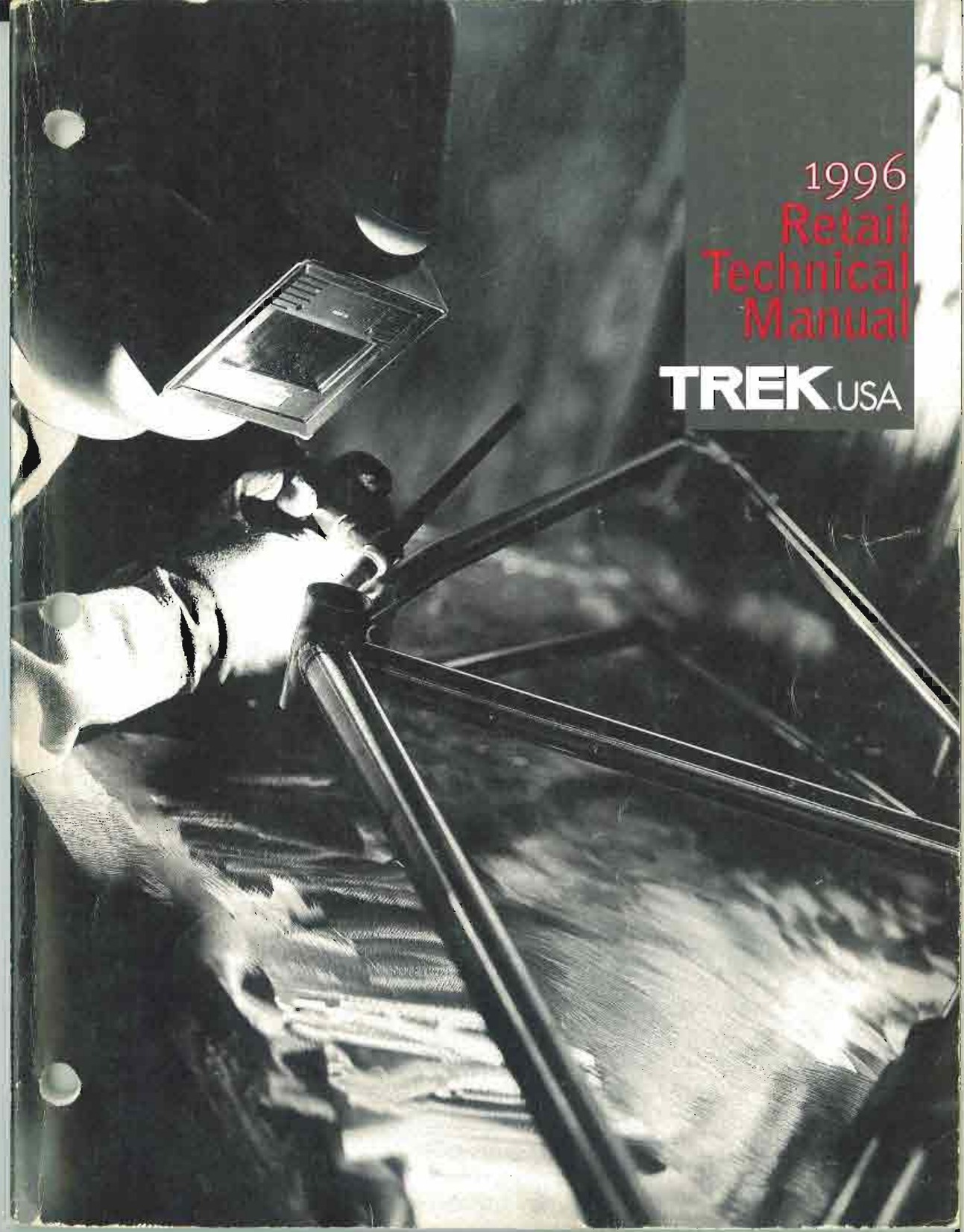


1996 Retail Technical Manual

TREK USA

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Why Trek?

The fonnding idea of Trek in 1976 was to bnild bicycle frames that wonld rival the performance of the classic road machines being hand-built in Europe, but to do so at an economical price by adding American technology to the manufacturing process. Keep the ride, the light weight, the beantifnl looks, the durability, bnt bring down the cost and make them easy to find by creating the best dealer network in the world.

That lofty goal is what still drives the Trek Bicycle Corporation today: Build bikes that ride better than any on the market, but do it for a price which the average rider can afford. Thanks to Trek, your customer can walk into your store and buy the lightest prodnction frameset in the world, with the best performing equipment, competition proven by some of the hardest riders on the planet, and pay less for a complete bike than other companies are charging for a bare frameset!

There are two reasons why Trek has become the number one bike company in the U.S.:

1. We don't just 'design' bikes, we build bikes.

And lots of them. Over 400,000 in Wisconsin last year alone, so when we put the U.S. flag on a bike, it's not just a sales trick. We have built over 1.7 million bicycles in Wisconsin, and from our hands-on experience (not to mention a lot of hard work and smart engineering) we've learned how to build bikes better than any factory in the world. Our diverse manufacturing technology (bonding, brazing, TIG welding, OCLV) lets us choose how we make those bikes. We're not limited by the manufacturing techniques or materials offered by someone else's factory.

When your customer buys a Trek, it will be built more accurately, and last longer. Not only that, our engineers have found ways to do this for a lower cost, so you can sell your customer a better bike for less money.

2. We listen to the people who ride and buy our bikes, and give them what they want.

Sometimes even more. Our "Dealer Advisory Boards" bring the nation's top dealers to the Trek offices where they get previews of upcoming products and trends. Then they vote on what they want to see on the market.

We have a fleet of Wrench Force vans and mechanics who spend their summer providing mechanical assistance to riders of all abilities at cycling events across the country. The riders don't know it, but we're really using the Wrench Force as Spy Vehicles, learning what riders like and dislike.

Our high end bikes carry the approval of Team Trek. Wbile these fast folks are not engineers, they do know how to push the envelope on a product. When our racers say they like the way a bike rides, we know that the Trek engineers have designed a bike that everyone can ride, and ride hard.

The devotion to cycling and the hard work we bring to our bicycles is just as strong in our aftermarket products. Whether its the safety of someone wearing a Trek helmet, or the ability to reach peak fitness on our Trek Fitness machine, we pour our hearts and souls into making sure your customer gets the best product possible. That's because we've been where your customer is going. High in the mountains, admiring the views. Sprinting for the finish line. Pedaling our way to work. We've put in our mileage, and our experience makes Trek products better for your customer.

Our love of bikes got us to where we are today. Each model is designed and built as though a friend, or even ourselves, were going to ride it. When Team Saturn or the Rocket Boys are riding a Trek bike, its not a special design or a one-of-a-kind. Its the same as the one you may be selling a customer today, or riding home tonight.

We hope you will take the time to read through the information presented in this manual, and that the specifications and other resource material will be of help to you when selling Trek products in the upcoming year. If you have any suggestions regarding this manual, or any other ways we can be of service, please write to :

Trek Customer Service
P.O. Box 183
Waterloo, WI 53594

A Word about our Limited Warranty

Trek Bicycle Corporation warrants each new Trek bicycle frame and rigid fork against defects in workmanship and materials for the lifetime of the original owner, except OCLV and full suspension models, which are warranted for a period of five (5) years.

As yon may have noticed, a lot of bike manufacturers are only offering shorter warranties on their prodncts (like a year). There are several reasons for this. Most warranty sitnations occur dnring assembly. If a frame is truly defective (and that's what a warranty covers. not crashing or abuse), a good mechanic is likely to recognize the defect when they put the bike together.

Occasionally, a defect may require some force be applied to evidence itself. In this case, its probably going to happen with a minimum amount of riding. So a year is probably a reasonable amount of time. After a year, any defects are probably limited to heat affected problems, which are not a consideration with OCLV since its not welded or brazed. So we feel that the bike owner will be equally served with a 5 year warranty as with a lifetime warranty.

A good question might be- "If a warranty problem is going to occur right away whether its under warranty for 5 years or Lifetime, why not just say Lifetime?" The issue here is that a Lifetime warranty sends the wrong message to the user. OCLV bikes are the lightest you can buy. They should be treated with respect. And if given that treatment, they will last a long time.

A reasonable person would think- "Boy, I like this bike, and I want it to last forever, so I'll take care of it". But there are people who think "I can thrash this thing as much as I want, because if I break it, I'll just get a new one". The chances are good that any problems the thrasher might incur will probably not be covered by a warranty anyway. Nonetheless, its prudent for us to let them know that mistreatment will shorten the life of ANY bike, and the lightest bike on the market is no exception. This way, we haven't "led tbem on" with unreal expectations.

What the 5 year warranty does is give a message that a rider cannot expect a 2.92 pound frame to last forever without a little common sense in its usage. A reasonable person should take a little extra care of such a lightweight machine. But some don't, and they expect US to carry the burden of their abuse. What this does, in the long run, is makes the reasonable person pay for the mistakes of the unreasonable. And that's not fair.

The problem, in simple terms, is abuse. Some people abuse their bikes for the simple reason that they have a lifetime warranty. We could just tell folks who have problems resulting from abuse that they are out of luck. But generally, we go way out of our way to try to keep people happy. A broken bike outside of warranty does not make people happy, hence the more conservative message.

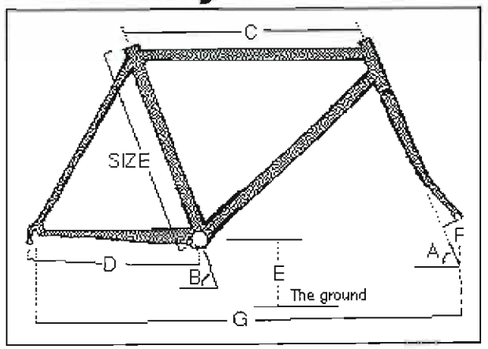
If we had doubts about the durability of our OCLV bikes, we would not risk having our Pros race on them. We wouldn't want to risk having our racers DNF (its expensive running a Pro team, and the only way you get anything out of it is to have your team finish tbe race). And we certainly would not want them breaking frames in the race- that ends up in the media. Instead Team Saturn, the Rocket Boyz, and our Pro Triathletes Mike Pigg and Karen Smyers are consistently at the top of the field in the overall standings at the end of the year- indicating that they are finishing their races. And finishing well!

So again, we are simply telling people ahead of time that if they abuse their bikes, they should not expect them to last forever. True, our warranty already states that we do not cover abuse. But the definition of abuse is somewhat murky. 5 years is pretty easy to determine.

So why do our aluminum and steel lineups still carry the Trek lifetime warranty? From our data (after building 1.7 million bikes in our Wisconsin factory) these bikes seem to be as free of defects as the OCLV bikes, but their added material seems to protect them from abuse pretty well, too. Our info says that our aluminum bikes are our most durable in all the categories we collect info from- warranty, crashes, and everything else that applies.

So, if someone is planning on riding in an abusive manner, we recommend that they buy one of our aluminum bonded bikes. They ride well, are less expensive, and continue to carry a Lifetime Warranty. Or maybe we should just recommend that riders NOT thrash their bikes!

Geometry and Ride Characteristics



Terminology

Head Angle (A)

The angle formed by the intersection of the centerline of the head tube and a horizontal plane. This angle effects steering quickness, and the steeper the head angle, usually the quicker the steering.

Seat Angle (B)

The angle formed by the intersection of the centerline of the seat tube and a horizontal plane. This angle effects the fit of the bike, particularly addressing the length of the femur (upper leg bone) by changing the rider's position over the crankset. Usually, smaller bikes will have steeper seat tubes, while larger bikes will have more relaxed seat angles.

Seat Tube Length (Size)

The distance from the center of the bottom bracket to the top of the seat tube, although alternate methods may measure to the center of the top tube or top of the top tube. This relates to overall leg length, but with the advent of super-long seatposts and new frame designs like the Y bikes (which don't have a true seat tube), seat tube size is less meaningful than it once was.

Top Tube Length (C)

The distance from the junction of the centerlines of the head tube and top tube to the junction of the centerlines of the seat tube and the top tube. This measurement relates to torso length and positioning on the bike.

Effective Top Tube Length

The length of a horizontal line from the junction of the centerlines of the head tube and top tube to the imaginary centerline of the seat tube. This measurement is important due to the sloping top tube (with extra long seat post extension) currently favored by mountain bikers. A more accurate version of the top tube measurement, this relates to torso length and positioning.

Chainstay Length (D)

The distance from the center of the bottom bracket to the center of the rear axle. This dimension effects weight distribution over the rear wheel.

Bottom Bracket Height (E)

The distance from the center of the bottom bracket to the ground. This measurement effects ground to pedal clearance, as well as stability of the bike by dictating the height of the rider's center of gravity.

Offset (Rake) (F)

The perpendicular distance from the centerline of the head tube to the center of the front hub. Rake combined with the head tube angle yields another steering term, trail.

Wheelbase (G)

The distance from the center of the rear hub to the center of the front hub. This determines handling characteristics like turning radius, tracking stability, and shock absorption.

Trail

The distance between where the head tube centerline intersects the ground and a vertical line dropped from the center of the front hub. This measurement effects the stability of the steering system and the feel of the steering. Longer trail usually means a "heavier" or more stable feel, while less trail usually feels "quicker" or "lighter".

Front Center

The distance from the center of the bottom bracket to the center of the front hub. This distance effects both weight distribution and toe clip /front wheel overlap. Given that most mountain bikes use only a narrow range of steering angles and offsets, front center also refers to the amount of "cockpit room" the rider will have.

Stem

This should be considered part of the bike's geometry because it effects weight distribution and steering feel. Along with handlebar width, it also relates to arm and torso length.

Suspension Ready Geometry

Prior to the 1993 Trek line, all mountain bikes were designed for forks with an axle-to-crown-race-seat of 387 mm. The suspension forks available at the time (Rock Shox RS-1) had an axle to crown race dimension of 408, and the air/oil design and lockout incorporated into the fork meant that this was the fork length with the rider on the bike. This meant the head tube of the bike was lifted 31 mm, or over an inch. The result was reduced standover height, and a loss of about one degree of head angle. It also meant that the handlebars were now too high, and slightly closer to the rider due to the change in angles. All and all, a loss of performance, at least from the original intention of the bike designer.

With Suspension Ready Geometry, the bike is designed for a longer fork, with the standover and angles correct with a 408 or 426 mm fork in the bike. With the new elastomer forks, some sag is recommended for correct ride. In addition, these new forks are always in motion, so there is a less defined actual ride height of the fork than with a rigid fork or early air/oil design. For this reason, the frame design works reasonably well as long as it is somewhere within the range of 408 to 430 mm. All our mountain bikes from the 930 and above use this dimension, and will ride well with any modern suspension fork design.

It All Works Together

Every facet of bike design will effect another, so we can only talk in generalities about what any one dimension does to the bike. Its obviously true that each part of the bike is connected to another part of the bike. However, it isn't always apparent how changing one dimension on a bike will effect the others.

A good example might be that chainstays effect steering. How, you say? When you shorten the chainstays on a bike, the bike will tend to steer quicker due to the shorter wheelbase.

This concept is just as important to consider when evaluating poor designs as good ones. With some bikes on the market today, all frame sizes share the same length of head tube to save money. However, its very difficult to get the proper handlebar height for every rider from a single head tube height.

Another example might be some of the new rear suspension designs, which use basically one or two seat tube lengths. They move the elevation of the top tube around, but due to the geometry limitations of their rear suspension, they cannot use a real dimension seat tube. In other words, the seat tube dimension does not really change. While this works fine on big bikes, the small frame sizes may not offer the range of seat height adjustment necessary for good fit, or the opportunity to drop the seat on rugged descents.

Ride Characteristics

Although we can talk on about the properties of materials, the really important thing is how a bike rides. And although a given material does tend to exhibit some tendencies on every bike where its found, it is often the design and manufacturing that sets one brand of frame apart from another, more than the frame material.

An example might be our aluminum road bikes, like the 1220 or the 1400. These bikes use aluminum frames, but with an 'in-between' diameter. Meaning they don't use the huge, super stiff tubing of some of our competitors, but the tubes are bigger than a traditional steel road bike. By using this design, we've been able to maximize the shock absorbing characteristics of the aluminum while maintaining enough frame rigidity to satisfy most racers.

Another example might be our OCLV road bikes. Initial impressions usually say that these bikes are very stiff. No doubt about it, that's because the 1 5/8" tubes are stiff. You'll feel that stiffness when you sprint or climb a hill hard. But over a long ride, these bikes are unexpectedly comfortable. That's because the carbon lugs can flex and absorb shock, something frames with metal joints can't claim.

When we describe the way a bike rides, we use some pretty subjective terminology. We talk about things like stiff, lively, shock absorptive, comfortable, quick, or steady. All these words have different meanings to different folks. So the best way to help your customer understand the way a bike rides is in a test ride. Take the time to explain to them what characteristics they should be testing for, or explain to them how a particular design is going to fill a need the customer expressed earlier. But most important- take the time to ride the different bikes yourself so that you know how they ride, can explain it, and can use this knowledge to fill the customer's desires.

The Importance of Quality

Now that you understand how important each facet of bike design is, its time to talk about why its important that bikes be built well. We know that everything on a bike effects another in terms of its fit and handling (and when we talk about bike performance, fit and handling are everything).

If one tube is slightly longer than it's supposed to be, it can throw off the entire design. Or if a frame joint is slightly different than spec, you'll get a similar result. Angles will be wrong, dimensions will change, or wheels and components may not be correctly aligned.

As an example, what happens if the top tube is cut just a little long? This will push the seat tube back, making the seat angle slightly more laid back. No big deal- but the seat stays won't change, so the more laid back seat tube will push the seat stays further back- which pushes the dropouts down- which raises the bottom bracket- which steepens the head angle. These changes may be small, but when your customer is paying a lot of money for their new bike, they deserve to get exactly what they have paid for. And Trek delivers.

Another term we use a lot to describe quality is that of alignment. A properly aligned bike puts both wheels in the same plane so that the bike tracks straight without having to lean it, and it turns with equal ease and precision both right and left. The other frame components should also be in plane, like the bottom bracket. If the bottom bracket is out of alignment, the chain will feed onto the chainrings at an angle, so the drivetrain will run rough and not shift properly. Plus the rider will be pedaling at an angle, and their efficiency and comfort will suffer from less than great ergonomics.

At Trek, we use sophisticated processes like laser mitering, size-specific jigs, and our Advanced Bonding Technology to name just a few. We have invested heavily in engineering expertise and new technologies which help us manufacture bikes of unparalleled quality. Even so, we still take the time to perform multiple alignment checks on every frame we make in Wisconsin.

All to make sure that your customer gets a bike which will be fun to ride for a long, long time.

Frame Materials

Important Factors

The two most important considerations when selecting a material for bicycle construction are **Specific Ultimate Strength** and **Specific Modulus**. In layman's terms, Specific Ultimate Strength is the breaking strength of a material divided by its weight (to be technically correct, divide by density). Specific Modulus can be translated to mean the stiffness per weight. A third factor which may be most important to your customer is the cost of the bicycle. When cost versus performance is considered, we refer to this as **Value**.

The reasons for the importance of these factors are simple. A bicycle must be adequately strong to withstand the rigors of cycling, it must be adequately stiff to provide good performance, and it should be as light as possible to avoid wasting the rider's energy. It should also be affordable.

If a material does not have a blend of stiffness and strength, it will either be heavy or be lacking in strength or performance. Let's look at an example: Cro-Moly steel has a high specific modulus, but a fairly low specific ultimate strength (see chart). This means that a fairly high amount of material (by weight) will have to be used to make a Cro-Moly bike of good strength. However, Cro-Moly steel is usually relatively inexpensive and so can offer a good value, even if a Cro-Moly bike will be a little heavier than a bike built with some other materials.

As another example, carbon fiber composite is quite a bit more expensive than Cro-Moly steel. However, because it has very high specific ultimate strength, a very light bike can be built that is very strong. In addition, its high specific modulus means that even a very light carbon bike can also have good stiffness.

Another high tech material for bicycles is titanium. Although different alloys vary somewhat in their characteristics, generally titanium has a lower specific modulus than carbon fiber composite, Cro-Moly steel, and even some aluminum alloys. Titanium has a higher specific ultimate strength than Cro-Moly steel, but is lower in strength (by weight) than carbon composite. This means that a titanium bike of good strength and stiffness will be heavier than a carbon fiber composite bike of like performance, even though considerably more expensive.

Trek engineers have looked at these and other materials to ensure that Trek bikes offer the best performance per dollar possible. We choose not to use some materials which may make good bicycles, but are too expensive to give good value.

As you look at the chart comparing characteristics of the various materials, remember that many factors will effect the end product. For example, increasing the diameter of a tube will increase its stiffness, but reduce its resistance to dents. Manufacturing techniques, like designing and building lugs, will effect the price of a completed bicycle. Manufacturing efficiency can bring prices down, an important fact that allows Trek to build expensive lugged aluminum and carbon bikes at competitive prices.

Manufacturing Quality

Another important point is that there is more to a bicycle than the material in the tube set. Tubing which is no longer straight or bikes that don't track straight due to poor alignment are poor values. Trek bicycles are built with high tech processes to ensure that the properties of the tubing remain after construction (since we actually make bikes, we're happy to get specific about just how we do this: see the sections on our OCLV, ABT, and Signature Sequential TIG welding processes). The fittings are top quality as well. Investment casting, forging, and other processes are integrated into all Trek lug work and framesets.

Fatigue Resistance

In the trade publications, much has been made of the fatigue strength, or fatigue resistance, of materials. Although there have been some truths explained in these magazines, there has been some rather broad oversights, especially regarding the fatigue resistance of aluminum bikes. First, lets talk about what fatigue is. In a bike, its essentially the forces and flexing that a bike frame undergoes in everyday riding. This is the result of strain placed on the material, but at a lower force than the yield strength (or bending strength) of the material. That is, a force is placed on the frame that may be sufficient to alter the shape of the frame, but not to leave it permanently bent. With each repetition of this stress, different materials will fatigue at different rates.

Its important to note that the smaller the area affected by a given force, the higher the stress will be on that area. This means that the more spread out the stress, the wider the stresses are distributed, and the longer the fatigue life of the part. The important point here is that with good design, fatigue failure with any reasonable material can be almost eliminated. This is why aluminum is widely accepted in the aviation industry. And its also why carbon fiber, with its almost infinite fatigue resistance, is a great material to use for bikes.

Durability

Another important consideration of bicycle frame materials is impact resistance, especially as the envelope is being pushed for light weight products. No longer are we just concerned with frontal impact or fatigue strengths of bike frames. In modern mountain biking, hard crashes are fairly common, and the bike gets tortured in ways unheard of just a few years ago. Slammed on their sides. Smacked on rocks. Front wheels wildly rotating and handlebars smashing the top tube. We have taken the time to try to evaluate some of these stresses (although with the wide variability of crashes, its pretty hard to build a "front wheel endo machine" for testing such). The good news here is that our carbon bikes actually offer as much, if not more, impact resistance than commonly used metal frames. For a really good visual demonstration of this, review your Trek Technical Clinic videos from either '94 or '95, and watch what a carbon tube does to a steel or aluminum tube when the two meet head-on!

Repairability

A final consideration in bicycle design (and one we hope never becomes necessary) is the ability to repair a frame in the event of a severe accident. We have gone to great lengths to over-design Trek bikes, to make them stronger than necessary. In almost every case we could reduce the weight of our bikes somewhat, but at the expense of reliability. Nevertheless, chances are good that someone out there will find a way to break their Trek bike. With this thought in mind, we've designed our bikes to be repairable. Even our carbon fiber frames can be economically repaired.

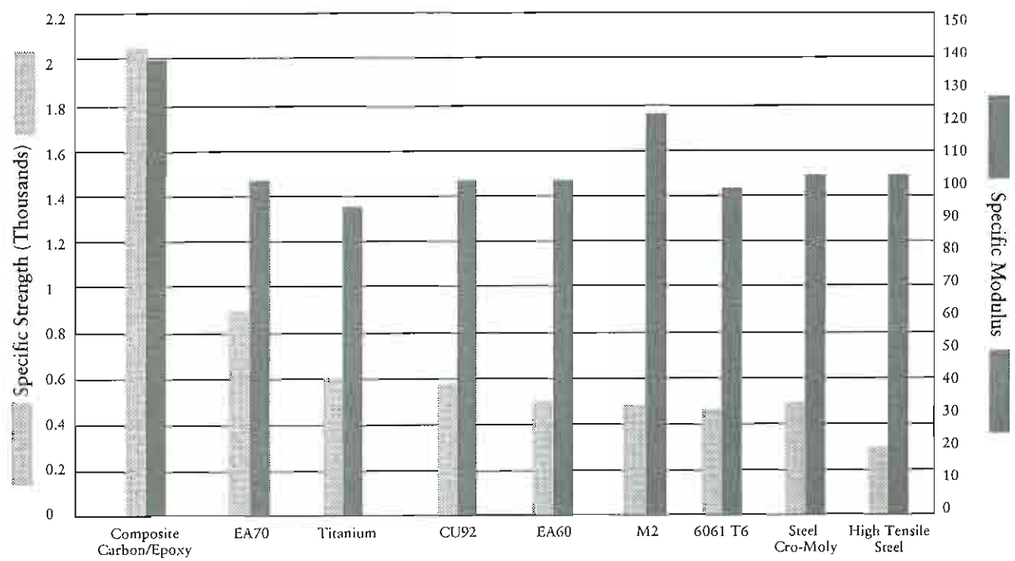
The Chart

It should be noted that for this comparison and chart, we use only two of the many properties of materials which might be considered for bicycle design. While the Specific Modulus relates in some ways to the performance characteristics of a bike, the Specific Ultimate Strength dictates how strong a bike can be. If a material is very strong, like carbon composite, it will take less material by weight to make an adequately strong bike (assuming equal design and manufacturing). If a material does not have a high Ultimate Specific Strength, you end up with either a heavier bike, or a light bike that's not as strong.

In our comparison, we use Ultimate Strength rather than the Yield Strength. Yield Strength is the value of force where the material is permanently deformed, but not separated or broken. With carbon fiber composite, the Yield Strength and Ultimate Strength are essentially the same. This is why a carbon structure is thought to fail suddenly, since the point where it partially fails is almost identical to the point where it totally fails. With most metals, the Yield Strength is well below the Ultimate Strength. This means that long before a metal frame completely fails, it will bend to the point of being useless. Although this lower Yield Strength may be seen by some to be a 'safety valve', others will see it as a premature loss of use of the bike.

We think the point of high strength is for the bicycle to remain useful under high loads. In other words, its better to have a bike which will withstand incredible loads and then fail than a bike which will become damaged at much lower loads, not completely fail, but no longer be rideable.

Specific Ultimate Strength & Specific Modulus



Tires '96- Continental, Panaracer, and Tioga

Tires can make a big difference in how fast or easy a bike rides, how comfortable it is, and how it handles. We have carefully analyzed how to best compliment the ride of each Trek bike. We hope that you and your customers find our selections good ones. Because of this wide array of tires, we list here some of the specifications and manufacturer's recommendations concerning their tires:

Continental off-road tires

Navigator- A more aggressive version of the Leader Pro used on our '95 bikes. Continental's tread compound has the highest percentage of natural rubber for harder knobs which still have great traction. This compound is also more cut and wear resistant for long tread life. A special process coats the nylon threads in the casing with natural rubber for high cut resistance. Open directional tread pattern means more pressure per square inch of knob for maximum bite. 1.9 width for good flotation, but with low weight. 480 gms.

Cross Country- Same casing construction and tread material as the Navigator. Large, sharp, and closer spaced knobs with cross-tread blocking for uphill traction as well as increased stopping power. Suitable for front or rear tire use with directional arrows for each. 1.9 width for low weight, and fast rolling. 530 gms. The extra weight compared to the Navigator is the result of the large knobs.

Panaracer off-road tires

Dart II- A lighter, faster version of the venerable Dart. The Comp version uses Kevlar™ beads for lower weight.

Smoke II- A lighter, faster version of the well respected Smoke. Again, the Comp version uses Kevlar™ beads for lower weight.

Dart II Comp/ Smoke II Comp- A lighter version of these two tires using a Kevlar™ bead to pare 40 grams off each tire.

Tioga off-road tires

Tioga uses a variety of descriptor letters along with the names of their tires. These can be confusing, so here we'll try to straighten it out:

K- Slightly rounded tread blocks, with more spacing between the knobs. Lighter and faster. (Yeah, we thought it meant Kevlar™, too.)

S- Steel bead

T- New rear specific tread with larger knobs for wear, and more cross-block tread for in-line traction both climbing and braking.

R- Amber colored, softer tread (and we thought it was R for Racing)

II- Denser tread pattern for durability

Psycho- 1.95 casing width with the tread width more like that of a 2.1. Recommended tire mounting has the front chevrons pointing forwards, and the rear chevron pointing rearwards (when on top of the wheel). Treks use the Psycho K with Kevlar™ bead (540 grams) and the Psycho KS, with a steel bead (580 grams).

Trek off-road tires

Connection- Linked center blocks for smooth rolling and aggressively sized knobs on a 1.95 casing make this a great combination road and off-road tire.

Kahuna front and rear- Trek designed steering and drive specific tire system. A heavier version called the Big Kahuna was used by Trek's Rocket Boys. Big 2.1 casing is shock absorptive and durable. 615 gram front. 678 gram rear.

Continental road tires

Super Sport Ultra-Continental technology in a great recreational road tire. 320 grams.

Grand Sport- Same casing quality and tread compound as Conti's off road tires. 290 grams in a 23c.

Grand Prix- Conti's best. Just 190 grams in a 23c.

Trek road tires

Invert II- 700 x 38c tire with more open inverted tread. Tread pattern is expanded to cover more tire surface for better traction in looser terrain. 440 grams.

IsoTech 2- Road tire with smooth center for speed, siped sidewalls for traction. 66 TPI. Max pressure 100 PSI.

IsoTech 3- Lighter and stronger version of the 2. 115 PSI and 265 grams for a 25c.

IsoTech 3K- Same features as the 3, but with the addition of a Kevlar™ belt under the tread for extra puncture resistance. The Kevlar™ belt adds some weight, so this one is 295 grams.

GripShift ESP 900

SRAM Corporation's GripShift shifting systems have been winning fans in the mountain bike world for several years now. The growth in GripShift's popularity stems from their ease of use, low weight, relative simplicity, and the expeeted durability that comes with that simplicity. All these features are the result of a lot of R&D by the people at GripShift, who listened to their customers and worked hard to deliver what riders asked for.

Dedicated System

Following the theme of listening and delivering, GripShift has introduced a new American made rear derailleur and dedicated shifter called the ESP 900. By dedicated, we mean that this new derailleur will not work with existing Shimano shifters. Nor will this shifter work with other derailleurs.

Reduced Actuation Ratio

The reason why this is a dedicated system is that it takes about 75% more cable movement for each shift than existing systems. So the shifter pulls more cable, and the derailleur requires more cable pull for eaeh shift.

The reason for this greater amount of cable pull are two fold. First, if more cable moves in the same period of time, stiction of the cable is reduced. Second, by moving more cable for the same amount of shift travel (this system works on standard 8 speed spacing) the movement of the derailleur can be more precisely controlled. The result is more positive shifting without any extra shifting force required. But that's just part of the story-

Chain Gap Control

The ESP 900 derailleur uses a "coaxial" guide pulley. This means that the upper derailleur pulley is on the same pivot as the derailleur cage. Combined with a steeper parallelogram, this keeps the upper pulley at a more constant distance from the cogs resulting in more precise shifting over the whole cassette range. It also eliminates the need for a "B" pivot spring and thus removes a variable in the shifting system.

Materials Science

GripShift has developed several new derailleur body materials, including a carbon fiber composite with very high strength to weight characteristics. A stiffer extension spring keeps shifting snappy. And along with the new materials, GripShift's 900 derailleur is fully rebuildable, so the rider can expect the derailleur to have a long lifetime with a little maintenance. All pivot pins are serviceable, cleanable, and replaceable.

Other Performance Features

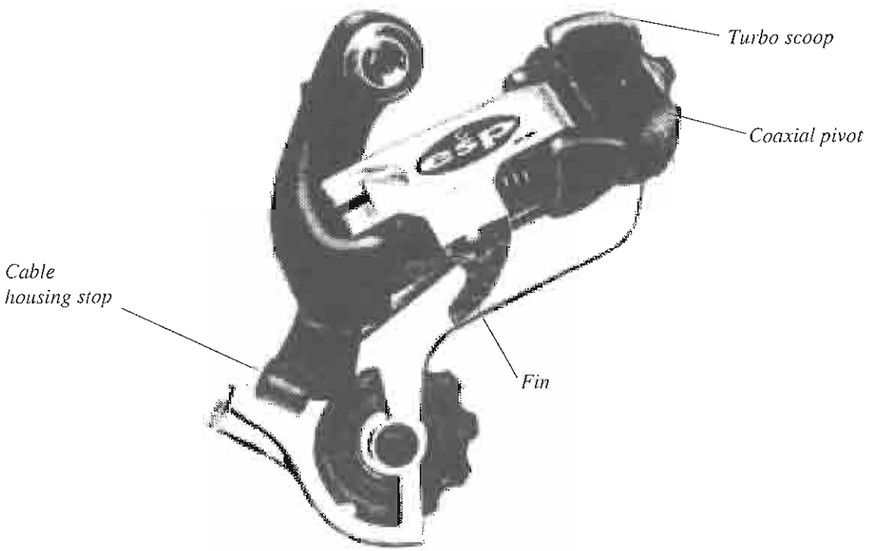
The derailleur body itself has several unique features. These all add to the ESP 900's shifting performance.

The "Turbo Scoop", located at the upper pulley, controls the chain as it moves off the upper pulley onto the eogs. This part is an ultra high molecular weight polyethylene, which eliminates wear of the derailleur body.

The "Fin" controls the derailleur actuation ratio, giving the shifter a powerful mechanical advantage for a very light shift effort.

A special housing stop design is angled to reduce friction and allow the cable to drain. And be eliminating the redundant cable tension adjuster on other derailleurs (after all, there's already one on the shifter!) this area is strengthened while reducing weight.

The ESP derailleur places the upper pulley forward of the cassette. This allows the chain ro be led onto the cassette smoothly without a floating pulley for crisper shifts. It also means the chain engages more cog teeth. More engagement is a plus in conditions where the chain may be clogged, like in mud or snow. And the more teeth are engaged at a given time, the less wear on each tooth, helping increase the life of the cogs.



Suspension Technology

For the 1996 Trek bicycle lineup, you'll find a lot of suspension. You'll also find top brands like Rock Shox, Manitou, Fox, and the new Stratos rear shock. To help you understand and sell the differences between the various shocks used on our bikes, we offer the following explanations:

SR DuoTrack 7006

The DuoTraek suspension fork has proven itself to be a solid performer in the reereational category. We hear discussions about whether this level of suspension is worthwhile. Our answer is that the primary benefit of suspension is comfort for the rider, and the DuoTrack does that very nicely. Extra comfort means less fatigue, so the rider doesn't get as tired. This also means the rider can better control the bike. So yes, its worthwhile.

The DuoTrack uses a coil steel spring with elastomer topout and bottom-out bumpers. Its a little heavier than a full elastomer spring, but offers a linear spring rate so the fork's entire travel is usable.

Manitou Mach 5 Pro

New for '96, the Pro offers multistage elastomer technology in a very light weight, laterally stiff package. The Pro also provides increased travel, with 58 mm of bump absorption.

The key to the low weight and rigid steering of the Pro is the new Posi-Link brake areh. Although massive for stiffness and strength, the back side of this arch has material removed from the magnesium casting to reduee unwanted weight. Then the arch is bonded, not bolted, to the sliders. This connection better resists torsion and without the weight of steel bolts, and therefore is lighter and requires less maintenance.

Adjustment of the Pro is done with an 'E-clip' mechanism which works easily and reduces the chanee of damaged adjusters. Simply unscrew the caps at the top of each fork leg. Inside, the E-clip ean be removed and placed in one of seven slots to change the length of the cap extension. Then thread the cap back into the fork until tight. It's not necessary that the E-clips be placed the same on each fork leg, meaning there are 14 different settings possible. For best results, find a setting which gives about 5 mm of fork sag when the rider is on the bike in normal riding position.

Manitou Mach 5 SX

Like the Mach 5 Pro, the SX model uses multistage elastomers for cush, and a Posi-Link brake arch for steering precision. However, the SX offers 63 mm (2.48 inches) of travel, and adjustable rebound damping for even greater control.

The SX also offers rotating fork preload adjusters with durable aluminum adjuster parts. Simply twist the adjusters at the top of each fork leg as indicated on the knobs for a stiffer preload. Like the Pro, we recommend about 5 mm of fork sag. The damping adjustment is done with an external knob found at the bottom of the left leg. Because its range of adjustment is so wide, Manitou does not recommend that you use the fork at full damping, as the fork may not fully return to its extended length after a given bump.

Rock Shox Quadra 5 and 21R

The Quadra 5 uses a one-piece urethane elastomer which is extra long for a very smooth spring curve. The preload is adjustable with external adjusters at the top of each fork leg. There is 48 mm of travel.

The new Quadra 21R has 60 mm of travel, using the micro-cellular urethane elastomers found in Rock Shox's top of the line Judy series. Although there is no damping cartridge like on the Judys, the system works very well. This is also a very light fork.

Rock Shox Judy XC

This fork's many great features made it Bicycling Magazine's favorite fork last year. It uses an MCU (Micro Cellular Urethane) elastomer stack with hand operated preload adjuster at the top of each fork leg. Because the elastomer staek is comprised of several separate pieces of different durometers, its also possible to change-out the pieces to further modify the stiffness if desired.

The Judy design includes oversized fork legs and a recessed brake arch to resist twisting during braking. Fork leg overlap has increased and bushing separation has more than doubled. This gives the Judy fork incredible lateral rigidity and steering control.

The left leg uses a hydraulic (oil) damping cartridge which is permanently sealed, and for '96 this cartridge has adjustable compression damping via a 2 mm allen screw located inside the left leg. Maximum damping is fully clockwise, while detents allow up to 4 full turns of adjustment. Also new, travel of the standard XC is 63.5 mm (2.5 inches). On the Trek Y22 full suspension bike, the Judy XC forks are the long travel version with 75 mm (3 inches) to compliment the 4 inches of rear wheel travel.

Also new are the Judy Jax, which replace the skewers which held the individual elastomers together in the '95 Judys. Judy Jax are small plastic pieces which snap snugly onto the ends of the elastomers. Not only are Judy Jax lighter than the skewer assemblies, but they eliminate a source of friction to make the Judy forks even more smooth and plush.

Rock Shox Judy SL

The Judy SL shares the features of the Judy XC including travel. However, through additional machining of parts and exotie materials (like titanium bolts, or the aluminum steerer) the SL is quite a bit lighter.

Fox Vanilla Coil/Over Rear Shock (1.5 inch travel)

For 1996, we have added several models of full suspension bikes, and new rear shocks to go with them. The Fox Vanilla coil/over shoek uses a coil steel spring over an oil damping unit. Although heavier than an air spring, the steel coil eliminates the stiction problem of an air shock. This lets this shock be very sensitive to small changes in terrain for extra comfort at slower speeds.

Because a eoil spring has a limited range of adjustment, we have specified 3 different springs for each of the 3 sizes of Y11s and ST120s. The Small size uses a 600 pound/inch spring, the Medium a 700, and the Large gets an 800 pound/inch spring. A 900 pound spring is available aftermarket. In addition, the shocks offer different damping rates by size of bike, with the large bike having the most damping.

Fox Alps 4 Rear Shock

The Fox Alps 4 long travel (1 1/2 inch), used in our Y bike design, yields 4 inches of travel at the rear wheel. The Fox shoek has no lockout mechanism, so travel is smooth and progressive over its entire range. A Fox pump is included with each of these bikes, making it easy to adjust the preload to get the desired riding characteristics. With an air shock, changing air pressure changes spring rate so one shock can fit any rider weight, unlike a coil spring.

This shock uses a negative spring to overcome stiction forces at slow bump speeds or smaller bumps. During the first 10 mm of shock compression, this negative spring reduces the force required to compress the shock. After the initial 10 mm of travel, the shock's spring curve is solely defined by the air spring and damping.

The Alps 4 uses an anodized aluminum barrel for low weight and less stiction. Its recommended that riders keep the shock clean to maximize the shoek life. Of course, this is true of any moving part!

Stratos Rear Shock

This new air/oil rear shock offers on-the-fly adjustable compression damping over a wide range. It goes from lively to locked-out with just a fliek of the top mount thumb shifter provided.

Although some say suspension actually aids their climbing, others disagree. But everyone agrees that rear suspension is good at least some of the time. With the Stratos rear shock, the rider can be the judge of when rear suspension is most appropriate.

Along with adjustable damping rate, the Stratos shock offers a more progressive spring curve than the other shocks we are speeing. Progressive spring rate means that the more you compress the spring, the harder (or more force) it takes to further compress the spring.

A Note on Rear Suspension Performance

A lot of terms are being thrown around regarding shocks and suspension designs. Several which we would like to define in OUR usage are:

Fully Active- In order for a suspension design to be active, it must be unaffected by braking or pedaling forces transmitted by the chain. If the rear wheel moves eloser to, and away from, the bottom bracket during suspension travel, chain tension will be effected. By our definition, this type of design is NOT fully active. The various pivot placements used in different designs will change the amount of chain tension effect, but if there is any chain tension effect, its not fully active.

Rising or Falling Rates- If the amount of travel varies relative to the amount of shock compression, you have a change in Rate. With the Y bikes, we use a falling rate which effectively flattens the spring eurve of the shock. By making the spring curve more linear with an air/oil shock, a rider will get more rear wheel travel under heavier loads for a more deeply plush ride. We like the feel of this.

To help you understand this concept, watch the path of the shock mount of the rear triangle as the shock compresses. To make this easier to see, you may even want to put a Y bike in a repair stand, remove the shock, and move the rear triangle with your hand to simulate hitting a bump.

As the rear wheel moves up, the rear shock mount follows an arc, rather than moving directly towards the front shoek mount on the main frame. As the rear shoek moves forward, it also moves down as it follows the arc described by the pivot point. So as the rear wheel moves through its arc over bigger and bigger bumps, the shoek compresses less for each given increment of rear wheel travel.

For illustration purposes, lets give some imaginary numbers (these have not been approved by Engineering, so they are only to illustrate what is happening): If the first 1" of rear wheel travel compresses the rear shock by .38", the last 1" of rear wheel travel will only compress the rear shock by .25".

1996 Shimano Innovations/Changes

XTR

RapidFire SL shifting

Even less shift lever pressure is required with the new SL shifters. In addition, each shift requires a shorter throw of the lever. As expected, for the best performance, Shimano recommends that you do not mix previous components with newer items.

New cables and housing- In '95, Shimano shifters used a 1.1 mm cable with 3.6 mm housing. This allowed the housing to be more flexible, and reduced cable friction for smoother shifting. But the smaller diameter allowed some compression in some circumstances, so the sizes have been beefed up for '96. The new dimensions are 1.2 mm cables, with 4.0 mm housings.

Mechanics should note that the new Shimano housing comes pre-greased. To prevent the grease from being pushed out of the housing, the cable should always be inserted into the end of the housing with the Shimano logo first, so the logo is closest to the respective lever. In cases where we are using non-Shimano housing, look for the housing end with an extra 'band' or 'ring' around it indicating the end of the housing holding the grease, which is the end to insert the cable into first.

Top Swing front derailleur

This new design was incorporated in some of Shimano's lower-line derailleurs in '95. By moving the derailleur cage in a straight line rather than an arc, Top Swing provides a linear spring rate to the front derailleur. This means more powerful shifting onto the large chainring with lighter action and increased durability. The linear spring rate also means a softer return for smoother downshifts.

Since the clamp band of the Top Swing design is lower than on previous derailleurs, on some frames this may be incompatible (such as Y bikes and OCLV hardtails). For these bikes, Shimano has made a new conventional front derailleur with Advanced Light Action to interface with the new RapidFire SL shifters.

The XTR front derailleur (only) uses a carbon fiber mounting plate which attaches to the fixed cup of the bottom bracket. This new derailleur also has hinged cage plates which work in different directions depending on whether you are up shifting or downshifting. These plates work to lift and move the chain better than any other front derailleur.

Rear derailleur

The new 'high efficiency' rear derailleur gets a stiffer upper spring ('P'-spring) which adds chain tension, and along with the IG chainrings and IG chain works to virtually eliminate chainsuck. 'Advanced Light Action' is designed to work with the shorter throw and softer push of the new RapidFire SL shifters.

V-Brakes

The long arms of the V-Brakes give extra leverage for incredible stopping power. V-Brakes open easily and very wide for easy tire removal. The V-Brake's unique linkage system keeps the pad parallel to the rim, rather than following an arc like a traditional cantilever. This means more powerful stopping, better modulation, and less pad wear (and no "dive" from wear). This also means less chance for the pads to "drift" if not properly maintained and readjusted as they wear, which can cause tire sidewall cuts.

Because of the large amount of cable pull required for the V-Brake, they require a specific Shimano V-Brake lever which utilizes an adjustable variable pull mechanism.

As a bonus, the V-Brake has a side-actuating system with a very narrow profile, making it ideal for full suspension bikes with low cantilever boss placement where cable routing or leg clearance might be a problem.

Since the new V-Brake requires a cable housing stop for the rear brake (at the seat cluster), these brakes may not be compatible with some framesets.

Bottom Bracket Cartridge

The new XTR bottom bracket features chainline stabilizers to prevent over insertion of the cranks, which could effect chainline. On XTR (only) it also incorporates a new splined axle design for added stiffness.

IG System (chain and chainrings)

Specially shaped tooth profiles and shifting ramps enhance shifting speed and accuracy. Combined with the new IG chain (with new 7.1 mm width), this also virtually eliminates chainsuck. Note: A special XTR crank will be available which uses conventional SG-X chainrings, which will not be IG.

Although you will get acceptable performance mixing most of the parts, its recommended for best performance that you do not mix them. In any case, avoid using a HG or UG chain on the new IG chainrings, as the chain may tend to come off easily, which is potentially dangerous.

Older IG chains, the IG50 and IG30, use a 7.3 mm chain width. These chains will not work with HG cassettes. If you use a new 7.1 mm chain on an older HG cassette, the SIS adjustment will be slightly more sensitive, so pay extra attention to this.

IG chains will not work with Altus C90 derailleurs.

Crank

Along with the new IG design of the chainrings comes a new bolt-hole pattern and different chainring sizes with lower gearing. In addition, the new XTR crank is a hollow, forged design with excellent stiffness and incredibly low weight and uses a new splined bottom bracket axle design. The 24/34/46 offers true racing gearing when paired with the 12-32 8 speed cassette (with titanium

24T/28T/32T cogs).

Other- Independent shift pods and brake levers allow you to mix and match components as you see fit.

XT

The new XT group shares many of the features listed for XTR above, including RapidFire SL shifting, Top Swing front derailleur (seat tube mount only), V-Brakes, Bottom bracket with chainline stabilizer (standard axle shape), IG chain and chainrings, and independent shift pods and brake levers. Please read about the important features of these under the XTR heading.

LX

The new LX group shares all of the new features listed for XT above, with the exception of V-Brakes. Please read about the important features of these under the XTR heading. In addition, LX gets:

"Easy Set' Cantilever brakes-The new LX cantis feature the "Easy Set" design. This is an automatic toe-in feature, designed to simplify assembly.

STX, STX-RC

These groups get the new RapidFire SL shifting, Top Swing front derailleur, Easy-Set cantilevers, new 7.1 mm chain, and independent shift pods and brake levers. Please read about the important features of these under the XTR heading.

Cranks- the cranks have been cosmetically changed.

Bottom bracket- the new BB-LP26 now inserts 'normally' from the right side of the bike, and is denoted by the new grey colored 'fixed cup'.

Alivio

Shift/brake levers- new finish.

Top Swing front derailleur- new finish.

Rear derailleur- 'High Efficiency' design.

Brakes- 'Easy-Set'

Cranks- New cosmetics

"Silent Clutch' rear hub- 'Silent Clutch' design uses roller clutch for super durable, quiet operation. By using a set of roller bearings for drive, rather than a pawl-and-tooth design, this hub gives a very smooth engagement which adds rear wheel traction and smoothes shifts even more than the standard IG system.

Altus C-90

Shift/brake levers- E-Z fire design (Trek has spec'd GripShift at this level).

Front Derailleur- new finish

Rear derailleur- Alloy B-body (the part which bolts to the frame).

Brakes- 'Easy Set'.

Bottom Bracket- BB-CT91 inserts 'normally' into right side of the frame.

Cranks- Cosmetic change to the arm.

Road

The only change to road groups for '96 is in the 105 series.

105SC

Triple shifting STI shift/brake levers- Now available for either double or triple chainring STI shifting.

Cranks- In addition to the 39/53 chainring set favored by racers, the 105 crankset is now available with a 32/42/52 triple chainring setup.

Derailleurs-New front and rear derailleur models are made to accommodate a wider gear range cassette and the 105 triple chainring.

1996 Shimano Road Groups

Bottom Bracket	BB-7410 230	BB-UN71 272	BB-UN51 308	BB-UN51	BB-UN51	BB-UN51	BB-LP25	BB-LP25	Model Name Weight (gms)
Brake/Shift Levers	• 2 8 4 480	• 2 8 4 542	• 2 8 4 495	• 3 8 4 495	• 2 8 4 495	No 3 7 or 8 2 495	• 2 7 2	• 3 7 2	Dual Control Front 'speeds' Rear 'speeds' Rear Upshifts/stroke Weight (gms)
Brakes	• Anodized 432	• Painted 423	• Painted 360	• Painted 360	• Anodized 348	• Anodized 348	• Painted	• Painted	Forged aluminum Finish Weight (gms)
Front Derailleur	15T 97	14T 107	15T 105		15T 105	26T 121	20T	20T	Total capacity Weight (gms)
Rear Derailleur	Al, forged & anodized Al, forged Al, forged Al, anodized Al, anodized 26T/12T/26 209	Al, painted Al, painted Al, painted Al, anodized Al, polished 28T/12T/28 215	Al, painted Steel Steel Al, polished Steel 28T/12T/28 247	Al, painted Steel Steel Al, polished Steel	Al, polished Steel Steel Steel Steel 28T/12T/28	Al, polished Steel Steel Steel Steel 30T/12T/36 302	Al, painted Steel Steel Steel Steel 28T/11T/28	Al, painted Steel Steel Steel Steel 28T/11T/36	Pivot and pulley cage Outer link Inner link Outer cage plate Inner cage plate Max/Min/Capacity Weight (gms)
Chain	HG Nickle plated Nickle plated	HG Black Silver	HG Gray Black	HG Gray Black	HG Gray Black	HG Gray Black	HG Black Black	HG Black Black	Chain type Inner link Outer link
Hubs/Cassette	8 • Al, forged 467 235 Champagne 12-23 258	8 • Al, forged 428 212 Chrome 12-23 250	8 • Al, forged 427 228 Silver 13-26 278	8 • Al, forged 427 228 Silver 13-26 278	8 • Al 427 202 Silver 13-26 278	8 • Al 427 202 Silver 13-26 278	7 • Al Black 11-24	7 • Al Black 11-24	# of gears Freehub w/QR Material Rear hub weight (gms) Front hub weight (gms) Cassette color Gearing Cassette weight (gms)
Crankset	39/53 A/A 130 589	39/53 A/A 130 650	39/53 A/A 130 686	32/42/52 A/A/A 130/74	39/53 A/A 130 686	32/42/52 A/A/A 130/74	26/36 S/S 110.74	26/36/46 S/S/S 110.74	Chainring teeth Chainring material Bolt hole circle Weight (gms)
	Dura-Ace	Ultegra	105SC	105SC Triple	RX100	RX100 GS Triple	RSX	RSX GS Triple	

1996 Shimano Mountain Groups

Bottom Bracket	BB-UN72 272 Right	BB-UN52 Right	BB-UN52 Right	BB-UN52 Right	BB-LP26 Right	BB-LP26 Right	BB-CT91 Left	BB-CS11 Left	Model Name Weight (gms) Installation side
Brake/Shift Levers	• 2 1 4 1 398	• 2 1 4 1 383	• 2 1 4 1 394	• 1 1 4 1	- 1 1 3 1	- 1 1 1 1	- 1 1 1 1	- 1 1 1 1	RapidFire SL Front Upshifts/Stroke Front Downshifts/stroke Rear Upshifts/Stroke Rear Downshifts/stroke Weight (gms)
Brakes	- • - • 383	- • - • 370	• • - - 366	• - • -	• - • -	- - • -	- - • -	- - • -	Anti-Vibration Cartidge-type pad Bushing-type mount V-Brakes Weight (gms)
Front Derailleur	22T •	20T •	20T • 135	20T •	18T •	18T -	14T -	22T -	Total capacity Stainless fasteners Weight (gms)
Rear Derailleur	Al, polished & clear coated Al Al Al, anodized Steel 32T/11T/38 250	Al, painted Al, painted Steel Chrome plated Chrome plated 32T/11T/38 285	Al, polished Al, polished Steel Chromica Painted steel 28T/11T/37 293	28T/11T/37	28T/11T/35	28T/11T/31	28T/11T/31	28T/14T/34	Pivot and pulley cage Outer link Inner link Outer eage plate Inner cage plate Max/Min/Capacity Weight (gms)
Chain	IG Nickle plated Nickle plated	IG Barrel Nickle	IG Barrel Nickle	IG Barrel Nickle	IG Brown Barrel	HG Black Black	HG or UG Black Black	UG Black Black	Chain type Inner link Outer link
Rear Hub/ Cassette	8-alloy spider • • Chrome plated compatible 256	8 • • 452 Silver compatible 326	7 • • 442 Chromica IG 254	7 • • 432 Chromica IG	7 • • Silver IG	7 • - Black -	7 • - Brown -	6 (FW) - - Black -	# of gears Freehub w/QR Alloy QR lever Hub weight (gms) Cassette color IG Cassette weight (gms)
Crankset	compatible 22/32/42 A/A/S 58/94	compatible 22/32/42 A/A/S 58/94 681	• 22/32/42 A/S/S 58/94 769	• 22/32/42 S/S/S 58/94	• 24/34/42 S/S/S 67	- 24/34/42 S/S/S Riveted	- 24/32/38 S/S/S Riveted	- 28/38/48 S/S/S Riveted	IG Chainring teeth Chainring material Bolt hole circle Weight (gms)
	XT	LX	STX-RC	STX	Alivio	Acera-X	Altus C90	Tourney	

System Components

System Components, like Trek bicycle frames, are the result of thorough study and development executed by the Trek engineering staff. These products were specifically designed to enhance the fit, look, function, and value of Trek bikes.

Each design has gone through a series of tests for accuracy in sizing, strength, durability, and more. Our engineers broke sample pieces from many manufacturers. We found out what worked and what didn't. After analyzing the data from these tests, we developed components that were both light and strong.

After we were satisfied with the design and quality of each of these System components, orders were placed. As the shipments arrive we continue to randomly sample the pieces to ensure that they match the quality of the test pieces. Its an expensive undertaking, but we feel its important to deliver a product that goes beyond just light weight.

The result is a common sense approach to upgrading a bike. If you replace a System 1 piece with a System 2, it will be both lighter and stronger. With Trek's R&D behind it, it will also be a great value

FORKS

System 1 ATB- new 28.6 mm blade diameter (was 31.8) provides smoother, more shock absorptive ride. 967 grams.

System 2 ATB- Same as '95, this is a butted, or taper gauge design. By putting more metal in the high stress crown and brake boss area, this fork is strong. But by removing material and weight in the lower portion of the fork blades, this is also a lively and shock absorptive fork. 855 grams.

ATB STEMS

System 1 ATB- 336 gm

TIG Cro-Moly. A good all-round stem with moderate rise and extra long insertion for recreational riding. Exposed stem bolt makes maintenance easy, and no cap to lose.

10° rise on the 90 and 105, with a 15° rise on the 120, 135, and 150 mm extensions. Models available for 1" or 1 1/8" headsets, 25.4 mm handlebar. Long 140-165 mm insertion tubes.

System 2 ATB- 319 gm

TIG Cro-Moly. A lighter and flatter version of the System 1 ATB stem for those desiring a racier position.

5° rise on 90 and 105, 10° rise on 120, 135, and 150 mm extensions. Models available for 1" and 1 1/8" headset, 25.4 mm handlebar. 130-150 mm insertion tubes.

System 2 ATB Direct Connect- 185 gm

Cold forged aluminum. Two external pinch bolt steerer clamp. Detachable front cap design makes changing stems or handlebars fast and easy. Very light.

5° rise on 90, and 10° rise on 105, 120, 135, and 150 mm extensions. Fits 1 1/8" Aheadset, 25.4 mm handlebar. 41 mm steerer clamp height.

System 3 ATB Direct Connect- 210 gm

Cold forged aluminum. Hidden steerer clamp bolt with radial steerer clamps for good hold. Detachable front cap design makes changing stems or handlebars fast and easy. Not lighter, but a very clean design.

5° rise on 90, and 10° rise on 105, 120, 135, and 150 mm extensions. Fits 1 1/8" Aheadset, 25.4 mm handlebar. 41 mm steerer clamp height.

ROAD STEMS

System 1 90° Road- 300 gm

TIG Cro-Moly with alloy wedge. 0° rise so the stem and quill form a 90° angle. Long insertion and no drop puts the handlebars up high.

Fits 1" headset, 25.4 mm handlebar. 65, 80, 100, 120 mm extensions. 150 mm insertion tube.

System 2 Road- 260 gm

TIG Heat Treated Cro-Moly with alloy wedge. Traditional position in a stiff Cro-Moly design. Hidden wedge bolt.

Fits 1" headset, 26.0 mm handlebar. -17° rise. Alloy wedge. 65, 80, 90, 100, 110, 120, 130, 140 mm extensions. 130 mm insertion tube.

System 3 Road (3TTT)- 260 gm

Hot forged 6061 T6 Aluminum with alloy wedge. Traditional, sleek and fast looking.

Fits 1" headset, 26.0 mm handlebar. -17° rise. 90, 100, 110, 120, 130 mm extensions. 140 mm insertion tube.

HYBRID AND TANDEM STEMS

System 1 Hybrid- 366 gm

TIG Cro-Moly with alloy wedge. Higher rise than a road stem, and longer insertion (depending on size) but interchangeable.

Fits 1" headset, 25.4 mm handlebar. 20° rise. 90, 105, 120, 135 mm extensions. 140 mm insertion on 90 and 105. 165 mm insertion tube on 120, 135, and 150.

System 2 Tandem- 340 gm

TIG Heat Treated Cro-Moly with alloy wedge. Hybrid style, with lots of rise.

Fits 1 1/4" headset, 25.4 mm handlebar. 32° rise. 120, 135, 150 mm extensions. 150 mm insertion tube.

System 3 Tandem 90°- 320 gm

TIG Heat treated Cro-Moly with alloy wedge. 0° rise, so stem forms a 90° angle with quill.

Fits 1 1/4" headset, 25.4 mm handlebar. 100, 120 mm extensions. 150 mm insertion tube.

System 2 Adjustable Tandem Stoker- 330 gm

TIG Heat Treated Cro-Moly. Two sizes with the longer one intended for child stokers.

Fits 27.2 mm seatpost, 25.4 mm handlebar. 35° rise. 140-180, 200-240 mm extensions.

ATB HANDLEBARS

System 1 ATB- 230 gm

6061 T6 Aluminum, 5° bend. Bulged and knurled center. 560 mm length.

Anodized finish, silver or black.

System 2 ATB- 170 gm

Butted 6061 T6 Aluminum, 5° bend. Bulged and knurled center. 560 mm length.

Anodized finish, silver, black, red, green, blue, or 3D violet.

ROAD HANDLEBARS

System 1 Road- 396 gm

6061 T4 Aluminum, 2.2 mm wall. Sleeved and knurled center, 25.4 mm clamp diameter.

Dual control design moves levers closer to the bars for easy reach, but without inhibiting full brake lever pull. Slight flare of drops adds wrist clearance in sprints. Anodized finish.

380, 400, 420, 440, 460 mm width.

System 2 Road- 340 gm

6061 T4 Aluminum, 2.0 mm wall. Bulged and knurled. Same Dual Control design as the System 1, but lighter and stiffer due to larger 26.0 mm clamp diameter. Also includes grooves for aero cable routing.

Anodized finish. 380, 400, 420, 440, 460 mm width. 26.0 mm clamp diameter.

System 3 Road- 296 gm

6061 T6 Aluminum, 1.65 mm wall. Lighter version of the System 2. Dual Control design. Bulged and knurled center, grooved aero cable routing.

Anodized finish. 380, 400, 420, 440, 460 mm width. 26.0 mm clamp diameter.

BAR ENDS

System 1- 150/180 gm

Bonded aluminum with choice of two shapes, ski bend or long style. Offset with hidden clamp bolt.

Anodized Silver, Black, 3-D Violet, Ice Cyan, Blue, Matte Ti, Pewter, and Green.

System 2- 140/170 gm

Bonded aluminum clamp w/magnesium tube. Both ski bend and long style. Offset with hidden clamp bolt. Powder-coated finish gives textured grip. Silver, Black.

System OCLV- 128/120 gm

Ergonomic shaped OCLV bonded to aluminum clamp. Both medium and ski bend. Offset with hidden clamp bolt. Super comfortable with lots of hand positions. Very strong for lightweight bar end. Unusual feature is that carbon does not conduct heat well- not too cold in the winter, or not too hot after sitting in the sun. Natural carbon finish.

SEAT POSTS

System 1- 270 gm/ 300 mm, 290 gm/ 350 mm.
6061 T6 aluminum. Forged aluminum head with single bolt attachment. Mechanically fastened to tube.
Silver.
System 2- 325 gm/ 300 mm, 357 gm/ 350 mm.
6061 tube. Trek designed forged aluminum head with dual bolt rocker clamp. Saddle can be removed without completely unthreading the bolts. Extended front screw lets you adjust for level with your fingers once the rear screw is loosened. Moderate setback fits most geometries.
Silver.
System 3 - 261 gm/ 300 mm, 289 gm/ 350 mm.
EA70 aluminum tube. Same head as the System 2, but on an even nicer post.
System 4 - 220 gm/ 300 mm, 235 gm/ 350 mm.
Titanium tube. Same head as the System 2, but on our lightest post.

SEAT POST CLAMPS

System Steel for QR- 20 gm
Forged aluminum. Through hole for quick release. Fits 31.9 mm seat tube.
System Steel w/ integral bolt- 20 gm
Forged aluminum. M6 threaded hole with 5 mm hex head bolt. Fits 31.9 mm seat tube.
System Steel w/ integral bolt and cable hanger- 33 gm
Forged aluminum. M6 threaded hole with 5 mm hex head bolt. Fits 31.9 mm seat tube.
System Aluminum w/ integral bolt and cable hanger- 31 gm
Forged aluminum. Fits 33.0 mm seat tube.
System Aluminum w/ integral cable hanger for QR- 31 gm
Forged aluminum. Fits 33.0 mm seat tube.
System Aluminnm w/ integral bolt- 31 gm
Forged aluminum. Fits 33.0 mm seat tube.
System OCLV w/ integral bolt and cable hanger- 33 gm
Forged aluminum. Fits 35.5 mm seat tube.
System OCLV w/ integral bolt- 25 gm
Forged aluminum. Both 35.5 mm for painted seat tube and 35.1 mm for 'Nude' bike.
System Tandem- 38 gm
Forged aluminum. Through hole for quick release. Extra stiff for tandems. Fits 31.8 mm seat tube.
System 1 Quick Release Lever- 32 gm
Cro-Moly axle with aluminum lever
System 2 Quick Release Lever- 32 gm
Cro-Moly axle with external cam and aluminum lever
System Road Binder Bolt- 10 gm
5 mm allen wrench, 6x1.0 metric thread

PEDALS

System 1 ATB- 428 gm
Resin body with Cro-Moly axle. Sealed bearing system. Nylon toe clip with dual strap holder. Long, stiff woven strap.
System 3 ATB- 450 gm
Forged alloy body with high-polish Cro-Moly axle. Sealed bearing system, 100% waterproof. Heat treated low-profile alloy cage.
System 1 Road- 475 gm
Resin body with Cro-Moly axle. Sealed bearing system. Nylon toe clip with dual strap holder. Long, stiff woven strap.
System 2 Road- 535 gm
Forged alloy body with Cro-Moly axle. Sealed bearing system. Nylon toe clip with dual strap holder. Long, stiff woven strap.

FRONT SUSPENSION HUBS

System 1- 208 gm.
10 mm axle, loose balls. Rubber seals.
System 2- 185 gm
12 mm axle, 13 loose 3/16" balls. Sealed. Since stiffness goes up exponentially with diameter, this axle is about twice as stiff as the System 1.
System 3- 156 gm
17 mm 7075 T6 aluminum axle, Precision sealed bearings. Aluminum end caps. Special design does not side load bearings for a long, smooth bearing life.
System 3 Front Quick Release- 44 gm.
Open cam design.
System 3 Rear Quick Release- 64 gm.
Open cam design.

Matrix Rims

A word about wheels

Wheel durability is affected by three factors: materials, wheel assembly, and use/maintenance. To get the most from the wheels on a bike, each factor is important.

Materials

The best wheels can be obtained through using the correct components. Correct rim selection for the intended usage is critical. Spoke gauges should match the diameter of the hub drillings. Use a spoke thread preparation to ease assembly and prevent corrosion of the threaded parts. Do not use alloy nipples if the rim's spoke holes are not smooth, and it even helps if they are lubricated. Carefully consider the strength requirements of rider weight and terrain. For wheels with high strength requirements such as tandems, Trek recommends more spokes and the use of stronger rims. While lighter wheels with fewer spokes may provide better performance, broken spokes or wheels that won't stay true are considered to be the lowest of performance factors.

Matrix rims are constructed of 6061 T6 heat treated aluminum. The Aurora, and the new Swami, Lobo, Cosmo, and Astro rims are welded, but the heat affected zone is so small that their heat treatment, strength, and alignment remain intact. Then the rim sidewalls are machined for a smooth, textured surface that provides extra stopping power without any lumps, bumps, or rim seams which would cause the brakes to 'catch' on the rims.

A ceramic sidewall is available on our Aurora and Swami rims. This coating helps prevent the brake pad from wearing the rim sidewalls, increasing the life of the rims. It also adds some texture which allows brake pads a better grip on the rim which is noticeable in dry conditions but a real advantage in the wet. We feel most folks would gladly accept the slight additional brake pad wear for the increased stopping power and rim durability.

Another important feature is the use of eyelets. Eyelets distribute the forces resulting from the attachment of the spokes. They also provide a smooth, hard surface for the nipple to rotate on during spoke tensioning.

Design of the rim also effects the strength and application of a rim. Good design distributes forces through the rim, reducing peak loads that can damage the rim. Rim width affects tire fit. Width also affeets how your brakes work.

Wheel Assembly

Good wheels are the result of careful attention to the building process. After lacing, bringing the wheel to correct round, true, and dish must be a gradual process to avoid placing undue stress on any of the components. Spokes must be "relieved" so that their bend matches that of the hub flange, so they take the most direct line possible to the rim, and so they have not been twisted, or rotated by turning the nipples.

To build a strong wheel you must insure that the spoke tension is correct, and does not change. There is actually a broad range of acceptable tension for a wheel, as long as there is even tension within the structure. Uneven spoke tension is the most common cause of wheel problems, because it allows some of the spokes to become unthreaded or loosen under varying loads.

Use/Maintenance

Any wheel deserves regular maintenance. In the Trek Owner's Manuals, riders are advised to check their wheels before every ride, and to have any problems serviced by their Trek dealer.

Even the most carefully built wheels can have problems. Some riders take pride in their ability to break equipment, but the best riders know that if you don't make it to the finish line, you can't win the race. Good riding technique goes a long way to avoiding wheel problems.

Heat Treating

One of the keys to strong wheels is strong rims. While careful building and maintenance will help, you still need strong parts to build a strong wheel. For this reason, we use heat treated 6061 aluminum alloy in all Matrix rims. By heat treating 6061 to a T6 condition, we add about 25% to the strength of the rim. While this does not make the rim stiffer, it does mean that it takes more force to permanently bend the rim.

Welded/Machined

In the past, we exclusively used a pinned rim construction on Matrix rims. This was to prevent the loss of the heat treating done to our rim material, because welding takes a material past the temperature used in heat treating, and thus removes it. Pinning also prevented any warping at the rim joint resulting from the high heat.

In 1995, we introduced a new series of rims featuring a Welded/Machined construction. The key to this process was finding a way to weld the rim without losing strength. With our new welding process, the heat effected zone is so small that the rim's overall strength as well as alignment is virtually unaffected.

Our welding process allows several benefits. First, the entire rim cross section is joined, not just the pinned lower cavity. Second, it allows the production of less expensive rims without hollow sections. And third, in combination with our machining process, it allows a rim with an almost perfectly smooth joint.

After welding, we machine the sidewalls of the rim. This smooths the weld flashing as well as adding texture to the rim sidewall. This texture provides a better surface for the brake pads, with increased stopping power. Machining also yields a more accurate rim dimension than the actual extrusion, so these rims have a more consistent weight and shape.

Still, welding does have its drawbacks. It requires that we hand finish the outer circumference of the rim. Occasionally this may leave what appears to be a small flat spot in the rim at the weld. Close inspection will show that the rim bead has no flat spot, so the tire sits on the wheel perfectly and is completely round. The only disadvantage to this slight cosmetic issue is that the rim may appear less than perfect in a truing stand.

Anodization

With most Matrix rims, we use an expensive coating process called anodization. This is an electrical process which chemically alters the outside of the rim. The anodized aluminum is harder than untreated aluminum which adds durability. Another benefit of anodization is that it prevents oxidization. Oxidized aluminum may result in dirty, black hands when handling un-anodized rims, particularly when wet. It also adds color, making the rim look nice.

A downside of anodization is that it can also make the rim smoother, particularly an issue in wet weather braking. For this reason, we use a lighter, silver anodization on the mountain bike rims we use on the bikes (dark, or 'hard' anodization is still available on aftermarket mountain bike rims for those who prefer it).

Ceramics

On some rims, we now offer a Ceramic coating on the sidewalls. While this makes each rim about 5 grams heavier, it adds considerable durability to the rim sidewall, reducing wear from brake pads. This is particularly of benefit in wet conditions or when using harder brake pad compounds, both which can wear rims very fast. Another advantage of Ceramic rim coatings is that braking performance is increased, especially in wet conditions.

Early attempts at Ceramic coatings had durability problems. After a sharp blow, the coating would show a tendency to peel off. We have developed a new process which virtually eliminates flaking and peeling of the coating. You can still damage it if you strike a rock, but that will be the extent of the damage.

For further information

If you would like to know more about wheels, their components, and the theory behind them, we recommend you read Jobst Brandt's book The Bicycle Wheel. For technical information regarding spoke lengths, see Sutherland's Handbook for Bicycle Mechanics.

	Sutherland's Correction Factor	Effective Rim Diameter	Weight	Eyelet	ERRTO Size	Spoke Pattern
26 Inch						
Lobo	-24	551	480 gm	no	559x21.5	32, 36
Mt. Tiran	-25	547	365 gm	single		28, 32, 36
Single Track	-29	541	510 gm	no	559x24	32, 36
Single Track Comp	-27	546	465 gm	single		28, 32, 36
Single Track Pro	-25	546	425 gm	single		28, 32, 36, 40
Swami	-27	546	395 gm	single	559x22.5	28, 32, 36
700C						
Astro	-8	615	510 gm	single	622x21.5	32, 36
Aurora	-10	610	430 gm	single	622x18	28, 32, 36
Cosmo	-10	610	410 gm	single	622x22.5	28, 32, 36
Fast Track	-14	?	530 gm	no	622x24	36, 40, 48
Iso C II	-14	600	410 gm	no	622x18	28, 32, 36
Journey	-9	610	500 gm	single		32, 36, 40, 48
Sonic	-12	?	465 gm	double		28, 32, 36
Tiran Tech	-9	611	475 gm	single		32, 36
Titan Tour	-10	614	520 gm	single		32, 36, 40, 48
Tubular						
Iso II	-10		375 gm	no		24, 28, 32, 36

Bike Specifications: A Guide

This section is designed to help the mechanic in the shop as well as the sales person on the floor. We've put just about everything there is to know about each model on a page. You'll also find info to help you size a bike, or better fit a customer by switching to a different model.

Angles and such-They're all listed, size by size. For explanations of the terms, and what they mean to the rider, see pages 4-5.

Stand over height- the distance from the ground to the top of the top tube, measured in the *middle* of the top tube.

Stem extension- the length of the stem measured from the center of the handlebars to the centerline of the steerer and stem quill, along the centerline of the stem. Because some stems are horizontal and some stems angled, there are two other stem dimensions to be aware of: reach (the horizontal component of the stem) and rise (the vertical component of the stem). Example: A 100 mm stem with a 25° rise in a bike with a 71° head tube will have a 44° rise when measured from the ground. In the bike this 100 mm stem has a reach of 71 mm and a rise of 71 mm. Also listed is the steerer clamp height of Direct Connect stems, because this effects steerer length.

Reach- the horizontal distance combining the reach of the stem with the effective top tube. This is a different way of measuring reach than we have used in the past, but a more accurate one.

Head tube length- original length of head tube. Use this to calculate the steerer length as you need it. Add stack height, head tube length, and stem requirements (different direct connect stems, cable guides, and spacers require different steerer lengths).

Hubset type- describes the hub configuration for freewheels, cassettes, or drum brakes, number of gears, and the number of spokes and gauge required.

Rear dropout width- indicates the distance between the inside dropout faces. With modern designs, this does not necessarily indicate the rear hub's outer locknut dimension (O.L.D.).

Tire size- Indicates the specified tire's listed size, as well as the largest size of Trek tire which will fit. Due to the size variances of a given listed size between different manufacturers, this may only apply to Trek tires.

Front derailleur- indicates the seat tube diameter, or "braze-on type" if the derailleur doesn't use a band or clamp attachment.

Bottom Bracket- indicates model, width, and axle length of the bottom bracket, as well as the chainring bolt hole circle, a dimension which must be matched when replacing chainrings.

Headset size- indicates the outer diameter of the stem/ Inner head tube diameter/ Fork crown race seat diameter in millimeters.

Stack height- the height of a headset when installed in the frame. This dimension is added to head tube length (also steerer clamp height, cable guides, and spacers for Direct Connect or AheadSet systems) to calculate steerer length.

Stem- The degrees of rise on each stem size specified. Also the handlebar clamp diameter.

Seatpost length- In some cases such as suspension bikes, longer posts will not allow the seatpost to slide entirely down into the frame. If substituting seatposts, please ensure that the new seatpost is measured accurately for diameter.

Steerer length- By popular demand, we list the original spec on steerer length. This should save time when ordering replacement forks, where exact length is not required. However, a note of caution: Changing any component of the headset, including spacers, Ahead stems, etc. will change this length, something which we are occasionally forced to do in manufacturing the bikes. When precision is required, a good mechanic will always take the time to measure these parts before cutting a steerer. Measure twice, cut once!

Understanding the specs- The following pages highlight the functional differences between many of the components found on this year's bikes. As you will see, a lot of careful thought and effort go into every selection. We have to make sure that every part works together, that fit and function are of the correct performance level for the bike we are specing, that the price is right, and that the part will he delivered when its needed to get the hikes assembled and shipped to your shop. No easy task!

A last word about specifications- Trek bicycles are made with components from around the world. Occasionally one of the vendors who supply these parts has a problem, goes out of business, runs out of materials, or is beset by any one of a million different problems. Two examples from last year: a rim factory had a fatal explosion and fire which closed down their production, and a freighter carrying Shimano parts had to toss the parts overboard to avoid sinking the ship in a Pacific storm.

When a vendor cannot deliver the specified part, we are forced to change the specifications of a given model of bike. When it becomes necessary to make a substitution of a part, we try to match the original part as best we can in quality, performance, and price. We apologize for the inconvenicnce this sometimes causes, but we feel its better to make the substitution and deliver the bike so that you can make the sale, than not deliver the bike at all.

Import Treks: How are they Different?

So Trek makes a bunch of bikes in Wisconsin. How does that help the customer who only wants to spend $300? Aren't those $300 bikes just like those from "Brand X"?

There are three things that set Trek bikes apart from their competition in the under-$500 market (and a reminder- we are now building bikes in this price range at our own factory in the U.S.). These three things are **QUALITY**, **DESIGN**, and **VALUE**.

First, Trek gets the best **QUALITY** of bike possible, even when we have bikes built by another factory. As a bike shop professional, if you were to go into another bike shop to buy a bike, wouldn't you be able to make a better choice than the average consumer? Well, the same thing applies when Trek buys bikes from Taiwan. With over a million Wisconsin-built bicycles under our belts, you can bet our engineers and product managers have learned a thing or two about making bikes. And that knowledge and experience means that Trek gets the best quality available from these factories. In some cases, we have had to teach these other factories how to improve their workmanship so that it meets Trek standards. We hate giving up our secrets, but if the consumer gets a better product because of it, then its worth it.

Second, Trek bikes are built differently with Trek's exclusive **DESIGNS**. We don't buy 'off-the-shelf' designs and just put on a few braze-on bits and some Trek decals. The bikes built overseas for Trek are designed by the Trek engineering staff in Wisconsin. Geometry, tubing dimensions, and wall thicknesses are all developed by Trek engineers. Then we analyze and test these frames in our Wisconsin engineering and quality control labs to make sure the work matches our engineers' specifications. These designers and testers are the same engineers who work to design Trek's state of the art OCLV bikes, or our Signature Sequential TIG welding process.

These experienced people and extra steps allow us to offer our limited warranty on all Treks, regardless of origin. We designed them to be better, and our testing shows it.

Lastly, Trek bikes offer more performance per dollar, something we call **VALUE**. Trek sells a half a million bikes around the world every year. This large volume allows us to get the very best prices possible from the vendors who sell us the parts to compliment our Trek framesets. With this kind of volume, Trek can afford go the extra mile for performance, putting custom designed parts on bikes which normally get generic, off the shelf spec (Example: Rocket Boy proven Trek Kahuna front and rear specific tires on the 830). With Trek's excellent distribution network and quality dealer base, we not only have a large sales volume, but there are other savings involved as well. We can get these great bikes to your store more economically, so transportation costs are less.

The bottom line is that Trek's manufacturing expertise allows us to get the best bikes possible from the overseas manufacturers. We can buy the parts at the lowest possible prices. Our product managers have tons of experience getting the right spec on every bike. We have a better distribution network. And all this means that your customer can buy the best bike available, a Trek, for less money than bikes sold by our competitors. That's value.

Mountain Cubs, Lions, and Mountain Tracks

Trek Mountain Tracks are high quality steel mountain bikes offering a variety of performance levels. The different geometries offered on this series of bikes allows you to fit the performance to the rider.

The 800 and 820 are very comfortable and stable. This forgiving handling is great for the less experienced rider, making it easier for this rider to negotiate rough terrain with confidence.

The 830 and 850 models are more aggressive and also designed to be suspension ready. Suspension ready means that when we spec a suspension fork on the 830SHX, the head tube angle and standover height does not change, so no performance is lost.

The 830 and 850 also have longer effective top tubes, and are equipped with stems designed to slightly increase the reach. This gives more 'cockpit room' so the rider can move around more on the bike. This increased agility is very helpful when negotiating more technical terrain.

The 830 and 850 offer a more aggressive ride for better handling in technical and steeper terrain. When we say a bike is more aggressive, we mean that the rider is more forward on the bike. With more weight on the handlebars, the 830 and 850 will steer a bit quicker and also be more reactive to the terrain, so they take a bit more skill to ride well. This position includes more forward lean which puts the rider in a more powerful pedaling position for quicker acceleration and better climbing.

As you move up the Trek line through the SingleTracks, the ABT bikes, the OCLV, and the new full suspension series, the bikes keep getting more and more aggressive. Why don't all bikes have more aggressive geometry? Some riders don't ride in terrain which requires aggressive handling, and would prefer more emphasis on comfort.

When you help your customer select the bike that is right for their riding style and terrain, you'll help them enjoy cycling to its fullest. Mountain Tracks offer the right styling and performance at a valne only offered by Trek.

Retail Price: $

Mountain Cub

A child's first two wheeler. Designed for the beginning rider with extra heavy duty, adjustable training wheels. The Mountain Cub includes a compact fork (with a short axle-to-crown race dimension) for a really low standover height. This allows a greater range of rider size so the bike can be nsed for a longer period of time, making it a better investment.

Girl's and Boy's 8" high tensile steel frame, with 16" wheels. Coaster brakes, 'cuz these kids don't have the hand strength to use caliper type brakes.

Designed so Mom and Dad don't worry, but fun to ride so the new cyclist will grow with the sport. We want those kids to love cycling, so don't put beginners on cheap bikes, get 'em a Trek Mountain Cub.

Geometry and Fit

All measurements in millimeters

Seat tube	8.5" (216 mm)	Weight	24.0 lbs. (10.90 kg)
Standover height	451/boy's 427/girl's	Colors:	
Stem	4 bolt BMX type	Bright Red (boys)	
Handlebar width 130		Deep Blue (boys)	
Crank arm length	4.5" (115 mm)	Pink Pearl (girls)	
Seatpost length	220	Lunar (girls)	
Head tube length	402		

Hubset, Type	Coaster brake	Bottom bracket, Model	One-piece type
	Nutted f & r	Threading	28TPI
Spokes	28	Chain	1/2 x 1/8"
Front	137 14ga.	Headset size	21.2/32.5/27.0
Rear	133 14ga.	Staek height	33.0mm
R. Dropout width	112.0mm	Stem, degrees rise	-
Tire size, Spec	16 x 1.75	Handlebar clamp dia.	25.4mm
Max. Trek size	16 x 2.125	Seatpost diameter	22.2mm
F. derailleur clamp	--	Gearing	32 x 19 = 26

Mountain Lion 30

Retail Price: $

Too big for training wheels? A slightly larger version of the Mountain Cub, and with 20" wheels.

The Mountain Lion 30 includes compact forks (with a short axle-to-crown race dimension) for a low standover height. This fork, with the 9.5" frame size, allows a greater range of rider size so the bike can be used for a longer period of time, making it a better investment.

Geometry and Fit

All measurements in millimeters

Seat tube	9.5" (241 mm)	Weight	25.2 lbs. (11.44 kg)
Standover height	567/boy's 525/girl's	Colors:	
Stem	4 bolt BMX type	Bright Blue (boys)	
Handlebar width 550		Black (boys)	
Crank arm length	4.5" (115 mm)	Purple (girls)	
Seatpost length	250	Iridescent Pink (girls)	
Head tube length	105/ boys 85/girls		

Hubset, Type	Coaster	Bottom bracket, Model	One-piece type
	Nutted f & r	Threading	28TPI
Spokes	36	Chain	1/2 x 1/8"
Front	185 14ga.	Headset size	22.2/30.0/27.0
Rear	183 14ga.	Stack height	39.0mm
R. Dropout width	112.0mm	Stem, degrees rise	-
Tire size, Spec	20 x 1.75	Handlebar clamp dia.	25.4mm
Max. Trek size	20 x 2.125	Seatpost diameter	22.2mm
F. derailleur clamp	--	Gearing	36 x 19 = 38

Kids

Retail Price: $

Mountain Lion 40

This bike has the scaled down look and feel of Mom or Dad's mountain bike, but in a much simpler format. An obvions difference is the nse of coaster brakes, 'cuz these kids don't have the hand strength to rely solely on caliper type brakes (but we did put some cantis on so it looks cool).

Another difference is the one piece crank. This is a nice addition because of the low maintenance and kid-resistant strength of steel.

Designed so Mom and Dad don't worry, but cool looking and fnn to ride so the new cyclist will grow with the sport. ATB styling with coaster brake and rear canti. Steel rims. Fnll size 12" frame for 20" wheels.

Geometry and Fit

All measurements in millimeters

Seat tube	12" (305 mm)	Weight	31.9 lbs. (14.50 kg)
Standover height	567/boy's 525/girl's		
Stem	90	Color:	
Handlebar width 520		Blue/Dark Blue (boys)	
Crank arm length	5.5" (140 mm)	Iee Pink (girls)	
Seatpost length	300		
Head tube length	85		

Hubset, Type	Coaster	Bottom bracket, Model	One piece type
	Nutted f & r	Threading	28TPI
Spokes	36	Chain	1/2 x 1/8"
Front	187 14ga.	Headset size	22.2/30.0/27.0
Rear	185 14ga.	Stack height	33.0mm
R. Dropout width	112.0mm	Stem, degrees rise	40
Tire size, Spec	20 x 1.95	Handlebar clamp dia.	25.4mm
Max. Trek size	20 x 2.125	Seatpost diameter	26.6mm
F. derailleur elamp	--	Gearing	40 x 19 = 42

Mountain Lion 60

Retail Price: $

This bike is a great little mountain bike for great little mountain bikers. An easy to ride frame with a lower standover resulting from the dropped top tube and compact fork design (axle-to-crown race seat dimension is shorter).

20" alloy wheels are light and add stopping power. Aggressive knobs so your little biker can keep np on the ups and downs. 6 speed GripShift provides easy shifting for little hands. One piece crank is low maintenance and kid-tough.

Geometry and Fit

All measurements in millimeters

Seat tube	12"(305 mm)	Weight	26.0 lbs. (11.80 kg)
Standover height	567/boy's 525/girl's	Colors:	
Stem	80	Red (boys)	
Handlebar width 520		Lunar (girls)	
Crank arm length	5.5" (140 mm)		
Seatpost length	300		
Head tube length	85		

Hubset, Type	Freewheel, 6spd	Bottom bracket, Model	One piece type
Nutted f & r		Threading	28TPI
Spokes	36	Chain	1/2 x 1/8"
Front	188 14ga.	Headset size	22.2/30.0/27.0
Rear, D/ND	185/187 14ga.	Stack height	33.0mm
R. Dropout width	126.0mm	Stem, degrees rise	40
Tire size, Spec	20 x 1.95	Handlebar clamp dia.	25.4mm
Max. Trek size	20 x 2.125	Seatpost diameter	26.6mm
F. derailleur clamp	--		

Gearing

	40
14	57
16	50
18	45
21	38
24	33
28	29

Kids

Retail Price: $

Mountain Lion 60SHX

Think of this bike as a Mountain Lion 60 with shocks.

The featured SR DuoTrack 7006 suspension fork is rough and tough for youth action. Steel spring gives linear spring curve for smooth action throughout its travel range (1.5 inches). Elastomer topout and bottom-out bumpers. Can be upgraded to elastomer spring to reduce weight.

Geometry and Fit

All measurements in millimeters

Seat tube	12" (305 mm)	Weight	28.3 lbs. (12.83 kg)
Standover height	567/boy's 525/girl's		
Stem	80	Color:	
Handlebar width 520		Dry Titanium	
Crank arm length	5.5" (140 mm)		
Seatpost length	300		
Head tube length	85		

Hubset, Type	Freewheel, 6 spd	Bottom bracket, Model	One piece type
Nutted f & r		Threading	28 TPI
Spokes	36	Crankset bolt hole circle	-
Front	188 14ga.	Headset size	22.2/30.0/27.0
Rear, D/ND	185/187 14ga.	Stack height	33.0 mm
R. Dropout width	130.0 mm	Stem, degrees rise	40
Tire size, Spec	20 x 1.95	Handlebar clamp dia.	25.4 mm
Max. Trek size	20 x 2.125	Seatpost diameter	26.6 mm
F. derailleur clamp	--		

Gearing

	40
14	57
16	50
18	45
21	38
24	33
28	29

Retail Price: $

Mountain Lion 80

Outer butted Cro-Moly steel seat tube cuts weight and adds durability to seat clamp area.

Alloy rims make the wheels lighter and provide more friction for brake pads, for better stopping power. Stainless spokes are corrosion resistant and look great. And the rear hub is a cassette design, so the wheels are extra tough.

Shimano MJ crank moves the bike up to the 12 speed level with wider range for more experienced riders in steeper or more varied terrain.

Geometry and Fit

All measurements in millimeters

Seat tube	12 (305 mm)	Weight	25.3 lbs. (11.46 kg)
Standover height	567/boy's 525/girl's		
Stem	80	Colors:	
Handlebar width 520		Blue/Black (boys)	
Crank arm length	145	Dry Ice Orange/Ice Pink (girls)	
Seatpost length	300		
Head tube length	85		

Hubset, Type	HyperGlide	Bottom bracket, Model	Shimano BB-CT91
Nutted f & r	6 spd cassette	Shell width/ Axle length	68/116
Spokes	36	Crankset bolt hole circle	Riveted
Front	188 14ga.	Headset size	22.2/30.0/27.0
Rear, D/ND	186/188 14ga.	Stack height	33.0 mm
R. Dropout width	130.0 mm	Stem, degrees rise	40
Tire size, Spec	20 x 1.95	Handlebar clamp dia.	25.4 mm
Max. Trek size	20 x 2.125	Seatpost diameter	26.6 mm
F. derailleur clamp	28.6 mm / 1 1/8"		

Gearing

	28	38
11	51	69
13	43	59
15	37	51
18	31	42
21	27	36
24	23	--

Kids

Retail Price: $

Mountain Track 220

This bike is essentially an 800 Sport with bolt on 24 " wheels. So this rider will get all the fun of 18 speeds with powerful cantilever brakes.

Other kid-tough features include bolt style seat post binder, so parents don't have to worry about possible theft of the seat if the bike is ridden to school. Bolt-on wheels are good for kids who may not be ready for quick releases.

Tourney SIS derailleurs with QuickShifter shifting are positive and easy for new riders. Alloy rims reduce wheel weight and provide better stopping power. SR alloy crank is light and strong.

Geometry and Fit

All measurements in millimeters

Seat tube	13" (330 mm)	Weight	29.2 lbs. (13.26 kg)
Standover height	635/boy's 597/girl's	Colors:	
Stem	60	Dry Titanium (boys)	
Handlebar width 540 boys / 580 girls		Ice Cyan (boys)	
Crank arm length	165	Dry Ice Emerald (girls)	
Seatpost length	300	Ice Plum (girls)	
Head tube length	85		

Hubset, Type	Freewheel, 6 spd	Bottom bracket, Model	VP-B32/3N
Nutted f & r		Shell width/ Axle	?
Spokes	36	Crankset bolt hole circle	Riveted
Front	238 14ga.	Headset size	22.2/30.0/27.0
Rear, D/ND	235/237 14ga.	Stack height	33.0 mm
R. Dropout width	130.0 mm	Stem, degrees rise	25
Tire size, Spec	24 x 1.95	Handlebar clamp dia.	25.4 mm
Max. Trek size	24 x 2.125	Seatpost diameter	26.6 mm
F. derailleur clamp	28.6 mm / 1 1/8"		

Gearing

	28	38	48
14	--	64	81
16	41	56	71
18	37	50	63
21	31	43	54
24	28	37	47
28	24	32	--

Retail Price: $

Mountain Track 220SHX

Same features as the Mountain Track 220, but with shocks. The SR DuoTrack 7006 suspension fork is rough and tough for youth action. Steel spring gives linear spring curve for smooth action throughout its travel range (1.5 inches). Elastomer topout and bottom-out bumpers.

Retail Price: $

Mountain Track 240

If you take a Mountain Track 220, add an outer butted Cro-Moly seat tube, and upgrade the equipment to Shimano Altus C90, you get a Mountain Track 240. That includes Shimano Altus C90 cranks and a slightly wider gear range.

Geometry and Fit

All measurements in millimeters

Seat tube	13" (330 mm)	Weight	28.6 lbs. (12.98 kg)
Standover height	635/boy's 597/girl's		
Stem	60	Colors:	
Handlebar width 540 boys/600 girls		Ice Blue (boys)	
Crank arm length	170	Teal/Lunar (girls)	
Seatpost length	300		
Head tube length	85		

Hubset, Type	Comp. HyperGlide	Bottom bracket, Model	Shimano BB-CT91
Nutted f & r	7 spd cassette	Shell width/ Axle length	68/116
Spokes	36	Crankset bolt hole circle	Riveted
Front	238 14ga.	Headset size	22.2/30.0/27.0
Rear, D/ND	235/237 14ga.	Stack height	33.0 mm
R. Dropout width	130.0 mm	Stem, degrees rise	25
Tire size, Spec	24 x 1.95	Handlebar clamp dia.	25.4 mm
Max. Trek size	24 x 2.125	Seatpost diameter	26.6 mm
F. derailleur clamp	BB Mount		

Gearing

	24	32	38
11	--	69	82
13	44	58	69
15	38	50	60
18	31	42	50
21	27	36	43
24	24	31	37
28	20	27	--

Kids

Retail Price: $

Cruiser Classic

Its the fun of a classic cruiser, but with the addition of Trek's Lifetime Warranty, alloy rims, stainless spokes, and lots of handlebar padding. Wbich way to the beach?

Features
- Super fun bike
- Trek Lifetime warranty
- Wide flat pedals for foot comfort
- Alloy rims for low weight
- Stainless spokes resist corrosion, look good
- One piece cranks are tough

Geometry and Fit

All measurements in millimeters

Seat tube	19" (483 mm)	Weight	32.0 lbs. (14.53 kg)
Standover height	781 (men's)		
Stem	4 bolts BMX type	Colors:	
Handlebar width 700 with 132 mm rise		Ice Cobalt (men's & women's)	
Crank arm length	6.5" (165 mm)	Ice Violet (women's)	
Seatpost length	300	Black (men's)	
Head tube length	85		

Hubset, Type	Coaster	Bottom bracket, Model	One piece type
	Nutted f & r	Threading	28TPI
Spokes	36	Chain	1/2 x 1/8"
Front	264 14ga.	Headset size	22.2/30.0/27.0
Rear	260 14ga.	Stack height	37.0mm
R. Dropout width	110.0mm	Stem, degrees rise	-
Tire size, Spec	26 x 2.0	Handlebar clamp dia.	25.4mm
Max. Trek size	26 x 2.125	Seatpost diameter	22.2mm
F. derailleur clamp	-	Gearing	40 x 18 = 58

Retail Price: $

Calypso

You mean its uphill to the beach? I'll take the Calypso. Cruiser Classic with rear derailleur and GripShift.

Upgrades from Cruiser
- 6 speed gear selection
- Gumwall tires

Geometry and Fit

All measurements in millimeters

Seat tube	19" (483 mm)	Weight	34.6 lbs. (15.71 kg)
Standover height	781 (men's)		
Stem	4 bolts BMX type	Colors:	
Handlebar width 700 with 132 mm rise		Ice Green (men's)	
Crank arm length	6.5" (165 mm)	Ice Turquoise (women's)	
Seatpost length	300		
Head tube length	85		

Hubset, Type	Freewheel, 6spd	Bottom bracket, Model	One piece type
Nutted f & r		Threading	28TPI
Spokes	36	Crankset bolt hole circle	-
Front	264 14ga.	Headset size	22.2/30.0/27.0
Rear, D/ND	261/263 14ga.	Stack height	37.0mm
R. Dropout width	130.0mm	Stem, degrees rise	-
Tire size, Spec	26 x 2.0	Handlebar clamp dia.	25.4mm
Max. Trek size	26 x 2.125	Seatpost diameter	22.2mm
F. derailleur clamp	-		

Gearing

40	
14	75
16	66
18	58
21	50
24	44
28	37

800 SPORT

HiTensile frame and fork
Tourney with SIS thumb shifters

Off Road Recreation

Retail Price: $

Features
- Great value in a recreational mountain bike
- Designed by Trek Engineering
- Shimano derailleurs and brakes
- 18 speed SIS shifting
- Lots of sizes (including women's) with size specific components
- Aggressive, full width, all-round tire and alloy rims

Rider: First time rider. Recreational rider looking to get off pavement some. Person wanting upright position and stable, forgiving ride.

Concept:

We wanted to make an affordable bike which offers the quality and ride Treks are know for. So the 800 Sport has a Trek engineered design and geometry. Then we added alloy rims because they make a bike feel faster, and stop better.

The recreational cyclist wants comfort more than high performance, so this bike gets a high rise stem and padded anatomic seat. But we kept it within reason so that they can still ride efficiently.

Even a little hill can seem big if you don't ride everyday, so we gave the Sport an 18 speed SIS gear selection.

And although a speedy wheel change probably isn't a concern for this rider, the quick release on the front wheel makes transporting the bike easier.

Frameset	Frame	HiTensile steel
	Fork	HiTensile
	Headset	VP-H67
Controls	Handlebars	5° bend, women's 60 mm rise
	Stem	Steel
	Shifters	Shimano TY22 Thumbshifter w/Optigear
	Brake levers	Chang Star 267-A1
	Grips	Hi-Density foam
Brakes		Shimano Altus C90
Drivetrain	Crankset	SR
	Pedals	Victor VP-893N
	F. derailleur	Shimano Tourney 22, down pull
	R. derailleur	Shimano Tourney 22
	Cassette	Shimano HG22
	Chain	KMC UG50
Wheelset	Hubs	Joy Tech steel, with quick release front, nutted rear
	Rims	Weinmann 519 alloy
	Tires	Trek Comection
	Tubes	Schraeder valve
	Spokes	Chrome plated
Seat		Trek Hi-Density super soft foam
	Seatpost	Steel, black
	Seat binder	Quick release
Weight		30.69 lbs. (13.93 kg)
Color		Dry Ice Emerald/Dry Ice Purple fade
		Gloss Black

Gearing

	28	38	48
14	--	71	90
16	46	62	79
18	41	55	70
21	35	47	60
24	31	42	52
28	26	36	--

Geometry and Fit

All measurements in millimeters

	13.5	16.5	18	19.5	21	22.5	24	17W	20W
Head angle	70.0	70.0	70.5	70.5	70.5	70.5	70.5	69.5	70.0
Seat angle	73.0	73.0	72.5	72.5	72.5	72.0	72	72.5	72.0
Effective top tube	540	550	560	570	580	590	600	534	547
Chainstay length	436	436	436	436	436	436	436	436	436
Bottom bracket bt	291	293	295	295	295	297	297	284	296
Offset	43	43	43	43	43	43	43	45	45
Wheelbase	1031	1042	1044	1055	1066	1073	1084	1031	1044
Trail	75	75	72	72	72	72	72	77	73
Standover height	697	711	731	758	795	832	869	NA	NA
Stem	100	100	100	100	120	120	120	100	100
Reach	588	594	604	614	633	643	653	588	591
Handlebar width 580	580	580	580	580	580	540	600	600	
Crank arm length	170	170	170	170	170	170	170	170	170
Seatpost length	300	300	300	300	300	300	300	300	300
Head tube length	85	85	85	105	145	185	225	125	155
Steerer length	?								

Hubset, Type	Threaded
F/QR, R/bolt on	6 spd freewheel
Spokes	36
Front	264 14ga.
Rear, D/ND	262/263 14ga.
R. Dropout width	135.0mm
Tire size, Spec	26 x 1.95
Max. Trek size	26 x 2.35
Front derailleur clamp size	28.6 mm / 1 1/8"
Bottom bracket, Model	VP-B32/3N
Shell width/ Axle	68/?
Crankset bolt hole circle	Riveted
Headset size	22.2/30.0/27.0
Stack height	33.0mm
Stem, degrees rise	40
Handlebar clamp diameter	25.4mm
Seatpost diameter	26.6mm

800

HiTensile frame with Cro-Moly seat tube
Altus C90 with GripShift

Off Road Recreation

Rider: First time rider. Recreational rider looking to get off pavement some. Person wanting upright position and stable, forgiving ride.

Concept:

Like the 800 Sport, we wanted to make the 800 an affordable bike which offers the quality and ride Treks are known for.

But the 800 is for the rider who rides more often, more mileage, or more difficult terrain. 21 speeds make it easier to find a gear that's comfortable. And with the Altus crank, first gear is slightly lower for more challenging terrain. And if they're going to be on more challenging terrain, chances are they will use the seat quick release more often, so we used an outer butted Cro-Moly seat tube which can better handle the rigors of frequent seat height changes.

We also put two quick releases on this bike, so repairing flats is easier in the field.

Retail Price: $

Upgrades from 800 Sport

- *Outer butted Cro-Moly seat tube*
- Shimano Altus C90 derailleurs
- GripShift with 21 speeds
- Quick releases on both wheels
- *Cassette rear hub*

Frameset	Frame	HiTensile with outer butted Cro-Moly seat tube
	Fork	HiTensile
	Headset	YST HP-8002
Controls	Handlebars	5° bend, women's 60 mm rise
	Stem	Steel
	Shifters	GripShift MRX-100
	Brake levers	C•Star 274A
	Grips	Trek logo, GripShift
Brakes		Shimano Altus C90
Drivetrain	Crankset	Shimano Altus C90
	Pedals	Victor VP-893N
	F. derailleur	Shimano Altus C90, down pull
	R. derailleur	Shimano Altus C90 GS
	Cassette	Shimano HG30
	Chain	KMC UG50
Wheelset	Hubs	Joy Tech alloy, w/quick release both front and rear
	Rims	Weinmann 519
	Tires	Trek Connection
	Tubes	Schraeder valve
	Spokes	Chrome plated
Seat		Trek Hi-Density super soft foam
	Seatpost	Steel, black
	Seat binder	Quick release
Weight		30.13 lbs. (13.68 kg)
Color		Ice Cyan/Ice Indigo fade Dry Ice Plum

Gearing

	24	32	38
11	--	76	91
13	48	65	77
15	42	56	66
18	35	47	55
21	30	40	47
24	26	35	42
28	22	30	--

Geometry and Fit

All measurements in millimeters

	13.5	16.5	18	19.5	21	22.5	17W	20W
Head angle	70.0	70.0	70.5	70.5	70.5	70.5	69.5	70.0
Seat angle	73.0	73.0	72.5	72.5	72.5	72.0	72.5	72.0
Effective top tube	540	550	560	570	580	590	534	547
Chainstay length	436	436	436	436	436	436	436	436
Bottom bracket ht	291	293	295	295	295	297	284	296
Offset	43	43	43	43	43	43	45	45
Wheelbase	1031	1042	1044	1055	1066	1073	1031	1044
Trail	75	75	72	72	72	72	72	73
Standover height	687	711	731	758	795	832	NA	NA
Stem	100	100	100	100	120	120	100	100
Reach	588	594	604	614	633	643	588	591
Handlebar width 580	580	580	580	580	580	600	600	
Crank arm length	170	170	170	170	170	170	170	170
Seatpost length	300	300	300	300	300	300	250	300
Head tube length	85	85	85	105	145	185	125	155
Steerer cut length								

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	36
Front	264 14ga.
Rear, D/ND	261/262 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 1.95
Max. Trek size	26 x 2.35
Front derailleur clamp size	BB mount
Bottom bracket, Model Shimano	BB-CT91
Shell width/ Axle length	68/116
Crankset bolt hole circle	Riveted
Headset size	22.2/30.0/27.0
Stack height	38.0 mm
Stem, degrees rise	45
Handlebar clamp dia. 25.4 mm	
Seatpost diameter	26.6 mm

820

Cro-Moly main triangle and fork
Altus C90/ Acera-X with GripShift

Off Road Enthusiast

Rider: Recreational rider looking to get off pavement some. Person wanting the performance version of an upright position and stable, forgiving ride.

Concept:

This is a deluxe version of the 800, for the more discriminating rider who wants Cro-Moly main tubes and fork. Since Cro-Moly is stronger, we can use thinner tubes and still get the same strength, and this makes for a better ride.

We've spec'd a Shimano Acera-X rear hub for durability, and the rear derailleur for a bit more shifting performance.

The micro-adjust seatpost allows more precision in positioning, an important comfort feature as ride length increases.

Retail Price: $

Upgrades from 800

- Cro-Moly main triangle
- Cro-Moly fork
- Shimano Acera-X rear derailleur and rear hub
- Alloy micro-adjust seat post

Frameset	Frame	Cro-Moly main tubes, HiTensile stays
	Fork	Cro-Moly
	Headset	HPO1H
Controls	Handlebars	Steel, 5° bend; Women's: 60 mm rise
	Stem	Steel
	Shifters	GripShift MRX100
	Brake levers	C•Star 274A
	Grips	GripShift
Brakes		Shimano Altus C90
Drivetrain	Crankset	Shimano Altus C90
	Pedals	Wellgo LU945
	F. derailleur	Shimano Altus C90, down pull
	R. derailleur	Shimano Acera-X GS
	Cassette	Shimano HG30
	Chain	KMC UG50
Wheelset	Hub, Rear	Shimano Acera-X
	Front	Joy Tech
	Rims	Weinmann 519
	Tires	Trek Connection
	Tubes	Schraeder valve
	Spokes	Chrome plated
Seat		Trek Hi-Density super soft foam
	Seatpost	Micro-adjust, alloy
	Seat binder	Quick release
Weight		29.00 lbs. (13.17 kg)
Color		Dry Ti/Dry Slate Green fade Ice Green Baja Blue

Gearing

	24	32	38
11	--	76	91
13	48	65	77
15	42	56	66
18	35	47	55
21	30	40	47
24	26	35	42
28	22	30	--

Geometry and Fit

All measurements in millimeters

	13.5	16.5	18	19.5	21	22.5	24	17W	20W
Head angle	70.0	70.0	70.5	70.5	70.5	70.5	70.5	69.5	70.0
Seat angle	73.0	73.0	72.5	72.5	72.5	72.0	72.0	72.5	72.0
Effective top tube	540	550	560	570	580	590	600	534	547
Chainstay length	436	436	436	436	436	436	436	436	436
Bottom bracket ht	291	293	295	295	295	297	297	284	296
Offset	43	43	43	43	43	43	43	45	45
Wheelbase	1031	1042	1044	1055	1066	1073	1084	1031	1044
Trail	75	75	72	72	72	72	72	77	73
Standover height	687	711	731	758	795	832	868	NA	NA
Stem	100	100	100	100	120	120	120	100	100
Reach	588	594	604	614	633	643	653	588	591
Handlebar width 560	580	580	580	580	580	580	580	610	
Crank arm length	170	170	170	170	170	170	170	170	170
Seatpost length	300	300	300	300	300	300	300	250	300
Head tube length	85	85	85	105	145	185	225	125	150
Steerer cut length	124	124	124	144	184	224	264	164	194

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	36
Front	265 14ga.
Rear, D/ND	262/264 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 1.95
Max. Trek size	26 x 2.35
Front derailleur clamp size	BB mount
Bottom bracket, Model Shimano	BB-CT91
Shell width/ Axle length	68/116
Crankset bolt hole circle	Riveted
Headset size	22.2/30.0/27.0
Stack height	35.5 mm
Stem, degrees rise	45
Handlebar clamp dia. 25.4 mm	
Seatpost diameter	26.6 mm

830

Oversize Cro-Moly main triangle
Alivio/Acera-X with GripShift

Off Road Enthusiast

Rider: Recreational rider looking for a stable, forgiving ride off road. This person considers himself to be a cyclist, but still at a casual level.

Concept:

The 830's design is between an off road race bike and a recreational bike. It uses oversize tubes to add stiffness to the frame to resist the bouncing and flexing of off road use, giving better control. This frame is suspension ready, so an add-on fork will maintain good steering characteristics. And if a bike is a serious off road model, it should have aggressive tires like Trek Kahunas with steering and drive-specific treads.

Along with a more aggressive frame, we broadened the gear range by using an Acera-X crank with more high gears. Shifting is crisper with the SRT-300 shifters and the Acera-X front derailleur.

The San Marco Linea saddle rounds off the off-road features. Its a little narrower, so the rider can move around more on the bike to increase handling agility.

Retail Price: $ _____

Upgrades from 820
- OverSize Cro-Moly frame and fork w/*top route cables*
- More aggressive geometry w/suspension ready design
- GripShift SRT-300
- *Shimano Acera-X crank, front derailleur*
- *Alivio rear derailleur*
- Kahuna tires and stainless steel spokes
- *San Marco Linea saddle*

Frameset	Frame	Trek OverSize Cro-Moly w/ HiTensile stays
	Fork	Trek Cro-Moly
	Headset	VPH913W
Controls	Handlebars	CroMoly
	Stem	Steel
	Shifters	GripShift SRT-300
	Brake levers	C•Star 274A
	Grips	Trek logo, GripShift
Brakes		Shimano Altus C90
Drivetrain	Crankset	Shimano Acera-X
	Pedals	Wellgo, resin body w/ Cro-Moly spindles
	F. derailleur	Shimano Acera-X Top Swing, top pull (M), down pull (W)
	R. derailleur	Shimano Alivio
	Cassette	Shimano HG30
	Chain	KMC HG50
Wheelset	Hub, Rear	Shimano Acera-X
	Front	Joy Tech
	Rims	Weinmann 519
	Tires	Kahuna
	Tubes	Schraeder valve
	Spokes	Marwi USA stainless
Seat		San Marco Linea
	Seatpost	System 1
	Seat binder	System 1 quick release
Weight		27.81 lbs. (12.63 kg)
Color	Ice Green/Ice Indigo fade Dry Titanium	

Gearing

	24	34	42
11	--	81	100
13	48	69	85
15	42	59	73
18	35	50	61
21	30	42	52
24	26	37	46
28	22	32	--

Geometry and Fit

All measurements in millimeters

	13.5	16.5	18	19.5	21	22.5	17W	20W
Head angle	70.0	70.0	70.5	70.5	70.5	70.5	69.5	70.0
Seat angle	73.0	73.0	72.5	72.5	72.5	72.0	72.5	72.0
Effective top tube	540	555	570	580	590	600	534	547
Chainstay length	430	430	430	430	430	430	436	436
Bottom bracket ht	291	293	295	295	295	297	284	296
Offset	43	43	43	43	43	43	445	45
Wheelbase	1025	1041	1048	1059	1070	1078	1031	1044
Trail	75	75	72	72	72	72	77	73
Standover height	694	719	738	767	804	841	-	-
Stem	100	100	100	100	120	120	100	100
Reach	588	598	614	624	643	653	575	591
Handlebar width 560	580	580	580	580	580	580	610	
Crank arm length	170	170	175	175	175	175	170	170
Seatpost length	300	300	300	300	300	300	250	300
Head tube length	85	85	85	105	145	185	125	155
Steer cut length 124	124	124	144	184	224	164	194	

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	267 14ga.
Rear, D/ND	265/266 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	28.6 mm / 1 1/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/110
Crankset bolt hole circle	Riveted
Headset size	25.4/34.0/30.0
Stack height	34.0 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	26.6 mm

830SHX

Oversize Cro-Moly main triangle
SR 7006 suspension fork
Alivio/Acera-X with GripShift

Off Road Enthusiast

Rider: Recreational rider looking for a stable, forgiving ride off road. This person considers themselves to be cyclist, but still at a casual level.

Concept:

Like the 830, but the DuoTrack suspension fork adds some comfort to the bike. Comfort makes cycling nice, even around town, over potholes or driveway bumps. But off-road, suspension is becoming more and more the norm. It lets a rider stay on the bike longer, with less fatigue, and also helps tackle that technical stuff.

Retail Price: $ _____

Upgrades from 830
- SR DuoTrack 7006 suspension fork

Frameset	Frame	Trek OverSize Cro-Moly w/ HiTensile stays
	Fork	SR DuoTrack 7006 suspension
	Headset	VPH913W
Controls	Handlebars	Cro-Moly
	Stem	Steel
	Shifters	GripShift SRT-300
	Brake levers	C•Star 274A
	Grips	Trek GripShift
Brakes		Shimano Altus C90
Drivetrain	Crankset	Shimano Acera-X
	Pedals	Wellgo, resin body w/ Cro-Moly spindles
	F. derailleur	Shimano Acera-X Top Swing, top pull (M), down pull (W)
	R. derailleur	Shimano Alivio
	Cassette	Shimano HG30
	Chain	KMC HG50
Wheelset	Hub, Rear	Shimano Acera-X
	Front	Joy Tech
	Rims	Weinmann 519
	Tires	Kahuna
	Tubes	Schraeder valve
	Spokes	Marwi USA stainless
Seat		San Marco Linea
	Seatpost	System 1
	Seat binder	System 1 quick release
Weight		29.8 lbs. (13.53 kg)
Color	Black	

Gearing

	24	34	42
11	--	81	100
13	48	69	85
15	42	59	73
18	35	50	61
21	30	42	52
24	26	37	46
28	22	32	--

Geometry and Fit

All measurements in millimeters

	13.5	16.5	18	19.5	21
Head angle	70.0	70.0	70.5	70.5	70.5
Seat angle	73.0	73.0	72.5	72.5	72.5
Effective top tube	540	555	570	580	590
Chainstay length	430	430	430	430	430
Bottom bracket ht.	291	293	295	295	295
Offset	43	43	43	43	43
Wheelbase	1025	1041	1048	1059	1070
Trail	75	75	72	72	72
Standover height	694	719	738	767	804
Stem	80	100	120	120	135
Reach	586	613	640	650	668
Handlebar width 560	580	580	580	580	
Crank arm length	170	170	175	175	175
Seatpost length	300	300	300	300	300
Head tube length	85	85	85	105	145
Steerer cut length	119	119	119	139	179

Huhset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	267 14ga.
Rear, D/ND	265/266 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	28.6 mm / 1 1/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/110
Crankset bolt hole circle	Riveted
Headset size	25.4/34.0/30.0
Stack height	34.0 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	26.6 mm

850

True Temper double butted Cro-Moly
Alivio/STX with GripShift

Off Road Enthusiast

Rider: Recreational rider looking for a stable, forgiving ride off road. This person considers themselves to be cyclist, but still at a casual level.

Concept:

The 850 is a deluxe version of the 830, and shares the same geometry. But by using a full Cro-Moly frame and fork, and even double butting the tubes, we've taken weight out of the frame, and added a more shock absorptive, lively ride. While we were at it, we also took some weight out with the System 1 handlebars and Cro-Moly stem.

Better brakes and derailleurs include Shimano's IG system, for really smooth shifting both up and down the cassette and chainrings. And the Alivio chainrings are replaceable.

Since we expect this rider to be pedaling harder and farther, we included toe clips and straps to help them get the power to the pedals and rear wheel. And if they're going faster, they'll want the machined sidewalls of the Lobo rims for better stopping.

Retail Price: $

Upgrades from 830
- True Temper double butted Cro-Moly tubing
- Shimano Acera-X front hub and brakes, Alivio cranks and front derailleur, and STX rear derailleur (IG)
- GripShift SRT-400 shifters
- Matrix Lobo rims
- Toe clips and straps
- System 1 alloy handlebars
- Cro-Moly stem

Frameset	Frame	True Temper double butted Cro-Moly
	Fork	Trek Cro-Moly
	Headset	VPH913W
Controls	Handlebars	System 1
	Stem	Cro-Moly
	Shifters	GripShift SRT-400
	Brake levers	C•Star 274AG
	Grips	Trek logo, GripShift
Brakes		Shimano Acera-X
Drivetrain	Crankset	Shimano Alivio
	Pedals	Wellgo resin body w/Cro-Moly spindle w/ Medium clips and straps (13-19) Large clips and straps (21-22.5)
	F. derailleur	Shimano Alivio Top Swing, top pull
	R. derailleur	Shimano STX GS
	Cassette	Shimano IG31
	Chain	Shimano IG30
Wheelset	Hub, Front	Joy Tech
	Rear	Shimano Acera-X
	Rims	Matrix Lobo WM, silver, brushed
	Tires	Kahuna
	Tubes	Schraeder valve
	Spokes	Marwi USA, stainless
Seat		San Marco Linea
	Seatpost	System 1
	Seat binder	System 1 quick release
Weight		27.3 lbs. (12.40 kg)
Color		Silver/Ice Indigo fade
		Dry Ice Red

Gearing

	24	34	42
11	--	81	100
13	48	69	85
15	42	59	73
18	35	50	61
21	30	42	52
24	26	37	46
28	22	32	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.0	70.0	70.5	70.5	70.5	70.5
Seat angle	73.0	73.0	72.5	72.5	72.5	72.0
Effective top tube	540	555	570	580	590	600
Chainstay length	430	430	430	430	430	430
Bottom bracket ht.	291	293	295	295	295	297
Offset	43	43	43	43	43	43
Wheelbase	1025	1041	1048	1059	1070	1078
Trail	75	75	72	72	72	72
Standover height	694	719	738	767	804	841
Stem	90	105	120	135	135	135
Reach	615	632	658	679	689	699
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	170	175	175	175	175
Seatpost length	300	300	300	300	300	300
Head tube length	85	85	85	105	145	185
Steerer cut length	121	121	121	141	181	221

Hubset, Type	Compact HyperGlide
	7 spd cassette
Spokes	32
Front	269 14ga.
Rear, D/ND	267/268 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	28.6 mm / 1 1/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/110
Crankset bolt hole circle	67 mm
Headset size	25.4/34.0/30.0
Stack height	34.0 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	26.6 mm

850SHX

True Temper double butted Cro-Moly
Rock Shox Quadra 5 suspension fork
Alivio/STX with GripShift

Off Road Enthusiast

Rider: Recreational rider looking for a stable, forgiving ride off road. This person considers themselves to be cyclist, but still at a casual level.

Concept:

Since the 850 is a good all-round off road bike, we thought we'd offer it with the comfort of a good all-round suspension fork: the Rock Shox Quadra 5. This fork uses a one-piece elastomer which is extra long for a smooth and plush ride. Its easily adjustable with the adjusters on top of each fork leg.

With suspension, every ride can be more fun because the shock takes the edge off bumps. Less bumps means less work controlling the bike, so the rider can get through more difficult terrain successfully. They can also ride longer because they won't have to work as hard.

Retail Price: $

Upgrades from 850
- Rock Shox Quadra 5 suspension fork

Frameset	Frame	True Temper double butted Cro-Moly
	Fork	Rock Shox Quadra 5 suspension
	Headset	VPH913W
Controls	Handlebars	System 1
	Stem	Cro-Moly
	Shifters	GripShift SRT-400
	Brake levers	C•Star 274AG
	Grips	Trek logo, GripShift
Brakes		Shimano Acera-X
Drivetrain	Crankset	Shimano Alivio
	Pedals	Wellgo w/ resin body and Cro-Moly spindle w/ Medium clips and straps (13-19) Large clips and straps (21-22.5)
	F. derailleur	Shimano Alivio Top Swing, top pull
	R. derailleur	Shimano STX GS
	Cassette	Shimano IG31
	Chain	Shimano IG30
Wheelset	Hub, Front	Joy Teeh
	Rear	Shimano Acera-X
	Rims	Matrix Lobo WM, silver, brushed
	Tires	Kahuna
	Tubes	Schraeder valve
	Spokes	Marwi USA, stainless
Seat		San Marco Linea
	Seatpost	System 1
	Seat binder	System 1 quick release
Weight		28.5 lbs. (12.94 kg)
Color		Dry Ice Red

Gearing

	24	34	42
11	--	81	100
13	48	69	85
15	42	59	73
18	35	50	61
21	30	42	52
24	26	37	46
28	22	32	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.0	70.0	70.5	70.5	70.5	70.5
Seat angle	73.0	73.0	72.5	72.5	72.5	72.0
Effective top tube 600		540	555	570	590	590
Chainstay length 430		430	430	430	430	430
Bottom bracket ht.	291	293	295	295	295	297
Offset 43		43	43	43	43	43
Wheelbase	1025	1041	1048	1059	1070	1078
Trail	75	75	72	72	72	72
Standover height	694	719	738	767	804	841
Stem	90	105	120	135	135	135
Reach	615	632	658	679	689	699
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	170	175	175	175	175
Seatpost length	300	300	300	300	300	300
Head tube length	85	85	85	105	145	185
Steerer cut length	119	119	119	139	179	219

Hubset, Type	Compact HyperGlide
	7 spd eassette
Spokes	32
Front	269 14ga.
Rear, D/ND	267/268 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	28.6 mm / 1 1/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/110
Crankset bolt hole circle	67 mm
Headset size	25.4/34.0/30.0
Stack height	34.0 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	26.6 mm

SingleTrack

Signature Sequential TIG Welding (SST)

What is Signature Sequential TIG welding?

Its a very high tech frame building system developed by Trek for their Cro-Moly bikes including the SingleTracks. U.S. built Cro-Moly hybrids, the 520, and the Trek tandems.

What's high tech about welding? I thought all bikes were welded.

Many bikes are TIG welded (TIG = Tungsten Inert Gas), which means that while an electric arc from a Tungsten welding tip brings the frame tubes to their melting point, an Inert Gas (gas without oxygen) is flowed over the red-hot part of the molten frame tubes. This gas keeps oxygen from combining chemically with the steel, which would weaken the frame. When the molten steel cools, the tube joint become a solid, single piece. But Trek's process makes for a better quality welded bike.

Like how?

Well, first Trek engineers design the geometry of the bike. They also design the tubing.

Wow, you mean Trek makes its own tubing, too?

No, Trek doesn't make their own tubing, but its not off-the-shelf stuff either. Trek engineers do a lot of research and development to come up with special tube sizes and thicknesses. Radical butting. Good stiffness to strength to weight ratios. Stuff that makes Trek bikes stronger and ride better, but they're still light.

So the tubing is different. That's it?

That's just the start. For accurate welded frames, the tubing lengths and miters should be really exact.

What's a miter?

That's the way you cut funny looking curves into the tubing ends to make two tubes fit together smoothly. If its done right, the frame is more accurate and the frame joint is stronger.

What does Trek do that's different?

Most factories use a punch or a mill to miter their tubes. Either one leaves sharp, ragged edges to the tube, and as the cutter wears, its not as accurate so the tube length varies. Trek uses a laser, so the tubing is cut with a beam of light. It never wears, and because its controlled by a computer its really accurate. Also, the tube is always cut at a 90° angle to the tube wall, so its always got a thick edge for better welding.

How does the thick edge make a better weld?

When you weld, you actually melt the tube a bit. After it cools the melted portions are like one piece. If you weld a thin piece, it won't be as strong. But with laser mitering, the welder always works with a thick edge. Also, the 90° edge makes a little gap that lets heat into the joint better. Better heat penetration means a more complete weld, and that means more strength.

OK. I can tell there's more.

Trek also uses size and model specific jigs.

What's a jig?

A jig is a special device that holds the tubing in place while you weld it. Other factories use adjustable jigs so that they can build more models and brands of bikes, without having a lot of money tied up in jigs. But when you adjust them, there's a lot of error possible. With our size and model specific jigs, every frame that comes down the line is exactly like the last one, because you can't change the jig. With this system, you never see frames with the wrong angles or dimensions.

So where does the 'Signature' come in?

Well, first of all, Signature Sequential TIG welding is sequentially welded by hand. After one of our welders has completed a frame, he or she signs a small card that's attached to every frame that's used by the Quality Control department- that's where the Signature comes from.

What is sequential welding?

When you apply high heat to a metal, it tends to warp, sort of like the way a cookie sheet twists and pops in the oven. By following a special order, or sequence of welds as the frame is assembled, we can control the warping by making the frame pull itself back into alignment. Its time consuming, but with the lightweight tubing we use, we don't want to do a lot of cold setting to our frames. Also, remember the part of TIG where you keep the oxygen away from the molten steel? By only doing part of each joint and letting it cool while the gas flows over it, we do a better job of keeping the oxygen away from the red hot weld zone. If you went all the way around each joint with your welder, some material would still be red hot when exposed to the oxygen in the air.

So why do the welders sign the little card?

That's so we can monitor their work. Every single frame that comes from the welders is checked for alignment on a light table, plus they're also checked thoroughly for uniformity and good looks. Its basically the same thing a high quality custom builder would do.

Oh. That seems pretty basic. When you said quality control, I was thinking of white lab coats and such.

Well, we do that too, but its really not necessary to have the lab coat types check every frame. They check random frames throughout every work day with X-rays and dye penetrant testing. These special procedures show up things you can't see with the naked eye. If there's ever a problem, every frame done by a particular welder can be checked more thoroughly, because WE HAVE THEIR SIGNATURE on them. So that's the real reason for the Signature. It guarantees the quality of every Trek bike.

Wow. X-rays and lasers. You'd think that bikes built like that would cost a lot more.

Trek engineers have a lot of bike building experience, and they've been able to design a really great process with our Signature Sequential TIG welding. Remember, its Trek's newest technology, and we've learned a lot over the years as we developed things like bonding, OCLV, and designing and building our own factory. With Trek's Signature Sequential TIG welding, you benefit from our experience that comes from building over a million bicycles.

True Temper Tubing

All the SingleTrack models use triple butted tubing in the main triangle. By using three butt thicknesses instead of two, additional weight can be removed from the frame, while maintaining the strength required for hard riding. The SingleTracks also have hidden features, like internal reinforcements in the head tube and seat tube to reinforce these critical areas while allowing the use of really light weight and oversize tubing.

The 970, 970SHX, and the 990 use OX-3 tubing, which is heat treated. The heat treatment increases strength (by about 20%), so less material is needed. This again reduces the frame weight, and also adds to the lively feel that the SingleTracks are known for. On the 970, 970SHX, and the 990, the stays are thinner at the ends, but left thick under the cantilever bosses. This reduces the weight without losing any of the seatstay's torsional and bending stiffness which is required for great braking response. The 930, 930SHX, and 950 use straight gauge Cro-Moly stays.

Fitting a SingleTrack

Since SingleTracks have raised bottom brackets (compared to a road bike) and this rider may want to dismount in rough or uneven terrain, more clearance over the top tube is desirable.

Our engineers designed the SingleTracks to fit best with 2 to 6 inches of clearance over the top tube. Using this sizing, most riders will find at least two sizes which fit. Of these two sizes, choose the bike with the rider's preference for reach and handlebar height.

Please note that with the 13" and 22.5" sizes, you'll be able to fit more folks on SingleTracks than ever before.

Mechanics Notes

Those little clear plastic things- When assembling the SingleTracks, you'll notice that we no longer include the protective cable sheathing for the top tube. Instead, look in the baggy with the brake straddlewires. You'll find three sets of three tiny, clear plastic donuts which break apart to slide over the top tube cables to protect the frame. With the slotted housing stops, the top tube bumpers also allow easy lubrication of the cables for best performance.

Suspension Ready Geometry- The entire SingleTrack line is suspension ready, but with a slightly different fork length specification than the 830 and 850. This is because the SingleTracks are designed to accommodate longer travel forks like Rock Shox Quadras or air/oil forks. For the SingleTracks, the axle to fork crown race seat dimension is 408 mm.

ACSD Anti Chain Suck Device- Unfortunately, the ugliness of chainsuck is an off-road fact of life. Even with the best equipment in great shape, a little mud can stick a chain to a chainring in nothing flat. The Trek ACSD is the best protection there is for protecting those tender chainstays.

If the chainrings are bent or misaligned, it is critical that they be straightened before performing this adjustment. Position the ACSD plate so that there is between 1 and 2 mm of clearance between the ACSD and any part of the chainrings. Tighten the ACSD adjusting bolts. Test ride the bike to make sure the chainrings do not rub under deflection.

Single Track frame weight (18" 930):	**2320 gm (5.10 pounds)**
Single Track OX-3 frame weight (18" 990):	**2090 gm (4.60 pounds)**
System 1 Cro-Moly straight gauge fork (18"):	**967 gm (2.13 pounds)**
System 2 Cro-Moly taper gauge fork (18"):	**855 gm (1.88 pounds)**

SingleTrack

930

True Temper triple butted Cro-Moly
STX with GripShift

Retail Price: $ _____

Off Road Performance

Rider: Rider who wants to go faster, and may do some Beginner racing.

Concept:

The 930 uses true racing geometry, identical to that of our top end steel bike. So although the 930 doesn't have all the features of a full race bike, its completely capable of tackling any terrain. Along with the geometry, the 930 is made with our S.S.T. welding, so its a very high quality frame for this price level of bike.

Even for Beginner class, we thought this rider would want lower gears for steeper terrain, so we used an STX crank with a 22T chainring. And for coming down those steeps, Alivio brakes with Tektro levers for more stopping power.

Like the 850, the 930 uses welded and machined Lobo rims, but we put on the lighter Tioga Psycho tires. We also spec'd the Silent Clutch rear hub which uses rollers instead of teeth, so it will last long and actually improves shifting through its clutch design. And the front hub is a System 1 with suspension axle for increased steering control.

Upgrades from 850

- More aggressive position with lots of cockpit room.
- True Temper triple butted tubing, SST welding
- Shimano STX cranks and front derailleur, Alivio brakes w/Tektro levers
- Silent Clutch rear hub
- Tioga Psycho tires
- System components- pedals, stem, fork, and front hub
- Vetta Comfort Flex saddle

Frameset	Frame	True Temper triple-butted Cro-Moly
	Fork	System 1 Cro-Moly
	Headset	Tange Seiki Passage
Controls	Handlebars	System 1
	Stem	System 1
	Shifters	GripShift SRT-400
	Brake levers	Tektro
	Grips	Trek logo, GripShift
Brakes		Shimano Alivio
Drivetrain	Crankset	Shimano STX
	Pedals	System 1 ATB w/ Medium clips and straps (13-16.5) Large clips and straps (18-22.5)
	F. derailleur	Shimano STX Top Swing, top pull
	R. derailleur	Shimano STX SGS
	Cassette	Shimano IG50
	Chain	Shimano IG31
Wheelset	Hub, Front	System 1
	Rear	Shimano R050 Silent Clutch
	Rims	Matrix Lobo WM, silver, brushed
	Tires	Tioga Psycho KS front, Psycho TS rear
	Tubes	Presta valve
	Spokes	Marwi USA stainless
Seat		Vetta Turbo Comfort Flex
	Seatpost	System 1
	Seat binder	System Steel with System 2 quick release
Weight		26.4 lbs. (11.97 kg)
Color		Ice Green/Black/Green
		Ice Inkwell Blue

Gearing

	22	32	42
11	--	76	100
13	44	65	85
15	38	56	73
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.5	70.5	71.0	71.0	71.0	71.0
Seat angle	73.5	73.5	73.0	73.0	73.0	72.5
Effective top tube	542	560	580	590	600	610
Chainstay length	430	430	430	430	430	430
Bottom bracket ht	285	295	298	298	298	300
Offset	38	38	38	38	38	38
Wheelbase	1022	1043	1055	1066	1077	1083
Trail	78	78	75	75	75	75
Standover height	675	728	749	774	811	849
Stem	90	105	120	135	135	150
Reach	621	652	679	702	712	734
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	175	175	175	175	175
Seatpost length	300	300	350	350	350	350
Head tube length	85	85	85	105	145	185
Steerer cut length	123	123	123	143	183	223

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	269 14ga.
Rear, D/ND	267/268 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 1.95
Max. Trek size	26 x 2.35
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/110
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	33.4 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

930SHX

True Temper triple butted Cro-Moly
Rock Shox Quadra 5
STX with GripShift

Retail Price: $ _____

Off Road Performance

Rider: Rider who wants to go faster, and may do some Beginner racing.

Concept:

Whether its racing or just lots of hard riding, we make a version with a Quadra 5 suspension fork to make it more fun. And since we expect this rider will want the most performance from their suspension, the 930SHX comes with the Aheadset system for increased steering rigidity. After all, the 930 is suspension ready, and even comes with a System 1 front suspension hub.

Riding hard? Sounds like this rider might want bar ends for climbing, too. With bar ends, the rider gets a more powerful pull on the handlebars, and can use that leverage to help them find the best balance between the wheels for uphill traction and control.

Upgrades from 930

- Rock Shox Quadra 5 elastomer suspension fork
- Dia-Compe ST-2 AheadSet
- System 2 Direct Connect stem
- System 1 bar ends

Frameset	Frame	True Temper triple-butted Cro-Moly
	Fork	Roek Shox Quadra 5
	Headset	Dia-Compe ST-2
Controls	Handlebars	System 1
	Bar ends	System 1
	Stem	System 2 ATB forged alloy direct connect
	Shifters	GripShift SRT-400
	Brake levers	Tektro
	Grips	Trek logo, GripShift
Brakes		Shimano Alivio
Drivetrain	Crankset	Shimano STX
	Pedals	System 1 ATB w/ Medium clips and straps (13-16.5) Large clips and straps (18-22.5)
	F. derailleur	Shimano STX Top Swing, top pull
	R. derailleur	Shimano STX SGS
	Cassette	Shimano IG50
	Chain	Shimano IG31
Wheelset	Hub, Front	System 1
	Rear	Shimano R050 Silent Clutch
	Rims	Matrix Lobo WM, silver, brushed
	Tires	Tioga Psycho KS front, Psycho TS rear
	Tubes	Presta valve
	Spokes	Marwi USA stainless
Seat		Vetta Turbo Comfort Flex
	Seatpost	System 1
	Seat binder	System Steel with System 2 quick release
Weight		27.4 lbs. (12.45 kg)
Color		Ice Inkwell Blue

Gearing

	22	32	42
11	--	76	100
13	44	65	85
15	38	56	73
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.5	70.5	71.0	71.0	71.0	71.0
Seat angle	73.5	73.5	73.0	73.0	73.0	72.5
Effective top tube	542	560	580	590	600	610
Chainstay length	430	430	430	430	430	430
Bottom bracket ht	288	295	298	298	298	300
Offset	38	38	38	38	38	38
Wheelbase	1022	1043	1055	1066	1077	1083
Trail	78	78	75	75	75	75
Standover height	675	728	749	774	811	849
Stem	90	105	120	135	135	135
Reach	621	652	683	707	717	727
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	175	175	175	175	175
Seatpost length	300	300	350	350	350	350
Head tube length	85	85	85	105	145	185
Steerer cut length	163	163	163	183	223	258

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	269 14ga.
Rear, D/ND	267/268 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 1.95
Max. Trek size	26 x 2.35
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/110
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.5 mm
Stem, degrees rise	10
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41.0 mm
Seatpost diameter	27.2 mm

950 *True Temper triple butted Cro-Moly STX-RC/LX with RapidFire SL*

Retail Price: $

Off Road Performance

Rider: Rider who wants to go faster, and may do some Beginner racing.

Concept:

The 950 is our best value in a bike with an 8 speed rear end, and its even RapidFire SL. Although the gear range is the same as the 930, each gear on the 950 is closer together. With less difference in effort between gears, its easier to find one that feels just right. This is an important feature for people riding at their limit, like racers.

Along with the 8 speed comes a host of upgraded parts, like LX rear hub, cassette, and chain. We also used an STX-RC crank (for the lighter weight chainrings) and STX brakes. We also used the System 2 front suspension hub, with a 12 mm Cro-Moly axle- about twice the stiffness of other hubs in this price range.

And if they are riding at their limit, even for recreation, they'll want a saddle with narrower shape so they can move on the bike better. The Bontrager Plus 10 offers this type of shape, but with a bit more width and padding than other saddles of this type.

Upgrades from 930

- 8 speed Shimano LX RapidFire SL shifters, rear derailleur and hub, cassette, and chain
- Shimano STX-RC front derailleur and cranks
- Shimano STX brakes
- Bontrager Plus 10 saddle
- System 2 front hub
- Panaracer Smoke/Dart tires

Frameset	Frame	True Temper triple-butted Cro-Moly
	Fork	System 1 Cro-Moly
	Headset	Tange Seiki Passage
Controls	Handlebars	System 1
	Stem	System 1
	Shifters	Shimano LX RapidFire SL
	Brake levers	Shimano LX
	Grips	Trek logo
Brakes		Shimano STX
Drivetrain	Crankset	Shimano STX-RC
	Pedals	System 1 ATB w/ Medium toe clips and straps (13-16.5) Large toe clips and straps (18-22.5)
	F. derailleur	Shimano STX-RC Top Swing, top pull
	R. derailleur	Shimano LX SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, Front	System 2
	Rear	Shimano LX
	Rims	Matrix Lobo WM, silver, brushed
	Tires	Panaracer Dart 2 front, Smoke 2 rear
	Tubes	Presta valve
	Spokes	Marwi USA stainless
Seat		Bontrager Plus 10 Racing
	Seatpost	System 1
	Seat binder	System Steel with System 2 Quick Release
Weight		25.8 lbs. (11.70 kg)
Color	Ice Cyan	
	Dry Ice Black	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.5	70.5	71.0	71.0	71.0	71.0
Seat angle	73.5	73.5	73.0	73.0	73.0	72.5
Effective top tube	542	560	580	590	600	610
Chainstay length	430	430	430	430	430	430
Bottom bracket ht	288	295	298	298	298	300
Offset	38	38	38	38	38	38
Wheelbase	1022	1043	1055	1066	1077	1083
Trail	78	78	75	75	75	75
Standover height	675	728	749	774	811	849
Stem	90	105	120	135	135	150
Reach	624	656	686	708	718	728
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	175	175	175	175	175
Seatpost length	300	300	350	350	350	350
Head tube length	85	85	85	105	145	185
Steerer cut length	123	123	123	143	183	223

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	269 14ga.
Rear, D/ND	267/268 14 ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/110
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	33.4 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

SingleTrack

970 *True Temper OX-3 heat treated triple butted Cro-Moly LX/XT with GripShift*

Retail Price: $ _____

Off Road High Performance

Rider: Racer, or demanding rider.

Concept:

The 970 uses a very trick frame, with full S.S.T. Welding features and also OXIII tubes. Since the heat treatment of these tubes makes them stronger, we require less material for the necessary frame strength. This results in about 1/2 pound weight reduction, and a big improvement in ride. We also spec a System 2 butted Cro-Moly fork for similar reasons- thinner tubing makes the bike livelier and more shock absorptive.

To compliment this full race frame, we used System 2 bars, stem, seatpost, and pedals. We also use a Bontrager saddle with Cro-Moly rails. To make the wheels lighter (the most important place to cut weight) we use Swami rims, Kevlar™ beaded Smoke/Dart II tire combo, and double butted spokes. All these parts cut weight without sacrificing durability, so we end up with a bike that's over a pound lighter than the 950.

Upgrades from 950
- OX-3 heat treated tubing
- System 2 pedals, handlebars, and butted Cro-Moly fork
- Dia-Compe ST-2 AheadSet and System 2 stem
- GripShift SRT-800 X-Ray
- Shimano LX cranks, brakes, and front derailleur
- Shimano XT rear derailleur
- Matrix Swami rims, butted spokes, System 3 front hub, and Kevlar™ beaded tires

Frameset	Frame	True Temper OX-3 Triple butted Cro-Moly
	Fork	System 2 butted Cro-Moly
	Headset	Dia-Compe ST-2
Controls	Handlebars	System 2 ATB
	Stem	System 2 ATB forged alloy direct connect
	Shifters	GripShift SRT-800 X-RAY
	Brake levers	Dia-Compe PC-7
	Grips	Trek logo, GripShift
Brakes		Shimano LX
Drivetrain	Crankset	Shimano LX
	Pedals	System 2 w/ Medium toe clips and straps (13-16.5) Large toe clips and straps (18-22.5)
	F. derailleur	Shimano LX Top Swing, top pull
	R. derailleur	Shimano XT SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, Front	System 3
	Rear	Shimano LX
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Bontrager Plus 10, Cro-Moly rails
	Seat post	System 2
	Seat binder	System Steel with integral binder bolt and hanger
Weight		24.5 lbs. (11.14 kg)
Color	Ice Fire	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.5	70.5	71.0	71.0	71.0	71.0
Seat angle	73.5	73.5	73.0	73.0	73.0	72.5
Effective top tube	542	560	580	590	600	610
Chainstay length	430	430	430	430	430	430
Bottom bracket ht	288	295	298	298	298	300
Offset	38	38	38	38	38	38
Wheelbase	1022	1043	1055	1066	1077	1083
Trail	78	78	75	75	75	75
Standover height	675	728	749	774	811	849
Stem	90	105	120	135	135	135
Reach	621	652	683	707	717	727
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	175	175	175	175	175
Seatpost length	300	300	350	350	350	350
Head tube length	85	85	85	105	145	185
Steerer cut length	173	173	173	193	233	273

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model	Shimano BB-UN52
Shell width/ Axle length	73/110
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.5 mm
Stem, degrees rise	10
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41.0 mm
Seatpost diameter	27.2 mm

970SHX *True Temper OX-3 heat treated triple butted Cro-Moly Rock Shox Quadra 21R LX/XT with GripShift*

Retail Price: $ _____

Off Road High Performance

Rider: Racer, or demanding rider.

Concept:

If you're putting suspension on a very trick, light bike, the fork should match. That's why we've spec'd the Q21R. It uses the same MCU bumpers as the Judys for 60 mm of lively, plush travel. For a racer, the comfort is not as important as the ability to carry speed through rough and technical terrain. So the extra travel will be appreciated.

Like on many of our other suspension models, we've included bar ends on the 'deluxe' version of the 970.

Upgrades from 970
- Rock Shox Quadra 21R micro-cellular elastomer suspension fork
- System 1 bar ends

Frameset	Frame	True Temper OX-3 Triple butted Cro-Moly
	Fork	Rock Shox Quadra 21R
	Headset	Dia-Compe ST-2
Controls	Handlebars	System 2 ATB
	Bar ends	System 1
	Stem	System 2 ATB forged alloy direct connect
	Shifters	GripShift SRT-800 X-RAY
	Brake levers	Dia-Compe PC-7
	Grips	Trek logo, GripShift
Brakes		Shimano LX
Drivetrain	Crankset	Shimano LX
	Pedals	System 2 w/ Medium toe clips and straps (13-16.5) Large toe clips and straps (18-22.5)
	F. derailleur	Shimano LX Top Swing, top pull
	R. derailleur	Shimano XT SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, Front	System 3
	Rear	Shimano LX
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Bontrager Plus 10, Cro-Moly rails
	Seat post	System 2
	Seat binder	System Steel with integral binder bolt and hanger
Weight		25.9 lbs. (11.74 kg)
Color	Ice Fire	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.5	70.5	71.0	71.0	71.0	71.0
Seat angle	73.5	73.5	73.0	73.0	73.0	72.5
Effective top tube	542	560	580	590	600	610
Chainstay length	430	430	430	430	430	430
Bottom bracket ht	288	295	298	298	298	300
Offset	38	38	38	38	38	38
Wheelbase	1022	1043	1055	1066	1077	1083
Trail	78	78	75	75	75	75
Standover height	675	728	749	774	811	849
Stem	90	105	120	135	135	135
Reach	621	652	683	707	717	727
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	175	175	175	175	175
Seatpost length	300	300	350	350	350	350
Head tube length	85	85	85	105	145	185
Steerer cut length	163	163	163	183	223	258

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model	Shimano BB-UN52
Shell width/ Axle length	73/110
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.5 mm
Stem, degrees rise	10
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41.0 mm
Seatpost diameter	27.2 mm

SingleTrack

990

True Temper OX-3 heat treated triple butted Cro-Moly
XT with GripShift

Retail Price: $ _____

Off Road Competition

Rider: Expert level racer.

Concept:

This bike has all the features an Expert level racer would need. A really light, tricked out steel frame. Shimano XT parts for low weight and high durability. The full XT drivetrain, including chain, cassette, cranks, and rear hub, will stand up to the tons of training miles an Expert puts in each season.

This level of riding requires clipless pedals, so we chose Shimano's M535s. They're sturdy, reliable, and have some rotation (although some folks don't need this feature, rotation makes it easier to adjust cleats).

We also did some critical gram shaving with details like alloy nipples on the double butted spokes, Kevlar™ beads on the tires, and Bontrager handlebars. At 156 grams, the System 3 front hub qualifies as a gram shaver, but we used it because the 17 mm alloy axle is real stiff, and the cartridge bearings are real smooth.

Upgrades from 970
- Shimano XT cranks, front derailleur, rear hub, brakes, cassette, and chain
- Bontrager handlebars
- Leather saddle cover
- Shimano SPD M535 pedals
- Alloy nipples

Frameset	Frame	True Temper OX-3 triple butted heat treated Cro-Moly
	Fork	System 2 butted Cro-Moly
	Headset	Dia-Compe SA-2
Controls	Handlebars	Bontrager Race 1
	Stem	System 3 forged alloy direct connect
	Shifters	GripShift SRT-800 X-Ray
	Brake levers	Dia-Compe PC-7
	Grips	Trek logo, GripShift
Brakes		Shimano XT cantilevers
Drivetrain	Crankset	Shimano XT
	Pedals	Shimano SPD M535
	F. der.	Shimano XT Top Swing, top pull
	R. der.	Shimano XT SGS
	Cassette	Shimano M737-1
	Chain	Shimano IG90
Wheelset	Hub, Front	System 3
	Rear	Shimano XT
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted, alloy nipples
Seat		Bontrager Plus 10, Cro-Moly rails, leather cover
	Seatpost	System 2
	Seat binder	System Steel with integral binder bolt and hanger
Weight		24.1 lbs. (10.92 kg)
Color	Ice Ti	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.5	70.5	71.0	71.0	71.0	71.0
Seat angle	73.5	73.5	73.0	73.0	73.0	72.5
Effective top tube	542	560	580	590	600	610
Chainstay length	430	430	430	430	430	430
Bottom braeket ht	288	295	298	298	298	300
Offset	38	38	38	38	38	38
Wheelbase	1022	1043	1055	1066	1077	1083
Trail	78	78	75	75	75	75
Standover height	675	728	749	774	811	849
Stem	90	105	120	135	135	135
Reach	621	652	683	707	717	727
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	175	175	175	175	175
Seatpost length	300	300	350	350	350	350
Head tube length	85	85	85	105	145	185
Steerer cut length	170	170	170	190	230	270

Hubset, Type	Compact HyperGlide
	8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model	Shimano BB-UN72
Shell width/ Axle length	73/110
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	26.5 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41 mm
Seatpost diameter	27.2 mm

SingleTrack

990SHX

True Temper OX-3 heat treated triple butted Cro-Moly
Manitou Mach 5 SX
XT with GripShift

Retail Price: $ _____

Off Road Competition

Rider: Expert level racer.

Concept:

Some folks would argue that the 990 isn't fully race ready without a suspension fork. If you agree with that, we thiuk you'll also agree that the Manitou Mach 5 SX is a great choice for the 990SHX. Its Posi-Link brake arch makes it one of the best steering suspension forks there is. And with its adjustable rebound damping, it has the tuning capabilities a racer needs.

Again. with bar ends. The System 2s use a magnesium barrel for low weight, and a textured surface for better grip.

Upgrades from 990
- Manitou Mach 5 SX suspension fork
- System 2 bar ends

Frameset	Frame	True Temper OX-3 triple butted heat treated Cro-Moly
	Fork	Manitou Mach 5 SX
	Headset	Dia-Compe SA-2
Controls	Handlebars	Bontrager Race I
	Bar ends	System 2
	Stem	System 3 forged alloy direct connect
	Shifters	GripShift SRT-800 X-Ray
	Brake levers	Dia-Compe PC-7
	Grips	Trek logo, GripShift
Brakes		Shimano XT cantilevers
Drivetrain	Crankset	Shimano XT
	Pedals	Shimano SPD M535
	F. der.	Shimano XT Top Swing, top pull
	R. der.	Shimano XT SGS
	Cassette	Shimano M737-I
	Chain	Shimano IG90
Wheelset	Hub, Front	System 3
	Rear	Shimano XT
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted, alloy nipples
Seat		Bontrager Plus 10, Cro-Moly rails, leather cover
	Seatpost	System 2
	Seat binder	System Steel with integral binder bolt and hanger
Weight		25.4 lbs. (11.54 kg)
Color	Ice Ti	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	13	16.5	18	19.5	21	22.5
Head angle	70.5	70.5	71.0	71.0	71.0	71.0
Seat angle	73.5	73.5	73.0	73.0	73.0	72.5
Effective top tube	542	560	580	590	600	610
Chainstay length	430	430	430	430	430	430
Bottom bracket ht	288	295	298	298	298	300
Offset	38	38	38	38	38	38
Wheelbase	1022	1043	1055	1066	1077	1083
Trail	78	78	75	75	75	75
Standover height	675	728	749	774	811	849
Stem	90	105	120	135	135	135
Reach	621	652	683	707	717	727
Handlebar width 560	560	560	560	560	560	
Crank arm length	170	175	175	175	175	175
Seatpost length	300	300	350	350	350	350
Head tube length	85	85	85	105	145	185
Steerer cut length	160	160	160	180	220	260

Hubset, Type	Compact HyperGlide
	8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model	Shimano BB-UN72
Shell width/ Axle length	73/110
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	26.5 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41 mm
Seatpost diameter	27.2 mm

Advanced Bonding Technology (ABT)

What is Bonding?

Bonding is joining two pieces of material with an adhesive. We use bonding to join the frame together on all our aluminum road bikes and all our carbon fiber models. We also use bonding on most of our aluminum bikes with the exception of the ST120 and the rear triangle of the Y bikes, which are welded.

You mean Trek bikes are made with glue? That doesn't seem strong enough to hold a bike together.

We use a special glue called epoxy. Its strong enough to hold airplanes together. Virtually all large aircraft use bonding extensively.

We did a lot of R&D to find the right epoxy. Its extremely strong. From our testing we found that the bond is actually stronger than the surrounding material.

OK. So its strong. Why don't more bike companies use bonding?

Bonding requires very high quality control, so only a high tech factory will be successful at it. Its also expensive to get started bonding, because you need things like curing ovens, and special fixtures to hold the lugs and tubes together while they cure, and other expensive stuff. There's a lot of precise engineering work that has to go into designing and manufacturing the lugs, too.

What's a lug?

A lug is a specially shaped form which mates to a tube to create a frame joint. A good lug gives a very precise fit to the tube end which adds strength to a joint and also keeps the tubing in alignment. A good fit adds a lot of strength and rigidity, kind of like woodworking.

Seems like a lot of trouble when you can just weld a couple of tubes together and be done with it.

That's true. Lots of trouble and cost as well. But lugs let you use materials that can't be welded, like high tech aluminum alloys or carbon fiber. And again, it provides extra strength at the joints, and provides great alignment.

I understand the importance of a strong frame, and I know carbon is pretty cool, but what's alignment?

Alignment is one of the terms we use to reference frame quality. Riding a poorly aligned frame is like shooting pool with a curved cue- its hard to get things to go right where you want them. A frameset with good alignment rides better, and all the parts on it work better and fit better as well.

With bicycles, alignment means that both of the wheels are in the same plane, and all a bike's parts are correctly placed relative to that plane. As an example, if the wheels are not aligned, a bike may turn more easily one direction than another. Or if the bottom bracket is not aligned, the bike may not shift correctly, and the chain may tend to fall off. Alignment here can also refer to the fact that with bonding, each frame exactly matches the design produced by our engineers. There is no manufacturing variance which might produce a bike with incorrect angles or tubing lengths. Examples of things which cause variance are heat treating which can make tubing warp, or jigs which may be incorrectly adjusted for the wrong angles.

So you're saying that bonding is a high tech process that provides a really accurate and high quality bike frame out of any material? But didn't you say that bonding is expensive?

Yes and no. Bonding is expensive to start up because of the engineering, design, and manufacturing of the lugs and machines for doing the work. And it would be especially expensive to do in limited quantities. But Trek made the investment in bonding technology a long time ago, and with our world wide distribution network, we can build bonded bikes for a reasonable cost.

But I heard that aluminum bikes have a short fatigue life and won't last.

There are several things which contribute to fatigue failure in bikes, and especially the aluminum ones. The most important of these is something called a stress riser, a point where frame stresses are concentrated in a small area. Stress risers resulting from welding are common with many welded aluminum bike designs and can also be the result of poor welding quality. And the thinner the material under stress, the more this can evidence itself as fatigue failure.

With Trek's bonding process, the lug's extra thick walls are designed to resist the high stresses at the bike frame's joints. Since the lug extends well past the highest stress areas (generally found right at the weld on a welded bike), and the tube overlaps the lug, our bonded aluminum bikes are very strong in these areas of the bike. In addition, our lugs are designed to distribute the stress over a wide area, spreading the load out so that the frame is not subject to the relatively high loads required to effect fatigue failure.

Aluminum welded bikes can be designed and built to handle these stresses, and some are. But with our bonded construction you don't have to wonder if the design is a good one, or whether the welder was paying attention when they made your bike. Bonding is highly repeatable, so each bike is identical in strength to the last. As proof of the quality of our bonding process, our data base accumulated after building over 1.5 million bikes shows our aluminum frames to be our most durable series of bikes.

Aluminum Mountain Bikes

In sizes 16.5, 18, 19.5, and 21, the centerline drawings from Trek aluminum bikes are identical to those of the race proven OCLV hardtail group, the bikes ridden by Team Rocket Boy. With this race-proven geometry, including suspension ready geometry, you know these bikes are gonna fly.

The only geometry differences between the OCLV bikes and the aluminum bonded bikes is the top tube and seat tube lengths of the smaller 14.5 inch size, and the standover heights. The difference in standover comes from the requirements on the OCLV bikes to have a smooth, graceful curve at the top tube junctions with the head tube and seat tube to avoid tight radius bends of the carbon fibers. With the use of aluminum lugs on the ABTs, there is no such restriction.

The aluminum lugs used to bond these bikes together add strength and stiffness to the frame joints, while also providing virtually automatic alignment. Still, great care is used, along with some very precise frame assembly equipment, to make sure the alignment is perfect. It may be redundant, but we still manually check the alignment of every single frame just to make sure.

Like last year, the 7000, 7000SHX, the 8000, and the 8000SHX use Easton Program EA60 T6 tubing. EA60 is a very high strength alloy, but it is not weldable. That is why most welded aluminum bikes still use lower strength 6061 alloy. Trek is the only bike company using Easton's very best alloy, EA70, which is found on the 8500 and 8500SHX. Please refer to the Materials section in this manual for further information on these alloys.

Easton's "Program" designation means that the tubing is butted, although in this case the butting process is controlled by a very exacting computer, thus the name 'Program'. In addition, Easton has the ability to program the butts for virtually every manufacturer, so we get essentially a custom tube set for our ABT bikes. We take full advantage of Easton's Program butting by using different tubing butt lengths for different sizes of bikes, an extra step many companies overlook.

Fitting an ABT Mountain Bike

Since ABT bikes have raised bottom brackets (compared to a road bike) and mountain bike riders may want to dismount in rough or uneven terrain, more clearance over the top tube is desirable.

Our engineers designed the ABT bikes to fit best with 2 to 6 inches of clearance over the top tube. Using this sizing, most riders will find at least two sizes which fit. Of these two sizes, choose the bike with the rider's preference for reach and handlebar height.

Mechanics Notes

Beefy Seatstays and Chainstays for '96

A major frame change which may go unnoticed is that we have beefed up the diameter of the seat and chainstays of our bonded aluminum bikes. Since the stiffness of a tube is greatly effected by diameter (stiffness increases by a power of 4 as diameter doubles, while it only goes up double as wall thickness doubles), our 1996 aluminum bikes ride better and look better, too!

Suspension Ready Geometry- The entire ABT mountain bike line is suspension ready, but with a slightly different fork length specification than the Trek 830 and 850. This is because the ABT mountain bikes are designed to accommodate longer travel forks like Rock Shox Quadras, Manitou Mach 5s, or air/oil forks with an axle-to-fork crown race seat dimension around 408 mm. Some longer forks, like Rock Shox Judy XC or SL, will also ride very well in these bikes.

Chainstay Protector- With Shimano's new IG (Interactive glide) system, chainsuck has been greatly reduced. Thanks to this, we have removed the ACSD bond-on and ACSD plate from these bikes for this year. However, the chainstay still needs some protection, so we have installed an adhesive steel plate similar to that used on our OCLV road bikes to protect the chainstay.

Cold forged dropouts and derailleur hanger- We are frequently asked why we don't use bolt-together derailleur hangers. From our experience, these exhibit a lot of flex which decreases shifting accuracy. In addition, they are usually weaker, and break or bend more easily than our cold forged hangers. These are the reasons why quality bike manufacturers first moved away from the bolt-on hangers found on department store bikes.

Since good shifting is important every day, and breaking a hanger is very rare, we chose to make sure the bike works its best. And if the worst happens, we can easily fix it in our Wisconsin factory. Even our steel bikes have dropouts which are replaceable, since those dropouts are brazed, not welded.

Other manufacturers use the bolt-together design as a band-aid, since welded bikes are impractical to repair, even if the bike in question wasn't made overseas. True, if you break a bolt-together hanger its easier to replace, but our cold forged hanger might not have broken in the first place. Plus, our bikes will shift better every single shift, every day.

7000 frame weight (18"):	**1760 gm (3.87 pounds)**
8500 frame weight (18"):	**1700 gm (3.75 pounds)**
System 1 Cro-Moly straight gauge fork (18"):	**967 gm (2.13 pounds)**
System 2 Cro-Moly taper gauge fork (18"):	**855 gm (1.88 pounds)**

7000

Easton EA60 Program aluminum
STX with GripShift

Off Road Performance

Rider: Rider who wants to go faster, and may do some Beginner racing.

Concept:

We think our bonded aluminum bikes are very under rated, and that if you compare apples to apples, you'll find that the frame on the 7000 compares favorably to those costing hundreds more. Why? Read about it in the ABT section, pages 46-47.

Like our Performance Cro-Moly 930, the 7000 uses true racing geometry. Only this time the geometry matches our top-end OCLV bikes. And since we consider our aluminum bikes to be 'more serious' than our Cro-Moly models, we gave the 7000 the same fork as that used on the High Performance 970.

We also used a Bontrager saddle to give the rider more maneuverability in technical terrain. And the Dia-Compe brake levers enrich the feel of the 'contact points' while increasing stopping power.

Retail Price: $ _____

Upgrades from 930
- Easton EA60 Program aluminum frame
- System 2 butted Cro-Moly fork
- Dia-Compe PC-7 brake levers
- Bontrager Plus 10 saddle

Aluminum

Frameset	Frame	Easton EA60 Program aluminum, bonded
	Fork	System 2 butted Cro-Moly
	Headset	Tange Seiki Passage
Controls	Handlebars	System 1
	Stem	System 1
	Shifters	GripShift SRT-400
	Brake levers	Dia-Compe PC-7
	Grips	Trek Logo, GripShift
Brakes		Shimano Alivio
Drivetrain	Crankset	Shimano STX
	Pedals	System 1 w/ Medium toe clips and straps (14.5-16.5) Large toe clips and straps (18-21)
	F. derailleur	Shimano STX Top Swing, top pull
	R. derailleur	Shimano STX SGS
	Cassette	Shimano IG50
	Chain	Shimano IG31
Wheelset	Hub, Front	System 1
	Rear	Shimano R050 Silent Clutch
	Rims	Matrix Lobo WM, silver, brushed
	Tires	Tioga Psycho KS front, TS rear
	Tubes	Presta valve
	Spokes	Marwi USA stainless,
Seat		Bontrager Plus 10 Racing
	Seatpost	System 1
	Seat binder	System Aluminum w/System 2 quick release
Weight		25.9 lbs. (11.78 kg)
Color	Ice Blue	

Gearing

	22	32	42
11	--	76	100
13	44	65	85
15	38	56	73
18	32	47	61
21	27	40	52
24	24	357	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	14.5	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.5	73.0	73.0	73.0	73.0
Effective top tube	538	582	592	594	599
Chainstay length	424	424	424	424	424
Bottom bracket ht	297	297	297	297	297
Offset	37	37	37	37	37
Wheelbase	1018	1054	1059	1064	1069
Trail	79	79	76	76	76
Standover height	719	744	762	785	820
Stem	90	105	120	135	135
Reach	620	678	697	712	717
Handlebar width 560	560	560	560	560	
Crank arm length	170	175	175	175	175
Seatpost length	300	300	350	350	350
Head tube length	105	105	105	125	158
Steerer cut length	143	143	143	162	197

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	269 14ga.
Rear, D/ND	267/268 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 1.95
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	33.4 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

7000SHX

Easton EA60 Program aluminum
Rock Shox Quadra 5
STX with GripShift

Off Road Performance

Rider: Rider who wants to go faster, and may do some Beginner racing.

Concept:

Whether its racing or just lots of hard riding, we make a version with a Quadra 5 suspension fork to make it more fun. And since we expect this rider will want the most performance from their suspension, the 7000SHX comes with the Aheadset system for increased steering rigidity. After all, the 7000 is suspension ready, and even comes with a System 1 front suspension hub.

Riding hard? Sounds like this rider might want bar ends for climbing, too. With bar ends, the rider gets a more powerful pull on the handlebars, and can use that leverage to help them find the best balance between the wheels for uphill traction and control.

Retail Price: $ _____

Upgrades from 7000
- Rock Shox Quadra 5 suspension fork
- System 1 bar ends
- Dia-Compe ST-2 AheadSet
- System 2 direct connect stem

Aluminum

Frameset	Frame	Easton EA60 Program aluminum, bonded
	Fork	Rock Shox Quadra 5 suspension
	Headset	Dia-Compe ST-2
Controls	Handlebars	System 1
	Bar ends	System 1
	Stem	System 2 ATB forged alloy direct connect
	Shifters	GripShift SRT-400
	Brake levers	Dia-Compe PC-7
	Grips	Trek Logo, GripShift
Brakes		Shimano Alivio
Drivetrain	Crankset	Shimano STX
	Pedals	System 1 w/ Medium toe clips and straps (14.5-16.5) Large toe clips and straps (18-21)
	F. derailleur	Shimano STX Top Swing, top pull
	R. derailleur	Shimano STX SGS
	Cassette	Shimano IG50
	Chain	Shimano IG31
Wheelset	Hub, Front	System 1
	Rear	Shimano R050 Silent Clutch
	Rims	Matrix Lobo WM, silver, brushed
	Tires	Tioga Psycho KS front, TS rear
	Tubes	Presta valve
	Spokes	Marwi USA stainless
Seat		Bontrager Plus 10 Racing
	Seatpost	System 1
	Seat binder	System Aluminum w/System 2 quick release
Weight		27.0 lbs. (12.26 kg)
Color	Ice Blue	

Gearing

	22	32	42
11	--	76	100
13	44	65	85
15	38	56	73
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	14.5	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.5	73.0	73.0	73.0	73.0
Effective top tube	538	582	592	594	599
Chainstay length	424	424	424	424	424
Bottom bracket ht	297	297	297	297	297
Offset	37	37	37	37	37
Wheelbase	1018	1054	1059	1064	1069
Trail	79	79	76	76	76
Standover height	719	744	762	785	820
Stem	90	105	120	135	135
Reach	617	674	695	711	716
Handlebar width 560	560	560	560	560	
Crank arm length	170	175	175	175	175
Seatpost length	300	300	350	350	350
Head tube length	105	105	105	125	158
Steerer cut length	183	183	183	203	237

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	269 14ga.
Rear, D/ND	267/268 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 1.95
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.5 mm
Stem, degrees rise	10
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41.0 mm
Seatpost diameter	27.2 mm

8000

Easton EA60 Program aluminum
STX-RC/LX with RapidFire SL

Retail Price: $ _____

Off Road High Performance

Rider: Racer, or demanding rider.

Concept:

The 8000 uses the same frame as the 7000. We think this is a great frameset, and even at this price range its better than others it competes against (again, please refer to pages 46-47 for the why). Try it for yourself, and you'll find that this is not some totally rigid bone shaker like some aluminum bikes with overinflated tubing. Its more like a very nice riding bike, kind of like a quieter version of our OCLV frames.

Since we think so highly of this frame, we went ahead and juiced it up. 8 speed rear end. Double butted spokes. Swami rims and Panaracer Dart II/ Smoke II tires. LX parts (even the chain and cassette, parts frequently down-spec'd by other companies). Aheadset system for extra steering control. System 2 suspension hub with 12 mm Cro-Moly axle (about twice as stiff as 10 mm axles).

Upgrades from 7000

- Shimano STX-RC cranks and front derailleur
- 8 speed
- Shimano LX rear derailleur, rear hub, cassette, chain, and RapidFire SL shifting
- STX brakes
- System 2 handlebars and front hub
- Swami rims, double butted spokes, and Smoke 2/ Dart 2 tire combination

Aluminum

Frameset	Frame	Easton EA60 Program aluminum, bonded
	Fork	System 2 butted Cro-Moly
	Headset	Tange Seiki Passage
Controls	Handlebars	System 2
	Stem	System 1
	Shifters	Shimano LX RapidFire SL
	Brake levers	Shimano LX
	Grips	Trek Logo
Brakes		Shimano STX
Drivetrain	Crankset	Shimano STX-RC
	Pedals	System 1 w/ Medium toe clips and straps (14.5-16.5) Large toe clips and straps (18-21)
	F. derailleur	Shimano STX-RC Top Swing, top pull
	R. derailleur	Shimano LX SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, Front	System 2
	Rear	Shimano LX
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 front, Smoke 2 rear
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Bontrager Plus 10 Racing
	Seatpost	System 1
	Seat binder	System Aluminum with integral binder bolt
Weight		24.3 lbs. (11.05 kg)
Color	Ice Black	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	14.5	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.5	73.0	73.0	73.0	73.0
Effective top tube	538	582	592	594	599
Chainstay length	424	424	424	424	424
Bottom bracket ht	297	297	297	297	297
Offset	37	37	37	37	37
Wheelbase	1018	1054	1059	1064	1069
Trail	79	79	76	76	76
Standover height	719	744	762	785	820
Stem	90	105	120	135	135
Reach	617	674	695	711	716
Handlebar width 560	560	560	560	560	
Crank arm length	170	175	175	175	175
Seatpost length	300	300	350	350	350
Head tube length	105	105	105	125	158
Steerer cut length	143	143	143	162	197

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	33.4 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

8000SHX

Rock Shox Quadra 21R
STX-RC/LX with RapidFire SL

Retail Price: $ _____

Off Road High Performance

Rider: Racer, or demanding rider.

Concept:

If you're putting suspension on a very trick, light bike, the fork should match. That's why we've spec'd the Q21R. It uses the same MCU bumpers as the Judys for 60 mm of lively, plush travel. For a racer, the comfort is not as important as the ability to carry speed through rough and technical terrain. So the extra travel will be appreciated. And the screaming yellow paint job says "Front Line" all over it.

Like on many of our other suspension models, we've included bar ends on the 'deluxe' version of the 8000.

Upgrades from 8000

- Rock Shox Quadra 21R micro-cellular elastomer suspension fork
- System 2 bar ends

Aluminum

Frameset	Frame	Easton EA60 Program aluminum, bonded
	Fork	Rock Shox Quadra 21R suspension
	Headset	Dia-Compe ST-2
Controls	Handlebars	System 2
	Bar ends	System 1
	Stem	System 2 forged alloy direct connect
	Shifters	Shimano LX RapidFire SL
	Brake levers	Shimano LX
	Grips	Trek Logo
Brakes		Shimano STX
Drivetrain	Crankset	Shimano STX-RC
	Pedals	System 1 w/ Medium toe clips and straps (14.5-16.5) Large toe clips and straps (18-21)
	F. derailleur	Shimano STX-RC Top Swing, top pull
	R. derailleur	Shimano LX SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, Front	System 2
	Rear	Shimano LX
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 front, Smoke 2 rear
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Bontrager Plus 10 Racing
	Seatpost	System 1
	Seat binder	System Aluminum with integral binder bolt
Weight		25.7 lbs. (11.65 kg)
Color	Gloss Yellow Dry Ice Black	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	14.5	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.5	73.0	73.0	73.0	73.0
Effective top tube	538	582	592	594	599
Chainstay length	424	424	424	424	424
Bottom bracket ht	297	297	297	297	297
Offset	37	37	37	37	37
Wheelbase	1018	1054	1059	1064	1069
Trail	79	79	76	76	76
Standover height	719	744	762	785	820
Stem	90	105	120	135	135
Reach	617	674	695	711	716
Handlebar width 560	560	560	560	560	
Crank arm length	170	175	175	175	175
Seatpost length	300	300	350	350	350
Head tube length	105	105	105	125	158
Steerer cut length	183	183	183	203	237

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.5 mm
Stem, degrees rise	10
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41.0 mm
Seatpost diameter	27.2 mm

8500

Easton EA70 Program aluminum
XT with RapidFire SL

Off Road Competition

Rider: Expert level racer.

Concept:

With all the excitement over exotic alloys, this bike should turn some heads. Easton's EA70 outperforms titanium, but costs much less (at least when it has the Trek label, anyway).

Shimano XT parts for low weight and high durability. The full XT drivetrain, including chain, cassette, cranks, and rear hub, will stand up to the tous of training miles an Expert puts in each season.

This level of ridiug requires clipless pedals, so we chose Shimano's M535s. They're sturdy, reliable, and have some rotation (although some folks don't need this feature, rotation makes it easier to adjust cleats).

We also did some critical gram shaving with details like alloy nipples on the double butted spokes, Kevlar™ beads on the tires, and Bontrager handlebars. At 156 grams, the System 3 front hub qualifies as a gram shaver, but we used it because the 17 mm alloy axle is real stiff, and the cartridge bearings are real smooth.

Retail Price: $

Upgrades from 8000
- Easton EA70 frame
- Shimano XT shifters, cranks, derailleurs, rear hub cassette, chain, and V-Brakes
- Shimano SPD M535 pedals
- Aheadset with System 3 stem and Bontrager bars
- System 2 seatpost and leather covered saddle with CroMoly rails
- Alloy nipples, System 3 hub, Kevlar™ beaded tires

Aluminum

Frameset	Frame	Easton EA70 Program
	Fork	System 2 butted Cro-Moly
	Headset	Dia-Compe SA-2
Controls	Handlebars	Bontrager Race 1
	Stem	System 3 forged alloy direct connect
	Shifters	Shimano XT RapidFire SL
	Brake levers	Shimano XT V-Brake
	Grips	Trek Logo
Brakes		Shimano XT V-Brakes
Drivetrain	Crankset	Shimano XT
	Pedals	Shimano SPD M535 clipless
	F. derailleur	Shimano XT Top Swing, top pull
	R. derailleur	Shimano XT SGS
	Cassette	Shimano M737-1
	Chain	Shimano IG90
Wheelset	Hub, Front	System 3
	Rear	Shimano XT
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted, alloy nipples
Seat		Bontrager Plus 10 Lite, Cro-Moly rails, leather cover
	Seatpost	System 2
	Seat binder	System Aluminum with integral binder bolt
Weight		23.6 lbs. (10.73 kg)
Color	Gold Dust	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	14.5	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.5	73.0	73.0	73.0	73.0
Effective top tube	538	582	592	594	599
Chainstay length	424	424	424	424	424
Bottom bracket ht	297	297	297	297	297
Offset	37	37	37	37	37
Wheelbase	1018	1054	1059	1064	1069
Trail	79	79	76	76	76
Standover height	719	744	762	785	820
Stem	90	105	120	135	135
Reach	617	674	695	711	716
Handlebar width 560	560	560	560	560	
Crank arm length	170	175	175	175	175
Seatpost length	300	300	350	350	350
Head tube length	105	105	105	125	158
Steerer cut length	179	179	179	199	234

Hubset, Type	Compact HyperGhde
	8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-UN72
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.8 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41 mm
Seatpost diameter	27.2 mm

8500SHX

Easton EA70 Program aluminum
Manitou Mach 5 SX
XT with RapidFire SL

Off Road Competition

Rider: Expert level racer.

Concept:

Some folks would argue that the 8500 isn't fully race ready without a suspension fork. If you agree with that, we think you'll also agree that the Manitou Mach 5 SX is a great choice for the 8500SHX. Its Posi-Link brake arch makes it one of the best steering suspension forks there is. And with its adjustable rebound damping, it has the tuning capabilities a racer needs.

Again, with bar ends. The System 2s use a magnesium barrel for low weight, and a textured surface for better grip.

Retail Price: $

Upgrades from 8500
- Manitou Mach 5 SX suspension fork
- System 2 bar ends

Aluminum

Frameset	Frame	Easton EA70 Program
	Fork	Manitou Mach 5 SX
	Headset	Dia-Compe SA-2
Controls	Handlebars	Bontrager Race 1
	Bar ends	System 2
	Stem	System 3 forged alloy direct connect
	Shifters	Shimano XT RapidFire SL
	Brake levers	Shimano XT V-Brake
	Grips	Trek Logo
Brakes		Shimano XT V-Brakes
Drivetrain	Crankset	Shimano XT
	Pedals	Shimano SPD M535 clipless
	F. derailleur	Shimano XT Top Swing, top pull
	R. derailleur	Shimano XT SGS
	Cassette	Shinano M737-I
	Chain	Shimano IG90
Wheelset	Hub, Front	System 3
	Rear	Shimano XT
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted, alloy nipples
Seat		Bontrager Plus 10 Lite, Cro-Moly rails, leather cover
	Seatpost	System 2
	Seat binder	System Aluminum with integral binder bolt
Weight		25.4 lbs. (11.52 kg)
Color	Gold Dust	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	14.5	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.5	73.0	73.0	73.0	73.0
Effective top tnbe	538	582	592	594	599
Chainstay length	424	424	424	424	424
Bottom bracket ht	297	297	297	297	297
Offset	37	37	37	37	37
Wheelbase	1018	1054	1059	1064	1069
Trail	79	79	76	76	76
Standover height	719	744	762	785	820
Stem	90	105	120	135	135
Reach	617	674	695	711	716
Handlebar width 560	560	560	560	560	
Crank arm length	170	175	175	175	175
Seatpost length	300	300	350	350	350
Head tube length	105	105	105	125	158
Steerer cut length	179	179	179	199	234

Hubset, Type	Compact HyperGlide
	8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-UN72
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.8 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41 mm
Seatpost diameter	27.2 mm

Optimum Compaction Low Void (OCLV)

It seems like a lot of people are starting to use carbon fiber now. Why didn't they before?

Carbon fiber technology is relatively new to most manufacturers, compared to steel, which has been around for centuries. Other brands did not have the resources or vision to develop functional carbon designs. Fortunately, Trek has a long history of successful carbon fiber bikes, dating back to 1986. Our research at the time showed us then that carbon composite was simply the best combination of performance and value available. And its still true today.

Trek's been using carbon fiber that long?

Yep. On the original Trek 2500, we used our already proven bonding techniques, and avoided a lot of the problems that other bike manufacturers had with carbon production. We also did a lot of R&D to make sure we got the best carbon possible.

I thought all carbon was the same.

Actually, its not. There are different carbon fibers, and different materials used to bind the fibers into a composite.

What exactly is a carbon fiber?

Its a long strand of carbon molecules. There are a lot of ways you can get the carbon molecules to join together with different results, like higher modulus, or stiffness. An individual fiber looks like a thin, black hair.

Hair doesn't sound like a good thing to make bikes out of.

You're right. That's why the carbon fibers are put in a matrix to form a composite. Composite means you have two or more visibly different components made into a single material with the best attributes of both components. In addition, some technologies require that you use very short, or "chopped" fibers. These short fibers don't have the strength and stiffness which make our carbon bikes so light and ride so well.

What is the matrix that holds the carbon fibers together?

There are lots of them. With the material Trek uses, it's mostly a thermoset epoxy, with just a bit of toughenors mixed in. We refer to this as carbon/epoxy, and it has the lowest weight, and highest strength and stiffness available. Other composites used in bikes today include carbon/thermoplastic or fiberglass/carbon fiber mix in thermoset. These other blends do not offer the combination of strength, stiffness and low weight of the materials developed by Trek.

So "thermoplastic" is really just another type of carbon fiber composite?

Right. Its another type of glue used to hold individual carbon fibers together. Some companies have been making a big deal of the fact that you can reheat thermoplastics and repair them, or recycle them. But executing this type of repair on a bike is probably unrealistic, and you'll probably find that your neighborhood recycling center won't accept thermoplastic bike frames for recycling.

But can't you repair thermoplastic frames if they get dinged?

The most common structural damage which might need repairing would probably be broken tubes with broken fibers. One way you might repair this is to add a patch of material, and then repainting. Patching frames like this is not an acceptable repair procedure.

We make our frames repairable by using our Advanced Bonding Technique (see **ABT** on pages 46-47), which allows us to replace individual components of the frame when damaged, even with OCLV framesets.

Are there any other differences?

Yes- there's a real biggie. How the carbon fibers are oriented, and how close together they are, has a lot to do with the end results of stiffness, strength, and weight. That's what separates OCLV from the rest of the pack.

What does OCLV mean?

It stands for Optimum Compaction, Low Void. Optimum Compaction means that the carbon fibers are compressed just the right amount in the epoxy for the best strength possible. If you have too much or too little epoxy, you don't get full strength out of the composite. Low Void is an engineering term meaning that less than 2% of the composite is voids. And voids are any inconsistencies in the composite like air bubbles where there aren't any carbon fibers. Again, that would mean lowered strength. Trek commonly gets in under 1%, which is better than aircraft specifications.

So how does that make a better bike?

If you maximize the strength and stiffness of a material, you can use less of it, and produce a lighter structure while maintaining the strength and stiffness you need.

What is it that lets Trek get this extra strength and stiffness?

The real key is the control over the fibers in the matrix. You need the control to place them exactly where you want them. With a round, cylindrical tube, that's fairly easy to do. The fibers can be placed on a mandrel, or steel cylinder, and then pressed tightly in place from the outside. After curing, you can pull the mandrel out from the tube. But you can't do that with a complex shape like a lug. Only the OCLV process allows us to put the fibers right where our engineers designed them to be.

But I heard that using lugs and tubes puts natural weak spots in a frame?

If the lug and tube only touched at their ends, that would be true. But we have engineered lugs and tubes with a precision tapered overlapping design with a very large bond area, plus we designed the lugs so that the stress is spread over a large area, and away from the highest stress areas found on a bike.

But you still glue the pieces together. Doesn't that make it weak?

You have to remember that in carbon fiber composite, the material ITSELF is glued together. Each carbon fiber is glued to the next, whether its a tube, a lug, or an entire frame being joined. As long as the bond is of the same precision as the parts you are bonding, there is no weak point.

So with OCLV, you get the best quality of laminate, at the highest strength and stiffness to weight ratio possible?

That explains why OCLV frames are the lightest around, yet fully capable of hard core racing.

Fitting OCLV Hardtails

Since OCLV hardtail mountain bikes have raised bottom brackets (compared to a road bike) and this rider may want to dismount in rough or uneven terrain, more clearance over the top tube is desirable.

With the slightly dropped top tube design of the OCLV hardtails, the correct size offers even more standover than usual for a mountain bike. This slightly dropped top tube results from our desire to avoid any tight bends of the carbon fibers, which might result in a decrease of stiffness or strength. As a bonus, it gives the OCLV bikes a sleek, aerodynamic appearance.

Our engineers designed the OCLV hardtails to fit best with 2.5 to 7 inches of clearance over the top tube. Using this sizing, most riders will find two sizes which fit. Of these two sizes, choose the bike with the rider's preference for reach and handlebar height.

New Details for '96

•In '94, we added some torsional stiffness to the bottom bracket.

•In '95 we added a bit more stiffness through the use of filament wound tubing. We added internally threaded water bottle mounts. And we changed to top tube routed cables to avoid mud buildup.

•For '96 we have changed the head tube configuration in all our OCLV bikes. Rather than use a single cylinder running all the way through the head tube, we now use two separate shouldered inserts, sort of like little top hats. The shoulder gives a large, flat face for each head cup to seat against, and means that cutting tools never have to work on the abrasive carbon fiber. So this new design is lighter, easier to work with, and provides better support for the headset. Another change which is more subtle but just as important, a new bottom bracket design will add lateral stiffness and mud clearance to these bikes, making them even better!

Also for '96 we have added a new, smaller 15" size, and adjusted the top tube length on the 16.5" size so that this size better fits more people.

Mechanic's Notes

OCLV bikes and their seatposts

With the OCLV construction, the seat lug is lined with a thin fiberglass layer bonded to the inside of the seat lug. This liner prevents galvanic corrosion which could occur if the aluminum seatpost and the carbon fiber lug were in contact. With this insert, there is no need to grease the seatpost on OCLV bikes, nor is it recommended. If you have inadvertently greased an OCLV seatpost and it will not clamp correctly, clean the seatpost and the inside of the seat lug with a degreaser, being careful not to get degreaser in the bottom bracket.

Suspension Ready Geometry-

The entire OCLV mountain bike line is suspension ready, but with a slightly different fork length specification than the Trek 830 and 850. This is because the OCLV mountain bikes are designed to accommodate longer travel forks like Rock Shox or air/oil forks. The front axle-to-crown race seat dimension for these bikes is 408 mm.

ACSD Anti Chain Suck Device-

Unfortunately, the ugliness of chainsuck is an off-road fact of life. Even with the best equipment in great shape, a little mud can stick a chain to a chainring in nothing flat. The Trek ACSD is the best protection there is for protecting the chainstays. For 1996, Shimano chains and chainrings feature the new IG (Interactive Glide) design, which greatly reduces chainsuck. Because of this, we do not spec the Trek ACSD plate as original equipment. However, if a rider chooses to use non-IG equipment, or they just want extra protection, we still attach the bond-on plate to the chainstay of our OCLV bikes so a rider can add an ACSD plate if so desired.

OCLV Off-Road Hardtail frame weight (18"): 1330 gm (2.92 pounds)

9700SHX

OCLV carbon composite
Manitou Mach 5 Pro
STX-RC/LX with GripShift

Retail Price: $ _____

Off Road Competition

Rider: Expert level racer.

Concept:

This bike has all the spec required for an Expert racer. An outrageously light frame, LX 8 speed rear end, a sweet wheelset with Swami rims, double butted spokes, and Kevlar™ beaded tires, SPD pedals, and a Manitou suspension fork.

We even included some "hidden" spec, like Aheadset, bar ends, and Cro-Moly saddle rails. See ya at the races.

Upgrades from 8000SHX

- OCLV carbon composite frame
- Manitou Mach 5 Pro suspension fork
- Shimano M535 SPD pedals
- Shimano LX front derailleur
- GripShift SRT-800 X-Ray
- Cro-Moly saddle rails
- Kevlar™ beaded tires

Frameset	Frame	OCLV carbon composite
	Fork	Manitou Mach 5 Pro
	Headset	Dia-Compe ST-2
Controls	Handlebars	System 2
	Bar ends	System 1
	Stem	System 2 forged alloy direct conneect
	Shifters	GripShift SRT-800 X-Ray
	Brake levers	Dia-Compe PC-7
	Grips	Trek Logo, GripShift
Brakes		Shimano STX
Drivetrain	Crankset	Shimano STX-RC
	Pedals	Shimano M535 SPD clipless
	F. derailleur	Shimano LX, top pull
	R. derailleur	Shimano LX SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, Front	System 2
	Rear	Shimano LX
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Bontrager Plus 10, Cro-Moly rails
	Seatpost	System 1
	Seat binder	System OCLV with integral cable hanger and binder bolt
Weight		25.1 lbs. (11.39 kg)
Color	Dry Ice Fire	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	15	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0	73.0	73.0
Effective top tube	554	571	592	594	600
Chainstay length	424	424	424	424	424
Bottom bracket ht	298	298	297	297	297
Offset	38	38	38	38	38
Wheelbase	1030	1041	1060	1065	1070
Trail	79	79	77	77	77
Standover height	725	745	762	785	820
Stem	90	105	120	135	135
Reach	636	667	702	717	722
Handlebar width 560	560	560	560	560	
Crank arm length	170	175	175	175	175
Seatpost length	300	350	350	350	350
Head tube length	110	110	110	124	159
Steerer cut length	189	189	189	202	238

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	26.5 mm
Stem, degrees rise	10
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41.0 mm
Seatpost diameter	27.2 mm

OCLV

9800SHX

OCLV carbon composite
Rock Shox Judy XC
LX/XT with RapidFire SL

Retail Price: $ _____

Off Road Competition

Rider: Expert level racer.

Concept:

We took the concept of the 9700SHX, and applied a gram scale. The result is a bike weighing over 1.5 pounds less (and the 9700 isn't exactly heavy!).

But it wasn't just a weight exercise- we improved the function, too. Bontrager bars and bar ends. LX cranks, brakes, and RapidFire SL shifters. XT rear derailleur and hub. System 3 front hub (just 156 grams, thanks to the 17 mm alloy axle). And even lighter wheels with alloy nipples and Conti tires.

Finally, we used the new Judy XC suspension fork, with adjustable damping this year.

Upgrades from 9700SHX

- Rock Shox Judy XC fork
- *Shimano LX cranks, brakes,* and RapidFire SL shifters
- XT rear derailleur and hub
- Alloy nipples, Conti tires
- Vetta saddle, System 2 seatpost, System 3 front hub
- Bontrager bars and bar ends
- Continental tires, alloy nipples

Frameset	Frame	OCLV carbon composite
	Fork	Rock Shox Judy XC
	Headset	Dia-Compe SA-2
Controls	Handlebars	Bontrager Race I
	Bar ends	Bontrager Race Lite 109
	Stem	System 3 forged alloy direct connect
	Shifters	Shimano LX RapidFire SL
	Brake levers	Shimano LX
	Grips	Trek Logo
Brakes		Shimano LX
Drivetrain	Crankset	Shimano LX
	Pedals	Shimano SPD M535
	F. derailleur	Shimano LX, top pull
	R. derailleur	Shimano XT SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, Front	System 3
	Rear	Shimano XT
	Rims	Matrix Swami WM, anodized
	Tires	Continental Navigator / Cross Country, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted, alloy nipples
Seat		Vetta TT Traverse, manganese rails
	Seatpost	System 2
	Seat binder	System OCLV with integral cable hanger and binder bolt
Weight		23.5 lbs. (10.66 kg)
Color	Nude	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	15	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0	73.0	73.0
Effective top tube	554	571	592	594	600
Chainstay length	424	424	424	424	424
Bottom bracket ht	298	298	297	297	297
Offset	38	38	38	38	38
Wheelbase	1030	1041	1060	1065	1070
Trail	79	79	77	77	77
Standover height	725	745	762	785	820
Stem	90	105	120	135	135
Reach	636	667	702	717	722
Handlebar width 560	560	560	560	560	
Crank arm length	170	175	175	175	175
Seatpost length	300	350	350	350	350
Head tube length	110	110	110	124	159
Steerer cut length	184	184	184	199	233

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.0/F, 1.9/R
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-UN52
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.8 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41 mm
Seatpost diameter	27.2 mm

OCLV

9900SHX

OCLV carbon composite
Rock Shox Judy XC
XT with GripShift ESP

Retail Price: $ _____

Off Road Competition Elite

Rider: Pro level racer.

Concept:

The "Competition Elite" designation means this is a bike we would put our own race team on, with no regrets. Its got everything they need to race on, and to win:

•OCLV frame (actnally, its the same frame they've been using all along, but with this year's performance tweaks)

•Judy XC fork (with the addition of adjustable damping, the '96 XC is basically last year's SL)

•XT package with V-Brakes. Also including the "hidden" parts, like XT level bottom bracket, chain, and cassette.

•The new GripShift ESP 900 shifters and rear derailleur. By pulling 75% more cable with every click, you get "louder" signals at the derailleur for more accurate shifting, and less cable friction.

•747 pedals.

Upgrades from 9800SHX

- Shimano XT front derailleur, cassette, chain, and V-Brakes
- GripShift ESP-900 shifters and rear derailleur
- Shimano SPD M747 pedals
- White Industries hubs
- Wheelsmith wheels with alloy nipples
- Bontrager handlebars, stem, and seatpost

Frameset	Frame	OCLV carbon composite
	Fork	Rock Shox Judy XC
	Headset	Tange Seiki DL-2
Controls	Handlebars	Bontrager Race II EA70
	Bar ends	System OCLV
	Stem	Bontrager forged alloy direct connect
	Shifters	GripShift SRT-900 ESP
	Brake levers	Shimano XT V-Brake
	Grips	Trek Logo, GripShift
Brakes		Shimano XT V-Brakes
Drivetrain	Crankset	Shimano XT
	Pedals	Shimano SPD M747 clipless
	F. der.	Shimano XT, top pull
	R. der.	GripShift SRT-900 ESP
	Cassette	Shimano M737-I
	Chain	Shimano IG90
Wheelset	Hub, front	System 3
	Rear	Shimano XT
	Rims	Matrix Swami WM, anodized
	Tires	Continental Navigator/F, Cross Country/R, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA, stainless, double butted, alloy nipples
Seat		Vetta TT Traverse, manganese rails
	Seatpost	Bontrager Race Lite II EA70
	Seat binder	System OCLV with integral binder bolt
Weight		22.5 lbs. (10.23 kg)
Color	Nude	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	15	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0	73.0	73.0
Effective top tube	554	571	592	594	600
Chainstay length	424	424	424	424	424
Bottom bracket ht	298	298	297	297	297
Offset	38	38	38	38	38
Wheelbase	1030	1041	1060	1065	1070
Trail	79	79	77	77	77
Standover height	725	745	762	785	820
Stem	90	105	120	135	135
Reach	636	667	702	717	722
Handlebar width 550	550	550	550	550	
Crank arm length	170	175	175	175	175
Seatpost length	300	350	350	350	350
Head tube length	110	110	110	124	159
Steerer cut length	192	192	192	205	241

Hubset, Type	HyperGlide
	8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.0/F, 1.9/R
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-UN72
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	27.6 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	44.5 mm
Seatpost diameter	27.2 mm

OCLV Kit

Rock Shox Judy SL
XTR with RapidFire SL

Retail Price: $ _____

Off Road Competition Elite

Rider: Pro level racer.

Concept:

Although the 9900SHX has all the features (and more, like V-Brakes) used by Team Rocket Boy last year, the OCLV Kit bike goes beyond that, with the new XTR group from Shimano. This full XTR package offers amazing performance, with every feature at Shimano's disposal (please refer to pages 12-15 for the whole list). And while offering all this, the new XTR group is about a FULL POUND lighter than the XT group.

Although functionally the '96 Judy SL fork is not much different than the Judy XC, it is a bunch lighter. We had to go for it.

We remember when a mountain bike qualified as light if its was under 30 pounds (and that was before suspension). This one is only 21 and a half. So light, you may need to tie it down so it doesn't float away.

Upgrades from 9800SHX

- Rock Shox Judy SL suspension fork
- Shimano XTR equipment
- System OCLV bar ends
- Rocket Boy saddle

Frameset	Frame	OCLV carbon composite
	Fork	Rock Shox Judy SL w/ carbon brace
	Headset	Tange Seiki DL-2
Controls	Handlebars	T Brown Rocket Bar
	Bar ends	System OCLV, short
	Stem	Bontrager forged alloy direct connect
	Shifters	Shimano XTR RapidFire SL
	Brake levers	Shimano XTR V-Brake
	Grips	Trek Logo
Brakes		Shimano XTR V-Brakes
Drivetrain	Crankset	Shimano XTR
	Pedals	Shimano SPD M747 clipless
	F. der.	Shimano XTR Top Swing, top pull, BB mount
	R. der.	Shimano XTR
	Cassette	Shimano XTR
	Chain	Shimano HG90
Wheelset	Hub, front	System 3
	Rear	Shimano XTR
	Rims	Matrix Swami WM, ceramic
	Tires	Continental Navigator/F, Cross Country/R, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA, double butted, alloy nipples
Seat		Rocket Boy logo SSM Dynamica
	Seatpost	Bontrager Race Lite II EA70
	Seat binder	System OCLV with integral binder bolt
Weight		21.5 lbs. (9.78 kg)
Color	Nude	

Gearing

	24	34	46
12	--	74	101
14	45	64	86
16	39	56	75
18	35	50	67
21	30	42	57
24	26	37	50
28	22	32	43
32	20	28	--

Geometry and Fit

All measurements in millimeters

	15	16.5	18	19.5	21
Head angle	70.5	70.5	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0	73.0	73.0
Effective top tube	554	571	592	594	600
Chainstay length	424	424	424	424	424
Bottom bracket ht	298	298	297	297	297
Offset	38	38	38	38	38
Wheelbase	1030	1041	1060	1065	1070
Trail	79	79	77	77	77
Standover height	725	745	762	785	820
Stem	90	105	120	135	135
Reach	636	667	702	717	722
Handlebar width 550	550	550	550	550	
Crank arm length	170	175	175	175	175
Seatpost length	300	350	350	350	350
Head tube length	110	110	110	124	159
Steerer cut length	192	192	192	205	241

Hubset, Type	HyperGlide
	8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.0/F, 1.9/R
Max. Trek size	26 x 2.35
Front derailleur clamp size	BB Mount
Bottom bracket, Model	Shimano BB-UN91
Shell width/ Axle length	73/113
Crankset bolt hole circle	74/110
Headset size	25.4/34.0/30.0
Stack height	27.6 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	44.5 mm
Seatpost diameter	27.2 mm

Y Bike Technology

Wasn't Trek one of the first companies out with full suspension?

Trek introduced their first full suspension design, dubbed T3C, over 4 years ago. At the time, it was cutting edge technology incorporating a simple, clean design which offered protection from big hits, while riding like a hardtail most of the time. Using a single, maintenanee free pivot and a swingarm design which still allowed adjustment of the front derailleur, this design is still used by other brands.

Didn't Trek say that the swingarm design of the T3C was more efficient than a fully active design?

With the Y design, you can sit comfortably in the saddle and pedal over all sorts of obstacles without getting thrown around. With the pivot location on the Y, you even get this benefit if you stand. That saves a lot of energy and keeps the power transmission steady for better traction. Although the suspension is always moving, you actually save energy with the Y bike.

So how much bobbing is there?

A really plush fully active bike like the Y series will move if you bounce on it, both front and rear. You must bear in mind that if a bike is to react to a small force *under* the suspension, it will also react to a small force *over* the suspension. The flip side is that the bike reacts to every little bump, keeping the tires on the ground and giving you incredible traction. But eorrect adjustment of the suspension and good pedaling technique with a round stroke will go a long ways to minimize any negative effect from the suspension.

Another detail missed by some is that the rear suspension is affected by the front suspension. If the fork allows your body to move downwards, the accelerated mass of your body will create additional force, and an active rear suspension will react to this force. A plush fork can definitely make the bike move up and down more. We actually put a rigid fork in to check this, and found that most of the Y's bobbing motion comes from the plushness of the fork. So if you set the bike up carefully for a test ride, you won't get much bobbing.

Are both climbing and stopping traction improved?

Yes. Since the Y's design allows the wheels to follow the terrain better, the tires always maintain better contact with the ground. So all traction is improved. Even cornering. Combine the added traction with the Y's lateral rigidity, and this bike corners like it's on rails.

You mentioned lateral rigidity. How stiff is it?

The new Y bikes are about 15% stiffer torsionally than a Trek 9900, and abont 8% laterally.

Wow. That's awesome, because the 9900 is a mean ride. How about weight?

Well, you still have a weight penalty, but its not too bad. The top of the line Y33 goes at about 24.5 pounds, compared to around 23 pounds for a 9900.

They aren't really all that expensive. What's the down side?

A plush, fully active suspension is just that. Plush and active. If a rider gets on expecting it to feel like a rigid bike, or even a suspended hardtail, they'll miss what this bike is all about. What we've found is that the more we ride suspension, the softer we seem to like it. Under normal pedaling there is not a lot of motion that you can feel. You can see the shocks moving, thongh. When you get out of the saddle and sprint, the bike can move up and down, especially if the fork is set-up really soft. Most of the movement is the fork, and for this reason you may want to send your demos out with the fork at full damping, and somewhat high spring preload. After the rider gets used to an active feel, they can soften it up.

Of course, with the new Stratos rear shock on the Y33, you can have it both ways. Plush and active, or locked out and rigid for efficiency in hard sprints and smooth climbs.

So mostly its just adjustment. How much air in the rear shock?

On the Y22 with Alps 4, your body weight in PSI, plus about 10% is a good starting point. Later, most folks will ride it on the softer side. On the Y33 with Stratos rear shock, the smaller diameter shock body will require a preload of around your body weight plus 50% in PSI. So if you weigh 150 pounds, add half that again for a preload of about 225 PSI. Bnt the best rule of thumb for any rear shock on the Y is to look for about 2-4 mm compression of the shock when you sit on the bike. This works for air/oil as well as coil/over shocks like the Fox Vanilla on the Y11 and ST120.

How much travel do you actually get?

4 inches in the back, and 3 in the front with the long travel Judys, or 2.35 inches with a Quadra 21R.

So how do you describe this design?

Its a "Unified Rear Triangle" because the rear dropouts, the bottom bracket, the seat and chainstays, and the "seat tube" are all joined in a triangle. With tbis design, the bottom bracket and rear wheel cannot move toward or apart from one another, so there is no chain or pedal feedback. Its what makes the action of the rear end so supple.

Some other Unified Rear Triangles have really different pivot locations. Why is that?

Trek's was located to minimize torsional flex, and to keep the bottom bracket and seat at the same distance. Otherwise, hitting a bump will make your seat feel like its moving up and down (actually its the bottom braeket which moves) making it hard for you to pedal. This defeats the purpose of having an active suspension.

Also, some URT designs are meant to "lock out" when you stand, while our goal was to keep the suspension active all the time. With these other designs, in order for the rear wheel to get over a bump, it has to lift the bottom bracket the same amount as the distance change from saddle to bottom bracket we were just discussing (around 1.5 inches, depending on the design). Since our pivot is located almost directly above the bottom bracket, the rear wheel doesn't really have to lift you during its movement over a bump (if the rear wheel moves up 4", the bottom bracket only has to lift 1/4"). No lifting, no lockout.

How much does the Y bike bottom bracket move?

If you fully compress all four inches at the wheel, the bottom bracket will move up about 1/4 inch, and back only about 3/4 inch. Since it would be hard to stay seated and pedal through such a hard bump, you can't feel it.

How does this pivot location minimize flex?

Think of it this way. The longer the wrench, the more you can twist a bolt or nut, right? Well, the further the pivot is away from a straight line between the bottom bracket and the head tube, the more torque you can apply to the pivot, causing more flex.

In addition, the further forward on the bike you move the pivot, the greater the chances that a front wheel impact would activate the rear shock. We placed the Y bike pivot so that it has fully independent suspension.

What about the pivot, anyway?

Its an electroless Nickel plated aluminum axle riding on a Teflon™ impregnated composite bearing.

Sounds cool? What's special about it?

Its maintenance free. You don't even have to lube it. In fact, you shouldn't because some lubes may damage the Teflon™ lubrication in the bearing. Just wash the pivot area with a little soap and water.

Isn't that the same thing as the T4C bikes?

Its the same technology, but used a little differently. There's actually about 30% more bearing surface now, even though the axle is a little shorter.

Fitting the Y bikes

With the Y bike frame, its hard to even say it has a top tube, but we'll use the term for discussion's sake. With the dropped top tube design of the Y the correct frame size offers way more standover than usual for most mountain bikes.

With this sizing, most riders will find they can straddle all 3 sizes. Choose the hike with the rider's preference for reach and handlebar height, and make sure that the rider's seat post adjustment leaves at least 1 inch of clearance over the top of the shock. The seatpost can be raised to its normal full length, to the highest point where the Minimum Insertion mark is still in the frame. This will not place undue stress on the frame, since from our testing it would take approximately 8 Gs (eight times the rider's weight) to break the seat mast.

Selling the Y Bikes

With any suspension bike it will help a great deal to set the bike up properly for a test ride. We recommend that you try the following 2 Step procedure for your own test ride. Then follow it with your customers (with your own modifications as desired).

Trek's recommendation for a first ride are to set the bike up with body weight plus ten percent in PSI in the rear shock, and set the fork up at its stiffest setting. This is a firm setting. As you set the bike up firm, explain to the customer that the bike can easily be set up softer as they get used to it, and that you will have them try that, too.

After this initial test ride soften the bike up so that there is 2-4 mm of sag (measured at the rear shock) with the rider in the saddle, and 5-10 mm in the fork. Then ride the hike again.

We find that some folks like the fork set at full soft. In any case, you won't want more than 2-4 mm of sag at the rear shock as this may cause the bottom bracket to be too low.

How to Describe the Y Bike

The Y bike uses a frame design called a Unified Rear Triangle. This type of design means that there are no pivots or movable pieces between the brakes, the rear axle, or the bottom bracket. This results in a Fixed Chain Length, where the movement of the suspension does not change the distance between the bottom bracket and the rear axle. The result of this design is that there is no pedal-actuated lockout, nor is there any biopacing or pedal feedback. Also, you get the same suspension action regardless of what gear you're in. Sitting or standing has little effect on the Y bike because its bottom bracket is almost directly under the pivot.

The main frame (not really a triangle) is made as a one-piece OCLV lug. This makes it very light and extremely rigid. The rear triangle is welded 6061 T6 heat treated aluminum.

The large diameter pivot is laterally rigid and low maintenance. It uses an electroless nickel plated aluminum axle which rotates on Teflon™ impregnated composite bearings. The composite includes ceramic material, so it is very hard and wear resistant. With the Teflon™ impregnation, it is also very smooth and maintenance free.

The Y design yields 4 inches of travel at the rear wheel, with 2.35 to 3 inches up front depending on the fork. The Suspension Ready Geometry of the Y bike is designed for the Judy long travel forks, so the design calls for an axle-to-crown race distance of 426.5 mm. Frame weight is 2.1 pounds. Swingarm weight is 2.0 pounds.

Here's how to show your customer the difference between our pivot location and that of other URT bikes:

Place the eraser end of a pencil on the counter to represent the pivot on the bike. We'll have the other end represent the rear wheel. Have your customer move this end of the pencil up and down to illustrate the wheel moving over a big bump.

With the Trek Y bike pivot, the bottom bracket is roughly 1/80th of the way from the pivot to the rear axle. Place your finger about 1/4" from the eraser and push down on the pencil while the customer "moves the wheel over a bump". Point out that your finger pressure does little to resist the wheel movement, while it also does not move up and down much during wheel travel.

With other designs, the bottom bracket is located about 1/4 of the way from the pivot to the rear wheel. To demonstrate what this means, place your finger about 1 to 1.5 inches from the 'pivot' and have your customer 'move the wheel'. Your finger can now prevent the 'wheel' from moving, and when the wheel moves, your finger will be moving up and down considerably.

New for '96-

When we spec'd longer travel forks on the Y, we knew this would lift the head tube slightly. As the head tube lifts, the bottom

bracket height (and thus the angles) are modified. By shorting the "ears" which form the shock mount of the rear triangle, we were able to keep the bottom bracket height the same while slightly decreasing the head angle. The result is a slightly smoother ride. The carbon fiber frame section remains the same as in 1995, except for the new cable stop and its internal reinforcement for the Stratos control cable.

For '96 we have changed the head tube configuration in all our OCLV bikes. Rather than use a single cylinder running all the way through the head tube, we now use two separate shouldered inserts, sort of like little top hats. The shoulder gives a large, flat face for each head cup to seat against, and means that your cutting tools will never have to work on the abrasive carbon fiber. So this new design is lighter, easier to work with, and provides better support for the headset.

ST120

Easton Program aluminum/ 6061 T6 full suspension
Rock Shox Quadra 21R
STX/LX with GripShift

Retail Price: $ _____

Off Road Performance

Rider: Rider who wants to go faster, and may do some Beginner racing. But wants extra comfort and fun with full suspension.

Concept:

In the "Upgrades", we compare this to the 7000SHX. Partly because the spec is similar, but also because that's about the point where a rider may be getting more for their cycling dollar with full suspension.

But while other companies cut some serious corners on their low-end full suspension rigs, we did not. Q21R fork, with 60 mm of travel. A full 4 inches of travel in the rear wheel. And remember, a bike's shock absorbing capacity relates very directly to the amount of travel. Make that USABLE travel.

Although its less of a problem with a URT bike, suspension bikes seem to wear out derailleurs because of the bouncing the drivetrain goes through, so we went for upgraded LX units.

Upgrades from 7000SHX
- Full Suspension
- Rock Shox Quadra 21R suspension fork
- Shimano LX derailleurs

Frameset	Frame	Easton Program aluminum
	Swingarm	6061 T6 aluminum, welded
	Rear Shock	Fox Vanilla coil/over
	Fork	Rock Shox Quadra 21R
	Headset	Dia-Compe ST-2
Controls	Handlebars	System 1
	Bar ends	System 1
	Stem	System 2 forged alloy direct connect
	Shifters	GripShift SRT-400
	Brake levers	Dia-Compe PC-7
	Grips	Trek Logo, GripShift
Brakes		Shimano Alivio
Drivetrain	Crankset	Shimano STX
	Pedals	System 1 w/ medium clips and straps (S) large clips and straps (M, L)
	F. der.	Shimano LX, top pull
	R. der.	Shimano LX SGS
	Cassette	Shimano IG50
	Chain	Shimano IG31
Wheelset	Hub, front	System 1
	Rear	Shimano R050 Silent Clutch
	Rims	Matrix Lobo WM, silver, brushed
	Tires	Tioga Psycho KS front, Psycho TS rear
	Tubes	Presta valve
	Spokes	Marwi USA stainless
Seat		Bontrager Plus 10 Racing
	Seatpost	System 1
	Seat binder	System Aluminum with integral binder bolt
Weight		28.0 lbs. (12.71 kg)
Color	Dry Ice Black	

Gearing

	22	32	42
11	--	76	100
13	44	65	85
15	38	56	73
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	S	M	L
Head angle	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0
Effective top tube	566	597	615
Chainstay length	430	430	430
Bottom bracket ht.	315	315	315
Offset	38	38	38
Wheelbase	1046	1072	1095
BB to top of seat tube	17.5	19.5	21.5
Trail	75	75	75
Standover height	711	737	762
Stem	105	120	135
Reach	658	700	732
Handlebar width 560	560	560	
Crank arm length	175	175	175
Seatpost length	300	350	350
Head tube length	110	123	139
Steerer cut length	203	203	223

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	267 14ga.
Rear, D/ND	265/266 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 1.95
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.5 mm
Stem, degrees rise	10
Handlebar clamp dia.	25.4 mm
Steerer clamp height	41.0 mm
Seatpost diameter	27.2 mm

Y11

OCLV/ 6061 T6 Full Suspension
Rock Shox Quadra 21R
STX-RC/LX with RapidFire SL

Off Road High Performance

Rider: Racer or hard core recreational rider who wants to go faster, or farther. But wants extra comfort and fun with full suspension.

Concept:

With the upgrade to an OCLV main frame, our full suspension line moves to the Y11. This is the same frame as the Y33, but with less expensive parts. That's consistent with our belief that the frame is the most important part of the bike.

Since we think the wheels are the next place to focus on, we went with the System 2 front hub, and LX rear. We used double butted spokes laced to Swami rims. And we topped the wheels off with the Smoke II Comp/ Dart II Comp combo, with Kevlar™ beads. Lighter, stronger, and with increased steering precision from the System 2's 12 mm Cro-Moly axle.

But hey, we know your customer looks at the rear derailleur, so we made it an LX, complete with RapidFire SL shifting on an 8 speed cassette.

Retail Price: $

Upgrades from ST120
- OCLV main frame
- Shimano LX rear hub, cassette, chain, and RapidFire SL shifters
- 8 speed
- System 2 front hub, Swami rims, double butted spokes, Kevlar™ beaded tires
- STX-RC cranks
- STX brakes

Frameset	Frame	OCLV carbon composite
	Swingarm	6061 T6 aluminum, welded
	Rear Shock	Fox Vanilla coil/over
	Fork	Rock Shox Quadra 21R
	Headset	Dia-Compe ST-2
Controls	Handlebars	System 2
	Bar ends	System 1
	Stem	System 2 forged alloy direct connect
	Shifters	Shimano LX RapidFire SL
	Brake levers	Shimano LX
	Grips	Trek Logo
Brakes		Shimano STX
Drivetrain	Crankset	Shimano STX-RC
	Pedals	System 1 w/ medium clips and straps (S) large clips and straps (M, L)
	F. derailleur	Shimano LX, top pull
	R. derailleur	Shimano LX SGS
	Cassette	Shimano HG70-1
	Chain	Shimano IG70
Wheelset	Hub, Front	System 2
	Rear	Shimano LX
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Bontrager Plus 10, Cro-Moly rails
	Seatpost	System 1
	Seat binder	System OCLV with integral bolt
Weight		27.1 lbs. (12.29 kg)
Color	Ice Blue	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	S	M	L
Head angle	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0
Effective top tube	566	597	615
Chainstay length	430	430	430
Bottom bracket ht.	315	315	315
Offset	38	38	38
Wheelbase	1046	1072	1095
BB to top of seat tube	175	19.5	21.5
Trail	75	75	75
Standover height	711	737	762
Stem	105	120	135
Reach	658	700	732
Handlebar width 560	560	560	
Crank arm length	175	175	175
Seatpost length	300	350	350
Head tube length	110	123	159
Steerer cut length	188	201	237

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.5mm
Stem, degrees rise	10
Handlebar clamp dia.	25.4mm
Steerer clamp height	41.0mm
Seatpost diameter	27.2mm

Y22

OCLV/ 6061 T6 Full Suspension
Rock Shox Judy XC-Long travel
LX/XT with RapidFire SL

Off Road Competition

Rider: Expert racer, or expert recreational rider who deals with aggressive terrain and long distances.

Concept:

For the more discriminating full suspension rider we wanted to add more travel. Up front we did this with a long travel version of the Judy XC, with 75 mm of travel (that's 3 inches for those not on the Metric system). On the rear, you'll get more of those 4 inches of travel over bigger hits with the air/oil Alps 4.

Since this is a full race bike, it got SPD pedals, and a full LX group, including chain and cassette. Actually, we went one better by using an XT rear hub and derailleur.

And we pared weight with upgraded parts for the racer, including the System 3 hub, alloy nipples, System 2 seatpost and bar ends, and Bontrager bars.

Retail Price: $

Upgrades from Y11
- Rock Shox Judy XC long travel suspension fork
- Fox Alps 4 air/oil rear shock
- Shimano LX cranks, brakes
- XT rear derailleur, rear hub
- System 3 hub, alloy nipples
- Shimano LX cranks, brakes
- Shimano M535 SPD pedals
- Bontrager handlebars
- System 2 bar ends, seatpost
- Vetta TT Traverse saddle

Frameset	Frame	OCLV carbon composite
	Swingarm	6061 T6 aluminum, welded
	Rear Shock	Fox Alps 4 air/oil
	Fork	Rock Shox Judy XC , 75 mm travel
	Headset	Dia-Compe SA-2
Controls	Handlebars	Bontrager Race I
	Bar ends	System 2
	Stem	System 3 forged alloy direct connect
	Shifters	Shimano LX RapidFire SL
	Brake levers	Shimano LX
	Grips	Trek Logo
Brakes		Shimano LX
Drivetrain	Crankset	Shimano LX
	Pedals	Shimano SPD M535
	F. derailleur	Shimano LX, top pull
	R. derailleur	Shimano XT SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, Front	System 3
	Rear	Shimano XT
	Rims	Matrix Swami WM, anodized
	Tires	Panaracer Dart 2 Comp front, Smoke 2 Comp rear, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted, alloy nipples
Seat		Vetta TT Traverse, manganese rails
	Seatpost	System 2
	Seat binder	System OCLV with integral bolt
Weight		26.1 lbs. (11.85 kg)
Color	Nude w/ fabric	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	S	M	L
Head angle	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0
Effective top tube	566	597	615
Chainstay length	430	430	430
Bottom bracket ht.	315	315	315
Offset	38	38	38
Wheelbase	1046	1072	1095
BB to top of seat tube	17.5	19.5	21.5
Trail	75	75	75
Standover height	711	737	762
Stem	105	120	135
Reach	658	700	732
Handlebar width 560	560	560	
Crank arm length	175	175	175
Seatpost length	300	350	350
Head tube length	110	123	159
Steerer cut length	185	198	234

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0mm
Tire size, Spec	26 x 2.1
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-UN52
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	26.5mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4mm
Steerer clamp height	41mm
Seatpost diameter	27.2mm

Y33

OCLV/ 6061 T6 Full Suspension
Rock Shox Judy SL Long Travel
XT with RapidFire SL

Retail Price: $

Off Road Competition Elite

Rider: Pro level racer.

Concept:

The "Competition Elite" designation means this is a bike we would put our own race team on, with no regrets. Its got everything they need to race on, and to win:

•Full XT package with V-Brakes, 747 pedals, and RapidFire SL shifting. Also including the "hidden" parts, like XT level bottom braeket, chain, and cassette.

•Long travel (75 mm) version of the light weight Judy SL. Unlike the 9900SHX, we felt that on a full suspension rig, we needed the weight savings.

•Stratos rear shock with adjustable damping. The rider can go from very plush to virtually locked out with a flick of the handlebar mounted thumb shifter. This eliminates any complaints a racer may have about upper body actuated bobbing when they throw themselves at the pedals trying to chase a competitor at 110% effort.

Upgrades from Y22
- Rock Shox Judy SL suspension fork
- Stratos rear shock
- Bontrager bars, stem, seatpost, and bar ends
- Shimano XT V-Brakes
- XT cranks, front derailleur, chain, and cassette
- Shimano SPD M747 pedals
- Continental tires
- Leather saddle cover

Frameset	Frame	OCLV Carbon composite,
	Swingarm	6061 T6 aluminum, welded
	Rear Shock	Stratos w/ adjustable damping and remote adjuster
	Fork	Rock Shox Judy SL, 75 mm travel
	Headset	Tange Seiki DL-2
Controls	Handlebars	Bontrager Race II EA70
	Bar ends	Bontrager Race Lite 109
	Stem	Bontrager forged alloy direct connect
	Shifters	Shimano XT RapidFire SL
	Brake levers	Shimano XT V-Brake
	Grips	Trek Pro Lite
Brakes		Shimano XT V-Brakes
Drivetrain	Crankset	Shimano XT
	Pedals	Shimano SPD M747
	F. der.	Shimano XT, top pull
	R. der.	Shimano XT SGS
	Cassette	Shimano M737-I
	Chain	Shimano IG90
Wheelset	Hub, front	System 3
	Rear	Shimano XT
	Rims	Matrix Swami WM, anodized
	Tires	Continental Navigator/ Cross Country, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted, alloy nipples
Seat		Vetta TT Traverse, Manganese rails, leather cover
	Seatpost	Bontrager Race Lite II EA70
	Seat binder	System OCLV with integral binder bolt
Weight		24.6 lbs. (11.19 kg)
Color	Judy Yellow Enamel	

Gearing

	22	32	42
11	--	76	100
12	48	70	92
14	41	60	79
16	36	52	69
18	32	47	61
21	27	40	52
24	24	35	46
28	21	30	--

Geometry and Fit

All measurements in millimeters

	S	M	L
Head angle	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0
Effective top tube	586	597	615
Chainstay length	430	430	430
Bottom bracket ht.	315	315	315
Offset	38	38	38
Wheelbase	1046	1072	1095
BB to top of seat tube	17.5	19.5	21.5
Trail	75	75	75
Standover height	711	737	762
Stem	105	120	135
Reach	658	700	732
Handlebar width 560	560	560	
Crank arm length	175	175	175
Seatpost length	300	350	350
Head tube length	110	123	159
Steerer cut length	187	200	237

Hubset, Type	HyperGlide
	8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.0/F, 1.9/R
Max. Trek size	26 x 2.35
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-UN72
Shell width/ Axle length	73/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	25.8 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	44.5 mm
Seatpost diameter	27.2 mm

Y Bike Kit

OCLV/ 6061 T6 Full Suspension
Rock Shox Judy SL Long travel
XTR with RapidFire SL

Retail Price: $

Off Road Competition Elite

Rider: Pro level racer.

Concept:

Although the Y33 has all the features (and more, like V-Brakes) used by Team Rocket Boy last year, the Y Kit bike goes beyond that, with the new XTR group from Shimano. This full XTR package offers amazing performance, with every feature at Shimano's disposal (please refer to pages 12-15 for the whole list). And while offering all this, the new XTR group is about a FULL POUND lighter than the XT group.

Although functionally the '96 Judy SL fork is not much different than the Judy XC, it is a bunch lighter. We had to go for it.

We remember when a mountain bike qualified as light if its was under 30 pounds (and that was before suspension). Even with full suspension and lots of travel, the Y Kit bike still weighs less than many non-suspended rigs at just 23.6 pounds.

Upgrades from Y33
- Shimano XTR equipment
- System OCLV bar ends
- T-Brown Rocket bar
- Ceramic Swami rims
- Rocket Boy saddle

Frameset	Frame	OCLV Carbon composite,
	Swingarm	6061 T6 aluminum, welded
	Rear Shock	Stratos w/ adjustable damping and remote adjuster
	Fork	Rock Shox Judy SL w/ 75 mm travel
	Headset	Tange Seiki DL-2
Controls	Handlebars	T-Brown Rocket Bar
	Bar ends	System OCLV, short
	Stem	Bontrager forged alloy direct connect
	Shifters	Shimano XTR RapidFire SL
	Brake levers	Shimano XTR V-Brake
	Grips	Trek Logo
Brakes		Shimano XTR V-Brakes
Drivetrain	Crankset	Shimano XTR
	Pedals	Shimano M747 SPD
	F. der.	Shimano XTR, Top Swing, top pull, BB mount
	R. der.	Shimano XTR
	Cassette	Shimano XTR
	Chain	Shimano HG90
Wheelset	Hub, front	System 3
	Rear	Shimano XTR
	Rims	Matrix Swami WM, ceramic
	Tires	Continental Leader Pro / Cross Country, Kevlar™ beads
	Tubes	Presta valve
	Spokes	Marwi USA, double butted, alloy nipples
Seat		Rocket Boy logo SSM Dynamica
	Seatpost	Bontrager Race Lite EA70
	Seat binder	System OCLV with integral binder bolt
Weight		23.6 lbs. (10.74 kg)
Color	Judy Yellow Enamel	

Gearing

	24	34	46
12	--	74	101
14	45	64	86
16	39	56	75
18	35	50	67
21	30	42	57
24	26	37	50
28	22	32	43
32	20	28	--

Geometry and Fit

All measurements in millimeters

	S	M	L
Head angle	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0
Effective top tube	586	597	615
Chainstay length	430	430	430
Bottom bracket ht.	315	315	315
Offset	38	38	38
Wheelbase	1046	1072	1095
BB to top of seat tube	17.5	19.5	21.5
Trail	75	75	75
Standover height	711	737	762
Stem	105	120	135
Reach	658	700	732
Handlebar width 560	560	560	
Crank arm length	175	175	175
Seatpost length	300	350	350
Head tube length	110	123	159
Steerer cut length	187	200	237

Hubset, Type	HyperGlide
	8 spd cassette
Spokes	32
Front	267 14/15ga.
Rear, D/ND	265/266 14/15ga.
R. Dropout width	135.0 mm
Tire size, Spec	26 x 2.0/F, 1.9/R
Max. Trek size	26 x 2.35
Front derailleur clamp size	BB mount
Bottom bracket, Model	Shimano BB-UN91
Shell width/ Axle length	73/113
Crankset bolt hole circle	74/110
Headset size	25.4/34.0/30.0
Stack height	27.6 mm
Stem, degrees rise	7
Handlebar clamp dia.	25.4 mm
Steerer clamp height	44.5 mm
Seatpost diameter	27.2 mm

MultiTracks

Like a mountain bike, only easier to pedal.

Like a road bike, only tougher and more comfortable.

Trek MultiTrack bicycles are the perfect machines for every day riding. They have mountain bike style handlebars and a wide seat for upright riding position to make you more comfortable, stable, and even more visible in traffic.

Great for everything from a spin around the block to long day tours, MultiTracks offer a wide 18, 21, or 24 speed gear ratio. They also have the extra stopping power of cantilever brakes. This is a really nice feature for those riding in steeper areas, off pavement, or pulling a bike trailer.

The wheels on Multitrack bikes are similar to the lightweight wheels on road bikes, but with an extra measure of durability for the less-than-ideal road conditions found in everyday riding. While these wheels offer more comfort and stability than a road bike, they also offer more speed and maneuverability than those found on most mountain bikes.

There are many mountain bikes sold today which will never be ridden off the pavement. These bikes are selected for their stability and comfort, especially the more upright position. This type of rider would benefit from the light weight ride of a MultiTrack. Your customer may not be interested in more speed, but most everyone is interested in a bike that's easier to pedal. MultiTracks are the solution.

From the description given here, it may sound like these are pavement-only bikes. Not true! All the MultiTracks come equipped with wider 35c or 38c tires. This extra width makes them more comfortable, more stable, and more durable, all attributes which will allow the rider an off-pavement experience.

However, being suitable for off-pavement does not mean off-road. Only an experienced cyclist will use a MultiTraek on single track or serious off-road riding. If a cyclist is interested in a MultiTrack for use off-road, we would recommend the models 7600 or the 7900. These bikes have a design very similar to a mountain bike, including a higher bottom bracket than that of the steel MultiTracks. This higher bottom bracket is important for adequate pedal clearance in rough or uneven terrain.

The steel MultiTracks use a bottom bracket height more closely matched by our road bikes. This gives the rider a lower center of gravity when riding, and also makes it easier to get on and off. The steel MultiTracks have a very different design than a road bike, however, in that they have a smoother, more stable ride as a result of their longer wheelbase.

The steel MultiTracks come in more sizes than the 7600 and 7900, and also come in a step-through (also called 'women's') model. This design should not be limited to just women. Anyone wanting a slightly closer reach, or wanting the convenience of mounting the bike by stepping through the frame and not over it (thus the name) will enjoy this style of frame.

MultiTrack

Fitting the MultiTrack

When sizing a MultiTrack bike, remember that Multitrack positioning is similar to that of a mountain bike. Choose a bike with 2-5 inches clearance over the top tube. If the bike is sized like a road bike (with just 1-2 inches elearance), the rider may be too stretched out for comfort.

New for 1996

We have made a slight change in the steel MultiTrack models 730 and 750 for this year. By increasing the offset (rake) of the forks, we have given these bike more stable steering while adding toe clip clearance, especially nice on the smaller frame sizes.

700SPORT

HiTensile steel
Tourney with SIS Thumbshifters

Retail Price: $ _____

Urban Recreation

Rider: First time rider. Recreational rider looking for an all-round bike for around town or bike patbs, in an upright position and fun, stable ride.

Concept:

We wanted to make an affordable bike which offers the quality and ride Treks are known for. So the 700 Sport has a Trek engineered design and geometry. Then we added alloy rims because they make a hike feel faster, and stop better.

The recreational cyclist wants comfort more than high performance, so this bike gets a high rise stem and padded anatomic seat. A more upright position puts more weight on the seat, so the Oasis saddle is a great feature.

Even a little hill can seem big if you don't ride everyday, so we gave the Sport an 18 speed SIS gear selection.

And although a speedy wheel change probably isn't a concern for this rider, the quick release on the front wheel makes transporting the bike easier.

Features
- Versatile MultiTrack design and performance. Great all-round bike
- Trek Lifetime warranty
- Easy to use SIS shifters
- Comfortable Oasis seat, High rise stem and bars, and 35c tires
- 18 speeds

Frameset	Frame	HiTensile Steel
	Fork	HiTensile Steel
	Headset	HP01H
Controls	Handlebars	Steel with 60 mm rise
	Stem	Cro-Moly steel
	Shifters	Shimano TY22 Thumbshifter with OptiGear
	Brake levers	C•Star 267-A1
	Grips	Foam
Brakes		Shimano Altus C90
Drivetrain	Crankset	SR
	Pedals	Wellgo LU945
	F. derailleur	Shimano TY22, down pull
	R. derailleur	Shimano TY22
	Cassette	Shimano HG 22
	Chain	KMC UG50
Wheelset	Hubs	JoyTech w/front quick release
	Rims	Weinmann 519 (alloy)
	Tires	Trek MultiTrack
	Tubes	Schraeder valve
	Spokes	Chrome plated
Seat		Oasis w/ dual density comfort zone and springs
	Seatpost	Steel, blaek
	Seat binder	Quick release
Weight		28.1 lbs. (12.76 kg)
Color	Teal Green/Black fade	
	Ice Violet	

Gearing

	28	38	48
14	--	74	93
16	48	65	82
18	42	58	73
21	36	49	62
24	32	43	47
28	27	37	--

Geometry and Fit

All measurements in millimeters

	15	17	19	21	23	17W	20W
Head angle	70.0	70.5	71.5	71.5	71.5	70.5	71.5
Seat angle	73.0	73.0	73.0	73.0	73.0	73.0	73.0
Effective top tube	530	540	555	565	575	533	536
Chainstay length	450	436	436	436	436	436	436
Bottom bracket ht	296	296	296	296	296	286	296
Offset	40	40	40	40	40	40	40
Wheelbase	1053	1039	1038	1040	1051	1036	1041
Trail	83	80	74	74	74	80	74
Standover height	719	746	777	811	856	NA	NA
Stem	105	105	105	105	105	105	105
Reach	576	586	601	611	621	579	582
Handlebar width 580	580	580	610	610	580	610	
Crank arm length	170	170	170	170	170	170	170
Seatpost length	300	300	300	300	300	250	300
Head tube length	85	85	85	100	140	125	155
Steerer cut length	?						

Hubset, Type	Threaded
F/QR, R/nutted	6 spd freewheel
Spokes	36
Front	304 14ga.
Rear, D/ND	302/303 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	700 x 35
Max. Trek size	700 x 38
Front derailleur clamp size	28.6 mm / 1⅛"
Bottom bracket, Model YST BB-612	
Shell width/ Axle length	68/?
Crankset bolt hole circle	Riveted
Headset size	22.2/30.0/27.0
Stack height	35.5 mm
Stem, degrees rise	45
Handlebar clamp dia. 25.4 mm	
Seatpost diameter	26.6 mm

MultiTrack

700 *HiTensile steel with outer butted Cro-Moly seat tube Altus C90 with GripShift*

Urban Recreation

Rider: First time rider. Recreational rider looking for an all-round bike for around town or bike paths, in an upright position and fun, stable ride.

Concept:

Like the 700 Sport, we wanted to make the 700 an affordable bike which offers the quality and ride Treks are known for.

But the 700 is for the rider who rides more often, more mileage, or more difficult terrain. 21 speeds make it easier to find a gear that's comfortable. And with the Altus crank, first gear is slightly lower for steeper or longer hills.

Since this rider may try some dirt road riding, they may want to use the seat quick release. That's why we used an outer butted Cro-Moly seat tube which can better handle the rigors of frequent seat height changes.

We also put two quick releases on this bike, so repairing flats is easier in the field.

Retail Price: $ _____

Upgrades from 700 Sport
- Cro-Moly seat tube
- GripShift MRX-100 shifters
- Shimano Altus C90 cranks, derailleurs
- 21 speeds
- Cassette rear hub with quick release
- Alloy micro-adjust seatpost

Frameset	Frame	HiTensile Steel w/outer butted Cro-Moly seat tube
	Fork	HiTensile Steel
	Headset	HP01H
Controls	Handlebars	Steel with 60 mm rise
	Stem	Steel ATB
	Shifters	GripShift MRX-100
	Brake levers	C•Star 273 A
	Grips	Trek GripShift
Brakes		Shimano Altus C90
Drivetrain	Crankset	Shimano Altus C90
	Pedals	Wellgo LU945
	F. derailleur	Shimano Altus C90, down pull
	R. derailleur	Shimano Altus C90
	Cassette	Shimano HG30
	Chain	KMC UG50
Wheelset	Hubs	JoyTech w/front and rear quick releases
	Rims	Weinmann 519
	Tires	Trek MultiTrack
	Tubes	Schraeder valve
	Spokes	Chrome plated
Seat		Oasis w/ dual density comfort zone and springs
	Seatpost	Micro-adjust alloy
	Seat binder	Quick release
Weight		27.4 lbs. (12.43 kg)
Color	Titanium/Steel Blue fade	
	Ice Green	

Gearing

	24	32	38
11	--	79	94
13	50	67	80
15	44	58	69
18	36	48	58
21	31	42	49
24	27	36	43
28	23	31	--

MultiTrack

Geometry and Fit

All measurements in millimeters

	15	17	19	21	23	17W	20W
Head angle	70.0	70.5	71.5	71.5	71.5	70.5	71.5
Seat angle	73.0	73.0	73.0	73.0	73.0	73.0	73.0
Effective top tube	530	540	555	565	575	533	536
Chainstay length	450	436	436	436	436	436	436
Bottom bracket ht	296	296	296	296	296	286	296
Offset	40	40	40	40	40	40	40
Wheelbase	1053	1039	1038	1040	1051	1036	1041
Trail	83	80	74	74	74	80	74
Standover height	719	746	777	811	856	NA	NA
Stem	105	105	105	105	105	105	105
Reach	576	586	601	611	621	579	582
Handlebar width 580	580	580	610	610	580	610	
Crank arm length	170	170	170	170	170	170	170
Seatpost length	300	300	300	300	300	250	300
Head tube length	85	85	85	100	140	125	155
Steerer cut length						110.5	

Hubset, Type	Compact HyperGlide
	7 spd cassette
Spokes	36
Front	304 14ga.
Rear, D/ND	302/303 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	700 x 35
Max. Trek size	700 x 38
Front derailleur clamp size	Bottom bracket mount
Bottom bracket, Model	Shimano BB-CT91
Shell width/ Axle length	68/116
Crankset bolt hole eircle	Riveted
Headset size	22.2/30.0/27.0
Stack height	35.5 mm
Stem, degrees rise	45
Handlebar clamp dia. 25.4 mm	
Seatpost diameter	26.6 mm

720 *Cro-Moly main triangle and fork Altus C90/ Acera-X with GripShift*

Urban Enthusiast

Rider: First time rider. Recreational rider looking for an all-round bike for around town or bike paths, in an upright position and fun, stable ride.

Concept:

This is a deluxe version of the 700, for the more discriminating rider who wants Cro-Moly main tubes and fork. Since Cro-Moly is stronger, we can use thinner tubes and still get the same strength, and this makes for a better ride.

We've spec'd a Shimano Acera-X rear hub for durability, and the rear derailleur for a bit more shifting performance.

The micro-adjust seatpost allows more precision in positioning, an important comfort feature as ride length increases.

Retail Price: $ _____

Upgrades from 700
- Cro-Moly main triangle
- Cro-Moly fork
- Shimano Acera-X rear derailleur and hub

Frameset	Frame	Trek Cro-Moly main tubes, HiTensile stays
	Fork	Cro-Moly
	Headset	HP01H
Controls	Handlebars	Steel with 60 mm rise
	Stem	Steel ATB
	Shifters	GripShift MRX-100
	Brake levers	C•Star 273A
	Grips	GripShift
Brakes		Shimano Altus C90
Drivetrain	Crankset	Shimano Altus C90
	Pedals	Wellgo LU945
	F. derailleur	Shimano Altus C90, down pull
	R. derailleur	Shimano Acera-X GS
	Cassette	Shimano HG30
	Chain	KMC UG50
Wheelset	Hub, Rear	Shimano Acera-X
	Front	JoyTech
	Rims	Weinmann 519
	Tires	Trek MultiTrack
	Tubes	Schraeder valve
	Spokes	Chrome plated
Seat		Oasis w/dual density comfort zones and springs
	Seatpost	Micro-adjust alloy
	Seat binder	Quick release
Weight		27.2 lbs. (12.35 kg)
Color	Ice Cyan/ Ice Indigo fade	
	Dry Pearl Teal	

Gearing

	24	32	38
11	--	79	94
13	50	67	80
15	44	58	69
18	36	48	58
21	31	42	49
24	27	36	43
28	23	31	--

MultiTrack

Geometry and Fit

All measurements in millimeters

	15	17	19	21	23	17W	20W
Head angle	70.0	70.5	71.5	71.5	71.5	70.5	71.5
Seat angle	73.0	73.0	73.0	73.0	73.0	73.0	73.0
Effective top tube	530	540	555	565	575	533	536
Chainstay length	450	436	436	436	436	436	436
Bottom bracket ht	296	296	296	296	296	286	296
Offset	40	40	40	40	40	40	40
Wheelbase	1053	1039	1038	1040	1051	1036	1041
Trail	83	80	74	74	74	80	74
Standover height	719	746	777	811	856	NA	NA
Stem	100	100	100	100	100	100	100
Reach	576	586	601	611	621	579	582
Handlebar width 580	580	580	610	610	580	610	
Crank arm length	170	170	170	170	170	170	170
Seatpost length	300	300	300	300	300	250	300
Head tube length	85	85	85	100	140	125	155
Steerer cut length	124	126	129	139	184	169	202

Hubset, Type	Compact HyperGlide
	7 spd cassette
Spokes	36
Front	304 14ga.
Rear, D/ND	302/303 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	700 x 35
Max. Trek size	700 x 38
Front derailleur clamp size	BB mount
Bottom bracket, Model	Shimano BB-CT91
Shell width/ Axle length	68/116
Crankset bolt hole circle	Riveted
Headset size	22.2/30.0/27.0
Stack height	35.5 mm
Stem, degrees rise	45
Handlebar clamp dia. 25.4 mm	
Seatpost diameter	26.6 mm

730 *Trek Cro-Moly Acera-X/Alivio with GripShift*

Urban Enthusiast

Rider: Recreational rider looking for a fun all round bike for city or country, pavement or dirt roads and trails. This person considers themselves to be cyclist, but still at a casual level.

Concept:

The 730's design is between a road bike and a recreational mountain bike. By using stronger rims with a bigger tires, the 730 can more easily handle gravel roads and other uneven roadways. And since this kind of riding may need more power, we added toe clips.

Along with a more aggressive and shock absorptive wheelset, we broadened the gear range by using an Acera-X crank with more high gears. Shifting is crisper with the SRT-400 shifters and the Alivio derailleurs.

The Trek Comfort saddle rounds off the features. Its a little narrower, so the rider has more leg room for pedaling hard, and can move around more on the bike to increase handling agility.

Retail Price: $

Upgrades from 720
- Trek Cro-Moly frame
- System 1 Cro-Moly fork
- System 1 stem and alloy bars
- Shimano Acera-X brakes, and front hub
- Alivio cranks and derailleurs
- GripShift SRT-400
- Matrix Astro rims, Invert II 700 x 38c tires, stainless spokes
- Shimano IG system

Frameset	Frame	Trek Cro-Moly
	Fork	Trek Hybrid Cro-Moly
	Headset	Tange Seiki Passage
Controls	Handlebars	System 1 ATB
	Stem	Hybrid Cro-Moly
	Shifters	GripShift SRT-400
	Brake levers	C•Star 274AG
	Grips	GripShift
Brakes		Shimano Acera-X
Drivetrain	Crankset	Shimano Alivio
	Pedals	Resin with medium clips and straps (15-19, 17W-20W) large clips and straps (21-23)
	F. derailleur	Shimano Alivio Top Swing, down pull
	R. derailleur	Shimano Alivio GS
	Cassette	Shimano IG50
	Chain	Shimano IG31
Wheelset	Hubs	Shimano Acera-X
	Rims	Matrix Astro WM, silver, brushed
	Tires	Trek Invert II
	Tubes	Schraeder valve
	Spokes	Marwi USA Stainless
Seat		Trek Comfort foam
	Seatpost	System 1
	Seat hinder	System Steel with System 1 Quick Release
Weight		25.9 lbs. (11.78 kg)
Color		Ice Green/Blue fade Ice Fire

Gearing

	24	34	42
11	--	84	104
13	50	71	88
15	44	62	76
18	36	51	64
21	31	44	54
24	27	39	48
28	23	33	--

MultiTrack

Geometry and Fit

All measurements in millimeters

	15	17	19	21	23	17W	20W
Head angle	70.0	70.5	71.5	71.5	71.5	70.5	71.5
Seat angle	73.0	73.0	73.0	73.0	73.0	73.0	73.0
Effective top tube	530	540	555	565	575	533	536
Chainstay length	450	436	436	436	436	436	436
Bottom bracket ht	296	296	296	296	296	286	296
Offset	40	40	40	40	40	40	40
Wheelbase	1053	1039	1038	1040	1051	1036	1041
Trail	83	80	74	74	74	80	74
Standover height	719	746	777	811	856	NA	NA
Stem	90	105	120	120	135	90	105
Reach	600	622	648	658	680	603	618
Handlebar width 560	560	560	560	560	560	560	
Crank arm length	170	170	175	170	170	170	175
Seatpost length	300	300	350	350	350	300	350
Head tube length	85	85	85	100	140	125	155
Steerer cut length	126	126	126	136	176	156	201

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	301 14ga.
Rear, D/ND	299/300 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	700 x 38
Max. Trek size	700 x 45
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model Shimano	BB-LP26
Shell width/ Axle length	68/110
Crankset bolt hole circle	67
Headset size	22.2/30.2/26.4
Stack height	30.9 mm
Stem, degrees rise	20
Handlebar clamp dia. 25.4 mm	
Seatpost diameter	27.2 mm

750 *Trek double butted Cro-Moly STX with GripShift*

Urban Performance

Rider: This person is interested in speed, or longer distances. But still mostly on road, and with the all round ride of a hybrid.

Concept:

The 750's design is between a road bike and a recreational mountain bike. Like the 730, this bike is mostly for pavement but can also handle gravel roads and other uneven roadways.

We used double butted Cro-Moly tubing on the 750 to reduce weight, increase shock absorption, and also make for a more lively ride. The STX crankset has a 22T chainring for lower gears, important when rides get longer and steeper. The STX derailleurs help shift this wider range.

The 750 also has other weight saving parts like the System 1 alloy bars and Cro-Moly stem.

Retail Price: $

Upgrades from 730
- Double butted tubing
- Shimano STX derailleurs
- Alivio brakes, front hub
- System 1 stem and pedals
- Vetta Comfort Flex saddle

Frameset	Frame	Trek Double butted Cro-Moly
	Fork	Trek Hybrid Cro-Moly
	Headset	Tange Seiki Passage
Controls	Handlebars	System 1 ATB
	Stem	System 1 Hybrid
	Shifters	GripShift SRT-400
	Brake levers	C•Star 274AG
	Grips	GripShift
Brakes		Shimano Alivio
Drivetrain	Crankset	Shimano STX
	Pedals	System 1 w/medium clips and straps (15-17) large clips and straps (19-23)
	F. derailleur	Shimano STX Top Swing, down pull
	R. derailleur	Shimano STX GS
	Cassette	Shimano IG50
	Chain	Shimano IG31
Wheelset	Hub, front	Shimano Alivio
	Rear	Shimano R050 Silent Clutch
	Rims	Matrix Astro WM, silver, brushed
	Tires	Trek Invert II
	Tubes	Presta valve
	Spokes	Marwi USA Stainless
Seat		Vetta Comfort Flex
	Seatpost	System 1
	Seat binder	System Steel with System 2 Quick Release
Weight		25.7 lbs. (11.69 kg)
Color	Ice Black	

Gearing

	22	32	42
11	--	79	104
13	46	67	88
15	40	58	76
18	33	48	64
21	29	42	54
24	25	36	48
28	21	31	--

MultiTrack

Geometry and Fit

All measurements in millimeters

	15	17	19	21	23	17W	20W
Head angle	70.0	70.5	70.5	71.5	71.5	70.5	70.5
Seat angle	74.0	74.0	73.0	73.0	73.0	74.0	73.0
Effective top tube	545	550	560	570	580	547	556
Chainstay length	430	430	430	430	430	430	430
Bottom bracket ht	271	271	271	271	271	271	271
Offset	40	40	40	40	40	40	40
Wheelbase	1027	1028	1029	1030	1041	1028	1029
Trail	83	80	80	74	74	80	80
Standover height	702	727	750	781	826	-	-
Stem	90	105	120	120	135	90	105
Reach	600	622	648	658	680	603	618
Handlebar width 560	560	560	560	560	560	560	
Crank arm length	170	170	175	175	175	170	175
Seatpost length	300	300	350	350	350	300	350
Head tube length	90	90	90	100	140	120	165
Steerer cut length	126	126	126	136	176	156	201

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	301 14ga.
Rear, D/ND	299/300 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	700 x 38
Max. Trek size	700 x 45
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model Shimano	BB-LP26
Shell width/ Axle length	68/110
Crankset bolt hole circle	58/94
Headset size	22.2/30.2/26.4
Stack height	30.9 mm
Stem, degrees rise	20
Handlebar clamp dia. 25.4 mm	
Seatpost diameter	27.2 mm

7600

Easton EA60 Program aluminum
STX-RC with GripShift

Retail Price: $

Urban/Off Road Performance

Rider: This person does all-round riding, both road and off road. They may even do some touring.

Concept:

The 7600 is designed differently than our other MultiTracks, something more akin to a mountain bike with road wheels. As such, the higher bottom bracket adds pedal clearance, while the more more forward leaning, aggressive position increases handling and allows the rider to put more power to the pedals.

Like with mountain bikes, the uneven terrain of off road riding can put a frame through more twists, while requiring better steering precision. So the 7600 has an oversize steering system including fork, headset, and stem.

To compliment this style of riding, we used a light weight bonded aluminum frame with STX-RC cranks, brakes, and derailleurs. We also used lighter and stronger Cosmo rims.

Upgrades from 750
- Easton aluminum frameset with oversize headset
- Shimano STX-RC equipment
- GripShift SRT-600
- System 2 handlebars and OS hybrid stem
- STX-RC chain and cassette
- Dia-Compe PC-7 brake levers
- Matrix Cosmo rims

Frameset	Frame	Easton Program aluminum, bonded
	Fork	Trek OS Hybrid Cro-Moly
	Headset	Tange Seiki Passage
Controls	Handlebars	System 2 ATB
	Stem	System 1 ATB
	Shifters	GripShift SRT-600
	Brake levers	Dia-Compe PC-7
	Grips	Trek Logo, GripShift
Brakes		Shimano STX-RC
Drivetrain	Crankset	Shimano STX-RC
	Pedals	System 1 w/medium clips and straps (16.5) large clips and straps (18-22)
	F. derailleur	Shimano STX-RC Top Swing, top pull
	R. derailleur	Shimano STX-RC SGS
	Cassette	Shimano IG50
	Chain	Shimano IG51
Wheelset	Hubs	Shimano STX-RC
	Rims	Matrix Cosmo WM, anodized
	Tires	Trek Invert II
	Tubes	Presta valve
	Spokes	Marwi USA Stainless
	Seat	Vetta Comfort Flex
	Seatpost	System 1
	Seat binder	System Aluminum with integral binder bolt, hanger
Weight		24.5 lbs. (11.12 kg)
Color	Ice Inkwell Blue	

Gearing

	22	32	42
11	--	79	104
13	46	67	88
15	40	58	76
18	33	48	64
21	29	42	54
24	25	36	48
28	21	31	--

MultiTrack

Geometry and Fit

All measurements in millimeters

	16.5	18	20	22
Head angle	70.5	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0	73.0
Effective top tube	564	574	574	585
Chainstay length	430	430	430	430
Bottom bracket ht	308	311	311	313
Offset	40	40	40	40
Wheelbase	1043	1056	1057	1060
Trail	76	73	73	73
Standover height	743	764	794	836
Stem	90	105	120	135
Reach	646	670	679	703
Handlebar width 560	560	560	560	
Crank arm length	170	175	175	175
Seatpost length	300	350	350	350
Head tube length	93	93	116	167
Steerer cut length	131	131	154	207

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	300 14ga.
Rear, D/ND	298/299 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	700 x 38
Max. Trek size	700 x 45
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model Shimano	BB-LP26
Shell width/Axle length	68/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	33.4 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

7900

Carbon fiber with Easton stays
LX/XT with GripShift

Retail Price: $

Urban/Off Road High Performance

Rider: This person does all-round riding, both road and off road. They may even do some touring.

Concept:

The 7900 shares the design of the 7600, but with lighter and more lively carbon composite tubes.

Since this rider probably is interested in speed, or challenging themselves in other ways, we gave the 7900 24 gears. The tighter jumps of the 8 speed cassette allows the rider to more easily find a gear which is just right for their cadence, so they'll be more efficient when riding hard.

Bar ends help weight distribution on steep terrain, and the Gel saddle adds comfort on longer mileage rides.

Upgrades from 7600
- 3 main tubes carbon composite main triangle
- Shimano LX equipment with XT rear derailleur
- GripShift SRT-800 X-RAY
- System 1 bar ends
- LX chain and cassette
- System 2 pedals
- System 3 front hub
- Vetta Gel saddle

Frameset	Frame	Carbon composite w/Easton aluminum stays
	Fork	Trek OS Hybrid Cro-Moly
	Headset	Tange Seiki Passage
Controls	Handlebars	System 2 ATB
	Bar ends	System 1
	Stem	System 1 ATB
	Shifters	GripShift SRT-800 X-RAY
	Brake levers	Dia-Compe PC-7
	Grips	Trek Logo, GripShift
Brakes		Shimano LX
Drivetrain	Crankset	Shimano LX
	Pedals	System 2 ATB w/ medium clips and straps (16.5) large clips and straps (18-22)
	F. der.	Shimano LX Top Swing, top pull
	R. der.	Shimano XT SGS
	Cassette	Shimano HG70-I
	Chain	Shimano IG70
Wheelset	Hub, front	System 3
	Rear	Shimano LX
	Rims	Matrix Cosmo WM, anodized
	Tires	Trek Invert II
	Tubes	Presta valve
	Spokes	Marwi USA stainless
Seat		Vetta Gel Flex
	Seatpost	System 2
	Seat binder	System Aluminum with integral binder bolt, hanger
Weight		23.9 lbs. (10.87 kg)
Color	Ice Forest Green	

Gearing

	22	32	42
11	--	79	104
12	49	73	95
14	43	62	82
16	37	54	72
18	33	48	64
21	29	42	54
24	25	36	48
28	21	31	--

MultiTrack

Geometry and Fit

All measurements in millimeters

	16.5	18	20	22
Head angle	70.5	71.0	71.0	71.0
Seat angle	73.0	73.0	73.0	73.0
Effective top tube	564	574	574	585
Chainstay length	430	430	430	430
Bottom bracket ht	308	311	311	313
Offset	40	40	40	40
Wheelbase	1043	1056	1057	1060
Trail	76	73	73	73
Standover height	743	764	794	836
Stem	90	105	120	135
Reach	646	670	679	703
Handlebar width 560	560	560	560	
Crank arm length	175	175	175	175
Seatpost length	300	350	350	350
Head tube length	93	93	116	167
Steerer cut length	131	131	154	207

Hubset, Type	Compact HyperGlide 8 spd cassette
Spokes	32
Front	300 14ga.
Rear, D/ND	298/299 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	700 x 38
Max. Trek size	700 x 45
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model Shimano	BB-UN52
Shell width/Axle length	68/113
Crankset bolt hole circle	58/94
Headset size	25.4/34.0/30.0
Stack height	33.4 mm
Stem, degrees rise	10-15
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

Road Bikes

There are few things in life which can compare with the feeling of whizzing down the open road under your own power. Trek road bikes bring this feeling to life. Beautiful scenery, a feeling of vigor from healthy exercise, companionship and camaraderie. Speed. Thrills. Road hikes offer all this, plus an elegant solution to today's transportation headaches.

Trek makes the largest selection of road hikes in the industry. We make steel, aluminum, carbon fiber, and OCLV models. We make the perfect bike for someone just getting into cycling. We also make the perfect tonring bike for those who just want to get away. For the ultimate ride, try one of our OCLV thoroughbreds. At just 2.50 pounds for the frame, its the lightest production road bike frameset in the world. When athletes from Team Saturn, or triathletes Karen Sinyers of Mike Pigg ride one, its also one of the fastest.

There are several things which set Trek road bikes apart from the rest of the pack.

1. **Quality-** With our own manufacturing facility in Wisconsin, we control the finished product by starting at the beginning. We design, we build, we learn, and we get better. With over a million bikes built, many say we're the best.
2. **Selection-** We make as many as 8 frame sizes in some models. Your customer has more options to get a perfect fit with a Trek. With a choice of frame materials, you're likely to find that a Trek hike fits their desired performance level. And with Trek's eye on value, it will fit their pocket book as well.
3. **Performance-** Trek hikes are ridden by some of the best athletes in the world to a lot of podium visits. More importantly, when your customer buys a Trek it's the same bike and the same design or the same technology (and built by the same people) as the Treks which won the medals. Trek details like size specific handlehars, stems, cranks, and toe-clips compliment Trek's proven frame designs for a custom fit and ultimate performance.
4. **Reliability-** With Trek's rigid standards of quality, and our manufacturing expertise, your customer can expect to enjoy this incredihle level of performance for many years to come.

Fitting Trek Road Bikes

Have the customer straddle the bike. There should be 1-2" clearance over the top tubc. Using this test, most people will find two bike sizes that fit well. Between these sizes, select the bike through your customer's preferences for handlebar height and reach.

Mechanic's notes:

8 Speed spacing

Our bonded aluminum and carbon/aluminum models usc a rear triangle spacing of 128 mm. This will accept either a 125 mm 6/7 speed hub, or a 130 mm 8 speed hub. The slight flexing of the frame needed to accommodate these two sizes will not damage the frame or cause fatigue. However, do not attempt to change this spacing, as attempting to bend the frame may damage it.

ABT Road bike top tube cable sleeve

Trek ABT (Advance Bonding Technology) road bikes route the rear hrake cable through the top tube (with the exception of the OCLV models). This cable routing is clean and visually eye appealing. However, over large bumps, the brake cable housing can bounce inside the top tube, making noise. To prevent this from happening, we have included a foam sleeve with each of these bikes. The foam looks like a very small diameter piece of pipe insulation. To install this device, please follow these instructions:

1. Thread the rear brake housing into the top tube through the front entry hole.
2. Push the housing through the top tube and guide it out through the seat lug and seat tube.
3. Slide the foam sleeve over the housing, ease the foam through the seat lug hole, and continue to slide the foam into the top tube. It may be necessary to compress the foam or wiggle it a bit to slide it through the top rube opening inside the seat lug.
4. Slide the foam as far forward as possible in the top tube.
5. Pull the rear end of the cable housing back into seat tube a bit, and reroute the housing through the rear housing exit hole of the seat lug/ top tube.

Note: When installing a new cable housing at some time in the future, it is not necessary to route the new housing through the foam sleeve. The sleeve will do its joh even if its just loose in the top tube.

Another tip: On small sizes, sometimes the cable housing will cause the rear brake to become un-centered. If this occurs, try attaching the smallest size of wire tie to the housing where it exits either end of the top tube. This will prevent the housing from sliding through the top tube.

420

Cro-Moly main triangle and fork
300EX/ Acera-X with down tube shifters

Retail Price: $ _____

Road Enthusiast

Rider: Recreational rider looking for a faster bike for fitness, around town or longer rides.

Concept:

We wanted to make an affordable bike which offers the quality and ride Treks are known for. So the 470 has a Trek engineered design and geometry. Then we added alloy rims because they make a bike feel faster, and stop better.

Although the 420 would he suitable for a first time rider, we expect that anyone purchasing a road bike over another style is pretty serious about their riding. They want to ride regularly, and do some mileage. So this hike got the lighter weight and more lively ride of Cro-Moly main triangle and fork (the seat and chainstays don't really flex much on a bike, so they make less of a difference in ride quality).

The 470 has a 21 speed gear range to help the rider conquer hills. We also added a micro-adjust seatpost, important for getting the correct position necessary for long-range comfort.

Features

- Trek design and Engineering
- Cro-Moly main triangle
- Cro-Moly fork
- Trek Lifetime warranty
- Shimano SIS 21 speed w/ Acera-X rear derailleur
- Micro adjust alloy seatpost
- IsoTech 2 tires, alloy rims

Frameset	Frame	Trek Cro-Moly main tubes, HiTensile stays
	Fork	Cro-Moly
	Headset	HP01H
Controls	Handlebars	HL DR-9B alloy
	Stem	Cro-Moly
	Shifters	Shimano 400EX downtube, braze-on
	Brake levers	Dia-Compe BL-07 Aero
	Grips	White cork/foam tape
Brakes		Shimano 300EX
Drivetrain	Crankset	SR
	Pedals	Victor VP-393 w/elips and straps (M/43-50, L/54-60)
	F. derailleur	Sbimano Tourney TY30
	R. derailleur	Shimano Acera-X
	Cassette	Shimano HG50
	Chain	KMC UG50
Wheelset	Hub, Front	Joy Tech w/QR
	Rear-	Shimano HG50 w/QR
	Rims	Weinmann 217 alloy
	Tires	Trek IsoTech 2
	Tubes	Presta valve
	Spokes	Chrome plated, double butted
Seat		Trek HiDensity foam
	Seatpost	Micro-adjust alloy
	Seat binder	Kalloy 8 x 25
Weight		25.3 lbs. (11.49 kg)
Color		Ice Green/ Ice Violet fade

Gearing

	28	38	48
13	--	77	98
15	49	67	85
17	44	59	75
19	39	53	67
21	35	48	60
23	32	44	55
26	28	39	--

Geometry and Fit

	43	50	54	56	58	60
Head angle	72.5	72.5	73.0	73.0	73.5	74.0
Seat angle	75.0	75.0	74.0	73.0	73.0	73.0
Effective top tube	525	522	540	555	566	575
Chainstay length	415	415	415	415	415	415
Bottom bracket ht.	267	267	267	267	267	267
Offset	47	47	47	43	43	43
Wheelbase	978	980	986	988	995	998
Trail	57	57	54	55	55	52
Standover height	716	748	776	798	813	835
Stem	80	80	80	100	100	120
Reach	605	602	620	655	666	695
Handlebar width 390	390	390	410	410	430	
Crank arm length	170	170	170	170	175	175
Seatpost length	300	300	300	300	300	300
Head tube length	85	85	105	123	141	162
Steerer cut length	121	120	141	159	177	198

Hubset, Type	HyperGlide 7 spd cassette
Spokes	36
Front	304 14/15ga.
Rear, D/ND	302/304 14/15ga.
R. Dropout width	130.0 mm
Tire size, Spec	700 x 25
Max. Trek size	700 x 32
Front derailleur clamp size	28.6 mm / 1 1/8"
Bottom bracket, Model	Shimano BB-LP20
Shell width/ Axle length	68/118
Crankset bolt hole circle	Riveted
Headset size	22.2/30.0/27.0
Stack height	35.5 mm
Stem, degrees rise	0
Handlebar clamp dia.	25.4 mm
Seatpost diameter	26.6 mm

470 *Double butted Cro-moly 14 speed RSX STI*

Retail Price: $ _____

Road Performance

Rider: Road rider looking for a faster bike for fitness, or entry level racing.

Concept:

The 470 shares the geometry of the 420, but with a lighter and more lively double butted cro-moly frame.

Along with this higher level of frame performance, we added the full RSX STI group including Dual Control shifting. We chose the 470's 14 speed set up for racing, but first gear is lower than that on our high performance racing bikes so its still suitable for more recreational riding.

Since this bike is likely to be ridden harder and farther, we cut rotating weight and added wheel durability with Rigida rims and double butted stainless spokes.

Upgrades from 420

- Double butted Cro-moly frame
- Shimano RSX brakes, front and rear derailleur, hubs, and cranks
- STI Dual Control shifting
- Rigida rims
- Stainless spokes
- San Marco Linea saddle

Frameset	Frame	Trek double butted Cro-moly
	Fork	Trek Cro-moly
	Headset	Tange Seiki Passage
Controls	Handlebars	HL DR-9B alloy
	Stem	Cro-Moly
	Shifters	Shimano RSX STI Dual Control
	Brake levers	Shimano RSX
	Grips	White cork/foam tape
Brakes		Shimano RSX
Drivetrain	Crankset	Shimano RSX
	Pedals	Victor VP516 with medium clips and straps (19-21) large clips and straps (23-25)
	F. derailleur	Shimano RSX
	R. derailleur	Shimano RSX
	Cassette	Shimano HG50
	Chain	KMC HG50
Wheelset	Hubs	Shimano RSX
	Rims	Rigida SPH-60, alloy
	Tires	Trek Iso Tech 3
	Tubes	Presta valve
	Spokes	Double butted stainless
Seat		San Marco Linea
	Seatpost	Micro-adjust alloy
	Seat binder	Kalloy 8 x 25 allen bolt
Weight		25.9 lbs. (11.76 kg)
Color	Ice Indigo	

Gearing

	36	46
11	--	111
12	79	101
14	68	87
16	60	76
18	53	68
21	45	58
24	40	--

Geometry and Fit

All measurements in millimeters

	43	50	54	56	58	60
Head angle	72.5	72.5	73.0	73.0	73.5	74.0
Seat angle	75.0	75.0	74.0	73.0	73.0	73.0
Effective top tube	525	522	540	555	566	575
Chainstay length	415	415	415	415	415	415
Bottom bracket ht.	267	267	267	267	267	267
Offset	47	47	47	43	43	43
Wheelbase	978	980	996	988	995	998
Trail	57	57	54	55	55	52
Standover height	716	748	776	798	813	835
Stem	80	80	80	100	100	120
Reach	605	602	620	655	666	695
Handlebar width 390	390	390	410	410	430	
Crank arm length	170	170	170	170	175	175
Seatpost length	300	300	300	300	300	300
Head tube length	85	85	105	123	141	162
Steerer cut length	120	119	140	158	176	197

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	304 14/15ga.
Rear, D/ND	302/304 14/15ga.
R. Dropout width	130.0 mm
Tire size, Spec	700 x 25
Max. Trek size	700 x 32
Front derailleur clamp size	28.6 mm / 1 1/8"
Bottom bracket, Model	Shimano BB-LP25
Shell width/ Axle length	68/110
Crankset bolt hole circle	94
Headset size	22.2/30.0/27.0
Stack height	30.9 mm
Stem, degrees rise	-17
Handlebar clamp dia.	25.4 mm
Seatpost diameter	26.6 mm

520 *Trek double butted Cro-moly 21 speed RSX STI*

Retail Price: $ _____

Touring Performance

Rider: Road rider riding long distances, or carrying full panniers.

Concept:

The 520 uses a light and lively double butted Cro-moly frame, but with the stability and comfort of a long range touring design. The extra long chainstays provide lots of heel clearance with panniers while adding to the long wheelbase, making the 520 track solidly so the rider can watch the scenery instead of the road.

Due to popular demand, we added the full RSX STI triple group including Dual Control shifting, but with a few touring upgrades. For the extra stopping power needed for a full load, we spec'd STX-RC cantilevers. And for those heavier loads we also used STX hubs with wider spacing for increased wheel strength. Laced to Cosmo rims, and topped with Continental tires, this is one smooth ride.

Features

- True long distance, fully loaded touring bike
- Shimano RSX STI with Dual Control shifters
- Trek Backrack and all the braze-ons
- 90° System stem and wide Gel seat for comfort
- Matrix Cosmo rims w/36 spokes, Continental tires
- System bars, 90° stem, seatpost,and pedals

Frameset	Frame	Trek double-butted Cro-moly
	Fork	Trek touring Cro-moly, with low rider braze-ons
	Headset	Tange Seiki CDS
Controls	Handlebars	System 1 Road
	Stem	System 1 90° Road
	Shifters	Shimano RSX STI, Dual Control
	Brake levers	Shimano RSX
	Grips	White cork tape
Brakes		Shimano STX-RC cantilevers
Drivetrain	Crankset	Shimano RSX
	Pedals	System 2 Road w/ clips and straps
	F. der.	Shimano RSX
	R. der.	Shimano RSX SGS
	Cassette	Shimano HG50
	Chain	Shimano HG70
Wheelset	Hubs	Shimano STX
	Rims	Matrix Cosmo WM, silver, brushed
	Tires	Continental Super Sport
	Tubes	Presta valve
	Spokes	Marwi USA stainless
Seat		Vetta Gel Flex
	Seatpost	System 1
	Seat binder	System Steel with integral binder bolt
Extras		Trek BackRack
Weight		26.3 lbs. (11.94 kg)
Color	Ice Black Forest Green	

Gearing

	26	36	46
11	--	88	113
13	54	75	96
15	47	65	83
18	39	54	69
21	33	46	59
24	29	41	52
28	25	35	--

Geometry and Fit

All measurements in millimeters

	17	19	21	23	25
Head angle	71.0	71.0	71.0	72.0	72.5
Seat angle	74.0	74.0	73.5	73.0	72.0
Effective top tube	540	555	565	575	590
Chainstay length	450	450	450	450	450
Bottom bracket ht	264	264	269	269	269
Offset	52	52	52	52	52
Wheelbase	1044	1046	1054	1056	1062
Trail	63	63	63	57	54
Standover height	721	741	768	806	852
Stem	65	80	100	100	120
Reach	602	632	661	671	705
Handlebar width 400	400	420	420	440	
Crank arm length	170	170	170	175	175
Seatpost length	250	250	250	250	250
Head tube length	85	85	85	105	145
Steerer cut length	138	138	138	168	213

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	36
Front	297 14ga.
Rear, D/ND	294/295 14ga.
R. Dropout width	135.0 mm
Tire size, Spec	700 x 28
Max. Trek size	700 x 41
Front derailleur clamp size	31.8 mm / 1 1/4"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	68/118
Crankset bolt hole circle	74/110
Headset size	22.2/30.2/26.4
Stack height	33.7 mm
Stem, degrees rise	0
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

1220 *Easton EA60 Program aluminum w/Cro-Moly fork 21 speed RSX STI*

Touring Performance

Rider: Road rider looking for a faster bike for fitness, or long road rides.

Concept:

The 1220 shares the geometry of our carbon road racers in a bonded Easton aluminum frame. So its a fun, fast, and efficient frame for day rides, fast centuries, or multi day tours when the rider is not carrying a big load (see the 520 for our pannier carrying setup). The 1220 comes in 8 sizes, so the rider will get a better fit- important for the fit and performance this rider needs.

We designed this bike with slightly oversized aluminum tubes (relative to our Cro-Moly models) to maintain the rigidity necessary for good performance. But we did not go overboard, so our aluminum bikes are still comfortable for the long haul. And they're extremely durable (for more info on our bonded aluminum frames, see Frame Materials on pages 6-7 and ABT on pages 46-47).

To complimeut this great frameset, we spec'd the RSX STI triple group with Dual Control levers. We also revved up the wheels with Aurora rims and Marwi USA stainless double butted spokes.

Retail Price: $

Upgrades from 470
- U.S. made bonded Easton aluminum frame
- Matrix Aurora rims
- Shimano RX100 front derailleur
- 21 speed gearing
- IsoTech 3 tires
- System bars, stem, seatpost, and Vetta Comfort Flex seat
- Shimano chain
- Marwi USA spokes

Frameset	Frame	Easton EA60 Program aluminum
	Fork	Trek Cro-Moly unicrown
	Headset	Tange Seiki Passage
Controls	Handlebars	System 1 Road
	Stem	System 1 90° Road
	Shifters	Shimano RSX STI Dual Control
	Brake levers	Shimano RSX
	Grips	White cork tape
Brakes		Shimano RSX
Drivetrain	Crankset	Shimano RSX
	Pedals	System 1 Road w/clips and straps
	F. der.	Shimano RX100T
	R. der.	Shimano RSX GS
	Cassette	Shimano HG50
	Chain	Shimano HG50
Wheelset	Hubs	Shimano RSX
	Rims	Matrix Aurora WM, anodized
	Tires	Trek IsoTech 3
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Vetta Comfort Flex
	Seatpost	System 1
	Seat binder	System Road, 5 mm allen, M6 x 25
Weight		22.8 lbs. (10.36 kg)
Color	Ice Violet /Ice Indigo fade	

Gearing

	26	36	46
11	--	87	111
12	57	79	101
14	49	68	87
16	43	60	76
18	38	53	68
21	33	45	58
24	29	40	--

Geometry and Fit

All measurements in millimeters

	47	50	52	54	56	58	60	62
Head angle	72.5	73.0	73.0	73.5	73.5	73.5	73.5	74.0
Seat angle	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5
Effective top tube	518	530	530	550	550	570	570	585
Chainstay length	415	415	415	415	415	415	415	415
Bottom bracket ht.	267	267	267	267	267	267	267	267
Offset	47	47	47	43	43	43	43	43
Wheelbase	963	972	972	984	984	1004	1004	1014
Trail	56	54	54	55	55	55	55	52
Standover height	724	753	771	792	811	829	848	858
Stem	65	80	80	100	100	120	120	120
Reach	580	607	607	646	646	685	685	700
Handlebar width 380	400	400	420	420	420	440	440	
Crank arm length	170	170	170	170	175	175	175	175
Seatpost length	250	250	250	250	250	250	250	250
Head tube length	82	82	101	121	141	160	180	189
Steerer cut length	125	125	144	164	184	203	223	231

Hubset, Type	Compact HyperGlide 7 spd cassette
Spokes	32
Front	299 14/15ga.
Rear, D/ND	296/298 14/15ga.
R. Dropout width	128.0 mm
Tire size, Spec	700 x 25
Max. Trek size	700 x 28
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	68/118
Crankset bolt hole circle	74/110
Headset size	22.2/30.2/26.4
Stack height	30.9 mm
Stem, degrees rise	0
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

2120 *Carbon fiber with Easton stays and aluminum fork 24 speed 105SC STI*

Touring High Performance

Rider: Road rider looking for a faster bike for fitness, or long road rides.

Concept:

While the 1220 shares the geometry (only) of our carbon road racers, this bike shares the same frame and fork. The carbon adds some comfort, and the aluminum fork really does. Plus, they both save weight.

Since we assume this is a discriminating rider looking for a higher level of performance, we spec'd the 2120 with Shimano's new 105SC triple STI Dual Control group. If they are discriminating, or just want to put more power to the pedals, they'll want SPDs. We chose the M535s over 'road' models for two reasons: the double sided design makes it easier to clip in, and they have rotation.

Retail Price: $

Upgrades from 1220
- Carbon main triangle
- System 2 aluminum fork
- Shimano 105SC shifters, brakes, cranks, derailleurs, chain and 8 speed cassette
- Shimano M535 SPD pedals
- Continental Super Sport Ultra tires
- Vetta Gel saddle

Frameset	Frame	Trek butted carbon composite w/ Easton alloy stays
	Fork	System 2 Road epoxy bonded aluminum
	Headset	Tange Seiki CDS
Controls	Handlebars	System 1 Road
	Stem	System 1 90° Road
	Shifters	Shimano 105SC STI Dual Control, for triple
	Brake levers	Shimano 105SC
	Grips	White cork tape
Brakes		Shimano 105SC
Drivetrain	Crankset	Shimano 105SC, triple
	Pedals	Shimano SPD M535
	F. der.	Shimano 105SC for triple
	R. der.	Shimano 105SC, for triple
	Cassette	Shimano HG70
	Chain	Shimano HG70
Wheelset	Hubs	Shimano 105SC
	Rims	Matrix Aurora WM, anodized
	Tires	Continental Super Sport Ultra
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Vetta Gel Flex
	Seatpost	System 1
	Seat binder	System Road, 5 mm allen, M6 x 25
Weight		22.7 lbs. (10.33 kg)
Color	Ice Forest Green/Natural	

Gearing

	32	42	52
13	--	85	106
14	60	79	98
15	56	74	92
17	50	65	81
19	45	58	72
21	40	53	65
23	37	48	60
26	33	43	--

Geometry and Fit

All measurements in millimeters

	47	50	52	54	56	58	60	62
Head angle	72.5	73.0	73.0	73.5	73.5	73.5	73.5	74.0
Seat angle	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5
Effective top tube	518	530	530	550	550	570	570	585
Chainstay length	415	415	415	415	415	415	415	415
Bottom bracket ht.	267	267	267	267	267	267	267	
Offset	47	47	47	43	43	43	43	43
Wheelbase	963	972	972	984	984	1004	1004	1014
Trail	56	54	54	55	55	55	55	52
Standover height	724	753	771	792	811	829	848	858
Stem	65	80	80	100	100	120	120	120
Reach	580	607	607	646	646	685	685	700
Handlebar width 380	400	400	420	420	420	440	440	
Crank arm length	170	170	170	170	175	175	175	175
Seatpost length	250	250	250	250	250	250	250	250
Head tube length	82	82	101	121	141	160	180	189
Steerer cut length	128	128	147	167	187	206	226	234

Hubset, Type	HyperGlide 8 spd cassette
Spokes	32
Front	299 14/15ga.
Rear, D/ND	296/298 14/15ga.
R. Dropout width	128.0 mm
Tire size, Spec	700 x 23
Max. Trek size	700 x 28
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-UN52
Shell width/ Axle length	68/127.5
Crankset bolt hole circle	74/130
Headset size	22.2/30.2/26.4
Stack height	33.7 mm
Stem, degrees rise	0
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

1400

Easton Program aluminum
14 speed RSX STI

Retail Price: $

Road High Performance

Rider: Road rider looking for a faster bike road rides or entry level racing.

Concept:

While the 1400 shares the geometry or our high performance touring bikes (and thus may seem less than adequate for racing), it actually has a long racing pedigree. A close examination of finish line photos from the 1992 Men's Amatenr Road World Champi-onships will show second place riding a 1400 series frameset. All you need is those legs and lungs!

To compliment the 1400's frame and fork, we chose the RSX STI Dual Control group, in a 14 speed format. We also spec'd lightweight System components and Aurora rims with Conti Super Sport Ultra tires.

Upgrades from 470
- Easton aluminum frame
- System 2 aluminum fork
- Continental tires
- Shimano RX 100 front derailleur
- Shimano chain
- System 2 bars, stem, and pedals
- System 1 seatpost
- Matrix Aurora rims
- Vetta TT Traverse saddle

Frameset	Frame	Easton Program aluminum, bonded
	Fork	System 2 Road epoxy bonded aluminum
	Headset	Tange Seiki Passage
Controls	Handlebars	System 2
	Stem	System 2
	Shifters	Shimano RSX STI Dual Control
	Brake levers	Shimano RSX
	Grips	White cork tape
Brakes		Shimano RSX
Drivetrain	Crankset	Shimano RSX
	Pedals	System 2 Road w/ clips an straps
	F. der.	Shimano RX100
	R. der.	Shimano RSX SS
	Cassette	Shimano HG50
	Chain	Shimano HG50
Wheelset	Hubs	Shimano RSX
	Rims	Matrix Aurora WM, anodized
	Tires	Continental Super Sport Ultra
	Tubes	Presta valve
	Spokes	Marwi USA stainless
Seat		Vetta TT Traverse, Manganese rails
	Seatpost	System 1
	Seat binder	System Road, 5 mm allen, M6 x 25
Weight		21.9 lbs. (9.96 kg)
Color	Ice Fire	

Gearing

	36	46
11	--	111
12	79	101
14	68	87
16	60	76
18	53	68
21	45	58
24	40	--

Geometry and Fit

All measurements in millimeters

	47	50	52	54	56	58	60	62
Head angle	72.5	73.0	73.0	73.5	73.5	73.5	73.5	74.0
Seat angle	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5
Effective top tube	518	530	530	550	550	570	570	585
Chainstay length	415	415	415	415	415	415	415	415
Bottom bracket ht.	267	267	267	267	267	267	267	
Offset	47	47	47	43	43	43	43	43
Wheelbase	963	972	972	984	984	1004	1004	1014
Trail	56	54	54	55	55	55	55	52
Standover height	724	753	771	792	811	829	848	858
Stem	65	80	100	100	120	120	130	130
Reach	583	610	630	650	670	690	700	715
Handlebar width 380	400	400	420	420	420	440	440	
Crank arm length	170	170	170	170	175	175	175	175
Seatpost length	250	250	250	250	250	250	250	250
Head tube length	82	82	101	121	141	160	180	189
Steerer cut length	125	125	144	164	184	203	223	231

Hubset, Type	Compact HyperGlide
	7 spd cassette
Spokes	32
Front	298 14ga.
Rear, D/ND	296/298 14ga.
R. Dropout width	127.5 mm
Tire size, Spec	700 x 23
Max. Trek size	700 x 28
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	68/110
Crankset bolt hole circle	94
Headset size	22.2/30.2/26.4
Stack height	30.9 mm
Stem, degrees rise	-17
Handlebar clamp dia.	25.4 mm
Seatpost diameter	27.2 mm

2100

Carbon fiber with Easton stays and aluminum fork
16 speed RX100/105SC STI

Retail Price: $

Road High Performance

Rider: Road rider looking for a faster bike for road rides or entry level racing.

Concept:

Before OCLV, this frame and fork was our top of the line. As such, it was raced by some of the best riders in the US to a lot of podium visits. Pro Triathlete Mike Pigg had many successful seasons on this bike, as well as many other Trek sponsored teams.

For 1996, the 2100 gets a mix of RX100 and 105SC resulting in a wide ratio 16 speed setup. We chose a lower gear than on our full-race machines for the longer rides and more casual pace preferred by some folks who would like this bike.

We chose the M535 SPDs over 'road' models, because of the flotation.

Upgrades from 1400
- Shimano RX100 brakes, cranks, and Dual Control shift levers
- 8 speed cassette
- 105SC derailleurs , cranks
- Shimano M535 SPD pedals
- Double butted spokes

Frameset	Frame	Trek butted carbon composite w/Easton alloy stays
	Fork	System 2 Road epoxy bonded aluminum .
	Headset	Tange Seiki CDS
Controls	Handlebars	System 2
	Stem	System 2
	Shifters	Shimano RX100 STI Dual Control
	Brake levers	Shimano RX 100
	Grips	White cork tape
Brakes		Shimano RX 100
Drivetrain	Crankset	Shimano 105SC
	Pedals	Shimano SPD M535
	F. der.	Shimano 105SC
	R. der.	Shimano 105SC
	Cassette	Shimano HG70
	Chain	Shimano HG50
Wheelset	Hubs	Shimano RX100
	Rims	Matrix Aurora WM, anodized
	Tires	Continental Super Sport Ultra
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Vetta TT Traverse, Racing
	Seatpost	System 1
	Seat binder	System Road, 5 mm allen, M6 x 25
Weight		21.88 lbs. (9.93 kg)
Color	Ice Inkwell Blue/ Natural	

Gearing

	39	53
13	--	108
14	74	100
15	69	93
17	61	82
19	54	74
21	49	67
23	45	61
26	40	--

Geometry and Fit

All measurements in millimeters

	47	50	52	54	56	58	60	62
Head angle	72.5	73.0	73.0	73.5	73.5	73.5	73.5	74.0
Seat angle	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5
Effective top tube	518	530	530	550	550	570	570	585
Chainstay length	415	415	415	415	415	415	415	415
Bottom bracket ht.	267	267	267	267	267	267	267	
Offset	47	47	47	43	43	43	43	43
Wheelbase	963	972	972	984	984	1004	1004	1014
Trail	56	54	54	55	55	55	55	52
Standover height	724	753	771	792	811	829	848	858
Stem	65	80	100	100	120	120	130	130
Reach	583	610	630	650	670	690	700	715
Handlebar width 380	400	400	420	420	420	440	440	
Crank arm length	170	170	170	170	175	175	175	175
Seatpost length	250	250	250	250	250	250	250	250
Head tube length	82	82	101	121	141	160	180	189
Steerer cut length	128	128	147	167	187	206	226	234

Hubset, Type	Compact HyperGlide
	8 spd cassette
Spokes	32
Front	299 14/15ga.
Rear, D/ND	296/298 14/15ga.
R. Dropout width	128.0 mm
Tire size, Spec	700 x 23
Max. Trek size	700 x 28
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-LP26
Shell width/ Axle length	68/110
Crankset bolt hole circle	130
Headset size	22.2/30.2/26.4
Stack height	33.7 mm
Stem, degrees rise	-17
Handlebar clamp dia.	26.0 mm
Seatpost diameter	27.2 mm

2300

Carbon fiber with Easton stays and aluminum fork
16 speed Ultegra STI

Retail Price: $

Road Competition

Rider: Road racer.

Concept:

Before OCLV, this frame and fork was our top of the line. As such, it was raced by some of the best riders in the US to a lot of podium visits. Pro Triathlete Mike Pigg had many successful seasons on this bike, as well as many other Trek sponsored teams.

To compliment the racing performance of the 2300, we chose the full Ultegra group. We didn't shortcut, either: we included "hidden" spec like chain, BB, and cassette. We know that serious racers ride a lot of miles, and these components will last longer.

Since this bike is for racing, we put Conti's best tires on, the Grand Prixs. And we moved up to Shimano's road SPDs with the Ultegra model, which features flotation in a lighter, one sided design.

Upgrades from 2100

- Shimano Ultegra brakes, hubs, cranks, derailleurs, chain, and cassette
- Shimano Ultegra SPD pedals
- System 2 seatpost

Frameset	Frame	Trek butted carbon composite w/Easton alloy stays
	Fork	System 2 Road epoxy bonded aluminum
	Headset	Tange Seiki CDS
Controls	Handlebars	System 2 Road
	Stem	System 2 Road
	Shifters	Shimano Ultegra STI Dual Control
	Brake levers	Shimano Ultegra
	Grips	White cork tape
Brakes		Shimano Ultegra
Drivetrain	Crankset	Shimano Ultegra
	Pedals	Shimano Ultegra SPD
	F. der.	Shimano Ultegra
	R. der.	Shimano Ultegra
	Cassette	Shimano HG90
	Chain	Shimano HG90
Wheelset	Hubs	Shimano Ultegra
	Rims	Matrix Aurora WM, anodized
	Tires	Continental Grand Prix, folding
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Vetta TT Traverse, manganese rails
	Seatpost	System 2
	Seat binder	System Road, 5 mm allen, M6 x 25
Weight		21.2 lbs. (9.65 kg)
Color		Saturn/ Natural

Gearing

	39	53
12	--	117
13	79	108
14	74	100
17	69	93
17	61	82
19	54	74
21	49	67
23	45	--

Geometry and Fit

All measurements in millimeters

	47	50	52	54	56	58	60	62
Head angle	72.5	73.0	73.0	73.5	73.5	73.5	73.5	74.0
Seat angle	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5
Effective top tube	518	530	530	550	550	570	570	585
Chainstay length	415	415	415	415	415	415	415	415
Bottom bracket ht.	267	267	267	267	267	267	267	
Offset	47	47	47	43	43	43	43	43
Wheelbase	963	972	972	984	984	1004	1004	1014
Trail	56	54	54	55	55	55	55	52
Standover height	724	753	771	792	811	829	848	858
Stem	65	80	100	100	120	120	130	130
Reach	583	610	630	650	670	690	700	715
Handlebar width 380	400	400	420	420	420	440	440	
Crank arm length	167.5	170	170	172.5	172.5	172.5	175	175
Seatpost length	250	250	250	250	250	250	250	250
Head tube length	82	82	101	121	141	160	180	189
Steerer cut length	128	128	147	167	187	206	226	234

Hubset, Type	HyperGlide
	8 spd cassette
Spokes	32
Front	299 14/15ga.
Rear, D/ND	296/298 14/15ga.
R. Dropout width	128.0 mm
Tire size, Spec	700 x 23
Max. Trek size	700 x 28
Front derailleur clamp size	34.9 mm / 1 3/8"
Bottom bracket, Model	Shimano BB-UN71
Shell width/ Axle length	68/115
Crankset bolt hole circle	130
Headset size	22.2/30.2/26.4
Stack height	33.7 mm
Stem, degrees rise	-17
Handlebar clamp dia.	26.0 mm
Seatpost diameter	27.2 mm

OCLV: From the Space Age to Saturn

In 1995, the Saturn racing team again had a very successful year. In 1994, both the men's and women's U.S. National Championship jerseys went to riders wearing the Saturn jersey. In 1995, a Saturn rider on a 5500 won the U.S. Pro championship. Other big wins include Karen Smyers' victories on the 5500 at both Hawaii's IronMan Triathlon and the 1995 World Tri Championships.

What's so special about a Trek 5500? Its OCLV construction (see page 54-55) makes these the lightest production road frames in the world. Yet even at such a low weight (just 2.50 pounds in a 56 cm size), these bikes still have all the stiffness you could want for hard sprints, aggressive hill climbing, or sneaking the inside line in a hard criterium. The most amazing part, though, is that even though the 5500 is super efficient in a sprint, it can still offer amazing comfort on a long ride.

The space age secret to the bikes ridden by Team Saturn and Karen Smyers? Trek's OCLV process allows us to put carbon fibers just where you need them, and avoid placing them where they aren't adding to the bike's performance. This means *the best* carbon fiber bike possible. Combined with the fact that carbon fiber composite offers the most strength and stiffness per weight of any frame material in existence, and you get a bike with an awesome ride, one that "disappears beneath you" according to one magazine reviewer.

That's really the key to OCLV- we have more control over carbon fiber placement. This allows us to make size specific lugs and tubes which can exactly match the strength and stiffness requirements of the bike without any excess. How else do you think we get these frames down to just 2.50 pounds?

Size specific lugs and tubes offer the correct mix of lateral rigidity and vertical compliance. Because of this size specific design of the frame's lugs and tubes, larger frames are stiffer while smaller frames are less so. With almost every other bike, its just the opposite, so most big bikes are whippy and little bikes ride like rocks.

If you're impressed with how well our OCLV frames ride, and also by the success of Team Saturn, you'll want to get into our Team Saturn jersey and shorts. These attractive team replicas will make any rider look good, but especially on a Saturn 5500. Of course, they're built to Trek standards so they will also be comfortable and long lasting. So wear a Saturn jersey and show your colors!

For the Mechanic

OCLV bikes and their seatposts

With the OCLV construction, the seat lug is lined with a thin fiberglass layer bonded to the inside of the seat lug. This liner prevents galvanic corrosion which could occur if the aluminum seatpost and the carbon fiber lug were in contact. With this insert, there is no need to grease the seatpost on OCLV bikes, nor is it recommended. If you have inadvertently greased an OCLV seatpost and it will not clamp correctly, clean the seatpost and the inside of the seat lug with a degreaser, being careful not to get degreaser in the bottom bracket.

OCLV Chainkeeper and Chainstay Guard

Although OCLV carbon composite is stiffer, stronger, and more fatigue resistant than any other material used for bikes today, it has one soft spot. If you apply a fast moving bike chain to OCLV, it will cut faster than aluminum, which cuts faster than steel. And remember, even steel can be cut by a chain!

To add protection to OCLV frames, we have designed an adhesive plate called a **chainstay guard**. We have also designed chainkeeper, a round metal ring which fits between the fixed cup and bottom bracket shell to prevent the chain from getting stuck between the crank arm and bottom bracket. These pieces ***must*** be correctly installed on every OCLV road bike at all times. On OCLV mountain bikes, the ACSD is honded on in the same location as the chainstay guard, and with the addition of the chainkeeper, gives equivalent protection. If you see an OCLV road bike without the protection of both the chainstay guard and chainkeeper, please do everyone a favor and install them immediately. You can order a set from Trek, part number T83050.

New for '96

For '96 we have changed the head tube configuration in all our OCLV bikes. Rather than use a single cylinder running all the way through the head tube, we now use two separate shouldered inserts, sort of like little top hats. The shoulder gives a large, flat face for each head cup to seat against, and means that your cutting tools will never have to work on the abrasive carbon fiber. So this new design is lighter, easier to work with, and provides better support for the headset. Another change which is more subtle but just as important, a new bottom bracket design will add lateral stiffness to these bikes, making them even hotter! We have also changed the chainstay cable guide to a slotted type, to make cable lubrication easier for the mechanic.

OCLV Road frame weight (56 cm): 1140 gm (2.50 pounds)

OCLV Road fork weight (56 cm): 476 gm (1.05 pounds)

5000

OCLV carbon composite w/ aluminum fork
16 speed 105SC/Ultegra STI

Road High Performance

Rider: Road racer.

Concept:

Our belief is that the frame is the most important part of the bike. Its what determines the fit, function, and overall feel of the bike. For that reason, the 5000 has our best frameset, the OCLV carbon composite. Although we changed some lugs and beefed up the bottom bracket for this year, its still the lightest production frame available at just 2.5 pounds. The 5000 uses our System 2 epoxy bonded fork.

The next part of the bike in importance is the wheels. This is the most important place to reduce weight, but it has to be done smart because the wheels are also the most sensitive in terms of durability. So we spec'd the 5000 with matrix Aurora rims, double butted stainless spokes, and Conti Grand Prix tires.

To go with this great frame and wheelset, we chose a mix of 105SC and Ultegra parts, including the Ultegra SPD pedals which feature flotation in a lighter, one sided design.

Retail Price: $

Upgrades from 2300
- OCLV composite frame
- "Custom" sizing and geometry for each frame size.
- Extremely light weight with extreme performance

Frameset	Frame	OCLV carbon composite
	Fork	System 2 Road epoxy bonded aluminum
	Headset	Tange Seiki CDS
Controls	Handlebars	System 2
	Stem	System 2
	Shifters	Shimano 105SC STI Dual Control
	Brake levers	Shimano 105SC
	Grips	White cork tape
Brakes		Shimano 105SC
Drivetrain	Crankset	Shimano 105SC
	Pedals	Shimano Ultegra SPD
	F. der.	Shimano Ultegra
	R. der.	Shimano Ultegra
	Cassette	Shimano HG70
	Chain	Shimano HG70
Wheelset	Hubs	Shimano 105SC
	Rims	Matrix Aurora WM, anodized
	Tires	Continental Grand Prix, folding
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted
Seat		Vetta TT Traverse, manganese rails
	Seatpost	System 2
	Seat binder	System OCLV with integral bolt
Weight		20.2 lbs. (9.17 kg)
Color		Saturn

Gearing

	39	53
12	--	117
13	79	108
14	74	100
17	69	93
17	61	82
19	54	74
21	49	67
23	45	--

Geometry and Fit

All measurements in millimeters

	50	52	54	56	58	60	62
Head angle	72.0	72.5	73.0	73.75	73.75	74.0	74.0
Seat angle	75.0	75.0	74.0	73.5	73.0	73.0	72.
Effective top tube	531	528	545	560	570	580	590
Chainstay length	408	408	410	410	412	412	412
Bottom bracket ht	266	266	266	268	268	268	268
Offset	47	47	47	43	43	43	43
Wheelbase	979	982	987	986	994	1001	1006
Trail	60	57	54	53	53	52	52
Standover height	749	759	773	793	811	830	848
Stem	80	100	100	120	120	130	130
Reach	611	628	645	680	690	710	720
Handlebar width 400	400	420	420	420	440	440	
Crank arm length	170	170	170	172.5	172.5	175	175
Seatpost length	250	250	250	250	250	250	250
Head tube length	97	97	104	121	140	159	177
Steerer cut length	142	142	150	166	185	204	223

Hubset, Type	HyperGlide 8 spd cassette
Spokes	32
Front	299 14/15ga.
Rear, D/ND	296/298 14/15ga.
R. Dropout width	128mm
Tire size, Spec	700 x 23
Max. Trek size	700 x 28
Front derailleur clamp size	Braze-on type
Bottom bracket, Model Shimano	BB-UN71
Shell width/ Axle length	68/107
Crankset bolt hole circle	130
Headset size	22.2/30.2/26.4
Stack height	33.7mm
Stem, degrees rise	-17
Handlebar clamp dia. 26.0mm	
Seatpost diameter	27.2mm

5020 Kit

OCLV carbon composite
24 speed 105SC STI

Touring High Performance

Rider: Road rider looking for a faster bike for fitness, or long road rides.

Concept:

This bike is the no-compromise bike for the rider who want the best possible- a full OCLV bike. But this rider isn't ready to challenge the peloton, so may need lower gears than a standard racing bike set up, so we spec'd Shimano's new 105SC triple STI Dual Control group.

We made two other accommodations to a more casual style of riding: A Vetta Gel Flex saddle and M535 SPDs. We chose the M535s over 'road' models because the double sided design makes it easier to clip in.

Retail Price: $

Upgrades from 5000
- Shimano M535 SPD double sided pedals
- System 3 OCLV fork
- 24 speeds
- Vetta Gel saddle

Frameset	Frame	OCLV carbon composite
	Fork	System 3 Road OCLV
	Headset	Tange Seiki CDS
Controls	Handlebars	System 2
	Stem	System 2
	Shifters	Shimano 105SC STI Dual Control, triple
	Brake levers	Shimano 105SC
	Grips	White cork tape
Brakes		Shimano 105SC
Drivetrain	Crankset	Shimano 105SC, triple
	Pedals	Shimano SPD M535
	F. der.	Shimano 105SC, for triple
	R. der.	Shimano 105SC, for triple
	Cassette	Shimano HG70
	Chain	Shimano HG70
Wheelset	Hubs	Shimano 105SC
	Rims	Matrix Aurora WM, Anodized
	Tires	Continental Super Sport Ultra
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double-butted
Seat		Vetta Gel Flex
	Seatpost	System 2
	Seat binder	System OCLV with integral bolt
Weight		21.4 lbs. (9.72 kg)
Color	Ice Cyan	
	Ice Fire	
	Saturn w/Nude fork	
	Nude	

Gearing

	32	42	52
13	--	85	106
14	60	79	98
15	56	74	92
17	50	65	81
19	45	58	72
21	40	53	65
23	37	48	60
26	33	43	--

Geometry and Fit

All measurements in millimeters

	50	52	54	56	58	60	62
Head angle	72.0	72.5	73.0	73.75	73.75	74.0	74.0
Seat angle	75.0	75.0	74.0	73.5	73.0	73.0	72.
Effective top tube	531	528	545	560	570	580	590
Chainstay length	408	408	410	410	412	412	412
Bottom bracket ht	266	266	266	268	268	268	268
Offset	47	47	47	43	43	43	43
Wheelbase	979	982	987	986	994	1001	1006
Trail	60	57	54	53	53	52	52
Standover height	749	759	773	793	811	830	848
Stem	80	100	100	120	120	130	130
Reach	611	628	645	680	690	710	720
Handlebar width 400	400	420	420	420	440	440	
Crank arm length	170	170	170	172.5	172.5	175	175
Seatpost length	250	250	250	250	250	250	250
Head tube length	97	97	104	121	140	158	177
Steerer cut length	142	142	150	166	185	204	223

Hubset, Type	HyperGlide 8 spd cassette
Spokes	32
Front	299 14/15ga.
Rear, D/ND	296/298 14/15ga.
R. Dropout width	128mm
Tire size, Spec	700 x 23
Max. Trek size	700 x 28
Front derailleur clamp size	Braze-on type
Bottom bracket, Model Shimano	BB-UN52
Shell width/ Axle length	68/118
Crankset bolt hole circle	74/130
Headset size	22.2/30.2/26.4
Stack height	33.7mm
Stem, degrees rise	-17
Handlebar clamp dia. 26.0mm	
Seatpost diameter	27.2mm

5200

OCLV carbon composite
16 speed Ultegra STI

Retail Price: $ _____

Road Competition

Rider: Road racer.

Concept:

The upgrades from a 5000 to a 5200 reflect the needs of the serious racer. This rider needs the quick, precise shifting of a full Ultegra group as well as lower weight. This rider trains hard, so they can get by with the 23T low gear and appreciate the tighter gearing when its time to go hard. And to help them go hard, we made the 5200 lighter with alloy nipples, TTT forged alloy stem, System 3 handlebars, and System 2 seatpost.

Another need of the serious racer is durability, because they ride so many miles. So we spec'd the HG90 chain and cassette with a BB-UN71 bottom bracket.

And for all those miles, we included the comfort of a leather saddle cover.

Upgrades from 5000

- Shimano Ultegra shifters, brakes, hubs, crank, cassette and chain
- System 3 handlebars, seatpost, and TTT stem
- System 3 OCLV fork
- Alloy nipples
- Leather saddle cover

Frameset	Frame	OCLV carbon composite
	Fork	System 3 OCLV carbon composite
	Headset	Tange Seiki VR-254
Controls	Handlebars	System 3
	Stem	3TTT Synthesis
	Shifters	Shimano Ultegra STI Dual Control
	Brake levers	Shimano Ultegra
	Grips	White cork tape
Brakes		Shimano Ultegra
Drivetrain	Crankset	Shimano Ultegra
	Pedals	Shimano Ultegra SPD
	F. der.	Shimano Ultegra
	R. der.	Shimano Ultegra
	Cassette	Shimano HG90
	Chain	Shimano HG90
Wheelset	Hubs	Shimano Ultegra
	Rims	Matrix Aurora WM, anodized
	Tires	Continental Grand Prix, folding
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double-butted, alloy nipples
Seat		Vetta TT Traverse, manganese rails, leather cover
	Seatpost	System 3 EA70
	Seat binder	System OCLV with integral bolt
Weight		19.7 lbs. (8.97 kg)
Color	Ice Cyan	
	Ice Fire	
	Saturn w/Nude fork	
	Nude	

Gearing

	39	53
12	--	117
13	79	108
14	74	100
17	69	93
17	61	82
19	54	74
21	49	67
23	45	--

Geometry and Fit

All measurements in millimeters

	50	52	54	56	58	60	62
Head angle	72.0	72.5	73.0	73.75	73.75	74.0	74.0
Seat angle	75.0	75.0	74.0	73.5	73.0	73.0	72.
Effective top tube	531	528	545	560	570	580	590
Chainstay length	408	408	410	410	412	412	412
Bottom bracket ht	266	266	266	268	268	268	268
Offset	47	47	47	43	43	43	43
Wheelbase	979	982	987	986	994	1001	1006
Trail	60	57	54	53	53	52	52
Standover height	749	759	773	793	811	830	848
Stem	80	100	100	120	120	130	130
Reach	611	628	645	680	690	710	720
Handlebar width 400	400	420	420	420	440	440	
Crank arm length	170	170	170	172.5	172.5	175	175
Seatpost length	250	250	250	250	250	250	250
Head tube length	97	97	104	121	140	158	177
Steerer cut length	144	144	151	168	187	206	224

Hubset, Type	HyperGlide
	8 spd cassette
Spokes	32
Front	299 14/15ga.
Rear, D/ND	296/298 14/15ga.
R. Dropout width	128mm
Tire size, Spec	700 x 23
Max. Trek size	700 x 28
Front derailleur clamp size	Braze-on type
Bottom bracket, Model	Shimano BB-UN71
Shell width/ Axle length	68/115
Crankset bolt hole circle	130
Headset size	22.2/30.2/26.4
Stack height	35.2mm
Stem, degrees rise	-15
Handlebar clamp dia. 26.0mm	
Seatpost diameter	27.2mm

5500

OCLV carbon composite
16 speed Dura-Ace STI

Retail Price: $ _____

Road Competition Elite

Rider: Road racer.

Concept:

The 5500 is the same bike, and virtually identical equipment, to those raced by Team Saturn and our Pro Triathletes Mike Pigg and Karen Smyers. Right out of the box, this bike is ready to race at the highest level.

Start with our OCLV frame and fork, the lightest production frame on the planet. Add Shimano's best parts, Dura-Ace. Full dura-Ace. Chain, cassette, bottom bracket, everything including pedals. Use a light and tough wheelset with Matrix Aurora Ceramic rims, marwi USA double butted stainless spokes, and alloy nipples. And top the wheels off with Conti's Grand Prix tires.

Upgrades from 5200

- Shimano Dura-Ace shifters, cranks, hubs, derailleurs, brakes, and Dura-Ace SPD pedals
- Matrix Aurora Ceramic rims

Frameset	Frame	OCLV carbon composite
	Fork	System 3 OCLV carbon composite
	Headset	Tange Seiki VR-254
Controls	Handlebars	System 3
	Stem	3TTT Synthesis
	Shifters	Shimano Dura-Ace STI Dual Control
	Brake levers	Shimano Dura-Ace
	Grips	White cork tape
Brakes		Shimano Dura-Ace
Drivetrain	Crankset	Shimano Dura-Ace
	Pedals	Shimano Dura-Ace SPD
	F. der.	Shimano Dura-Ace
	R. der.	Shimano Dura-Ace
	Cassette	Shimano Dura-Ace
	Chain	Shimano Dura-Ace
Wheelset	Hubs	Shimano Dura-Ace
	Rims	Matrix Aurora WM, Ceramic
	Tires	Continental Grand Prix, folding
	Tubes	Presta valve
	Spokes	Marwi USA stainless, double butted, alloy nipples
Seat		Vetta TT Traverse, manganese rails, leather cover
	Seatpost	System 3 EA70
	Seat binder	System OCLV with integral bolt
Weight		19.6 lbs. (8.88 kg)
Color	Ice Cyan	
	Ice Fire	
	Saturn w/Nude fork	
	Nude	

Gearing

	39	53
12	--	117
13	79	108
14	74	100
15	69	93
17	61	82
19	54	74
21	49	67
23	45	--

Geometry and Fit

All measurements in millimeters

	50	52	54	56	58	60	62
Head angle	72.0	72.5	73.0	73.75	73.75	74.0	74.0
Seat angle	75.0	75.0	74.0	73.5	73.0	73.0	72.
Effective top tube	531	528	545	560	570	580	590
Chainstay length	408	408	410	410	412	412	412
Bottom bracket ht	266	266	266	268	268	268	268
Offset	47	47	47	43	43	43	43
Wheelbase	979	982	987	986	994	1001	1006
Trail	60	57	54	53	53	52	52
Standover height	749	759	773	793	811	830	848
Stem	90	100	110	120	120	130	130
Reach	621	628	655	680	690	710	720
Handlebar width 400	400	420	420	420	440	440	
Crank arm length	170	170	170	172.5	172.5	175	175
Seatpost length	250	250	250	250	250	250	250
Head tube length	97	97	104	121	140	158	177
Steerer cut length	144	144	151	168	187	206	224

Hubset, Type	HyperGlide
	8 spd cassette
Spokes	32
Front	299 14/15ga.
Rear, D/ND	296/298 14/15ga.
R. Dropout width	128mm
Tire size, Spec	700 x 23
Max. Trek size	700 x 28
Front derailleur clamp size	Braze-on type
Bottom bracket, Model	Shimano BB-UN74 I0
Shell width/ Axle length	68/103
Crankset bolt hole circle	130
Headset size	22.2/30.2/26.4
Stack height	35.2mm
Stem, degrees rise	-15
Handlebar clamp dia. 26.0mm	
Seatpost diameter	27.2mm

Tandem Selling and Riding Tips

Tandems require special riding techniques and special selling techniques. Knowing both will help your shop be successful with Trek tandems.

Selling tips:

Since tandems are perceived as an expensive bike, and there are now two people to sell to, tandem buyers will require more information and more time than people shopping for a single bike. Since selling tandems is quite different than selling singles, it may help to have a tandem 'specialist' in your store.

During the initial presentation, keep technical talk to a minimum. Most people have never ridden a tandem, and are really curious about what to expect. Avoid turning off the less 'techy' member of the prospective tandem duo. Instead, talk about the fun, the communication, and the ability to combine efforts to a common goal. Then take test rides.

Usually, the stoker is the less technical of the tandem pair. Target the stoker's needs and concerns with your initial presentation. Remember, stokers are giving up the control of the bike to the captain, a cause for concern. Soothe their worries and fears by discussing the extra powerful brakes on Trek tandems, how pedaling and shifting is easier because of the Trek specifications, of the extra rigidity of the Trek tandem's steering system makes a Trek tandem easy to control.

Emphasize the benefits of stoking. Then take the stoker out for a test ride in the stoker position, with you or your tandem specialist in the captain's position. During this ride, a smooth, steady ride is best. Make it easy and scenic, but of sufficient length for the stoker to become comfortable with the bike.

Once this ride is done, take the potential captain out, but in the stoker's position. After an explanation of what you are going to demoustrate, show the new captain what it might be like for the stoker if the captain displays bad tandem skills. After this message is learned, show the captain good captaining skills, and finally let the new captain practice captaining with you stoking. Especially practice getting under way, as covered in the next section.

Only after the captain feels confident in their handling skills should they take their new stoker for a test ride together. By following this approach with a new tandem couple, you will avoid the terror felt by the new stoker when a new captain has a hard time controlling the bike. If the new captain's inexperience allows the tandem to feel like its capsizing, or comes close to ramming an immovable object, that feeling of terror will kill the sale very fast. Avoid it.

After the test ride, your discussion of the features and benefits of the tandem design, construction, and component selection will be much better understood. The new tandem couple will see why the frame should be laterally stiff, why they need all those gears, and why they want good brakes. The wider handlebars will make more sense, as will the need for easy shifting and comfort features like bigger tires and softer seats.

Riding Tandems

The most important part of tandem riding is communication, letting your partner know what you are doing so they can anticipate your actions. This is critical for the enjoyment and safety of both riders.

When getting under way, its recommended that the captain hold the bike up, with both feet on the ground and knees spread to avoid being hit in the shins with the pedals. The stoker then mounts the bike and puts both feet in the pedals. The stoker rotates the pedals to a position comfortable for the captain to put one foot on the pedal. With a command from the captain, the stoker begins pedaling as the captain pushes off, tuoving into the seat and pedaling without engaging the second foot into the pedal. Once underway, and at a more stable speed, the captain will give the command to coast, and can then engage their second foot in the other pedal.

Coasting should be signaled verbally by either rider when they need a break, or when the captain desires the cranks to be horizontal, such as in coasting or descending. With a tandem, the riders don't move around in the seat as much as on a single, so its important to take a coasting break on a regular basis to avoid seat soreness.

Shifting a tandem requires synchronizing the pedaling forces of two riders over a wider gear ratio than most single bikes. In addition, it becomes more critical to anticipate shifting needs, such as when approaching a steep climb. For these reasons, it is especially important that the tandem pair reduce pedal pressure during a shift. To better tiue the shifting and pedaling efforts, usually the captain will signal by saying "shifting up front" or "shifting down rear" to help the stoker anticipate the shift. The stoker can better hear and see the derailleurs, so they can help the captain trim the derailleurs to prevent rubbing.

Although the captain can see obstacles in the road such as bumps, and ride over them in normal fashion, the stoker often cannot see the road immediately ahead. For this reason, it is critical that the captain give verbal warning of such objects, and perhaps even direct the stoker to coast. This allows the stoker to lift out of the seat to minimize the impact.

When stopping the tandem, simply reverse the mounting procedure. After signaling to coast, the captain should disengage one foot from the pedals, while the stoker remains smooth and steady with both feet on the pedals. As the bike slows to a stop, the captain should place one foot on the ground, and if necessary, disengage the second foot and place it on the ground as well. The captain should be mindful that they place their feet in such a way that they can balance the tandem, and so that they don't get hit in the shins by the pedals.

For short stops, like traffic signals, it may be most efficient for the stoker to keep both feet on the pedals for the entire stop, as this makes getting under way faster and easier. If the riders are going to completely dismount the tandem, the captain should hold the bike while the stoker dismounts, and then after the stoker is clear, dismount themselves. It is particularly bad form for the captain to swing their leg over the seat, right in front of the stoker's face.

A word of caution on speed: Tandems can easily go too fast for conditions on the flats, and especially on descents. Plan your high speed sections carefully, being mindful that the additional weight and speed of a tandem requires greater stopping distances.

Fitting a tandem

Trek makes 4 sizes of tandems which will accommodate most rider combinations. When sizing a tandem, remember that mounting and dismounting a tandem requires that the captain balance the bike while the stoker gets on or off. This requires adequate standover clearance (and is also helped hy wider handlebars and stiffer stems than on a single). To compound this situation, tandems use slightly higher bottom brackets tban singles. For this reason, most captains choose the same or a slightly smaller size than their normal road bike size. Since the stoker gets on and off the bike in a controlled, stopped position and often does not even dismount during the ride, standover height for the stoker is of much less of a concern. Tandems are often selected so that a variety of sizes of riders will fit the stoker position.

Trek Tandem Technology

Trek tandems are the result of years of tandem experience combined with Trek's proven geometry and fit, built with Trek's manufacturing expertise.

When Trek launched the R&D effort behind these tandems, we analyzed the construetion of tandems on the market. We talked with huudreds of tandem owners to find what they liked and disliked about their tandems. And we rode many of the best tandems on the market. We found several common complaints, and addressed them with an economical, but high performance design.

Fit- Correctly sized stoker positions were a rarity. We used our experience with road bikes to design better fitting tandems.

Stiffness and weight- Starting from scratch, we were able to design a custom tube set in conjunction with True Temper which gives the strength aud stiffness needed for performance tandem riding, but at a low weight. Our ovalized lateral tube adds lateral stiffness without sacrificing rider comfort. Our super-heavy duty straight gauge down tube adds extra torsional stiffness to the captain's bottom bracket. An oversize 1 1/4" steering system yields more control in the corners, and makes mounting the tandem easier as well. Oversize Cro-Moly tubing throughout means a strong, rigid structure that can stand up to hard charging, out of the seat climbs, without twisting and wandering around the road.

Full braze-on package- Trek tandems have all the braze-ons needed for long distance touring including 6 water bottle mounts (only 5 will fit on the small size), pump pegs, front and rear racks, and everything for an optional drum brake.

Precision manufactnring- Trek tandems use Signature Sequential TIG welding (see pages 36-37), so they get the benefits of laser mitering, size specific jigs, sequential welding, precision alignment, and demanding quality control. Other benefits of Signature Sequential TIG welding include internal reinforcements to the head tube and seat tubes, allowing very thin oversize tubes which securely support the 1 1/4" headset and 27.2 mm seatposts.

New for '96

Tandem rear wheels normally use a longer axle than that found on a single or even a mountain bike. The reason is twofold:

First, its common to use both a freewheel (or cassette) and a drum or disc brake attached to the hub. This requires extra clearance.

Second, to maintain the rear wheel strength necessary for tandem use, it is preferred that the spokes must be "dishless", or at the same angle to the rim. Rather than move the left flange in, its better to move the fright flange out, and this reqnires a longer axle.

New for '96, Shimano has adapted their cassette technology to two new hub sets, both using a 145 mm rear hub. In addition, they have increased the flange size so it will work with 48 spoke rims. We're using the STX level version on our T100, and the XT level hubset (which accepts an 8 speed casscttc) on the T200.

T100

Custom Tandem oversize Cro-moly
LX with GripShift

Tandem Performance

Rider: Recreational tandem riders, or first time tandemists.

Concept:

If the frame is the most important part of a single, on a tandem its doubly so. Trek Engineering designed this frame from the ground up, working with True Temper to make a custom tandem tube set specifically to address the needs of performance tandem riding (you'll notice we don't have a tandem in the "Recreation" category). They made this one of the best fitting tandems on the market by adapting the fit of our proven single designs to a bike for two.

Spec was carefully considered. Although we know that some tandem riders would like a less expensive parts package, the weight and power of two riders can really grind on components. And they need more stopping power. The list goes on. When we finished, we found that requirement had been met without sacrificing what we ourselves would want. Its an investment, but one that the riders will appreciate for a long time.

Retail Price: $

Features

- True Temper Cro-moly custom tandem tube set with Signature Sequential TIG Welding
- Hybrid positioning
- 21 speed wide ratio gearing and M-System cantilever brakes
- Shimano STX tandem hubs, 48 spoke Matrix FastTrack rims, and Invert II tires
- Comfortable Vetta Turbo Comfort Flex seat

Frameset	Frame	True Temper Cro-moly custom butted Tandem
	Fork	Trek butted, special taper gauge tandem Cro-moly
	Headset	YST 1 1/4" oversize
Controls	Handlebars	System 1 ATB
	Stem	System 2 Tandem front and Adjustable Stoker rear
	Shifters	GripSbift SRT-600
	Brake levers	Dia-Compe PC-7
	Grips	Trek Logo (GripShift front, standard rear)
Brakes		Shimano Alivio
Drivetrain	Crankset	Sugino Fuse' Tandem, 38T synchronization rings
	Pedals	System 1 ATB with clips and straps
	F. der.	Shimano LX
	R. der.	Shimano LX-SGS
	Cassette	Shimano HG50
	Chains	Shimano HG50
Wheelset	Hubs	Shimano STX Tandem
	Rims	Matrix Fast Track
	Tires	Trek Invert II
	Tubes	Presta valve
	Spokes	Trek Tandem butted stainless
Seat		Vetta Comfort Flex front, Trek Women's Touring rear
	Seatpost	System 1
	Seat binder	System Steel w/integral bolt (F), System Steel w/integral bolt and hanger (R)
Weight		42.9 lbs. (19.47 kg)
Color	Ice Green	

Gearing

	32	44	54
12	--	99	122
14	62	85	104
16	54	74	91
18	48	66	81
21	41	57	69
24	36	50	61
28	31	42	--

Geometry and Fit

All measurements in millimeters

	50x46	54x50	57x47	58x53
Head angle	72.0	72.0	73.0	73.0
Seat angle	73/73	73/73	73/73	73/73
Effective top tube	540/660	545/690	557/659	565/710
Chainstay length	430	430	430	430
Bottom bracket ht	272/272	272/272	272/272	272/280
Offset	60	60	55	55
Wheelbase	1707	1727	1712	1758
Trail	47	47	46	46
Standover height	763/700	785/755	809/740	824/792
Stem	120	120	135	135
Reach	619/530	624/560	646/529	654/580
Handlebar width 560/560		560/560	560/560	560/560
Crank arm length	170/170	175/170	175/170	175/170
Seatpost length	350/300	350/300	350/300	350/300
Head tube length	102	102	137	137
Steerer cut length	146	146	182	182

Hubset, Type	HyperGlide
Threaded for drum	7 speed cassette
Spokes	48
Front	287 13/14ga.
Rear, D/ND	286/287 13/14ga.
R. Dropout width	145.0mm
Tire size, Spec	700 x 38
Max. Trek size	700 x 41
Front derailleur clamp size	31.8 mm/ 1 1/4"
Bottom bracket, Model Shimano	BB-UN52
Shell width/ Axle length	68/122.5
Crankset bolt hole circle	74/110
Headset size	28.6/37.0/33.0
Stack height	40.4mm
Captain's stem, degrees rise	32
Handlebar clamp dia. 25.4mm	
Seatpost diameter	27.2mm

T200

Custom Tandem oversize Cro-moly
24 speed XT/LX with 105SC Dual Control shifters

Tandem High Performance

Rider: Serious tandem riders, century couples, or racers.

Concept:

Using the same frame as the T100 but with road equipment, this bike offers a fast and fun ride to those who want to ride their tandem hard. Performance features abound, like the XT tandem hubset with heavy duty 13/14 gauge spokes, 48 per wheel, and Continental tires.

Shimano's 105SC triple Dual Control shifters run the LX derailleurs over a wide range, 24 speed set up. LX cantis provide sure stopping, but there are also all the braze-ons and a threaded hub to accommodate an additional brake as desired.

Retail Price: $

Upgrades from T100

- Shimano LX cantilever brakes, front derailleur
- XT tandem hubs, chain, and rear derailleur
- Shimano M535 SPD pedals
- Continental Super Sport tires
- 90° System Road stem and Vetta TT Traverse seat
- Stoker suspension seatpost

Frameset	Frame	True Temper Cro-moly custom butted Tandem
	Fork	Tange butted, special taper gauge tandem Cro-moly
	Headset	YST, 1 1/4", sealed
Controls	Handlebars	System 1 Road
	Stem	System 3 90° Tandem with Adjustable Stoker rear
	Shifters	Sachs ergo levers for triple
	Brake levers	Shimano 105SC
	Grips	White cushion tape
Brakes		Shimano LX cantilevers
Drivetrain	Crankset	Sugino Fuse, 38T synchronization rings
	Pedals	Shimano M535 SPD
	F. der.	Shimano LX, down pull
	R. der.	Shimano XT SGS
	Cassette	Shimano HG70-I
	Chain	Shimano HG90
Wheelset	Hubs	Shimano XT Tandem
	Rims	Matrix Fast Track
	Tires	Continental Super Sport
	Tubes	Presta valve
	Spokes	Trek Tandem butted stainless
Seat		Vetta TT Traverse Manganese rails (front), Trek Women's Touring (rear)
	Seatpost	System 2 (front), suspension seat post (rear)
	Seat biuder	System Steel w/integral bolt (F), System steel w/integral bolt and hanger (R)
Weight		43.1 lbs. (19.57 kg)
Color	Saturn	

Gearing

	32	44	54
13	--	91	112
14	62	85	104
15	58	79	97
17	51	70	86
19	45	63	77
21	41	57	69
23	38	52	63
26	33	46	--

Geometry and Fit

All measurements in millimeters

	50x46	54x50	57x47	58x53
Head angle	72.0	72.0	73.0	73.0
Seat angle	73/73	73/73	73/73	73/73
Effective top tube	540/660	545/690	557/659	565/710
Chainstay length	430	430	430	430
Bottom bracket ht	272/272	272/272	272/272	272/280
Offset	60	60	55	55
Wheelbase	1707	1727	1712	1758
Trail	47	47	46	46
Standover height	763/700	785/755	809/740	824/792
Stem	100	100	120	120
Reach	636/530	641/560	672/529	680/580
Handlebar width 420/460		420/460	440/460	440/460
Crank arm length	170/170	170/170	175/170	175/170
Seatpost length	300/300	300/300	300/300	300/300
Head tube length	102	102	137	137
Steerer cut length	146	146	182	182

Hubset, Type	HyperGlide
Threaded for drum	8 spd cassette
Spokes	48
Front	287 13/14ga.
Rear, D/ND	286/287 13/14ga.
R. Dropout width	145.0mm
Tire size, Spec	700 x 28
Max. Trek size	700 x 41
Front derailleur clamp size	31.8/1 1/4"
Bottom bracket, Model Shimano	BB-UN52
Shell width/ Axle length	68/122.5
Crankset bolt hole circle	74/110
Headset size	28.6/37.0/33.0
Stack height	40.9mm
Stem, degrees rise	0
Handlebar clamp dia. 25.4mm	
Seatpost diameter	27.2mm

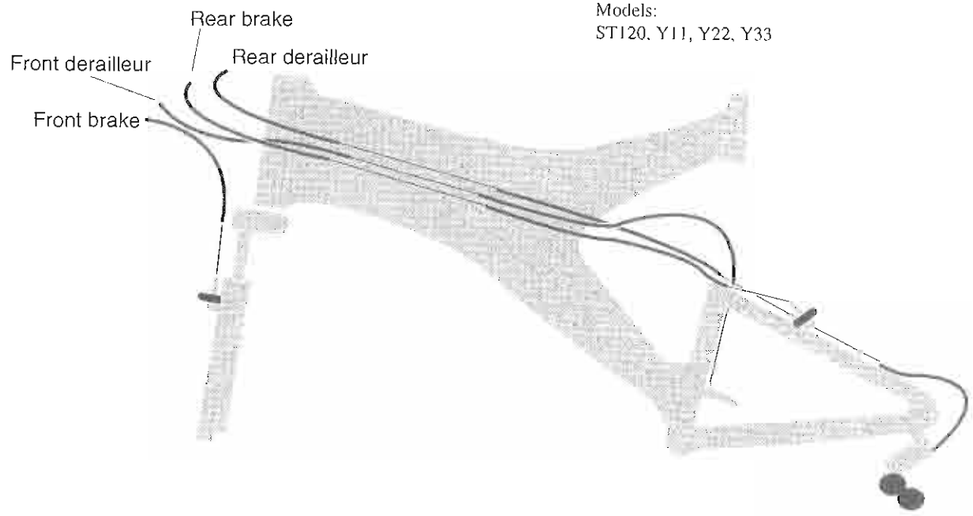
Torque Specifications

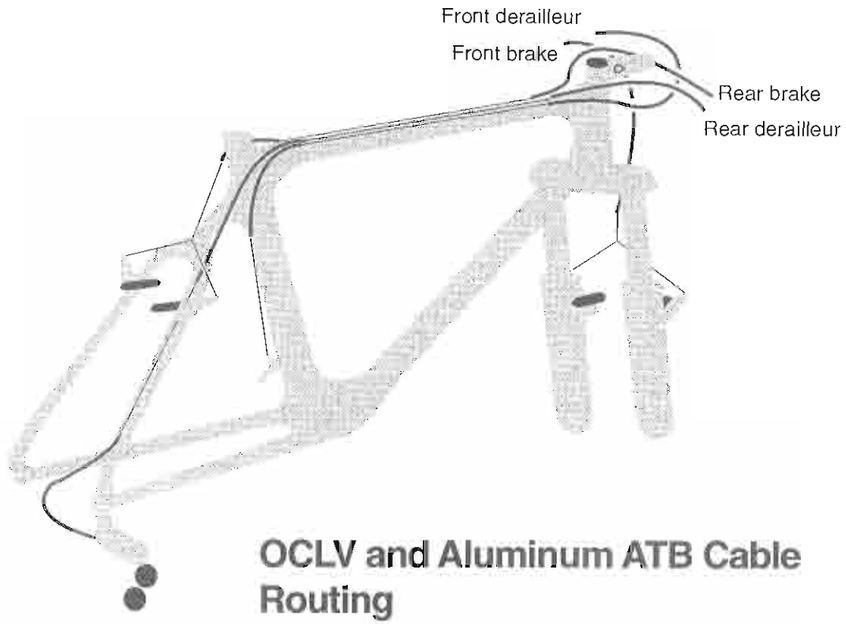
Item	Torque Specifications LB•IN	N•M
Handlebars		
Handlebar clamp bolt, forged stem	150-180	17-20.3
Handlebar clamp bolt, welded stem	100-120	11.3-13.6
Stem wedge bolt	175-260	19.8-29.4
Direct connect steerer clamp bolt, external pinch type	100-120	11.3-13.6
Direct connect hidden steerer clamp bolt, steel	150-180	17-20.3
Direct connect hidden steerer clamp bolt, forged aluminum	172-215	19.4-24.3
Bar end attaching bolts	85-125	9.6-14.1
Seats		
Seat attaching bolt, single	150-250	17-28.3
Seat attaching bolt, double	85-125	9.6-14.1
Seat post binder bolt	85-125	9.6-14.1
Cranks		
Crank arm bolt	350-435	40.2-49.1
Chainring bolt	70-90	7.9-10.1
Pedal attachment	350-380	40.2-42.9
Shimano cartridge fixed cup	435-608	40.2-68.7
Wheels		
Wheel axle nuts	130-210	14.7-23.7
Shimano cassette lockring	260-430	29.4-49.0
Derailleurs/Shifters		
Front derailleur clamp bolt	40-60	4.5-6.8
Rear derailleur attaching bolt	70-85	7.9-9.6
Front and rear derailleur cable clamp bolt	35-52	3.5-5.9
Shifter clamp bolt, top mount style	40-60	4.5-6.8
GripShift clamp bolt	25	2.8
Brakes		
Brake lever attaching bolt	40-60	4.5-6.8
Brake caliper attaching bolt	70-85	7.9-9.6
Cantilever brake attaching bolt	40-60	4.5-6.8
Caliper brake pad attaching bolt	40-60	4.5-6.8
Cantilever brake pad attaching nut	70-80	7.9-9
Brake cable clamping bolt	50-70	5.7-7.9
Cantilever cable carrier fixing bolt	35-45	3.5-5
Frame attachments		
Anti-Chain Suck Device	30-40	35-45
Water bottle attaching bolt	20-25	2.3-2.8
Y bike		
Shock mounting bolts	170-180	19.3-20.3
Pivot bolts	100-110	11.3-12.4
Stratos shock cable clamp	6	1
Suspension forks		
Rock Shox brake arch-slider	60	6.8
Rock Shox Brake boss	60	6.8
Rock Shox fork crown pinch bolts	55-65	6.5-7.3
Manitou fork crown pinch bolts	100-110	11.3-12.4

Cable Routing Maps

ST120 and Y Bike Cable Routing

Models:
ST120, Y11, Y22, Y33





OCLV and Aluminum ATB Cable Routing

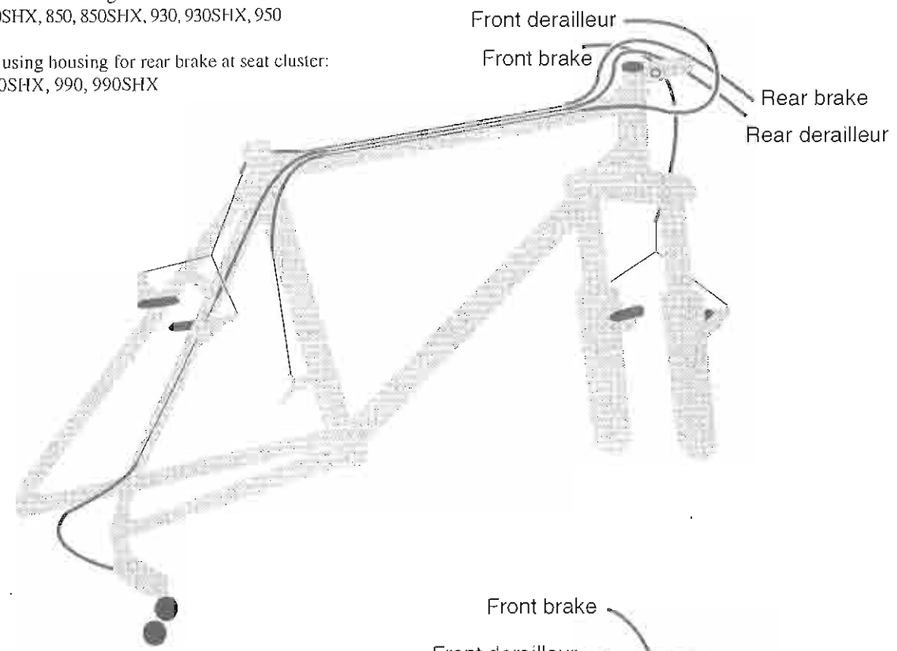
Models:
9700SHX, 9800SHX, and 9900SHX
7000, 7000SHX, 8000, 8000SHX, 8500, 8500SHX

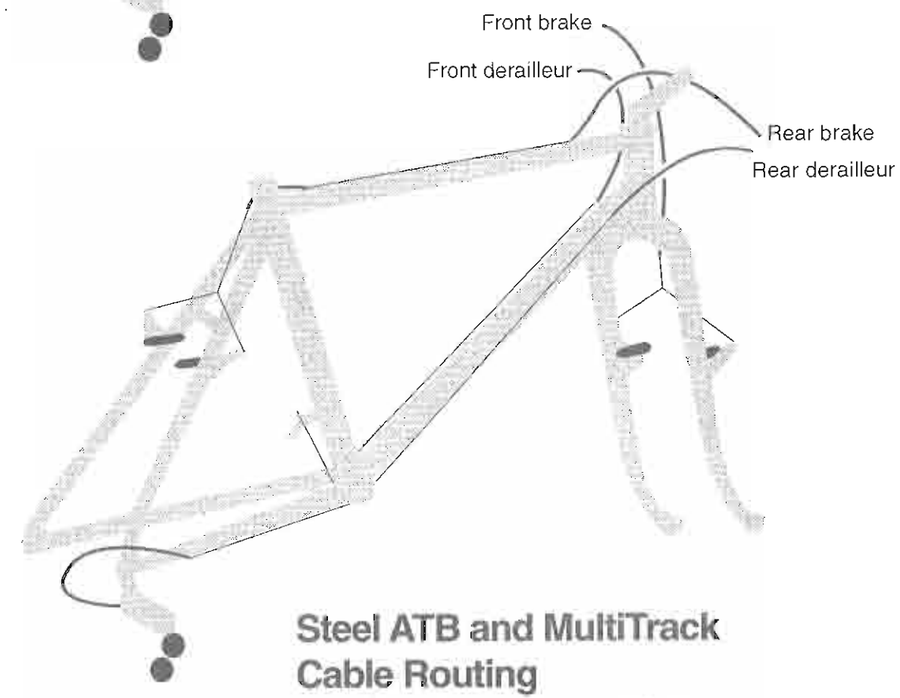
Cable Routing Maps

Steel ATB Cable Routing

Models with 'macaroni' guide at seat cluster for rear brake:
830, 830SHX, 850, 850SHX, 930, 930SHX, 950

Models using housing for rear brake at seat cluster:
970, 970SHX, 990, 990SHX



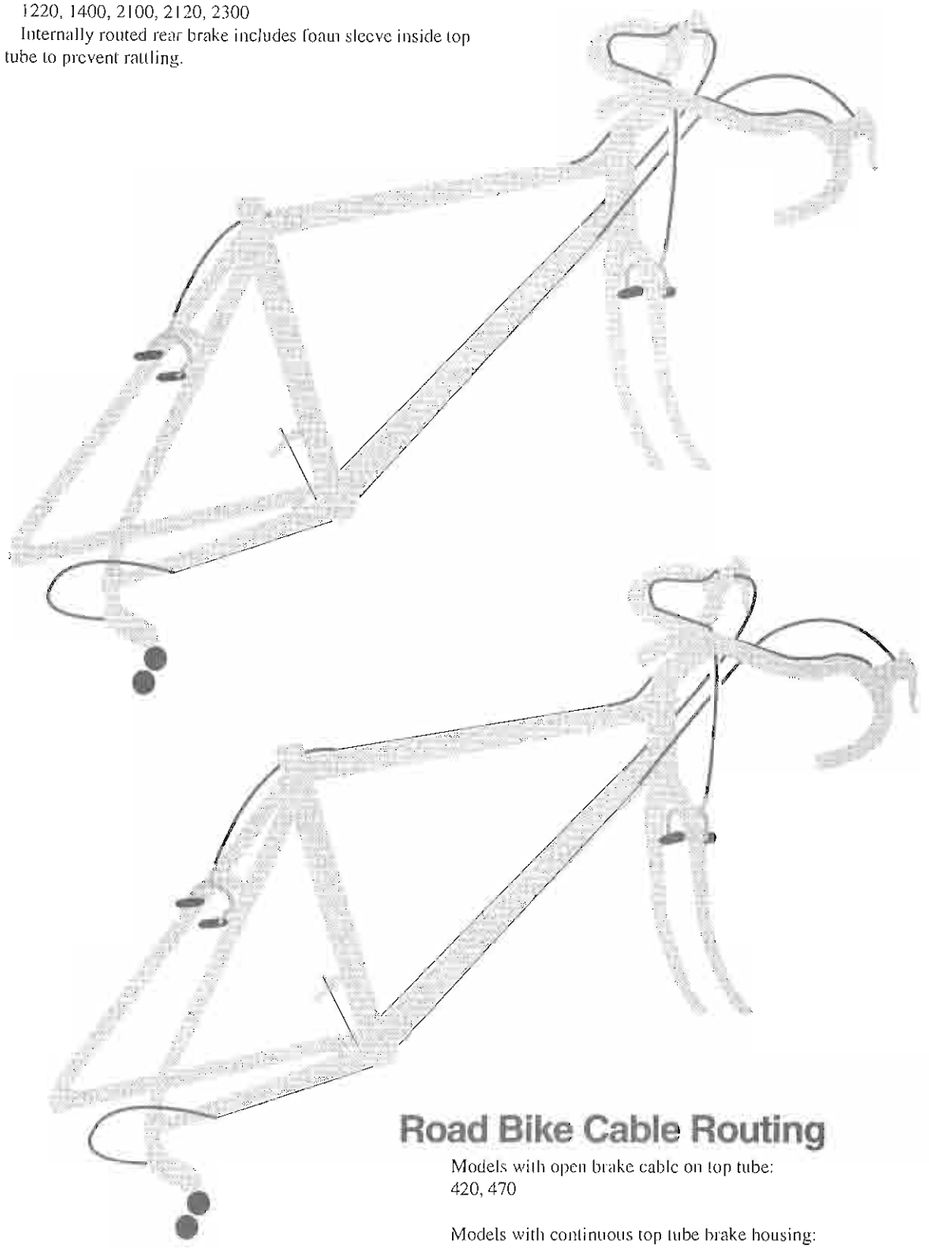


Steel ATB and MultiTrack Cable Routing

Models with bottom bracket routed shift cables
Also using 'macaroni' brake cable guide at seat cluster:
800 Sport, 800, 820, 700 Sport, 700, 720, 730, 750

Road Bike Cable Routing

Models:
1220, 1400, 2100, 2120, 2300
Internally routed rear brake includes foam sleeve inside top tube to prevent rattling.



Road Bike Cable Routing

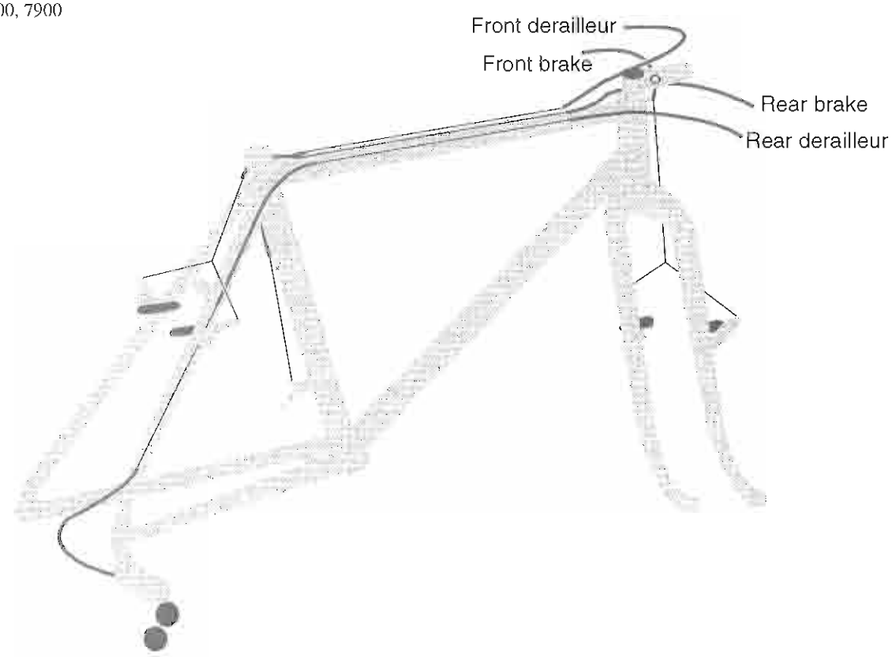
Models with open brake cable on top tube:
420, 470

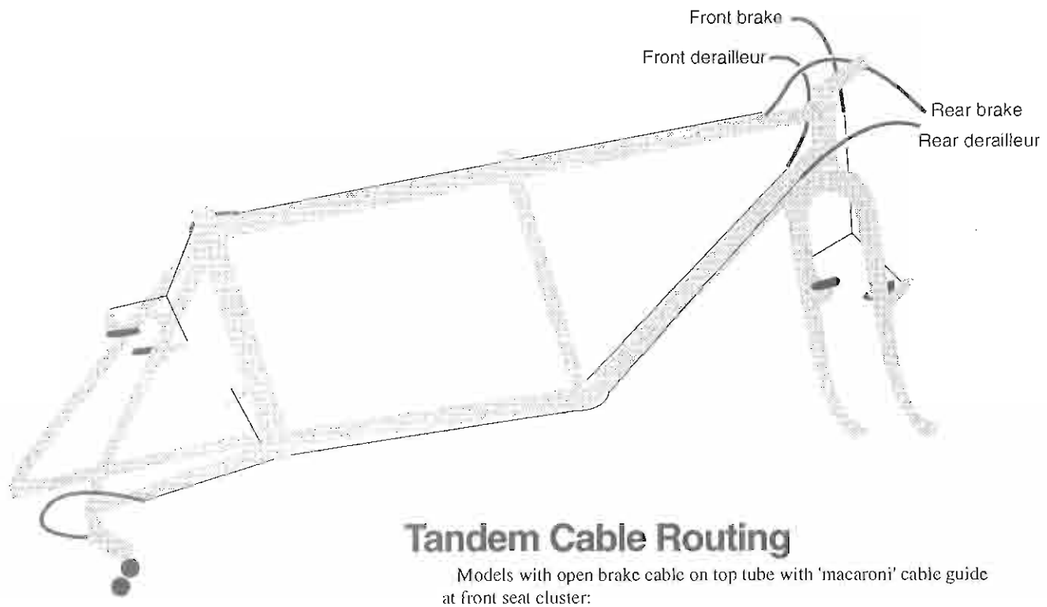
Models with continuous top tube brake housing:
5000, 5020, 5200, 5500

Cable Routing Maps

MultiTrack Cable Routing

Models with top routed derailleur cables:
7600, 7900



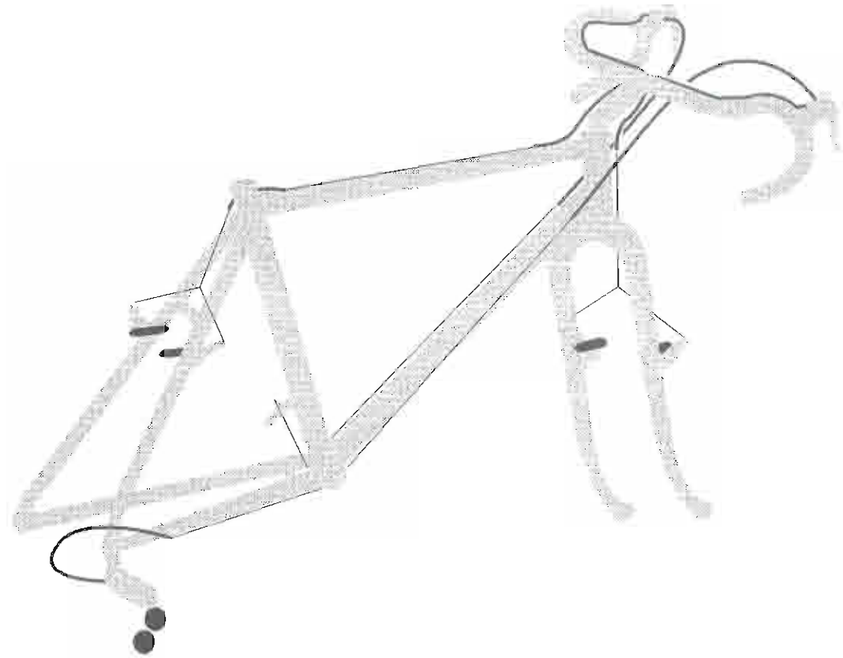


Tandem Cable Routing

Models with open brake cable on top tube with 'macaroni' cable guide at front seat cluster:
T100, T200

Road Bike Cable Routing

Models with cantilever brakes:
520



Cable and Housing Information- 1996

In '95, Shimano shifters used a 1.1 mm cable with 3.6 mm housing. This allowed the housing to be more flexible, and reduced cable friction for smoother shifting. But the smaller diameter allowed some compression in some circumstances, so the sizes have been beefed up for '96. The new dimensions are 1.2 mm cables, with 4.0 mm housings.

Mechanics should note that the new Shimano housing comes pre-greased. To prevent the grease from being pushed out of the housing, the cable should always be inserted into the end of the housing with the Shimano logo first, so the logo is closest to the respective lever. In cases where we are using non-Shimano housing, look for the housing end with an extra 'band' or 'ring' around it indicating the end of the housing holding the grease, which is the end to insert the cable into first.