Trek cannot boast of a decades-old heritage. Nor of a single yellow jersey in the Tour de France.
Not yet.
Rather, Trek has been content with developing, in a quiet Wisconsin town, the most highly-evolved cycling machines that technology will allow.
Their philosophy is not one of merely slapping trendy components onto the requisite set of steel-alloy tubing. To Trek, a bike's performance is as much a product of advanced thinking as it is the sum of its parts.
And that thinking begins with the frame.

**FRAME DESIGN:**
**A LESSON IN ADVANCED GEOMETRY.**

The frame is truly the heart and soul of a fine bicycle. If it is meticulously engineered, with every angle and tube dimension displacing the proper forces, it will be the single greatest factor contributing to the performance of the machine as a whole. If the frame is compromised, then no amount of sophisticated componentry can save it.

All frames will look somewhat similar at first inspection. Yet look closer, and you'll see the subtle variations that make a Trek "function specific" — that is, uniquely suited for particular kinds of riding.

Of the hundreds of design parameters, wheelbase is perhaps the most obvious. A short wheelbase (notice the tight clearance between the rear wheel and the seat tube) tells you that the frame was intended for fast riding and racing over relatively smooth surfaces. By tightening the geometry, most of the frame tubes get shorter, the angles get steeper, and
the bicycle will feel extra responsive, almost skittish, at high speeds.

But there is a trade-off. These bicycles are particularly "stiff" and absorb little shock, in an effort to direct all the rider's power, without loss, directly to the rear wheel.

Conversely, where comfort and capacity are of primary concern, the wheelbase is drawn out considerably, for a more stable touring platform. And results in plenty of extra length for panniers, handlebar packs, and other necessary take-alongs.
The shallower angles also let the rider sit more upright, as a streamlined body tuck is not required at slower touring speeds.

Trek's selection of quality bikes, 18 in all, guarantees that there is a selection of frames within this spectrum to suit your particular riding style.

Double-butted tubing maximizes a frame's strength by "butting" or thickening the tubing at the ends where it is subject to the greatest stress, then tapering to a lighter, thinner cross-section in the center.

**TUBING WALL THICKNESS**

<table>
<thead>
<tr>
<th>Tubing Name</th>
<th>Top Tube</th>
<th>Down Tube</th>
<th>Seat Tube</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reynolds 753 R and 531P</td>
<td>0.7</td>
<td>0.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Reynolds 531C and 531CS</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Reynolds 501</td>
<td>0.9</td>
<td>0.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Tange 2001 and 1000</td>
<td>1.0</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Reynolds 531AF and 531C AF</td>
<td>1.2</td>
<td>0.9</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Trek does not believe in resting on laurels. A case in point – this prototype bicycle built entirely from thin-gauge stainless-steel tubing.

**MATERIALS: THE BEST THE WORLD HAS TO OFFER.**

The most advanced bicycle frame consists of some simple elements – normal diameter tubes, narrower gauges (called "stays"), and a precision-made assortment of lugs, bridges, and shells to join them together.

Every Trek has a frame composed of double-butted tubing. Tubing with walls thicker at the ends than in the center, to reduce overall weight without sacrificing strength.

T.I. Reynolds Ltd. of England is perhaps the best-known maker of these tube sets.
But as great as their reputation is, only in the right hands can this manganese steel alloy be transformed into a Trek.

Trek steadfastly refuses to use the same tube formulation to fit every frame. Reynolds
501, 531, and the superlight 753 are used where appropriate. Reynolds has also certified Trek as a master in the use of their materials, the only major U.S. manufacturer to earn such a distinction.

Finally, Trek has pioneered the extensive use of investment-cast frame components in their line. The excellent detail and finer molecular structure obtained by this expensive process has enabled our builders to produce frames to closer tolerances than ever before.

**MELTING THE FRAMEBUILDING MYTH.**

All too often, mass production of bicycle frames dictates the need for fast, high-temperature brazing.

Yet metallurgical physics demands that brazing be accomplished at the lowest possible temperature to maintain tensile strength. Naturally, Trek refuses to compromise. Which is why they employ many of the same low-temperature techniques usually reserved for custom builders.

After precise mitering of the tubes, the lugs are slowly and evenly heated by a series of strategically-placed jets. Brass or silver solder is injected into the gap, filling it completely.

Every braze is scrutinized.

Alignment is confirmed using a complex series of mechanical and optical checks. Only then is the frame ready for a relatively primitive, but still unsurpassed step called craftsman-with-a-fine-file.

**A FITTING FINISH.**

Every Trek frame receives what is widely considered to be the most durable finish available. One that resists the corrosive effects of outside exposure while maintaining a like-new lustre for years.

First, Trek frames are dipped into four different chemical baths for cleaning and corrosion-proofing. Then a thick primer coat is sprayed on. Finally, DuPont Imron hard enamel is applied using electrostatically-charged paint particles to ensure perfect adhesion.

The result must be flawless, in both performance and appearance, or it will never wear a Trek decal.

**COMPONENTS: A MATCHED SET OF SENSIBILITIES.**

In viewing the bicycle as a total entity, Trek has specified component groups which mesh logically with the frame's function.

Weight is always an important criterion. But so is reliability, interchangeability, styling, and of course, superior mechanical design.
TREK RACING BICYCLES.  
BUILT FOR SPEED, VERY SLOWLY.

Long weeks sitting at a drawing board, devising better ways to build a machine that must weigh as little as possible, yet still must withstand the stress of hundreds of pounds of force.  
Then hours behind a mask, skillfully wielding a torch that must make dozens of precision brazes in the assembly of a tight, responsive racing frame.  
And finally, the painstaking finishing and assembly of the machine in such a way that the components don’t just bolt on together, they practically harmonize.  
But when the time is taken, and nothing is rushed, the result can be one of the few American-made bicycles to ever win the Coors Classic.  
Just like a Trek did last year.

A LESSON IN ADVANCED GEOMETRY.  
Naturally, a Trek racing frame is going to have some relatively acute frame angles.  
A short wheelbase for stiffness and acceleration.  
A steep head tube for riding close to the edge in corners and descents.  
And a well-pitched saddle angle to optimize body alignment.  
All of these variables are interdependent.  
There is more to the art, however.

Beyond all proportions, a Trek design must provide an almost synergetic link between cycle and cyclist.  
A balance of forces and function that will return every ounce of energy and sweat invested.  
Regardless of whether your style leans towards rhythmic climbing or straight out hammering.  
Reaching this goal is Trek’s highest ambition.

FAST COMPANY.

This year, Trek’s line of high-performance racing bikes includes 6 models for every cyclist at every level of USCF or Triathlon competition.  
Because of their response and extra stiffness, however, they are also the bicycles of choice for those athletes starting to hone their cycling skills, including the great number of people who are hanging up their jogging shoes for a better, less bone-jarring workout.

This wide selection of racing bikes also makes extensive use of the most widely-acclaimed tubing.  
Together with a carefully chosen group of racing equipment known for their precision, their consistency and their ability to bounce back from the occasional spill.
New for this year, the Trek 460 offers true short-wheelbase racing geometry together with some very lightweight components, including a featherweight price-tag. Also features new Shimano quick-shifting derailleurs, Z-505 narrow alloy presta rims and high-pressure tires. An excellent starting point for the rider interested in serious training or the competitive athlete who’s new to cycling.

The new SR asymmetrical crankset.

Black-accent short-reach brake set reacts swiftly and surely.
Finally, a racing bike for under $500 that won't get laughed off the starting line. The 560 was designed for fast club riding, triathlons, or Category IV racing. It boasts a genuine Reynolds 501 racing frame, which meshes perfectly with a group of all-alloy racing componentry— including SR's newly styled cranks, Aero handlebars and Matrix black-anodized wheels for lighter weight and lightning-quick reflexes.

Narrow profile Aero Gran Compe sidepulls.

Sleek aero-style handlebars and brake levers.
A well-composed racing bicycle with contributions from the world's finest component makers. From England, Reynolds 531 frame tubing. From Italy, Campagnolo cranks and derailleurs with Modolo brakes. From France, Maillard's revolutionary Helicomatic freewheel-hub. And from the United States, an Avocet R-1 saddle, Matrix hard-anodized rims, and the Trek technology that puts it all together.
A high-performance Reynolds 531 road-racing frame equipped with SunTour's Superbe Pro componentry. Investment-cast lugs and bottom-bracket shell are utilized for superlative fit and finish. The addition of the new Avocet Turbo saddle and hardcoat tubular wheels with Wolber sew-ups give the 760 no serious competition at anywhere near the price.
The same stiff, tightly-responsive frame as the Trek 760, but with Campagnolo’s best Super Record gruppo bolted on. Fitted with Super Champion’s “Aspen” tubular wheels and Wolber Pro 84 tires, the bicycle weighs in at just over 20 pounds. A bicycle capable of taking you all the way to Category 1.
Trek’s definitive statement of what a racing bicycle can be. Exotic Reynolds 753 tubing brazed with silver, and fanatical care, by a Reynolds-certified master framebuilder. All Campagnolo S.R. componentry, of course. This year, the 170 is also available in your choice of any of 14 DuPont Imron colors. All of which look very good in a speeding blur.
## Trek 1984 Racing Frame Geometry

<table>
<thead>
<tr>
<th>Model</th>
<th>Seat Tube Length</th>
<th>Seat Tube Angle</th>
<th>Head Tube Angle</th>
<th>Top Tube Length</th>
<th>Chain Stay Length</th>
<th>Fork Offset</th>
<th>Drop</th>
<th>Wheel Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>460</td>
<td>22.5&quot;</td>
<td>560</td>
<td>73.5&quot;</td>
<td>560</td>
<td>410</td>
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<tr>
<td>560</td>
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<td>73.5&quot;</td>
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<td>45</td>
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<tr>
<td>660</td>
<td>22.5&quot;</td>
<td>560</td>
<td>73.5&quot;</td>
<td>560</td>
<td>410</td>
<td>45</td>
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<td>995</td>
</tr>
<tr>
<td>760</td>
<td>22.5&quot;</td>
<td>560</td>
<td>73.5&quot;</td>
<td>560</td>
<td>410</td>
<td>45</td>
<td>72</td>
<td>992</td>
</tr>
</tbody>
</table>

**Components:**
- Special Braze Ons: Top Tube Guide, 2 Water Bottle Mounts, Chain Hanger, Top Tube Drop
- Fork: SR-350SE Steel Quill
- Seat Post: SR-5SE Lapped Type
- Extra: Lapiz, Toe Straps

## Racing Specifications

### 460
- **Frame:** Tange C14 Investment Cast
- **Materials:** Double Butted
- **Headset:** Stronglight A43 Black Delrin

### 560
- **Frame:** Tange 1000 Chromoly Double Butted
- **Materials:** Double Butted
- **Headset:** Stronglight A43 Black Delrin

### 660
- **Frame:** Tange 1000 Chromoly Double Butted
- **Materials:** Double Butted
- **Headset:** Stronglight A43 Black Delrin

### 760
- **Frame:** Tange 1000 Chromoly Double Butted
- **Materials:** Double Butted
- **Headset:** Stronglight A43 Black Delrin

### 770
- **Frame:** Tange 1000 Chromoly Double Butted
- **Materials:** Double Butted
- **Headset:** Stronglight A43 Black Delrin

### 170
- **Frame:** Tange 1000 Chromoly Double Butted
- **Materials:** Double Butted
- **Headset:** Stronglight A43 Black Delrin