



volae

OWNER'S MANUAL



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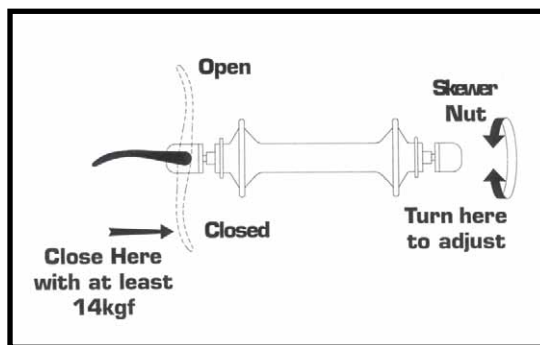
CHAPTER 1: READ ME FIRST!

Thank you for choosing a Volae recumbent! Proudly made in the U.S.A., Volae recumbents are designed to outperform the best upright road racing machines while providing incredible comfort. Please take a few minutes to fill out your warranty registration card and to read these important points about recumbents and bike riding in general.

Always wear an ANSI or Snell approved helmet. Wearing a modern bicycle helmet may save your life or prevent serious head injuries if you are involved in an accident.

Check your bike carefully before each ride. Spend a few moments before each ride inspecting your Volae for problems.

- Check all nuts, bolts and other fasteners to make sure none are loose.
- The tires should be inflated to the pressure molded on the sidewall, and free of cuts or imperfections.
- The wheel rims should be straight. Spin the wheel and observe the gap between the rim and one of the brake pads. There should be very little wobble as the wheel rotates.
- Squeeze each brake lever to make sure there is no binding and the brake pads press hard enough on the rims or the disc brakes contact the rotor to stop the bike. The brake pads should be centered on the rim and not touching the tire.
- Sitting on the bike, swing the handlebars from side to side checking for binding or interference. Check to make sure the stem bolts are tight.
- If you are unsure of the condition of your Volae recumbent, **DO NOT RIDE IT** until the problem has been corrected. If you have any questions, contact your Volae dealer or take it to your local professional bike shop.
- The wheel and seat quick release skewers should be clamped shut with at least 20 lbs (14kgf) of force, and a sharp blow to the top of the tire should not knock the wheel loose. Study the wheel/seat skewer operation diagram below. To adjust the skewer to the proper tightness, open the skewer handle, adjust (tighten or loosen) the skewer nut slightly, then close the skewer handle. It should take 20-45 lbs of force to close the handle as shown.



Wheel/Seat Skewer Operation

MAKE SURE THE SEAT AND WHEEL QR SKEWERS ARE TIGHT!

Wear gloves. With its low center of gravity, you don't fall very far on a recumbent, but your hand will touch down first. A set of bicycling gloves will protect your skin.

Wear eye protection. Riding down the road at speed is not time to get a bug or piece of dirt in your eye. Goggles, glasses or both may save your sight and protect against a crash.

Practice riding your Volae. Before you mix it up with traffic, spend enough time on your recumbent in an empty parking lot, driveway or other open area to get used to it's unique riding position. Chapter Three has some important information about riding your Volae.

Never ride at night without reflectors and a front and rear light!

Experiment with different seat positions and seat angles during your practice period. Your Volae recumbent has many adjustments and special features that fit the bike to you.

Be careful when riding in wet conditions. No rim brakes work as effectively in wet weather as they do in dry. It takes longer to stop in wet conditions. Also, ride slower through corners since tires will skid more easily on wet pavement.

Use caution when negotiating rough roads, unpaved roads or paved roads with sand or gravel on them. Volae bicycles are road bicycles and, as such, are not designed to be ridden on unpaved surfaces. Sand or gravel may cause you to lose control and crash. Pavement covered with sand or gravel may also cause tires to skid. No road tire/wheel is designed to be ridden aggressively over rough roads, chuck holes or railroad track crossings. Slow down for the rough stuff. Your wheels and tires will last much longer and you may avoid an accident.

Replace your tires before they wear out. A flat tire may cause you to lose control and crash. Tires can be damaged from riding too fast over chuck holes or hitting objects on the road. Tires don't always fail immediately. Inspect your tires regularly and replace them if they show any sign of damage or excess wear. Replacing your tires too frequently, rather than not often enough, can reduce the chance of a blowout or flat.

Get in the habit of watching the road surface for debris. Your best protection against flats is to avoid riding over a sharp object. Glass and other sharp objects do not discriminate. They puncture new tires just as easily as old tires.

CHAPTER 2: DESIGN, SETUP AND FITTING

SETUP & ASSEMBLY OF YOUR VOLAE

Unpacking and setting up your Volae. Volae bicycles are shipped with the front wheel removed, the stem riser rotated sideways, the handlebars rotated down, the rear seat bracket disconnected and the pedals removed (if included with the bike). Please be sure to save the shipping carton and packing materials in the event that your Volae has sustained any shipping damage and needs to be returned.

Assembly of your Volae recumbent. (Your bike may be shipped with steps 3 & 4 already done for you)

1. Unpack your bike carefully and make sure that all parts are removed from the box. Tools required for reassembly are a pedal wrench and a 4mm & 5mm Allen wrench.
2. Install the front wheel (**Fig. 1**). Detailed quick release skewer instructions are in Chapter 1.
3. Loosen handlebar stem face plate bolts and rotate handlebar to horizontal position (**Fig. 2**).
4. Attach rear seat mount to seat stays (**Fig. 3**).
5. Install pedals: Be sure to grease threads before installing. The right pedal is right-hand threaded (turn clock wise to install) and the left pedal is left-hand threaded (turn counter-clock wise to install).



Fig. 1

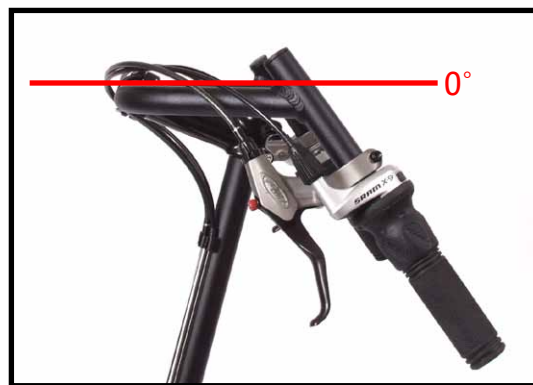


Fig. 2



Fig. 3

ADJUSTING THE VOLAE SEAT

Important Notes: Proper leg extension is achieved by moving the seat forward or backward and adjusting the seat back angle. Adjustments to both the **Seat Slider** and the **Seat Back Angle** will change your leg extension. The more the seat is reclined, the more the seat base must be moved forward, and the more the seat back is raised, the more the seat base must be moved backwards.

The Volae seat position is programmable. Once you have selected the ideal seat slider position and the seat back angle, you can remove and re-install the seat without changing the seat position.

SEAT BACK ANGLE ADJUSTMENT

Riding with the seat in a reclined position will provide better aerodynamics and make the seat more comfortable. Experiment to find out how far back you can recline the seat and still comfortably hold your head up. The molded seat is designed to work best in the reclined (**Fig. 4**) to mid-position (**Fig. 5**). Riding with the seat in a more upright position causes the seat base to level out. (**Fig. 6**). This may result in numbness on the back of your butt as well as the feeling that you are sliding forward on the seat. If you prefer a more upright seat angle we recommend a seat bottom wedge, which is available from the Hostel Shoppe. This wedge is attached to the seat bottom (**Fig. 7**) with hook and loop fasteners and should make the upright seat position more comfortable and eliminate the feeling that you are sliding forward off the seat.

To adjust the seat back angle:

1. Loosen the screws on the two seat stay collars. (**Fig. 8**)
2. Adjust the seat to the desired angle.
3. Tighten the seat stay collar screws. These bolts need to be snug enough to keep the seat from sliding when you ride. **Caution:** Repeatedly over tightening these screws can cause the threads to strip out.

LEG EXTENSION ADJUSTMENT



Fig. 4

Fig. 5

Fig. 6



Fig. 7

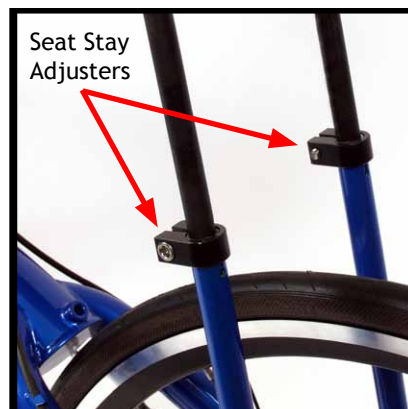
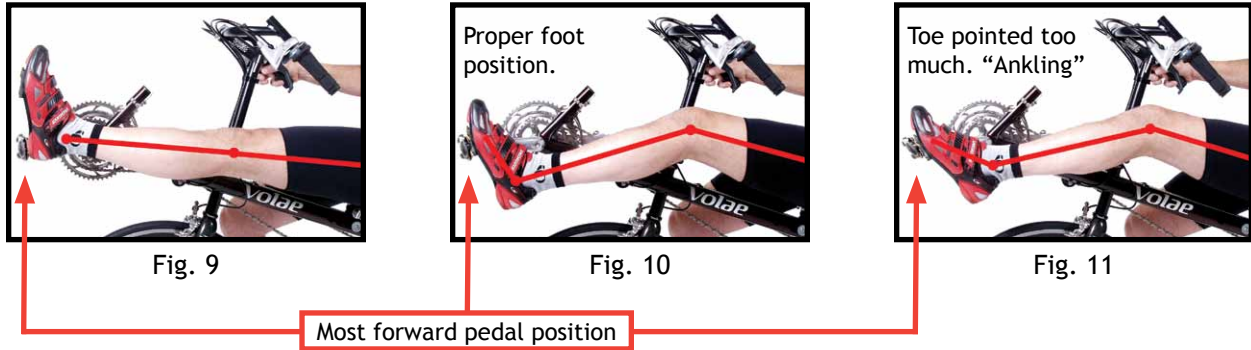


Fig. 8

1. Start by adjusting the seat so the heel of your foot just contacts the pedal in it's most forward position, with a straight leg (Fig. 9). This should result in a slight bend at the knee when the ball of the your foot is placed on the pedal (Fig. 10).
2. Fine-tune the seat adjustment, after riding, to make sure that you still have a slight bend in the knee at the forward most pedaling position. Your position on the seat may shift forward slightly when you are riding. After riding a short distance, you may find that you need to adjust the seat backwards a little to get the proper leg extension.
3. Pointing your toes to reach the pedals "Ankling" (Fig. 11) is not recommended.



SEAT SLIDER ADJUSTMENT

The seat slider mechanism has a front and rear position as well as a forward and backward orientation. The front position uses holes 1 and 2 and the rear position uses holes 2 and 3. (Fig. 12) The forward orientation is shown in (Fig. 13) and the backward orientation is shown in (Fig. 14)

Adjust the slider position and orientation to get the proper leg extension. The seat slider is adjusted by loosening the two quick adjust levers that attach the slider to the frame. Most riders will find the proper seat position and not need to adjust these levers again. The seat slider levers are not used to remove and reattach the seat.

Some riders will need to frequently adjust the seat to accommodate different family members or friends.



Fig. 12



Fig. 13



Fig. 14

ADJUSTING THE HANDLEBAR/STEM/RISER SYSTEM

STEERING ASSEMBLY ADJUSTMENTS

The Volae steering assembly consists of the handlebar, stem and riser (Fig. 15). This design allows the rider a great amount of flexibility in customizing the steering assembly to fit his/her needs.

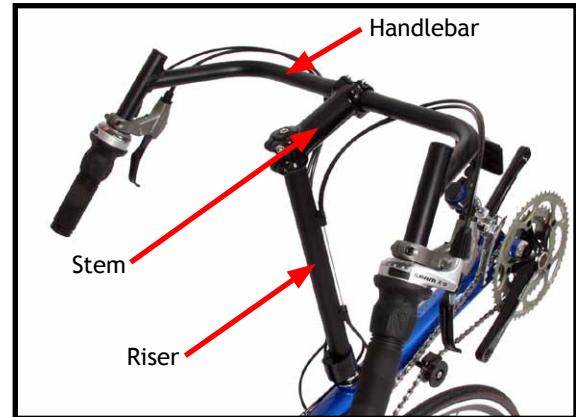


Fig. 15

STEM LENGTH AND RIDER ARM POSITION

The Hostel Shoppe has a variety of stems available in different lengths to help you achieve the arm position you prefer. This allows you to choose the arm position that is most comfortable for your riding style.

In the recreational position, the arms have more of a bend at the elbows (Fig. 16). In the sport position, the arms should have a slight bend at the elbows and the rider should feel a slight forward pull on the arms (Fig. 17). The performance position utilizes straight arms (Fig. 18). We recommend riding in the sport or performance position. This will cause the shoulders to be rounded slightly forward, which will make the contact between the upper back and the seat very comfortable on long rides. The arms forward position may feel a bit strange at first but after riding that way for a while most riders prefer it.



Fig. 16



Fig. 17



Fig. 18

SHORTENING THE RISER

As you ride you may find that you can lower the stem on the riser and still have adequate clearance between your shins and the handlebars. (Fig. 19) If you are consistently using a lower stem/handlebar position, you may want to trim off the excess riser that protrudes above the top of the stem. (Fig. 20)

Shortening the Riser on all Volaes: (Note: for highly trained bike mechanics only.)

1. Remove the AheadSet top cap. (Fig. 21)
2. Remove the stem.
3. Loosen the riser clamp. (Fig. 21)
4. Remove the shift cables and brake cables.
5. Slide the riser up and off of the fork steer tube.
6. Unscrew the AheadSet bolt extender assembly. (Fig. 21)
7. Use a tubing cutter (available at your local hardware store) to cut the riser to the desired length.
8. Replace the AheadSet star nut extender assembly (Fig. 21) with the proper number of spacers.
9. Reassemble.



Fig. 19



Fig. 20

Riser protruding above stem

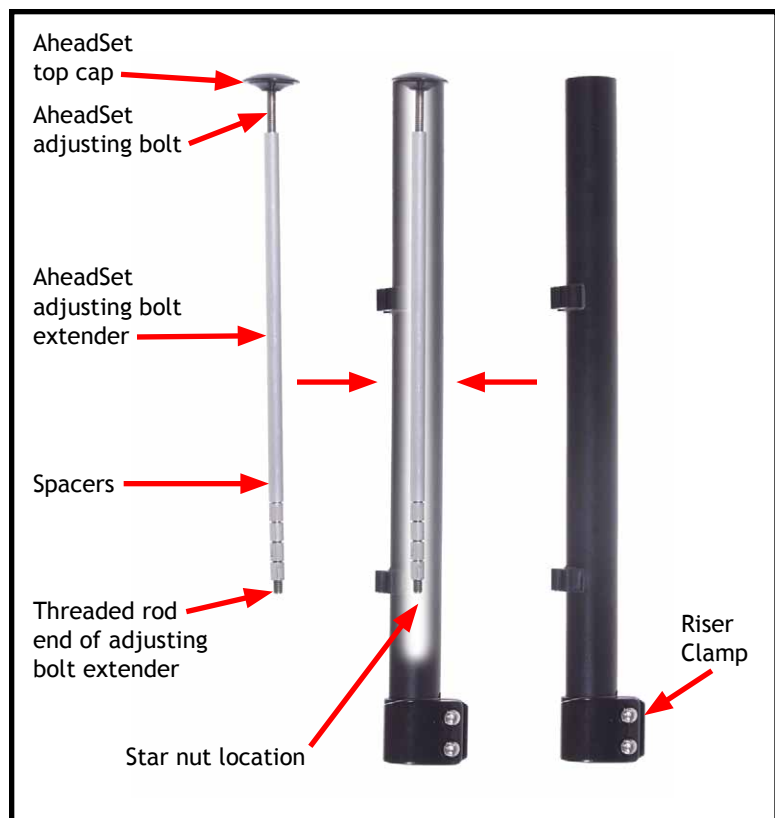


Fig. 21

FINAL INSPECTION.

Before each ride be sure to inspect all the nuts and bolts on the bike, looking for any parts that may have loosened. Check the alignment of the wheels, and inspect the brakes to make sure the shoes contact the rims squarely and bikes with disc brakes contact the rotor to stop the bike. The handlebars should be aligned and able to turn from side to side without binding or interference. Check that the wheel skewers are secure, and that a sharp blow on the wheel while you hold the bike off the ground, will not jar the wheel loose. Check that all seat and wheel skewers are secure. See Chapter One for more details.

CHAPTER 3: RIDING THE VOLAE

Learning to ride a Volae recumbent takes a little practice but is not difficult for most riders. This chapter covers some of the things that will make your transition to recumbents easier.

First, be sure to read the chapter about setting up and adjusting your bike. It's helpful to be sure that your Volae is adjusted to fit you properly. First time recumbent riders may find it helpful to have the seat a little more upright. Later, you can recline the seat incrementally, until you find your own ideal position.

It is essential to wear a helmet whenever you ride. Also, we recommend wearing gloves for two reasons. Gloves help protect your hands if you fall and they make shifting easier when you have sweaty hands. Protective eye wear is also helpful. Protection from dust, pollen and flying insects is important on a recumbent. Recumbent specific cycling shorts and jerseys make you even more comfortable.

Bike shoes with clipless pedals are highly recommended. We especially recommend them on the dual 650c wheel models. With your feet higher than the seat, it can be an effort to keep your feet on the pedals. **Ride a while with regular shoes to get confident with the balance before switching to a good set of clipless pedals and shoes.** Contact the Hostel Shoppe for suggestions about shoes and pedals.

HELPFUL TIPS FOR GETTING STARTED:

1. Find a spot with little or no traffic and lots of room, like an empty parking lot or quiet residential street.
2. Avoid starting in too high of a gear. Shift the bike into the middle chainring and one of the larger rear cogs. If the bike is not in this gear combination, have someone hold your bike with the rear wheel off the ground so you can spin the cranks and shift the gears. Don't forget that you should only shift when pedaling!
3. Now, get on the bike. I tend to mount from the left, like getting on a horse, but the important thing is to establish a pattern and do it the same way every time, so it becomes a habit. Grab the seat back with your right hand, and the middle of the handlebars with your left hand. Step through the space between the seat and handlebar with your right leg, and sit down on the seat. Squeeze the brake levers to keep the bike from rolling.
4. Lean back, settle yourself into the seat and get comfortable.
5. Put one pedal in the up position and place your foot on the pedal.
6. Relax your arms and shoulders. Avoid pulling on the handlebars when you start.
7. Release the brakes as you push forward on the pedal while keeping your back and shoulders against the seat.



LIKE THIS:

Leaning back against the seat,
arms and shoulders loose,
relaxed.

Good - good - very good.



NOT LIKE THIS:

Leaning forward, arms and
shoulders tense, not relaxed.

Bad - bad - very bad.





Next, you should practice using the brakes. Stop and start a few times, getting a feel for how much pressure on the lever it takes to slow down or stop the bike. Remember to always use both brakes together, with gentle pressure at first to stop the bike smoothly.

Drop both your feet to the pavement while giving the brakes the final squeeze to stop the bike. Lean forward a bit and stand up, while reaching behind you for the seat to steady the bike. Practice stopping and dismounting, then starting off again. You may also want to practice stopping by dropping only one leg, typically your non-dominant leg. This exercise will help you deal with momentary stops, such as at stop signs and traffic lights. It does take a little practice to balance the bike leaning onto a single leg. Remember to keep the brakes on when stopped to prevent the bike from rolling, it really helps. After stopping, I immediately position my “crank-bound” leg for the start, and then hold pressure against the brake until I’m ready to go.

You should also carefully investigate what happens to the bike with gradually increasing brake lever pressure, so you will be comfortable with quick decisions on the road.

HEEL OVERLAP:

It’s possible (on virtually all short wheelbase recumbents) for your heel to hit the front wheel during sharp turns. Heel strike is most likely to happen in slow-speed, sharp-steering maneuvers but never seems to happen under normal road riding conditions. You will learn to avoid heel strike as you gain experience on your bike.

It’s common to feel wobbly at first. It may take fifty to one hundred miles of riding before you start to feel the same confidence that you are accustomed to on your upright. Avoid riding in traffic during this start up period. It’s also common to feel slightly weaker or slower at first because you may be using a muscle group that is not as well trained as the one you are used to.

TRANSPORTING YOUR VOLAE:

Removing the mesh or hardshell seat for transport is easy and does not effect your seat adjustment settings. The seat on your Volae is designed to be removed by loosening two quick release skewers. The rear seat bracket is removed from the seat stays by loosening the quick release skewer lever and simply lifting the seat up. (Fig. 22)

The seat is removed from the seat slider by loosening the quick release skewer lever and unscrewing the top hat enough to clear the safety indent in the seat base bracket. (Fig. 23) Be sure to remove the seat slider quick release lever completely when traveling as the Top Hat could be lost by vibrating off the end of the skewer in transit. If you do transport your Volae on the outside of your vehicle with the seat on be sure to remove the seat foam on the hardshell seats. The seat foam is attached to the hard shell seat with hook and loop fasteners to make removal and reattachment easy.



Fig. 22

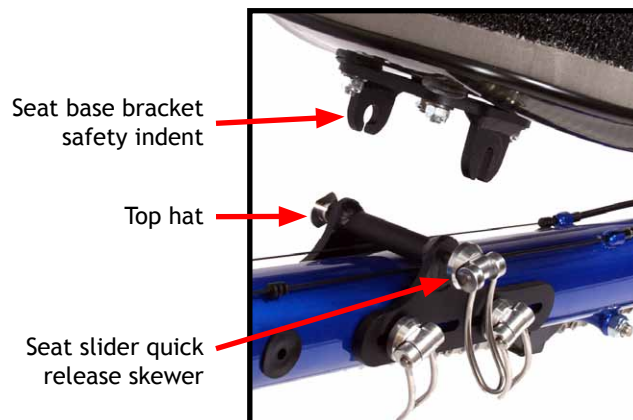


Fig. 23

CHAPTER 4: ES FRAMES



Some travel bikes compromise performance to make the bike extremely compactible for traveling. The cleverly engineered Volae frame separates in the middle to facilitate packing in a standard bike travel case while preserving the high performance that you demand.



IMPORTANT: Use only the Carbon Paste provided to lube the frame joint to insure easy assembly and secure coupling. To assemble your ES frame, line up the two ends of the frame. Be careful to not bend the prongs on the male end. The slot should line up with the seat slider quick releases.



Slide the frame together slowly to make sure the slots line up and engage properly.



Once the frame is pushed together the Volae logo should be about 45 degrees from the seat slider.



Rotate the frame until it stops, the Volae logo and seat slider should line up, and tighten the two pinch bolts** and the anti-rotate bolt. This insures proper wheel alignment. Connect the shifting and brake cables, attach the seat and you are ready to ride.



The ES frames come with end caps for use on the exposed frame ends so damage does not occur when the bike is in transit.

Take the frame apart occasionally and lube the joint with the provided paste to prevent the tubes from seizing together.

** Make sure the pinch bolts are inserted through the non-drive side (no threads) of the clamp and into the threaded side of the clamp.

** Pinch bolts do not have to be removed to take the frame apart.



Here is one way to pack and transport your Volae ES bike using the Crate Works Pro XL-C Box.



CHAPTER 5: ACCESSORIES

Now that you are comfortable riding your new Volae, you will probably want to customize it for your particular riding needs. Your Volae recumbent has been designed to accept a full range of standard bicycling accessories, as well as some custom items that have been designed for the Hostel Shoppe.



MIRROR

If you ride in traffic, a mirror is a must. The short bow B&M Cyclestar Mirror goes way beyond “sort-of works”. This lightweight, stable mirror fits on a Volae handlebar like it was made for it.



PEDALS

Your Volae will accept all standard pedaling systems. Clipless pedals are highly recommended to improve pedaling efficiency. For those riders who don't want to be “locked in”, another item that works well is the Ecko Power Grip Pedal Straps. Just insert your foot and twist and the strap secures you to the pedal for a smoother pedaling motion.



SEAT BAGS & HYDRATION

The Hostel Shoppe Euro Small (350 cu. in.) and Euro Large (1050 cu. in.) Seat Bags were designed to fit on the hard shell seats utilized by Volae. The Hostel Shoppe Volae Seat Day Bag works on the mesh seat. Seat bags are an effective way to carry water and other items on a recumbent. Hydration bladders can be placed in the bag, routing the drinking tube over your shoulder. They are also a good way to carry keys, wallets, rainwear, a spare tube, small pump and a mini tool.



COMPUTER

A variety of computers work on most Volae recumbents. However, you may need to use a long wire kit to mount the pick up either to the front or rear wheel.



REAR RACK/PANNIERS

Our cleverly designed seat stay adjustment clamps double as rear rack mounts, which makes it easy to mount a Blackburn Mtn 2 rack on almost any Volae (Old Man Mountain Sherpa Rear rack for the Expedition). Don't forget the Volae Rear Rack mounting kit when ordering your rack. The racks are compatible with a wide variety of panniers.



FENDERS

For wet weather riding, the Volae Tour and Century will accept fenders. We recommend the Volae 20/26 inch fender set for single recumbents.



KICKSTAND

Utilizing the Volae KS Gizmo, this handy adapter allows you to mount a standard 305mm Greenfield Kickstand to your Volae.



LIGHT MOUNT

The Volae T-bar Light Mount fits perfectly in the derailleur mast of any Volae. Attaching a headlight is about as easy as it gets.



ADDITIONAL INFORMATION

TIRE & WHEEL INFORMATION

FRONT: Tour, Century - 20", 406mm bead seat diameter
Expedition, Expedition Pro, Voyager - 26", 559mm bead seat diameter
Club, Team - 650c, 571mm bead seat diameter

REAR: Tour, Century - 26", 559mm bead seat diameter
Expedition, Expedition Pro, Voyager - 26", 559mm bead seat diameter
Club, Team - 650c, 571mm bead seat diameter

Inflation Pressures: Inflate to the pressure molded on tire sidewall. Check your pressure every ride.

SERIAL NUMBER LOCATION

The serial number is stamped on the front of the bottom bracket.

VOLAE, LLC. WARRANTY

Volae, LLC. warrants each new Volae bicycle frame, against defects in workmanship and materials for the lifetime of the original owner. Paint, decals, seat, fork and all original component parts are warranted for a period of one year from the date of purchase. This warranty is expressly limited to the repair or replacement of a defective frame, fork, seat or defective parts and is the sole remedy of the warranty. This warranty applies to the original owner and is not transferable.

Claims under this warranty are to be made through Volae, LLC. Proof of purchase is required. A Warranty Registration Card must be completed and received by Volae, LLC. before warranty claims may be processed.

The warranty does not cover normal wear and tear, improper assembly or maintenance, or installation of parts or accessories not originally intended or compatible with the bicycle as sold.

The warranty does not apply to damage or failure due to accident, abuse or neglect.

Volae, LLC. shall not be responsible for incidental or consequential damages. Labor charges for part change overs are not covered by this warranty. The user assumes the risk of any personal injury or damage to the bicycle or other losses if the bicycle is used in any competitive event including, but not limited to bicycle racing, triathlons or similar activities.

CARBON FIBER CARE: Inspection of Composite Fork, and Components

Cracks: Inspect for cracks, broken, or splintered areas. Any crack is serious. Do not ride any bicycle or component that has a crack of any size.

Delamination: Delamination is serious damage. Composites are made from layers of fabric. Delamination means that the layers of fabric are no longer bonded together. Do not ride any bicycle or component that has any delamination. These are some delamination clues:

- A cloudy or white area. This kind of area looks different from the ordinary undamaged areas. Undamaged areas will look glassy, shiny, or "deep," as if one was looking into a clear liquid. Delaminated areas will look opaque and cloudy.
- Bulging or deformed shape. If delamination occurs, the surface shape may change. The surface may have a bump, a bulge, soft spot, or not be smooth and fair.
- A difference in sound when tapping the surface. If you gently tap the surface of an undamaged composite you will hear a consistent sound, usually a hard, sharp sound. If you then tap a delaminated area, you will hear a different sound, usually duller, less sharp.

Unusual Noises: Either a crack or delamination can cause creaking noises while riding. Think about such a noise as a serious warning signal. A well maintained bicycle will be very quiet and free of creaks and squeaks. Investigate and find the source of any noise. It may not be a crack or delamination, but whatever is causing the noise must be fixed before riding.

WARNING: Do not ride a bicycle or component with any delamination or crack. Riding a delaminated or cracked frame, fork or other component could lead to complete failure, with risk of serious injury or death.



WARRANTY REGISTRATION CARD

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Email: _____

Model Bought: _____

Purchase Date: _____

*Serial #: _____

Frame Color & Size: _____

How did you hear about us? _____

Comments: _____

Please fold and mail back to Volae Recumbents.

* Your serial # is stamped on the front of the bottom bracket.

Place
Stamp
Here

Volae Recumbents
3201 John Joanis Drive
Stevens Point, WI 54481

Fold _

Fold _