RUNGU® JUGGERNAUT OWNERS MANUAL

Congratulations on purchasing the Juggernaut¹! Before you ride and make new tracks, *please read the following instructions carefully*.



IMPORTANT- Standard Bearer Machines will not be liable for any damage or injury that may occur due to operation of our Juggernauts. By using the Juggernaut, you are agreeing to Standard Bearer Machines Terms and Conditions and the warnings and conditions of the Generic Bike Manual which are included with other files in the USB key accompanying the Juggernaut.

¹ As the owner, you agree and are bound by all sales and transfer conditions as defined in <u>in "SBM Rungu Sales Terms and Conditions US 2022."</u> Copies of these documents are available upon request by e-mailing <u>sales@riderungu.com</u>.

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Parts identification

The following images show the names of various components on the Juggernaut





Figure 2 - Handlebar top view Kilimanjaro pre-2017



Unpacking and Assembly Instructions

Warning: Failure to follow instructions may lead to incomplete or faulty assembly that can result in accidental rider injury or death.

Before you ride and make new tracks, please follow the assembly instructions carefully. The team at Standard Bearer Machines recommends that you have the assembly performed by a qualified bike mechanic.

Tools required

- 2.5mm Hex wrench
- 5mm Hex wrench
- 6mm Hex wrench
- Adjustable wrench (not included)



Recommended: <u>SATA 6-inch Professional Adjustable Wrench with Forged</u>
Alloy Steel Body, Wide Jaw, and a Chrome Plated Finish - ST47202SC

• Tire inflation pump (not included)



Recommended: <u>CYCPLUS Tire Inflator Portable Air Compressor 2600mAh</u>
Smart Cordl<u>ess Electric Air Pump for Car Tires, Motorcycle, Bike, Balls A7</u>

Bicycle Tire pressure gauge – presta valve (not included)



• Wire cutters or scissors (not included)



Recommended: IRWIN VISE-GRIP Diagonal Cutting Pliers, 6-Inch (2078306)

Unpacking and Assembly Instructions

Juggernaut comes in a cardboard carton. After you have removed the binding straps, remove the top cover. If you intend to ship or return your Rungu, please keep all packing materials.

- 1. If you have purchased a model with a Rungu Cargo Rack or an optional Cargo Rack, remove the rack and place it to one side.
- 2. Remove the accessory box(es) containing Quick Release Skewers, AC battery charger, tools, Presta adapters, keys and pedals as well as other accessories that come with the specific model you ordered.

Note: If you purchased a Juggernaut with the optional Cargo Rack, remove the rack first and place it to the side.



Accessory Box. May be located elsewhere inside the carton

- 3. Remove the two wheels from the carton and place them aside carefully to avoid damaging the disc brake rotors.
- 4. Lift the frame and rear wheel from the carton and place the assembly on the floor gently so that it stands upright as it was in the carton.

5. Lift the frame and attached components from the carton.



CAUTION: THE JUGGERNAUT WITHOUT FRONT WHEELS WEIGHS 40 LBS (23 KG) USE TWO (2) PEOPLE TO REMOVE THE JUGGERNAUT FROM THE PACKAGING TO AVOID INJURY

6. Use the 5mm hex wrench to loosen and remove the four bolts from the right side handlebar clamp



7. Open the right-side handlebar clamp to allow placement of the right-side handlebar.



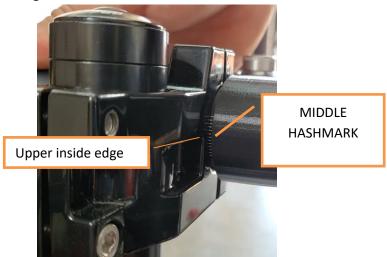
8. Place the right-side handlebar in the clamp such that there's a 1/8" gap between the handlebar end stop and the side of the stem as seen from the front of the handlebar.



9. Replace the four bolts in the handlebar clamp and finger tighten.

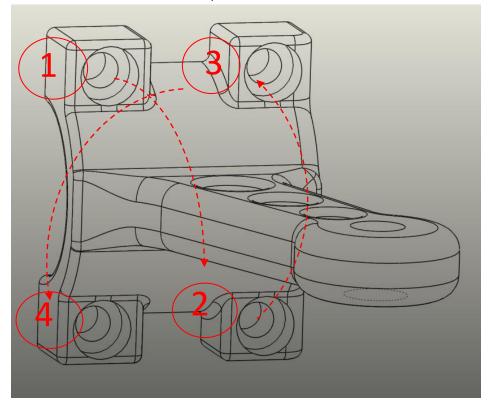


10. From the front of the bike, align the handlebar by rotating it so the middle hash-mark (7th) lines up with the upper inside edge of the stem as shown below.



CAUTION: FAILURE TO EXTEND THE HANDLEBAR AS SHOWN MAY RESULT IN WHEELS MAKING CONTACT WITH FORKS, WHICH CAN LEAD TO FORK OR TIRE DAMAGE.

11. Fasten, the right-side retention bolts using a crossing pattern (shown below) of tightening the upper handlebar retention screw and then bottom screw instead of tightening both top screws and then the bottom screws for each clamp.

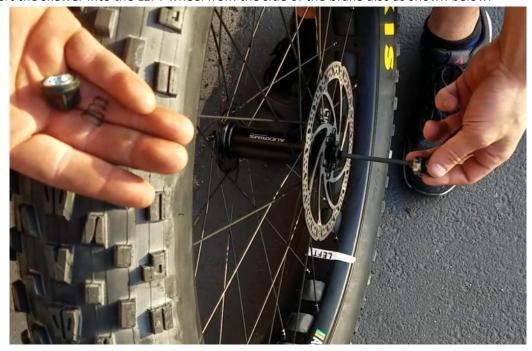


WARNING: TIGHTENING HANDLEBAR RETENTION SCREWS BEYOND 6NM (53 IN LBS.) OR FAILING TO ALIGN THE SCREWS WITH THE THREADS IN THE STEM MAY STRIP THREADS IN STEM LEADING TO INSUFFICIENT TIGHTENING OF THE HANDLEBAR. FAILURE TO TIGHTEN HANDLEBAR SUFFICIENTLY MAY RESULT IN UNEXPECTED HANDLEBAR ROTATION THAT CAN RESULT IN ACCIDENTAL RIDER INJURY OR DEATH.

- 12. Repeat steps 6 through 11 for the left-side handlebar.
- 13. Remove the two quick release skewers from the accessories box. Unscrew the end cap nut from the quick-release skewers and remove one of the two conical springs for each skewer.



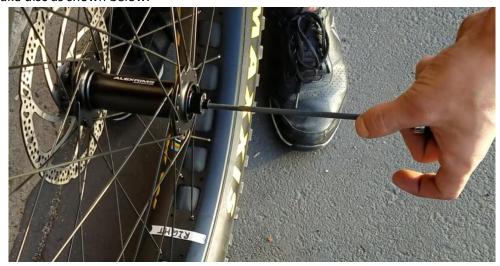
14. Insert the skewer into the LEFT wheel from the side of the brake disc as shown below.



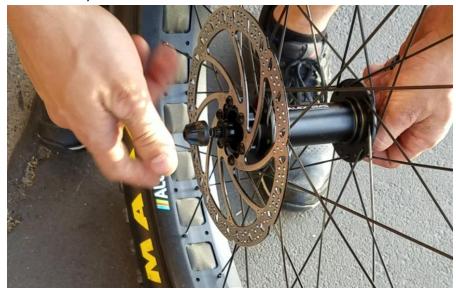
15. Replace the conical spring (small end first) on the other side of the wheel. Screw the end cap on a few turns to ready the wheel for installation.



16. Prep the RIGHT wheel. Insert the other skewer into the RIGHT wheel from the side OPPOSITE to the brake disc as shown below.



17. Replace the conical spring (small end first) on the other side of the wheel. Screw on the end cap with a few turns to ready the wheel for installation.



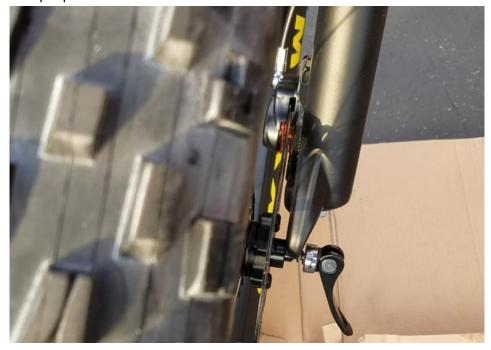
- 18. Get the bike ready to mount the front wheels by making sure the parking brake is off (which is the way the bike ships). See the section "Using the parking brake switch" on page 72 for more information.
- 19. Lift the front of the bike and mount the RIGHT wheel to the RIGHT fork making sure that the rotor fits between the brake caliper pads.



20. The ends of the axle will sit in the fork "dropouts" when correctly aligned. You may have to unscrew the end cap a turn or two if the fork doesn't drop in place.



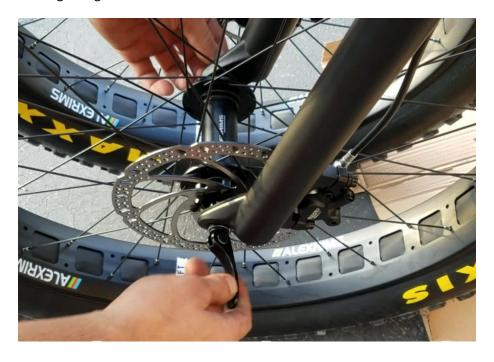
21. Tilt the bike and mount the LEFT wheel to the LEFT fork making sure that the rotor fits between the brake caliper pads.



22. The ends of the axle will sit in the fork "dropouts" when correctly aligned. You may have to unscrew the end cap a turn or two if the fork doesn't drop in place.

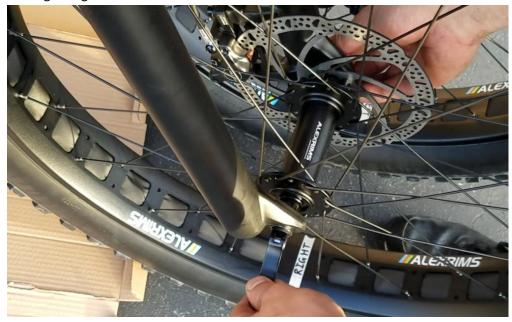


23. Tighten the end cap nut on the LEFT wheel and close the quick-release lever. As a guideline the end cap nut should begin to clamp onto the fork drop out when the lever points away from the wheel at a right angle.



WARNING: MAKE SURE TO TIGHTEN THE QUICK-RELEASE IN THE FORK SO THAT THE WHEEL CANNOT FALL OUT OF THE FORK; FAILURE TO ADEQUATELY TIGHTEN THE QUICK-RELEASE CAN RESULT IN ACCIDENTAL RIDER INJURY OR DEATH.

24. Tighten the end cap nut on the RIGHT wheel and close the quick-release lever. As a guideline the end cap nut should begin to clamp onto the fork drop out when the lever points away from the wheel at a right angle.



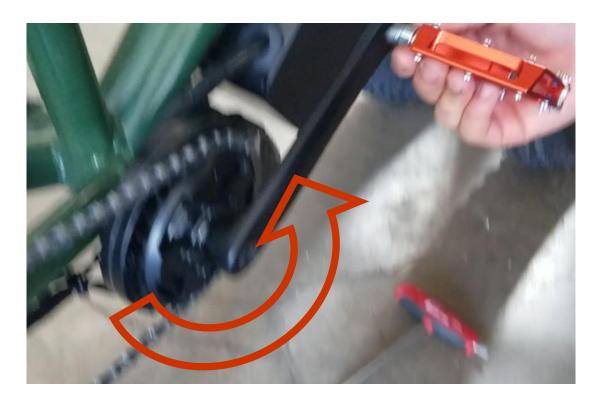
WARNING: MAKE SURE TO TIGHTEN THE QUICK-RELEASE IN THE FORK SO THAT THE WHEEL CANNOT FALL OUT OF THE FORK; FAILURE TO ADEQUATELY TIGHTEN THE QUICK-RELEASE CAN RESULT IN ACCIDENTAL RIDER INJURY OR DEATH.

25. Remove the pedals from the box and install the RIGHT Pedal first – the RIGHT pedal is marked with an "R" as shown below.



26. Use your fingers to thread the pedal shaft by inserting the threaded shaft into the crank arm. Then hold the threaded section of the pedal in the crank arm mounting hole and spin the entire crank arm in a counterclockwise motion as depicted below.

CAUTION: DO NOT FORCE THE THREADING OF THE PEDAL ONTO THE CRANKSET. WARRANTY DOES NOT COVER REPLACEMENT CRANKS FOR STRIPPED THREADS.



27. Use a 6mm Hex wrench to tighten the pedal once the pedal is fully inserted.

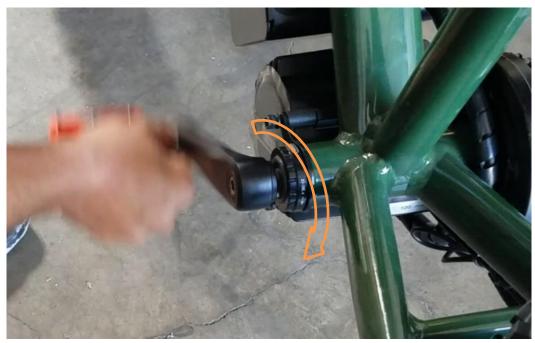


28. Install the LEFT Pedal next – LEFT pedal is marked with an "L" as shown below.



29. Use your fingers to thread the pedal shaft by inserting the threaded shaft into the crank arm. Then hold the threaded section of the pedal in the crank arm mounting hole and spin the entire crank arm in a clockwise motion as depicted below.

CAUTION: DO NOT FORCE THE THREADING OF THE PEDAL ONTO THE CRANKSET. WARRANTY DOES NOT COVER REPLACEMENT CRANKS FOR STRIPPED THREADS.



30. Use a 6mm Hex wrench to tighten the pedal once the pedal is fully inserted.



31. Inflate each tire between 5 and 10 PSI (34 to 69 KPa). See the section <u>Inflating Tires – using</u>

Presta valve adapters for directions.

Note: Tire pressure plays an especially important role in how you enjoy your Rungu Juggernaut. If you plan to ride mostly on soft ground like sand or snow, use a tire pressure of 5 (34 kPa) for best traction and control as well as minimizing tread wear. Use 10 PSI (69 kPa) if you plan to ride on harder surfaces like rock or dirt road. On harder surfaces, a higher pressure minimizes tread wear and improves the range of your Juggernaut.

CAUTION: AVOID UNDERINFLATING AND OVER INFLATING THE TIRES. UNDER INFLATION (BELOW 5 PSI) MAY PREVENT THE TIRE FROM SEATING ON THE RIM AND PREVENT YOU FROM RIDING JUGGERNAUT. OVER INFLATION (MORE THAN 15 PSI – 103 KPA) MAY RESULT IN TIRE BLOW-OUT WHILE RIDING.

32. Loosen the Seat Post Clamp by opening the lever. Insert the seat post and adjust to the height that suits you, then tighten the clamp by closing the lever.

Note: Failure to tighten the seat post can result in discomfort or injury while riding Juggernaut.

WARNING: DO NOT EXTEND THE SEAT POST BEYOND THE MAXIMUM HEIGHT LIMIT BEFORE CLAMPING. THIS CAN RESULT IN THE SEAT POST BREAKING AND SEVERE INJURY OR DEATH.

- 33. If the package you purchased includes optional mud flaps (Steep, Rugged, Rubicon Trail Edition) or the Rungu Cargo Rack with the range-extending battery, continue to the Additional Instructions for installation. If you have purchased (or you also have) the Rungu Cargo Rack, please refer to the Rungu Cargo Rack installation instructions for assembly.
- 34. Remove the remainder of the packing materials.

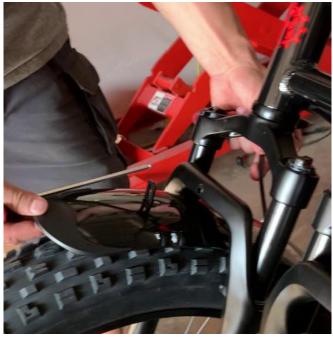
Additional Installation Instructions - Mud Guards

If you received Mud Guards as part of your package, follow the directions below for installation.



1. Remove the mud flaps from packaging along with their screws and retention nuts. Remove the retention nut from each screw. You'll need a crescent wrench (or 10 mm socket wrench) and a 5mm hex wrench to install the fenders

2. Slide the mud guard from front of fork backwards until mounting tab aligns with mounting hole on fork bridge.



3. Align the mounting slot with the mounting hole on the fork bridge. Install the screw from the front of the fork through the mounting slot as shown below.



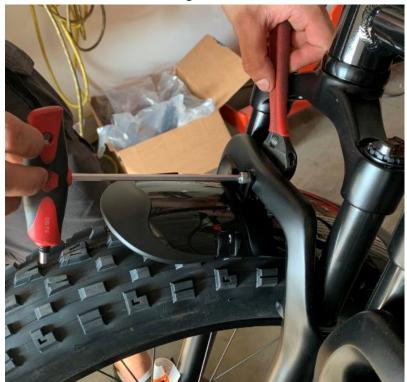
4. Thread the nut onto the back of the screw behind fork bridge.



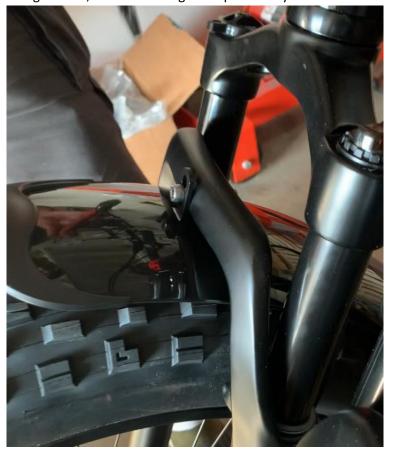
5. Use an adjustable wrench or 10 mm socket wrench to secure the nut.



6. Use a 5mm hex wrench to continue threading the nut onto the screw



7. Before fully tightening the nut, slide the mud guard up vertically to maximize wheel clearance.



- 8. Adjust the mud flap to align it with the tire and fully tighten the nut.
- 9. Bend the mud guard forward to allow even clearance between the mudguard and the tire.

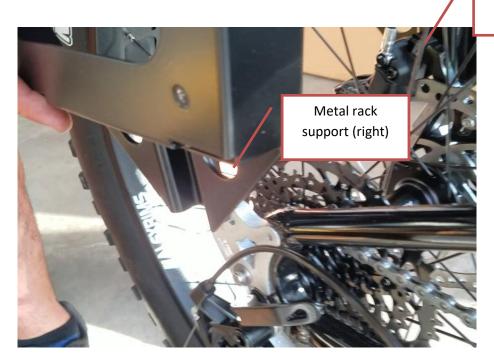


10. Repeat these steps for the second mud flap.

Additional Installation Instructions - Rungu Cargo Rack



1. Place the rack over the rear tire making sure that the tabs at the bottom of the rack are on the outside of the metal rack supports.



Metal rack support (left)

2. Slide the front tab of the rack into the rear rack support as shown. The rack will come to rest here and on the right and left rack supports so you can insert fasteners next.



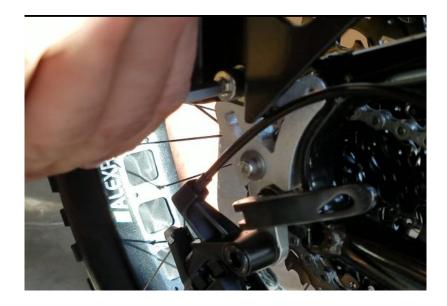
3. Align the front rack tab with the mounting bracket and place an M8 screw and washer through the mounting bracket hole. Thread the screw into the threaded hole on the front of the rack. Finger tighten.



4. Align the holes in the tab at the bottom left side of the rack with the fastening location on the left side metal rack support. Thread an M8 screw and washer through the tab and into the rack support. Finger tighten the screw.



5. Align the holes in the tab at the bottom right side of the rack with the fastening location on the right-side metal rack support. Thread an M8 screw and washer through the tab and into the rack support. Finger tighten the screw.



6. Use a 6 mm hex wrench to tighten all three screws, start with the screw on the mounting plate in the front.

Cautions and Safety

General Cautions and Warnings

The Juggernaut is a tricycle that you can ride like a bicycle with the added benefit of more stability on soft ground.

Refer to the **All Purpose Bicycle Manual** available on the Rungu USB drive that ships with the Juggernaut to new customers or online at this <u>link</u>².

WARNING: Being a tricycle, the Juggernaut has a tie-rod that connects the two front forks. DO NOT USE the tie-rod to lift the Juggernaut. The steering uses the tie rod as a hard stop so the forks don't rub against the front wheels. Grasping the tie rod when lifting WILL RESULT IN A PINCH TO THE HAND AND FINGERS THAT MAY LEAD TO HAND OR FINGER INJURY. ONLY GRASP PARTS OF THE FRAME OR SADDLE TO LIFT THE JUGGERNAUT.





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² http://riderungu.com/riderungu/wp-content/uploads/2016/08/Generic-Bike-Manual.pdf

Riding the Juggernaut

Juggernaut Operation Cautions

- 1. DO NOT apply the brakes abruptly when going downhill as this may result in loss of control. Use consistent, gradual braking.
- 2. Ride the Juggernaut at a level and speed you are comfortable with. Do not push the boundaries of your skill level or the Juggernaut!
- 3. NEVER jump with the Juggernaut. The Juggernaut is designed for moderate bumps but jumping your Juggernaut can lead to serious injury and/or damage!

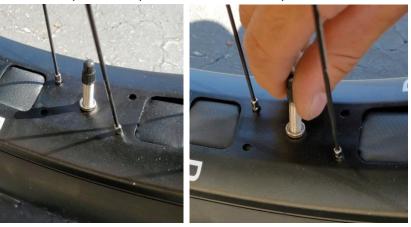
Inflating Tires - using Presta valve adapters

Your Rungu Juggernaut comes with "Presta" or "French Valve" innertubes, which work better at low pressures than "Schraeder" or "English Valves" (standard on car tires). Some bicycle pumps come with Presta valve adapters built into the pump outlet, but many do not. Rungu ships Juggernaut with a "screw-on" adapter.

CAUTION: DO NOT USE GAS-STATION AIR PUMPS OR OTHER HIGH-VOLUME AIR COMPRESSORS TO INFLATE YOUR TIRES. THEY MAY QUICKLY EXCEED THE LIMITS OF THE TIRE AND TUBE AND CAUSE THE TIRE TO EXPLODE.

Using the Presta "screw-on" valve adapters

1. Unscrew the protective cap from the presta valve on the tire you want to inflate.

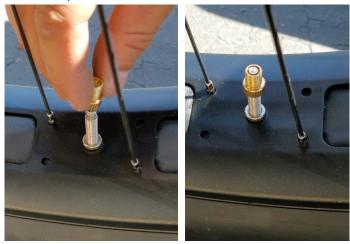


2. Unscrew the captive nut on the top of the presta valve to allow air to flow into the tire.





3. Screw on the Presta valve adapter.

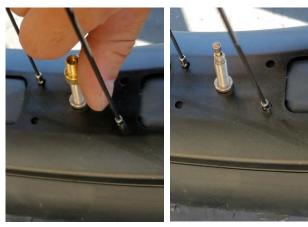


4. Connect the bike tire pump and inflate tire to the pressure appropriate for where you're riding – as recommended in the <u>before you ride</u> section of this document.

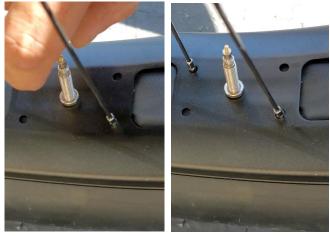


5. Remove the bike tire pump and unscrew the Presta valve adapter. Put the valve adapter in a safe place; they are easy to lose.

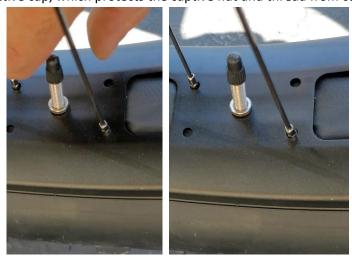
CAUTION: DO NOT LEAVE THE PRESTA VALVE ADAPTER IN PLACE. THE CAPTIVE NUT NEEDS TO BE RE-FASTENED TO RETAIN TIRE AIR PRESSURE.



6. Tighten the captive nut on the top of the Presta valve to keep the valve from leaking air.



7. Replace the protective cap, which protects the captive nut and thread from corrosion.



Before you ride - Safety Check

Note: If you have assembled the JUGGERNAUT yourself, Standard Bearer Machines recommends you take the JUGGERNAUT to a local bike shop for final tuning and adjustment.

As explained in the unpacking and assembly instruction, Standard Bearer Machines recommends the JUGGERNAUT to be assembled professionally once you receive it. The following ten steps are intended to help make your first and every ride a safe one.

Note: Standard Bearer Machines tune every Rungu prior to shipping. During shipping, shifters, brakes and other mechanical parts may move out of alignment.

- 1. <u>Make sure you wear a helmet</u>. "Fifty-four percent of bicyclists killed in 2017 were not wearing helmets. However, helmet use among those killed has remained relatively consistent at 16 percent since 2010." Wear a helmet.
- 2. Make sure the stems are tightly clamped to your forks. To do this, stand in front of the Rungu astride the left wheel facing the steering assembly. Hold both handlebars and try to turn the steering. The fork and wheel should flex, but the handlebars shouldn't turn independently of the wheel you're bracing. If the other wheel moves when you turn the handlebars, STOP. The stems aren't tightened enough; Turn the handlebars back to visually align the two front wheels with handlebars and tighten the two bolts on the back of the stem, where the stem clamps to the fork. Repeat this step for the right wheel.



3. <u>Make sure each wheel is fully inserted into its dropout</u>. Look carefully at both sides of the quick release on each wheel and make sure that the quick release skewer ends are seated inside the recesses on the bottom of the forks for each fork and inside the slot in the frame of the rear

³ https://helmets.org/stats.htm

- dropout for the rear wheel. If they are not, STOP. Unclamp the quick release, reposition the wheel and re-clamp the quick release to retain the wheel.
- 4. <u>Make sure each quick release skewer is clamping the wheel</u>. The quick releases should be difficult to open. If they are not, STOP. Open the quick release lever and screw in the retention nut to make the clamping tighter. The quick release should begin to clamp when the quick release lever is pointing perpendicularly away from the wheel.
- 5. Ensure that critical fasteners are tightened. Use a ¼" Hex Wrench provided with your purchase and check if you can loosen the Linkage Rod Retention bolts applying minimal force. If you can, STOP. Tighten each bolt. Use an 8mm hex wrench to check that the crank bolts are tightened and on both right and left sides. If you have a cargo rack, use a 6 mm wrench to check that all of the cargo rack fasteners are tightened as well.
- 6. <u>Make sure the handlebars don't twist in place</u>. Hold each grip and try to twist the handlebars. If they twist, STOP. Re-orient the handlebars according to your preference and re-tighten the four screws on each linkage arm to clamp the handlebars.
- 7. Make sure the handlebar ends extend past the stems by at least 45 mm (1 ¾"). To check this, move the handlebars to each stop where the handlebar end contacts the linkage rod. Look to see if the inside of the tire touches the outside of the neighboring fork. If it touches, STOP. Follow the instructions in the assembly section to reposition the handlebar end so that it extends at least 45 mm from the stem.



- 8. <u>Make sure your seat post and seat are tightened</u>. With the seat post clamp tightened, try to rotate the saddle. If the saddle moves, STOP. Open the seat post clamp and tighten the clamping mechanism before adjusting saddle height and orientation, then clamp it again.
- 9. Make sure your tires are inflated to the right pressure for the terrain you're going to ride. Use a tire pressure gauge to check the pressure of your tires. If the tire pressure is below 4 PSI or

above 15 PSI (103 KPa), STOP. Inflate the tires to be 5 PSI (34 KPa) or above, or release air from the tire to lower the pressure below 15 PSI (103 KPa).

Note: Tire pressure plays an especially important role in how you enjoy your Rungu JUGGERNAUT. If you plan to ride mostly on soft ground like sand or snow, use a tire pressure between 5 (34 kPa) and 6 PSI (41 kPa) for best traction and control as well as minimizing tread wear. Use 10 PSI (69 kPa) if you plan to ride on harder surfaces like rock or dirt road. On harder surfaces, a higher pressure minimizes tread wear and improves the range of your Juggernaut.

CAUTION: AVOID UNDERINFLATING AND OVER INFLATING THE TIRES. UNDER INFLATION (BELOW 5 PSI) WILL PREVENT THE TIRE FROM SEATING ON THE TIRE AND PREVENT YOU FROM RIDING JUGGERNAUT. OVER INFLATION (MORE THAN 15 PSI – 103 KPA) MAY RESULT IN TIRE BLOW-OUT WHILE RIDING.

Using Derailleur (Gear) Shifters

You use a shifter on the right-side handlebar to change gears and optimize your Juggernaut riding experience. Selecting the right gear lets you apply the appropriate power for the appropriate terrain. Like the transmission in a car, being in the wrong gear can cause the car to stall or use excessive energy to maintain speed. The same holds true with your Juggernaut.

Each Juggernaut has 9 gears – first gear is the largest sprocket on the rear wheel; ninth uses the smallest. First gear is used for hill climbing or crossing the most difficult soft terrain. Ninth gear has the highest gear ratio; it's used for cruising on flat roads to achieve the highest speed.

Changing gears with the microSHIFT advent system

If you have the derailleur pictured below, your Juggernaut is equipped with the microSHIFT advent system.



You use your right thumb and index finger to shift gears. Each short press of the thumb or short pull of the index finger against the shifter indexes the gear. A short press of the shifter with the thumb decreases the gear by one gear at a time starting at ninth gear. A short pull of the shifter increases the gear by one gear at a time starting with first gear. Long presses will change two gears at-a-time when available.

Riding Safety

Follow these guidelines to improve your safety when riding Juggernaut

- 1. ALWAYS wear proper safety equipment
- 2. NEVER operate at speeds that exceed your ability to operate Juggernaut safely
- 3. ALWAYS know your surrounding and actively scan the terrain for obstacles
- 4. DO NOT wear loose fitting clothes or articles
- 5. NEVER ride with more than 1 rider
- 6. Suitable for riders 16 and older.
- 7. Know your Juggernaut and your personal limits

WARNING: <u>DO NOT RIDE AT NIGHT WITHOUT APPROPRIATE REFLECTORS AND LIGHTING</u>. STANDARD BEARER MACHINES DOES NOT SHIP THE JUGGERNAUT OR JUGGERNAUT XR WITH ANY COMPONENTS FOR NIGHT-TIME RIDING SAFETY. IT IS THE OWNER'S RESPONSIBILITY TO EQUIP JUGGERNAUT WITH APPROPRIATE REFLECTORS AND LIGHTING TO RIDE SAFETY AT NIGHT.

WARNING: IF ANY INJURIES OR HARM OCCUR WHEN YOU USE THE PRODUCT, Standard Bearer Machines OR ITS DISTRIBUTOR WILL NOT BEAR ANY RESPONSIBILITY

Adjusting the Front Suspension

The front suspension has two manual controls that can change ride and handling characteristics. Looking from above astride the Juggernaut, the left-side knob controls the stiffness of the suspension. The right-side switch is used to disable/enable the suspension.



To stiffen or loosen the suspension, turn the right-side knob clockwise or counterclockwise respectively. All Juggernauts ship with the suspension at the loosest setting. If you find that the front-end dives too much, or that you are having difficulty turning on soft ground (sand, snow), increase the stiffness of both forks by turning the knob clockwise.

When activated, the optional front suspension for the Juggernauts makes cornering on hard surfaces smooth and

improves control on soft sand. The team at Rungu recommends leaving the suspension activated (not locked out) for all terrain, but you may want to try de-activating the suspension if you're in deeper snow for better carving capability.

Using the parking brake switch

The front hydraulic brake levers have a parking brake switch. To operate the switch, hold in the brake lever as hard as you can and flip the switch. The switch holds the brake lever in place, which holds the rotor in place and prevents Juggernaut from moving when parked. The parking brake is very useful when parking on angle. REMEMBER to switch off the parking brake before riding.

NOTE: Riding with the parking brake engaged produces significant wear on the brake pads leading to a decrease in brake pad life and stopping power. Warranty DOES NOT cover replacement brake pads.

Using the microSHIFT derailleur clutch

All 2020 models use the microSHIFT Advent derailleur system with built-in clutch to maintain better chain tension on the return track when off-roading (bumpy riding). It has the significant advantage of maintaining better gear engagement and limiting "chain suck" due to changing weather conditions. For these reasons, the team at Rungu strongly recommend the clutch switched on when riding in all conditions.



Figure 3 Cutaway view of Advent clutch mechanism

Figure 1 Clutch enabled - switch aligned with dot

To switch on the clutch, move the

switch on the side of the derailleur UP so that it aligns with the white dot. You can tell that the clutch is enabled by pushing the lower derailleur pulley

forward, you should encounter significant force to move the pulley. To disable the clutch (for wheel removal), move the switch on the side of the derailleur down so



Figure 2 Clutch disabled - switch aligned with circle

that it aligns with the white circle. You can tell when the clutch is disabled by pushing forward on the lower pulley. You will encounter minimal resistance to pivot the lower section of the derailleur.

Rungu Juggernaut Maintenance, Care and Repair

Before Each Ride

See section labeled "Before your first ride - Safety Check"

Securing your Juggernaut

When riding the Juggernaut in areas where theft is a concern, use appropriate cable or chain locking devices and make sure to thread the cable/or chain through the frame, wheels and saddle/seatpost to avoid quick removal.

Standard Bearer Machines recommends you use the Password feature found in the display settings described in an earlier section of this document.

After Each Ride

- 1. <u>Clean and inspect Juggernaut</u>. Hose off (Use a shower mode or light spray, avoid powerful spray settings) or wipe down JUGGERNAUT and dry it with a towel. Look for any damage to the frame or components that may need maintenance.
- 2. <u>Wipe and lubricate the chain</u>. Depending on the riding environment apply a dry or wet lubricant after wiping the chain clean and dry. See more about chain maintenance in Chain Maintenance section below.

Chain Maintenance - Cleaning and Lubrication every 40 miles of hard use

Every 40 miles in wet, salty or muddy conditions, clean the chain and reapply lubricant.

First clean wipe the chain with a rag and then use a chain cleaner like the one in the image below. We recommend the White Lightning Chain Cleaner Degreaser because it is easy to run the cleaning head back and forth over the chain without relying on rotating the crank arms backwards like most chain cleaning systems.





Here's a link to a video showing the more traditional way of using the chain cleaner. https://www.youtube.com/watch?v=Aiql_2UNTEE

After using the degreaser, empty the reservoir in the chain cleaner and fill it with water and run the chain cleaning mechanism over the chain again to remove the degreaser.

Wipe and dry the chain with a new rag.

With the chain clean, use the Lubrication guidelines below to choose the chain lube best for your environment. Follow application instructions printed on the chain lube bottle.

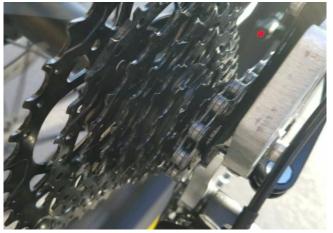
Conditions	Chain lubricant
Dirt/dry	White Lightning Clean Ride or Boeshield T-9
Dirt/wet (Stream	First choice Muc-Off E-bike Wet Weather Ceramic Lube (ebike wet chain lube) –
crossings)	Second Choice White Lighting Wet Ride
Mud	First choice Muc-Off E-bike Wet Weather Ceramic Lube (ebike wet chain lube) –
	Second Choice White Lighting Wet Ride
Sand/soft sand/beach	White Lightning Clean Ride or Boeshield T-9
Snow/Rain	First choice Muc-Off E-bike Wet Weather Ceramic Lube (ebike wet chain lube) –
	Second Choice White Lighting Wet Ride

Rear wheel removal or replacement

You may have to remove the rear wheel to fix a flat, replace the tire or replace the cassette. These directions explain the steps to remove and replace the rear wheel.

How to remove the rear wheel

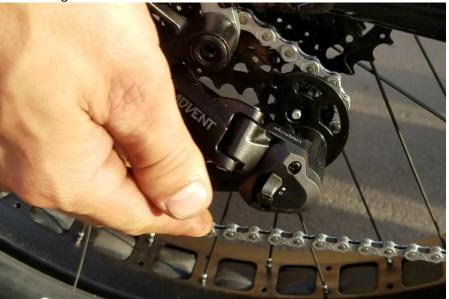
1. First, shift the rear wheel into 9th gear. Whether or not the chain is on the Rungu, shifting to 9th gear before wheel removal makes wheel removal easier.



2. If possible, find an object (e.g. empty bucket, cardboard box) that you can use to support the bike after the rear wheel is removed. Alternatively, hang the rear triangle from straps or ropes to support the rear triangle after the rear wheel is removed.



3. If you have the microSHIFT Advent Derailleur, switch off the derailleur clutch by pushing down on the switch so it aligns with the white circle.



4. Release the quick release lever



- 5. Loosen the quick release skewer by unscrewing the end cap. Be careful to not lose the springs or other components of the skewer if you remove the end cap.
- 6. The wheel will drop out and the cassette will get caught on the derailleur pulley.
- 7. Push back on the derailleur cage so the wheel can drop further.



8. Move the chain above the cassette so it doesn't interfere with wheel removal.



9. Put the rear wheel aside and support the frame as noted above while you service the rear wheel.

How to replace the rear wheel

1. If you have the microSHIFT Advent derailleur, make sure that the derailleur clutch switch is OFF. Regardless the derailleur, make sure that the derailleur is shifted into 9th gear. Lift the rear of the frame and position the rear wheel underneath and pull back on the derailleur so you can orient the chain around 9th gear on the cassette.



2. Remove any support for the frame and lower the frame so the axle of the wheel moves up into the dropouts. Take care to slide the brake rotor between the brake caliper pads on the left side of the bike.



3. Make sure the wheel axle is seated in the left and right dropouts, then carefully lower the wheel onto the ground. Gravity helps seat the axle in the dropouts. Then, tighten the quick release end cap. As a guideline the end cap nut should begin to clamp onto the left drop out when the quick release lever points away from the wheel at a right angle.



4. Close the quick release lever.



5. If the wheel doesn't appear to be vertical as in the picture below, loosen the quick release, realign and re-tighten the quick release.



6. After checking that the rear wheel is fastened tightly, switch on the derailleur clutch and test ride the Rungu for more than five minutes to make sure the speedometer is working.

WARNING: MAKE SURE TO TIGHTEN THE QUICK-RELEASE IN THE FRAME SO THAT THE WHEEL CANNOT FALL OUT; FAILURE TO ADEQUATELY TIGHTEN THE QUICK-RELEASE CAN RESULT IN ACCIDENTAL RIDER INJURY OR DEATH.

Technical Information

Feature/spec	Juggernaut
Projected length	85 in. (2134 mm)
Handle bar width (effective)	32.7 in. (830 mm)
Unit weight	57.9 lbs. (26.3 kg)
Frame size	14.5 in. (368 mm)
Seat tube length (center to top)	13.4 in. (341 mm)
Bottom bracket height	13.1 in. (332 mm)
Chainstay length	22.4 in. (569 mm)
Head tube angle	66°
Head tube length	7.6 in. (193 mm)
Seat post length	15.7 in. (400 mm)
Seat tube angle	73°
Top tube effective length (horizontal projection)	23.3 in. (592 mm)
Seat surface highest position - Standard Saddle	42 in. (1,041 mm)
Seat surface lowest position - Standard Saddle	34 in. (838 mm)
Seat surface highest position - Serfas CRS-1 with	
standard post	43 in. (1,067 mm)
Seat surface lowest position - Serfas CRS-1 with	
standard post	35 in. (864 mm)
Path width (distance from outside of one front tire	
to the other)	13.75 in. (349 mm)
Stand-over height	26.5 in. (673 mm)
Ground clearance	9.5 in. (241 mm)
Breakover angle	38°
Wheel base	54.7 in. (1390 mm)

Troubleshooting

Problem: I hear a clicking noise when I'm pedaling in every gear; gear changes take long or are difficult The rear derailleur may be out of adjustment, misaligned or bent, the chain may be worn out, or the cassette may be damaged.

Solution:

- 1. Check the cassette. Use a stand or tethering to raise the rear wheel and while operating the pedals with your hands. Rotate the rear wheel and look at the cassette (cogs/gears on rear wheel) and observe if any are bent or "wavy", if so order a new cassette to replace the damaged one. Adjust derailleur alignment (next step) when you complete the replacement. If the cassette is not bent or damaged,
- Adjust derailleur alignment. Use a stand or tethering to raise the rear wheel and while operating the pedals with your hands, use the shifter barrel adjustment to re-align your derailleur.

Note: If you have a high-bandwidth Internet connection, please <u>watch this video</u> that shows how to do a derailleur adjustment.

If this fails to eliminate the clicking noise,

- 3. Check that the derailleur, derailleur hanger, or frame isn't bent or broken. Replace components as necessary. If the derailleur, hanger and frame are intact,
- 4. Replace the chain.
- 5. Contact Rungu Support if you have other questions.

Problem: I hear a loud click noise coming when I'm pedaling in a high gear

The cassette cog is worn out; replace cassette.

Problem: I hear a rubbing or squealing noise from one, or both, of the front wheels when riding. The rubbing noise may occur from the brake rotor rubbing against a rotor or the tire rubbing against the inside of the fork. A squealing noise indicates the brake pad is rubbing against the brake rotor.

Solution:

- 1. Check the wheel position in the fork. Loosen the quick release and on level ground apply pressure on the fork to make sure the wheel hub is engaged correctly in the dropouts. Retighten the quick release. If you notice that the tire is rubbing after the correction, take the wheel to be "trued" by bicycle technician. If the brake rotor continues to rub against the brake pad,
- Re-align the brake caliper. Follow component directions on how to realign your brake caliper or have realignment performed by a qualified technician. If you cannot realign your brake caliper to eliminate the rotor rubbing against the brake pad,
- 3. The rotor is warped; replace it or have it replaced.
- 4. Contact Rungu Support if you have other questions.

Problem: I can't change into lower gears.

The derailleur may require adjustment or more seriously you have bent a cassette cog.

Solution:

- 1. Inspect the largest cassette cogs for damage. If a cog is bent it will prevent the chain from engaging with an adjacent cog. Replace the cassette if this is the case. If the cassette cogs are undamaged,
- 2. Check Derailleur alignment. Use a stand or tethering to raise the rear wheel and while operating the pedals with your hands, try to shift into first gear.

Note: If you have a high-bandwidth Internet connection, please <u>watch this video</u> that shows how to do a derailleur adjustment.

If the derailleur stops or has difficulty moving the chain into first gear, clean and lubricate the derailleur and refer to component directions to reset the high and low stops for the derailleur to ensure consistent gear changes. If the derailleur adjustments and cleaning fails to correct the problem,

- 3. Check that the derailleur, derailleur hanger, or frame isn't bent or broken. Replace components as necessary. If the derailleur, hanger and frame are intact,
- 4. Contact Rungu Support if you have other questions.

Getting more information

Thank you again for purchasing a Rungu Juggernaut. For further questions, please consult the <u>Support Page</u> on the riderungu.com website or email <u>support@riderungu.com</u>.