Max tire clearance: 29 x 2.50"

Front travel: 150 mm (150 - 170 compatible)

Rear travel: 145 mm

Head tube angle: 64.7°, w/ 150 mm fork

Seat tube angle: 77.0° (effective)

BB height: 13.5" / 344 mm

Chainstay length: 17.1" / 434 mm

Plush Mode / Crush Mode

- **Crush Mode:** strong mid-stroke support for flow trails and all-day adventures
- **Plush Mode:** softer top stroke for smashing rocks and mega-traction



Modular Frame Platform - Megatrail

As a highly refined and extremely versatile trail bike, the Megatrail is built for everything from conquering high-alpine adventures to shredding bike park laps, or just slaying your after-work rides.

Wheel size: 27.5"

Max tire clearance: 27.5 x 2.80"

Front travel: 170 mm (160 - 180 mm compatible)

Chainstay length: 17.0" / 432 mm

Trail Mode

- **Rear travel:** 155 mm
- **Head tube angle:** 65° w/ 170 mm fork
- **Seat tube angle:** 77.2° (effective)
- **BB height:** 13.5" / 343 mm

Gravity Mode

- **Rear travel:** 165 mm
- **Head tube angle:** 64.5° w/ 170 mm fork
- **BB height:** 13.2" / 335 mm



Modular Frame Platform - Trail Pistol

As the “Singletrack Flyer,” the Trail Pistol inspires the kind of fun you only experience flying through the pit of a punk rock show. The kind of reckless fun that reminds you why you started mountain biking in the first place.

Wheel size: 29”

Max tire clearance: 29 x 2.60”

Front travel: 130 mm (120 - 140 compatible)

Rear travel: 120 mm

Head tube angle: 65.9°, w/ 130 mm fork

Seat tube angle: 78.2° (effective)

BB height: 13.4” / 340 mm

Chainstay length: 16.8” / 426 mm

Plush Mode / Crush Mode

- **Crush Mode:** strong mid-stroke support for flow trails and all-day adventures
- **Plush Mode:** softer top stroke for smashing rocks and mega-traction



Modular Frame Platform - Shred Dogg

This is the bike that turns your local trail into your very own pump track. The Shred Dogg provides an exceptionally lively platform for those that value playfulness more than smashing the super-gnar.

Wheel size: 27.5, 27.5+

Max tire clearance: 27.5 x 2.80"

Front travel: 150 mm (140 - 160 compatible)

Rear travel:

- **Trail Mode:** 130 mm
- **Gravity Mode:** 140 mm

Head tube angle: 65.8°, w/ 150 mm fork

Seat tube angle: 78.2° (effective)

BB height: 13.3" / 337 mm

Chainstay length: 16.7" / 427 mm



Modular Frame Platform - Plush Mode / Crush Mode



The Smash and Trail Pistol are equipped with a seatstay-mounted chip that allows you to switch between Plush Mode and Crush Mode.

- Crush Mode (upper position): strong mid-stroke support for flow trails and all-day adventures
- Plush Mode (lower position): softer top stroke for smashing rocks and mega-traction

How to swap between Plush Mode and Crush Mode:

1. Remove the rear shock bolt with a 6 mm allen wrench
2. Remove the drive side chip from the rear shock mount / seatstay and flip its position.
3. Remove the non-drive side chip from the rear shock mount / seatstay and flip its position.
4. Reinstall the rear shock bolt and torque to 10 Nm

Gnarnivore's Tip: If the chips seem difficult to remove, try threading the rear shock bolt in from the opposite side in order to pull the chip out. With the non-drive side chip removed, you can use the bolt to push out the other chip.

Modular Frame Platform - Trail Mode / Gravity Mode



The Megatrail and Shred Dogg use a 20-second, one-bolt toggle on the rear shock mount to change between Trail Mode and Gravity Mode.

- Trail Mode (upper hole): Shorter travel, better pedaling platform
- Gravity Mode (lower hole): Longer travel, better at goin' fast.

How to swap between Trail Mode and Gravity Mode:

1. Remove the rear shock bolt with a 6 mm allen wrench.
2. Move the rear shock axle into the slot for the ride mode you want to use.
3. Reinstall rear shock bolt and torque to 10 Nm.

Gnarnivore's Tip: This mode swap is so easy most riders will pedal up in Trail Mode and swap into Gravity Mode while catching their breath and preparing for the DH.

Modular Frame Platform - Seatstay Tuning Kits

New for 2019 are Seatstay Tuning Kits, available as part of GG's new Modular Frame Platform. These Seatstay Kits allow you to convert your bike from one model to another, "tuning" your bike for different terrain, without having to buy a whole new bike.

The Tuning Kit includes all hardware necessary to install on your GG Modular Frame, including:

- Seatstays
- Bearings
- Derailleur hanger and bolt

Generally, what's not included are the parts you need to remove anyways in order to swap components (e.g. axle and frame hardware) or that aren't removed in the first place (e.g. rocker). Also, any necessary components will need to be purchased with the kit (e.g. shock, fork).



Modular Frame Platform - Seatstay Tuning Kit Installation

Installing the Seatstay Tuning Kits requires only 5 and 6 mm hex wrenches, but be sure to bring your three-way out just in case you're removing the stem and fork. It's as simple as removing the shock, rear axle, and the two pairs of bolts connecting the seatstays to the swingarm and rocker link. Reverse these steps and you're ready to rock!

1. Remove the rear wheel and axle
2. Remove the rear brake adapter from seatstay but leave caliper attached to adapter.
3. Remove the rear derailleur hanger bolt and separate hanger/derailleur from axle block
4. Remove the shock by unthreading the two shock bolts with your 6 mm allen wrench.
5. Using your 5 mm allen wrench, remove the bolt connecting the seatstay to the rocker link.
6. Remove and set aside the rocker/seatstay bolt and spacers
7. Finally, use your 5 mm allen wrench to remove the bolts that connect the seatstays to the swingarm.
8. Remove your seatstay from the swingarm.
9. Remove the bearing spacers in the seatstay/chainstay bearing and transfer to new seatstays.
10. Reverse these steps to install your new Seatstay Tuning Kit.

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Modular Frame Platform - Water Bottle Mount

All sizes of Modular Frame Platform bikes can carry a water bottle inside the front triangle. The cage and bottle available from Guerrilla Gravity have been optimized for the best fit and feature a fore/aft adjustment to fine tune clearance:

- With an inline shock, slide the cage rearward and enjoy a larger bottle
- With a reservoir shock, slide the cage forward to clear the shock reservoir

In general, side mount bottle cages and 21oz water are compatible

Note that not all water bottle cages or water bottles will fit, as there are no standards for where the cage mount screws are located relative to the bottom of the cage. If using another side-entry cage, be sure to cycle the rear suspension to check for clearance between the shock and water bottle.



Modular Frame Platform - Frame Storage System



The GG Frame Storage System provides a versatile mounting point designed for carrying a minimal flat repair kit or anything else you may want to bolt or strap to your bike.

We recommend installing the [Frame Storage Bracket](#) below the shock and rocker link and using the top tube water bottle mounts for a small bottle.

This bracket is secured using standard water bottle bolt spacing in order to be used with accessories that bolt to standard bottle mounts. This opens up bolt-on mini-pumps and storage cases or strapping in a burrito for later. Your bike, your choice on what to carry!

Gnarnivore's Tip: When loading up your Frame Storage Kit, be sure to roll the inner tube compactly and tighten it down with the NUTS strap to prevent anything from falling out when you're having fun!

Assembly - Frame Fittings



Seatpost: 30.9 mm with stealth dropper routing

Seatpost clamp: 37 mm (included with frame)

Shock hardware: 8x20 (F), 8x35 (R)

Shock size: See table on page 6

Max seatpost insertion:

- Size 1: 230 mm
- Size 2: 240 mm
- Size 3: 250 mm
- Size 4: 260 mm

Chainguide mount: ISCG05

Bottom bracket: 73 mm BSA threaded

Chainline: Compatible with 52 - 55 mm

Max chainring size: 34t

Rear spacing: 12 x 148 Boost rear hub, offset 3 mm to the driveside

Derailleur hanger: Syntace X-12 Type 1

Brake mount: ISO

Assembly - Torque Specs

Cockpit:

GeoAdjust Headset preload bolt: 5-7 Nm

Stem bolts (Race Face): 5 Nm

Seatpost clamp: 2-5 Nm

Suspension / Brakes:

Shock bolts: 10 Nm

Derailleur hanger bolt: 10 Nm

Rear axle: 20 Nm

Brake bolts: 6-9 Nm

Frame:

Main pivot axle: 25 Nm

Main pivot pinch bolt: 15 Nm

Rocker pivot axle: 20 Nm

Rocker pivot pinch bolt: 15 Nm

Seatstay / rocker bolt: 10 Nm

Swingarm / seatstay bolt: 10 Nm



Assembly - Chainline Setup

Guerrilla Gravity bikes are designed around a 52-55 mm chainline with wider chainlines allowing slightly larger chainring compatibility and greater heel clearance.

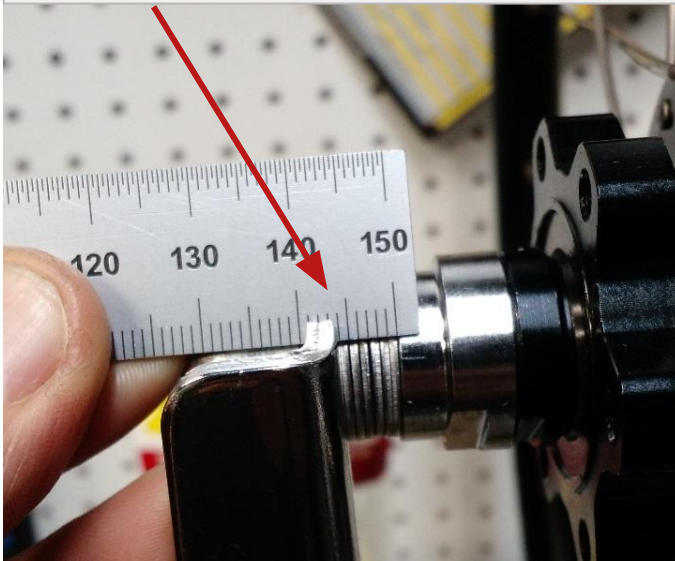
		BB and Crank Spindle Spacer Setup			
Crank	Chainline	BB drive side	BB non-drive side	Spindle drive side	Spindle non-drive side
SRAM DUB	52 mm	-	-	DUB 4.5 mm	Fixed Preload collar
Shimano XT and XTR	53.4 mm	2.5 mm	-	-	-
eThirteen TRS	52 mm	2.5 mm	-	-	Fixed Preload collar
Race Face Aeffect	55 mm	2.5 mm	-	4.5 mm + Aeffect spacer	4.5 mm 24mm ID
Race Face CINCH	55 mm	2.5 mm	-	4.5 mm (one 2.5 mm, two 1mm)	4.5 mm (one 2.5 mm, two 1mm)

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Assembly - Rear Hub Offset

Hub specifications: 12x148 rear hub,
Dish 3 mm to the non-drive side

Use 6 mm axle spacer, then true to center



Gnarnivore's Tip: Pedal washers are normally 1 mm thick. Slip six of them over the rear axle to make a 6 mm truing stand spacer.

Your new bike uses a 3 mm offset rear triangle to achieve the best balance of tire clearance, chainstay length, and wheel strength.

If you have access to a truing stand, use 6 mm of axle spacers on the non-drive side of the hub in order to dish the rim 3 mm to the non-drive side.

If you do not have access to a truing stand, this dish is normally accomplished by tightening all of the non-drive side spokes 1.5-2 turns and truing to center. Some wheels run higher spoke tensions, in this case detension the drive side spokes by .5-1 turn before tightening the non-drive side spokes and truing to center.

This 3 mm dish to the non-drive side does not noticeably change spoke length but consult with your wheelbuilder or the GG Shredquarters if you have any questions about hub/rim/spoke compatibility.

Assembly - ISCG05 Mount

Your bike or frame includes a removable ISCG05 mount that can be used for installing chain guides and/or bash guards.

The ISCG05 mount slips over a splined interface on the frame and is held in place by the bottom bracket cup.

MRP chainguide setup tips:

52 mm chainline (standard Boost configuration)

- Use no spacers or the thin spacers
- Fine tune chainguide cage angle based off largest rear cog

55 mm chainline (Gnarnivore's configuration)

- Use thicker spacers or thick+thin spacers
- Fine tune chainguide cage angle based off largest rear cog



Maintenance - Schedule

1. Every Ride Checklist

- a. Check for loose bolts. This does not mean to over-tighten the bolts every ride. Check to see if any bolts have loosened, and if so, then retighten them to the torque specs provided in this manual.
- b. Check the brakes for proper operation
- c. Check tire pressure
- d. Clean and lube the chain and drivetrain
- e. Make sure your headset is tight by holding the front brake and rocking the bike back and forth and feeling for play or slop at the headtube, headset bearing cup junction
- f. Clean all stanchions, including the fork, shock and dropper post.

2. Every 10 Rides Checklist

- a. Check to make sure your brake pads have sufficient pad material left, replace if they are close to being worn down to the metal base
- b. Make sure your tires are safe to ride on. Look for damaged casings, knobs are still in tact, and there is no dry rotting.
- c. Check chain wear. Bike shops have a tool to measure this, if the wear is beyond 75% of the usable range, replace it.
- d. Check spoke tension for both wheels. If a spoke is loose, tighten it so that it's tension is uniform with the other spokes.

3. Every 20 Rides Checklist

- a. Clean frame and check for damage or cracks
- b. Replace shifter cable and housing
- c. Check brakes, suspension and dropper seat post for smooth operation and service them if necessary.

Maintenance - Washing

Cleaning your bike:

Avoid high pressure washing, especially near any bearings or seals. The pivot bearings are designed to be shielded from water spray as much as practical, but gentle washing will produce longer bearing lives. Use a mild soap and water. It may be possible to have remnants of crushed rocks in random locations from punishing the terra firma at extreme levels.

Be careful to avoid spraying any soapy water onto brake pads or rotors as the oils in many soaps can contaminate your braking surfaces.

Cleaning your suspension:

After each ride, wipe down your suspension and dropper post using a clean, dry, rag. Keeping the wiper seals and stanchions clean will maintain the best suspension performance between service intervals.

Cleaning your drivetrain:

Use a mild citrus degreaser to clean your chain and drivetrain as needed. Avoid using aggressive solvents and mineral spirits, which can degrade the finish of your frame and components.

Maintenance - Replacement Parts

Frame Parts:

Seatpost: 30.9 mm with stealth dropper routing

Seatpost clamp: 37 mm (included with frame)

Rear axle: Syntace X-12, part # 119017

Alt. rear axle: MRP 12x148, part # WB-17-5108

GeoAdjust Headset Parts:

Upper bearing: 41 mm OD, 36°X45° MR122

Lower bearing: 51.8 mm OD, 36°X45° MR127

Drivetrain Parts:

Bottom bracket: 73 mm BSA threaded

Derailleur hanger: Syntace X-12 Type 1, part # 105669

Derailleur bolt: Syntace X-12, part # 105676

Brake parts:

Rear brake mount: ISO brake adapter

Frame Bearings:

Main pivot: 6903 Max

Rocker pivot: 6901 Max

Seatstay to rocker: 6900

Seatstay to chainstay: 6901 SM Max



Safety

1. Mountain biking is an inherently dangerous sport, and the risk is yours to keep yourself safe while riding by wearing the proper protective equipment and riding within your abilities at all times. Guerrilla Gravity is not liable for any injuries you incur while riding and/or crashing.
2. If you ride at night, use lights and reflectors.
3. If your bike is less than fully assembled when you receive it, take it to a qualified mechanic. If you assemble it yourself, we assume no responsibility for improper construction leading to equipment failure or personal injury. If you're in doubt about who is a qualified mechanic, call us and we'll help you find one in your area.
4. Minimum leg length – If there is less than one inch between your crotch and the top tube, the bike is too big for you. Oops. Let us know if this is the case for you.
5. Serial number – Each 2019 Guerrilla Gravity bike has a serial number stamped onto the head badge. This number denotes the model, date of fabrication, and manufacturing location. Make a note of this number in your records in case your bike is stolen.

Warranty - Lifetime Frame Support

We offer our unique Lifetime Frame Support program for original owners.

First off, we want you to know that we strive to build bikes that are durable and long-lasting, something that you can pass down to your kids/little sisters/favorite beginner. Anything less than that is a disappointment. Also note that the wide range of experiences and environments that mountain bikes encounter makes it impossible to account for every rider type, style, and aspect of misuse and misfortune. For this reason we feel it is misleading to offer a warranty similar to the ones found throughout the industry, which are chocked-full of ifs, ands, and buts.

Manufacturing defects typically reveal themselves within a year of ownership. Should a failure occur because of one of these we will act expediently to get the rider a replacement. Because of science, mountain bike frames and products do have a usable lifespan. But we know a broken frame never makes for a good day, so for this reason we will provide discounted replacements for the lifetime of the frame. The discount will depend on the age of the frame, replacement necessary, and circumstance. Frames painted or powder coated outside of GG's system will not be eligible for the Lifetime Frame Support.

In order to take advantage of the Lifetime Frame Support program, you will need to provide proof of purchase (if purchased through one of our partner channels and not directly through us). To receive a replacement, the rider is responsible for shipping us the frame in question. Please feel free to email us with additional questions.

We are not responsible for any component failures attached to the bike, but we will help connect you with the proper manufacturer to rectify the issue. We do make an attempt to only provide components we are confident in, but failures do happen. We keep a log of failures and are interested to hear about your experiences, even if you've handled it elsewhere.





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