
What Makes a Good Randonneur Bike?

by Jan Heine



My bike is based on a 1999 Rivendell Road. The most difficult component of a randonneur bike are fenders. While no longer mandatory, I would not ride long distances without them – 1200 km with a wet behind is more than most of us can handle. The Honjo alloy fenders cover much more of the front wheel than most fenders. That still was not enough, so I cut down a second rear fender to use at the front. Metal fenders with rolled edges and uninterrupted interiors work much better than plastic fenders (see Fender Test in Vol. 2, No. 1), but are more difficult to install.

*Note: This article originally was published in **Bicycle Quarterly**, Vol. 1, No. 3, as the first of a number of articles on what makes a good long-distance bike. Later articles treated frame geometry, frame stiffness, lighting, tires and more. The article has been updated slightly from the original published in 2003.*

Randonneur cycling combines the love of travel with the enjoyment of physical exercise. However, finding a good randonneur bike is not as easy as it seems. Randonneur riding is a very different sport from racing or mountain biking, and requires very different equipment. Most bicycle makers do not even understand what makes a good randonneur bike, much less know how to make one. The following are the requirements for such a bike, as I view them:

1. Reliability: To finish within the time limit, you need to arrive first and foremost. The bike should be assembled carefully, from parts that are not prone to breaking. Parts that tend to wear out, like spokes, should be replaceable on the road.

2. Comfort: Few people don't make the time limit. More drop out because saddle sores, shoulder or neck pain combine with fatigue, becoming too much to bear. Much of this can be avoided.

3. Speed: There is a time limit. And the faster you go, the more you can sleep, eat and rest. However, speed is relative: time trials are won by tenths of seconds, but in a brevet, even minutes are meaningless.

4. Beauty: If you love your bike, it is easier to enjoy riding when you are tired. Small deficiencies that you can tolerate when commuting to work (for example, a rubbing fender) will drive you mad when you are tired and exhausted. Conversely, a wonderful bike that performs flawlessly will inspire to ride further and faster.

Many of the French constructeurs were randonneurs themselves, who rode long distances. Their clients were not just young racers, but seasoned riders who would not accept second-best. With a Singer or Herse, you bought a complete bike with lights, fenders and all that was needed. A good randonneur bike is a fully integrated design. You can

order a frame and build your own randonneur bike, as I did with the Rivendell you see here. Be prepared to spec every detail of the frame – all the way to the distance of the bridges from the axles. While some compromises are inevitable with this approach, the result can be a very effective machine.

Frame: Comfort is the word here. Frame weight are unimportant. The heaviest quality frame weighs 2 lbs. more than the lightest – the same as a full waterbottle.

Super-low handlebars may work for racers, who push hard on the pedals: their bodies are pushed upward, requiring little support from the arms. Randonneurs rarely work that hard, but we have to last a lot longer than even a Tour de France stage! To get the bars higher, you can resort to trickery like sloping top tubes, head tube extensions, riser stems, etc. (see the Rivendell), or you can simply ride a taller frame (see the Singer on p. 13), both with the same top tube length.

A criterium bike that dives into corners at the slightest input may be nice for a spin around the block, but you will weave all over the road once you get tired. A well-designed randonneur bike does not give up any cornering capabilities, as it combines straight-line stability with precise cornering (see also "How to Design a Well-Handling Bicycle," Vol. 5, No. 3). If you start with a racing bike design, choose something similar to the bikes of the 1960s, when races were longer and speeds were slower.

In addition to providing comfort and stable handling, the frame must be designed to work with the other parts of your bike, especially the fenders and luggage. If at all possible, there should be no toeclip overlap even with fenders mounted. In racing, toeclip overlap is no big deal – racers never go so slow that they need to turn their handlebars more than a few degrees. However, as you negotiate tight turns into a control, tired after 500 km in the saddle, the last thing you want is a crash due to your foot hitting the front wheel.

Wheels: Standard components are good, especially for wheels. If

Sam Eldersveld's 2002 Alex Singer is a traditional French randonneur bike. Compared to the Rivendell, the added fork rake provides more stability with a handlebar bag and prevents toeclip overlap. Forward light placement eliminates shadows cast by the front tire. (Photo: Sam Eldersveld)



you break a spoke on a high-tech wheel, you will have a hard time getting it fixed on the road. For a standard wheel, a new spoke will be available at most bike shops – or carry your own. However, spend a little extra on hand-built wheels with quality spokes and rims.

Saddle: Comfort is the only requirement. The heaviest saddles weigh only a pound more than the lightest. Saddle problems probably are the number one reason people don't finish rides. I use Brooks saddles.

Lights: For randonneuring, lights have to be attached to the bike, not the rider: riding in front of somebody with a light attached to their head is very tiring, because the light jumps so much. Worse, oncoming riders (and drivers) are blinded by a "headlight," which is dangerous. Taillights clipped to clothes or packs rarely shine in the right direction, making the rider invisible from behind.

French randonneuring rules require lights have to be steady, rather than flashing. Just like a photographic flash is blinding, so is the flashing light of an oncoming bicycle. And riding behind a rider with a flashing red light can be extremely annoying.

Front light placement: Lower generally is better, because a beam parallel to the road surface means you can see further. Also, potholes and undulations will show up as shadows, making them easier to see. With a light mounted near the right front dropout (Rivendell), the front tire casts a shadow to the left. Turning left means riding into a shadow. The best location is at the front of the rack (Singer). The light is placed low, but forward, so the tire won't cast a shadow. If you do not use a handlebar bag, you can mount the light on the fork crown. NEVER clamp a light to the fork blades. The light may slide down the tapering blades and get caught in the front wheel, with potentially disastrous consequences. To read the cue sheet, I use a small, helmet-mounted LED light. (See also article on light placement in Vol. 5, No. 2.)

Weight: The Rivendell, ready for PBP, weighs 25.5 lbs. (with fenders, lights, rack). The Singer weighs about the same. I weigh about 155 lbs. Then there are about 6-8 lbs. of luggage and water. A total of 185-190 lbs. A carbon bike might save a few pounds, but once you add lights and water bottles, the difference becomes insignificant (< 3%). I'd rather be comfortable.

Cost: A good randonneur bike costs a lot more than a good racing bike. Not only does it have many more parts, but also much more care has to be



A Singer specialty: Low-rider rack frames attach to the front rack, allowing the rider to carry two panniers with enough gear for light touring. Ideal if you plan to do a little touring after Paris-Brest-Paris. (Photo: Sam Eldersveld)

taken when designing and building the bike.

Availability: Unfortunately, there are few makers of randonneur bikes. I really hope more builders will rise to the challenge and make true randonneur bikes. (Note: This has changed since 2003. Now there are numerous custom builders who make randonneur bikes.)

Once you have a good randonneur bike, it is a joy to forget the machine and concentrate on the ride. A bike that seems to roll effortlessly toward the horizon on a long ride is exhilarating and allows you to develop your full potential.



▷ **The Berthoud bag is easy to access while riding. Little pockets take things you need often (control card) and those you hopefully won't need at all (tools, spare tube). The stem is equipped with a special quick release for the bag: the two prongs on the bag slide into the tubes on the stem. The stem is 1.0 cm long. Any longer, and the bag is moved too far forward, upsetting the balance of the bike. Get a longer top tube instead!**

◁ **Some people carry all their tools, water and supplies on their backs. Others leave even their wallets behind. I prefer to have my bike carry the necessities. A handlebar bag allows you to access your food and clothing as you ride, saving valuable time. The map and cue sheet can go on top (getting lost takes time!). Does a handlebar bag upset the bike's handling? Yes, it will if it is suspended on a wobbly frame 10 cm (4") above the front wheel on a bike with a geometry not suited to front loads. Done right, a handlebar bag becomes an integral part of the bike, improving its handling. The bag should sit low, supported by a lightweight, tubular steel rack, but most importantly, the geometry must be designed for a front-end load (See *How to Design a Well-Handling Bike*, Vol. 5, No. 2). If you don't mind stopping every time you need something, you can use a bag that mounts behind the seat. This works with most geometries.**



◁ **High-powered battery lights require heavy batteries that last 6 hours at the longest. With a generator, you have light when you need it, any time. The resistance is negligible (see *Testing the Resistance of Hub Generators*, Vol. 3, No. 4). The Schmidt generator hub powers a 3W front light, mounted on a custom stainless steel support, which attaches to a second eyelet on the front dropout. Fender mounting: I drilled out the threaded eyelets, so they accept French-style eyebolts. (See also *Mounting Metal Fenders* in Vol. 5, No. 2.)**

▷ **For the rear, a battery LED light (better two) is fine – the batteries are light-weight and last 70 hours or more. Rear lights can be mounted on the seatpost, if you don't use a big bag there. More elegant is mounting it on the seat tube, like René Herse did, on the seatstay or under the chainstay. Unfortunately, few battery lights these days mount on braze-ons. Don't clamp the light to the seatstay, as it will slide down eventually. These lights have been modified for braze-on mounting.**



◁ **A good spread of gears is important. PBP is more hilly than many anticipate, and you'll be tired. This bike is set up for the huge tailwinds of eastern Washington: 50-40-30 with 13-21 freewheel. You really don't need gears this big (see *Who Needs a Triple – Get Rid of Your Big Ring*, Vol. 1, No. 1). I prefer older components for their reliability, but most drivetrains work fine. However, stay away from Shimano's brake/shift-levers, as the cables interfere with the handlebar bag. I use downtube shifters – taking my hands off the bars once in a while prevents sore hands. Walkable shoes are a must, as walking comfortably at controls stretches your legs and prevents soreness.**



△ *Integrated lighting on a true randonneur bike (1990 Alex Singer): BB generator controlled by shift lever on seat tube, rear light under chainstay. Internal wires. Vertical dropouts facilitate wheel removal with fenders.*

If you cannot afford a custom bike, look for an older sport-touring bike with suitable handling. Starting with a sport touring geometry for 27" wheels, this 1976 Alex Singer was converted to 700C. Mafac 2000 (or Racer) brakes provide enough reach, fender clearance is plentiful. The little TA rack attaches to the brake pivots and the fork crown. Lights can be added. The resulting bike provides 85% of the performance of a randonneur bike at a fraction of the cost.



▷ *Even if you do not participate in brevets, a randonneur bike is perfect for centuries or light touring. This Alex Singer has provided many memorable miles in the hill country of central Germany.*



△ *Compromises on the Rivendell: Horizontal dropouts don't work well with fenders. Also, the eyelets are not offset toward the outside, so there is no space for a nut between the eyelet and the chain on the smallest cog, as needed for an eyebolt attachment. Maxi-Car hubs allow spoke replacement without freewheel removal. Three spare spokes are carried on the fender stay.*

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