

Quick Information

Tire & Wheel information

Rear: R32: 406 bead seat diameter, 1"-1.75" (ex 20 x 1.35")

Front: R32: 406 bead seat diameter, 1"-1.75" (ex 20 x 1.35")

Inflation pressures: Inflate to the pressure moulded on tire sidewall

Torque specifications

Handlebar Extension: 65 in-lbs (6 N-M)

Handlebar Stem: 65 in-lbs (6 N-M)

Chain

3x7 Hub, Standard Frame = 205 Links

Serial number location

Stamped on the back plate, at the end of the main frame.

The Advanced Transportation Products Inc. Warranty

Advanced Transportation Products Inc. warrants each new VISION bicycle frame, fork, and seat frame against defects in workmanship and materials for the lifetime of the original owner. Paint and decals, seat fabric, and all original 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 an authorized VISION dealer. Proof of purchase is required. A Warranty Registration Card must be completed and received by Advanced Transportation Products Inc. 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.

Advanced Transportation Products Inc. shall not be responsible for incidental or consequential damages. Labor charges for part changeovers is 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, triathalons, or similar activities.

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Owner's Manual R32ETR & R32ETS



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Chapter 4: Accessories

Now that you are comfortable riding your new R32, I'm sure that you will want to customize it for your particular riding needs. Your Vision recumbent has been designed to accept a full range of standard bicycling accessories, as well as some custom items that have been designed by ATP.

Rhode Gear Mirror

If you ride in traffic, a mirror is a must. We recommend the Rhode Gear bar-end mounted (Mt. Bike style) mirror. You should be able to find this at your local bike shop, or it's available from us.

Chainguard

If you ride with loose/floppy pants, or just find yourself getting chain goo on your legs, we have lexan chainguard available.

Seat Back Bag

Advanced Transportation Products has designed a custom bag to sit on your seat back. It has approx. 800 cubic inches of storage capacity in two sections: a main storage compartment with flap, and a zippered pouch on the main flap for wallet, keys, etc. Off the bike it features a comfortable shoulder strap. The bag is ideal as a day bag, or a touring companion bag for carrying valuable items. Also available is a 70 ounce water bladder that fits inside the day bag, with a drinking tube you can clip to your shirt.

Rear Rack / Panniers

We have an underseat rack available for the R32 that will accept panniers.

Fenders

We have a fender set available for your R32. Keep yourself dry!

Kickstand

I hate always looking for a tree or wall to lean my bike against. We've built in an attachment point for a standard Greenfield kickstand. You should be able to get one of these at your local bike shop.

T-Shirts

Declare to the world that you are a Vision recumbent owner - has the Vision recumbent logo over the left breast.

Chapter 3: Riding the VISION

the bike. Practice stopping and dismounting, then starting off again. You should also 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 one hand clamped on a brake to prevent the bike from rolling, it really helps. I usually immediately cock 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.

Don’t fall asleep on me yet, we’re almost done. The last thing you should practice before hitting the open road is your shifting. You really need to be work on being aware of how the gears work. Be aware that you must be pedaling to shift the derailleur. Sachs 3x7 hub can be shifted when the bike is stopped, although sometimes you have to kick the pedals backwards a bit to finish the shift. Shifting either derailleurs or internal gear systems should be done under light pedaling pressure. Make sure you practice shifting into your start-up gear before you stop.

You shouldn’t feel like you have to do everything in one session. Many novice riders actually do much better working up to the open road in several short training sessions, often days apart.

Thank You!

Thank you for choosing a Vision® Recumbent! Here at Advanced Transportation Products have built the most advanced, full featured recumbent available. Please take a few moments now to fill out your warranty registration card - we want to know what you think about your new bike.

Before we explore your new Vision recumbent's features, we would like to take a few moments to discuss some important points about recumbents and bike riding in general, so please read this manual completely. If you have any questions or concerns about the proper operation of your Vision R32, be sure to talk to your bike shop or to us before you ride.



Chapter 1: Read me First!

Always wear an ANSI or Snell approved helmet

Yes, with their lower center of gravity and feet-first position, recumbents are significantly safer than upright bicycles. You still need to protect your most valuable body part. Modern bicycle helmets are light, cool, and offer lifesaving protection.

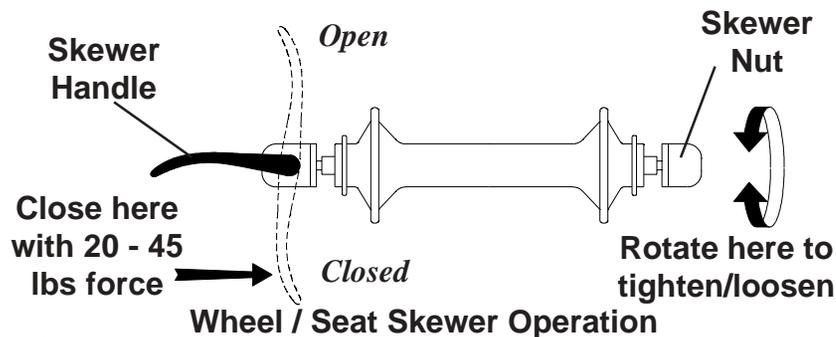
Check your bike carefully before each ride

Spend a few moments before each ride inspecting your VISION for problems.

*Check all the nuts, bolts and other fasteners to make sure none are loose.

*The tires should be inflated to the pressure moulded on the sidewall, and free of cuts or imperfections.

*The wheel quick release skewers should be clamped shut with at least 20 pounds (14kgf) of force, and a sharp blow to the top of the tire should not knock the wheel loose. Study the quick release skewer operation diagram - the skewer handle has a curve in it that will face the tire when properly closed. The skewer nut sets the tension of the system; it should be adjusted so that it takes 20-45 pounds of force to close the handle as shown. Generally, proper adjustment is achieved when the nut is set so that the handle starts to resist movement about 1/2 way through it's travel.



Chapter 3: Riding the VISION

you're not about to take a long ride on a short pier—practice swinging your head to the left and right, taking quick glances behind you. The first time you do this you will inevitably shift your weight and hand position, causing the bike to swerve. Don't panic, this is why we are practicing in the park instead of a congested street. While many riders like to use a helmet or bicycle mounted mirror—and we sell a beautiful unit that mounts onto the handlebar, see Chapter four of this manual—it's important to be able to actually look around behind you. This not only gives you options on checking out traffic, but practicing this will increase your skills and confidence on the bike.

At this point you should be feeling pretty good about life, zooming along nice and comfortable, relaxed and thinking about how much fun you are going to have on this thing. Well don't get too cocky yet. Before you hit the open road there are a some more exercises you should do. Practice circling, both to the right and to the left. Start out with gentle curves, and progress to tighter and tighter radius "U" turns. You should really try to master turning slowly in as tight a curve as possible quite a few times, this gets you ready for the real world of poor directions and detours. If you find yourself wobbling or jerking the handlebars around, you are probably too tense. Relax, let your hands grasp the bars in a light but firm manner. Let your shoulders droop, relax your neck, don't "death-clench" your teeth. Once you relax you will have more control over the bike.

Next, you should practice using the brakes. Stop and take off 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 frame to steady

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foot, but keep the strap nice and loose to start with. Swing the crank around until your foot is in a “cocked” position; somewhere close to the top of the pedal stroke. This spot is different for everyone, the key is to find the spot where you feel best about putting a lot of power into the pedal. It helps to hold the bike from rolling with either brake.



When you're ready, release the brake, and push forward firmly on the pedal. As you start moving, lift your other foot up and keep peddling. At first you probably will wobble a little, but don't panic and tense up! Just relax and concentrate on making small corrections with the handlebars. The most common beginners' error is to overcontrol the bike, ending up steering a set of “S” curves down the lane. If you relax and let your hands sit lightly on the handlebars, you will find it easier to avoid this syndrome. Lean back! You are probably trying to lean forward, to mimic that “other” type bike you've been riding. Another common first time mistake is to stare at your feet — after all, you've never seen them before! Look ahead, see the scenery you've been missing.

Once you're riding smoothly in a straight line, it's time to practice looking around. Now don't laugh, I'm not being funny nor condescending. Compared to a traditional bike you will find yourself looking at the world from a whole new perspective, a comfortable one. The biggest problem you will face is keeping your mind on the road. Since you are riding in a relaxing reclined position it's all too easy to forget about everything except the scenery in front of you. Looking behind you is not difficult, but it does take practice. As you ride in a straight line—and are sure

Read me First! (cont.)

Check your bike carefully before each ride

* The wheels should be straight and not wobble.

*Squeeze each brake lever to make sure there is no binding and the brake pads press hard enough on the rims to stop the bike. The brake pads should be adjusted so they are 1/16" (2mm) away from the rim when not applied. The brake pads should be centered on the rim and not touching the tire itself.

*The seat quick release skewers should be closed with at least 20 pounds (14kgf) of force (see the skewer diagram on page 4).

*Sitting on the bike, swing the handlebars from side to side checking for binding or interference. Check to make sure the attachment bolt is tight.

*If you are unsure of the condition of your Vision recumbent, **Do Not Ride It** until the problem has been corrected. If you have any questions at all, see your Vision dealer.

Wear gloves

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

Wear eye protection

Riding down the road at speed is no time to get a bug or dirt stuck in your eye! Goggles, glasses or both can save your sight.

Practice riding your Vision

Before you mix it up with traffic, spend enough time on your recumbent on a parking lot, driveway or other open area to get used to its unique riding position and handling characteristics.

Read me First! (cont.)

Never ride at night without a front and rear light!

Never, ever. Your Vision is equipped with a full reflector set, but these are not intended to make the bike meet state and federal regulation for night time riding. Be sure to add front and rear lights if you ride at night. See your local dealer for a selection of lights to fit your needs and budget.

Adjustments

Experiment with different seat and handlebar positions during your practice period. Your Vision recumbent has many adjustments and special features that fit the bike to you. Try them all!

Be careful when riding in wet conditions

No brakes, whatever their design, work as effectively in wet weather as they do in dry. Stopping distances and brake lever pressures will increase.

Keep your pedal cadence high

You can overstress your knees with the tremendous leverage you have on a recumbent. We recommend that you pedal in the 80-90 RPM range. If you experience knee pain, spin faster and check your leg length setting. It is probably too short - see Chapter 2 for leg length adjustment.



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don't have to take your hands off the handlebar at all to shift - just grab the grip between your thumb and forefinger, and twist!



Now let's get on the bike. I tend to always mount from the left, like 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, the middle of the handlebars with your left hand. Now

step through the space between the seat and the handlebar with your right leg, and sit down on the seat. Grab the brakes and apply lightly. Settle yourself into the seat and get comfortable.



Sit awhile, rock back and forth and from side to side. Notice how the seat cradles you, and how comfortably close to the ground you are. Grasp the handlebars and rock the front wheel from side to side. Squeeze the brake levers. Yodel a few times. Do whatever it takes to relax. Many first time riders try to sit forward on the seat, not being used to the relaxed, laid back position. Sit back! Enjoy the comfort!

Now pick a dominant leg. For most people this is your right leg, but go with whatever is most comfortable for you. Pick your leg up and swing the crank arm around so you can easily reach the pedal. If you are using toe straps, flip the pedal clip over your

Chapter 3: Riding the VISION

when you ride. If you do have an accident and fall over, you'll probably catch yourself with your hands, so save your palms and wear gloves. You should also wear protective eyewear; road grit and flying insects do not make for happy eyes. Wearing cycling shoes, shorts and jerseys can help you be more comfortable, but they are not as essential as the helmet, gloves and glasses.

Now you're all set to hop on your Vision and pedal away into the sunset, right? Wrong! The key to riding smoothly and in a controlled fashion on any bicycle, recumbent or not, is to be comfortable enough to relax. If you are nervous and tense, you will tend to ride in a jerky, overcontrolling fashion. Not only does this make you more uncomfortable, which leads to even worse riding, but it doesn't look cool. So you need to approach the bike as your friend, someone you'll enjoy spending the day with. The intent here is to spend some relaxed time getting to know your bike before you get 20 miles into nowhere, or involved with city traffic. Pack a lunch and head for the park, relax and enjoy the day for a bit, and then set yourself up to ride in the parking lot, or any open space with no traffic.

Before you start to ride, look at your gears and make sure that you are set in a good gear to start in. On a flat surface this usually is in the middle range of the internal hub ("2" on the left shifter) and in one of the three largest cogs. If the bike is not in one of these gears, have someone hold the rear wheel off the ground so you can spin the cranks and shift the gears. Don't forget that you should only shift the rear derailleurs when pedaling, although you can shift the internal hub when standing still by kicking the pedals backwards as you shift the left lever. As you gain experience you will find yourself thinking ahead and shifting into your favorite "start-up" gear before you come to a stop. Your VISION's gears are shifted with "twist grip" type shifters - they're right under your hands, on the forward part of the handlebar grips. You

Chapter 2: Adjustments

There are no assembly instructions included in this manual, your Vision Recumbent dealer will have put your bike together and set the adjustments for you. This section is intended to familiarize you with the adjustments you can make on your R32 to fit the bike to you. We will also discuss several of the unique features of the R32.

The Handlebar

The handlebar can be adjusted up or down, as well as toward or away from the rider. These adjustments are intended to help you find the most comfortable position for you. Never attempt to adjust the handlebar while riding. You will need a 6mm hex wrench to do these adjustments, see the illustration below.



The VISION® Seat

To install the seat on your R32, first make sure both quick release skewers are open. Slide the seat rails onto the main frame track from the front (see illustration No 1 below)



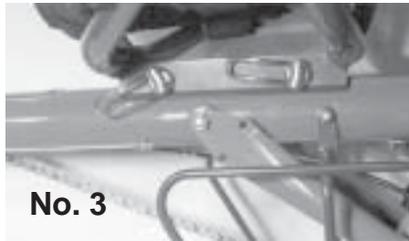
No. 1

Slide the seat to the middle of the track (see illustration No. 2 below) and tighten the quick release skewers. See page 4 for details on this.

Make sure the closed skewer handles do not interfere with the suspension swingarm. (illustration No. 3 below)



No. 2



No. 3

To adjust the seat position for your leg length, simply loosen both skewers and slide the seat forward or back as needed.



Lube your components.

Using your chain lube, or better still, a drip bottle of general bicycle lubricant (NOT "3 in 1" oil), carefully apply drops of lubricant to all the pivot points of the components. Do the brakes and the derailleur. As you move around the bike examine all the cables and casing pieces for wear and tear. Also examine the components for any damage.

Know your bike.

It's simple—just get to know the feel of your bike. If something feels different, and you can't figure out what it is, bring your bike to a shop to have it checked out. All of the components on the R32 are bicycle standards, and any competent shop can service it.

Chapter 3: Riding the VISION

Riding a Vision recumbent is no more difficult than riding a traditional diamond frame bicycle, just slightly different. If you are new to cycling, you'll find it easy to learn to ride on a Vision. If you are an experienced rider, you'll have to learn some new habits, but the benefits of riding a recumbent far outweigh the small learning curve involved. Either way, it's important to spend a little time adjusting to your new bike before riding in traffic or committing to a long ride. In this chapter I'm going to discuss some things that will make the transition to recumbents, or learning to ride on a recumbent, easier.

First of all, be sure to read the section of this manual about the set up of the bike. To ride well you have to be comfortable, and to be comfortable you need to be sure that your Vision is adjusted to fit you properly.

If you're comfortable on your bike, it's time to go riding. First and foremost, the most important part of riding any bike is to wear proper safety equipment. It is essential to wear a helmet, all the time, anytime you ride. It's also very important to wear gloves

General Maintenance

It's important to maintain your R32 properly, to keep it in good running condition. A regular visit to your bike shop is very important to keep your bike running smooth and safe, but between trips to the shop your bike will love some simple attention.

Lube your chain.

This is probably the most important regular maintenance item on any bike, and just as probably the most ignored. You should lube your chain at least every month. More if you ride a lot and do it every time you get rained on. It's simple, if you start when your ride is finished, rather than 2 minutes before you head out. First, grab a trashy rag (not a paper towel) and wipe the chain down completely. I wrap my hand with the rag, grab the lower section of the chain and turn the pedals backwards. Do this until the chain has travelled through the rag several times. Now apply a commercial bicycle chain lubricant (NOT WD-40!) to the chain. Follow the manufacturers directions, but what works for me is to drip it lightly onto the inner side of the chain, first the outer plates and then the inner. Now allow the bike to sit overnight. After the lube has had a chance to penetrate the links, it's important to wipe off all the excess lube. This helps to keep the chain free of excess road grit. Do this by repeating the wiping procedure outlined above.

Take care of your chain and it will take care of you. If your chain gets really nasty, there are some nice cleaning systems on the market—boxes that enclose the chain in it's own little washing machine. We recommend these over removing the chain from the bike to soak it. You should avoid breaking the chain any more than is absolutely necessary.

Pump up your tires.

It is normal for tire pressure to drop slowly. Check the pressure every week with a good hand pump. Inflate the tires to the pressure rating printed on the tire itself. Don't use pumps at gas stations... you'll be sorry if you do, your tires might blow off the rim.

Adjusting the VISION® Seat

It is very important to set the seat for your leg length correctly. If possible, set your R32 on a rear wheel type wind trainer. If you don't have access to such a trainer, have a friend hold the bike up behind your seat while you sit and back pedal the bike.

When the leg length is set properly, you should have a slight bend in your knee at full extension (see the illustration below).

To change the adjustment, get off the seat, loosen the seat quick release skewers and slide the seat forward or back to approximately the right spot for you. Tighten both seat QR skewers and sit down again. If you need further adjustment to get the proper leg extension, get off the seat and try again. Take your time—this is a very important adjustment. Once you have your leg extension set—and confirm this by spending some time riding the bike—you might want to make a discreet mark on the seat track. This way you can remove the seat for transport, and still get it back exactly where you like it.



Rear Suspension

Features

The R32 suspension system has more benefits than just the comfort of the cushioned ride. Up until now, it was often difficult to transport recumbents that did not have wheelbase lengths that were the same as typical upright bikes. Tandem racks often were needed. The R32 has the ability to fold itself into two positions; fully folded, with the rear wheel tucked under the frame for a "minimized" storage size, and partially folded, setting the wheelbase to a typical 36", so transport on a standard car top carrier (fork clamp style) is a snap.

System Pre-Load

To have the rear suspension operate efficiently, you need to set the "pre-load" on the air shock to suit your weight. This is very easy to do. Simply use a shock pump (a very high pressure pump designed for suspension systems) to set the air pressure in the rear shock. The exact air pressure needed depends on your size (i.e. the seat position) and your riding style. You should start by setting the shock to a pressure equal to your body weight. You might need to run 40-60 psi over your body weight. If you want a softer rider, reduce the air pressure. If you are getting excessive "pogo-ing" on climbs, increase the air pressure.



Transport & Storage

ternal hub into the first gear position ("1" on the twist grip).

Now, *without* pedaling, twist the right shifter back to the "#7" position, and the left shifter to the #3 position. This will slack up both cables. You will now be able to pull the rear derailleur and internal hub casings free from their casing stops on the right side of the frame, just behind the crankset (Fig. 1)



You will need to pop the front brake open at the caliper. (Fig 2)



Now, loosen up the riser clamp bolt with a 5mm hex wrench. (Fig 3)

You should be able to pull the grey handlebar riser free from the fork steerer now. You can lay the riser along the frame of the bike, and tie it in place with bungee cords. Be careful not to damage the gear or brake control cables.



To re-install the handlebars, lift the riser into place and slide it fully down the fork steerer. Align the handlebars so they are perpendicular to the front wheel, and firmly tighten the riser clamp bolt. Re-attach the front brake cable at the brake caliper, and then pop the two gear control cables back into their casing stops. Make sure both the twist grip controls are set to the #1 position. You might have to manually push the rear derailleur over until it's under the largest cog to get enough slack in the system to get the casing back into its stop. Lift the rear wheel from the ground and lightly pedal the cranks around a few times to get the gears re-settled.

Transport & Storage

Folding your R32

The first step to folding the R32 is to remove the shock upper support bolt. Undo the bolt completely, and be sure not to lose the hardware on the shock body. Fold the swing arm forward.



If you want the partially folded position for car-top transport, then stop the swingarm when the hole in the swingarm brace lines up with the partial fold hole on the main frame of the bike. Capture the chain by looping cable of the chain hanger/locking pin around the chain, then insert the pin into the appropriate hole, locking the swingarm in place.



For tighter storage, allow the swingarm to move all the way forward, and align the swingarm brace hole with the fully folded position hole on the main frame, then capture the chain and insert the pin.



Handlebar removal

To get the bike as small as possible for storage or transport, first fold the swingarm to the fully folded position described above. Next we need to remove the handlebar riser from the fork steerer. First, you must disconnect the control cables. This doesn't mean that you have to unhook the cables from the brakes or derailleurs, you simply have to pop the casings free from the split casing stops. To do this you need to shift the rear derailleur into the easiest to pedal gear (largest cog, #1 on the twist grip, be sure to pedal the bike when shifting the rear derailleur) and shift the in-



Anatomy of a Vision R32

