THORN Sherpa

Please read and note.
Prices are rising all the time and we do not wish to waste resources; consequently the prices, in printed copies of this brochure, may no longer be correct. The current prices, given in the on line brochure, are correct and will always be honoured.

A stunning, derailleur geared, rugged 26" wheel touring bike

Issue 16
Summer 2011

May also be built into a 26" wheel hybrid trekking bike or a bike for general-purpose commuting and day rides

Available in a choice of 2 colours and 11 sizes

Blood Red

Stealth black

THORN 969
DOUBLE BUTTED
SEAMLESS
HEAT TREATED
COLD-DRAWN
CRO-MO

Bike shown is size 560S

The most durable, sweetest-natured, derailleur-geared, go-anywhere, off the shelf touring bike, obtainable today...irrespective of price!

We have hundreds of happy Sherpa owners, some have cycled around the world, others have enjoyed reliable day to day transport, why not try one yourself, without any risk? (Please read on for more details.)

St John Street Cycles - Thorn Cycles Ltd. 91-93 St John Street - Bridgwater, Somerset TA6 5HX
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About Thorn

The business began as St John Street Cycles, in 1984 when Robin Thorn took over an almost defunct toy and cycle shop at 36 St John Street. He chose Bridgwater quite by chance – he was having holiday in the area from his home in Norfolk, and was amazed to see the number of people on bicycles in the town. In an instant the decision was made and the shop was leased that day.

Robin borrowed a small sum from his parents and worked all hours of the day and night to build up the business. He soon became a well-known figure with his oil-stained brown overall and wild hair and beard, often working on the pavement in the sunniest weather to draw further attention to his shop.

In 1989, the first employee was taken on – Andy Blance, a friend and very experienced audax rider.

In 1992, the first tentative moves were made into national advertising, concentrating on the touring and tandem markets, which were the particular interests of Robin and Andy. The emphasis had completely changed from cheap bikes to very high quality, specialist machines, though still often sold at a bargain price made possible by Robin's buying prowess.

In 1993, Robin decided to move up the road to number 91-93. The entire building front was gutted to give a modern, light, air-conditioned shop and a very superior workshop; the rear was left as a long single-storey brick store. St John Street Cycles was rapidly becoming known as one of the major touring and tandem suppliers in the country. We were gaining an extremely good reputation for the quality of our service and the breadth of our knowledge in the field.

In late 1995 we began to consider manufacturing our own bikes. We had become increasingly frustrated by the mistakes and missing features on the bikes we could buy and wanted to design what we considered to be the ideal touring bike and the ideal tandem. Andy used his wealth of experience and study of the subject to design the bikes, and the THORN brand was launched. The first bikes were so well received that we didn't even have to advertise them – they sold as quickly as we could get them made. At this point we set up our own frame shop and Andy designed complete ranges of Thorn bikes. Thorn quickly became established as a premier brand in the tandem touring market. At the same time, our mail order business and online store had been growing apace, and our internet site recognised as an industry best.

In 2000, the limited company Thorn Cycles Ltd. Was formed, with Robin and Helen Thorn as joint owners. St John Street Cycles remains as a trading name of the company.

(1) Robin and Andy back in 1992

(2) Robin 2007

(3) Andy 2007

Thorn Sherpa Index.

Steel is real

High quality steel is the best possible material for a strong, comfortable, well equipped, long lasting frame... all our bikes are high quality **heat treated steel**... we would not wish to build our bikes with anything else and we would not wish to use anything else for our own cycling!

The final heat treatment process can double the cost of a steel cycle tube. Heat treatment significantly raises the UTS (ultimate tensile strength) which makes the tubes stronger and more resistant to cracking, it also makes the tubes more resistant to denting. It also greatly enhances steel's much talked of and easy to notice but hard to describe quality of **"resilience".** Because heat treatment is so expensive, the steel tubes used in most cycles are not heat treated. If a frame doesn't say "heat treated", you can be certain that the tubes won't be.

All the tubes used in Thorn frames are heat treated.

Cheap (thick-walled) aluminium frames are strong enough, they could have the fittings required on a touring bike but they are heavy and very uncomfortable.

Expensive (thin walled) aluminium frames are less uncomfortable and they are quite light but they can't have the fittings required for touring and they break! Dealing with a broken lightweight aluminium frame is easy...You recycle it into bottle tops!

Carbon fibre frames can be very lightweight and very durable...as long as you don't scratch them...a gouge in a carbon frame is a catastrophic failure waiting to happen. I'd have no hesitation using one for racing...

...**if I raced !**

and (especially) if somebody else was paying for it!

It is difficult to manufacture a carbon frame with bosses...I don't know whether to laugh or cry, when I see a "cool" carbon road racing frame being used for lightweight touring...I see rattling mudguards, held on with cable ties, mega heavy alloy seat post-fitting (seat post breaking?) carriers with loads being carried, which are too high and too far back for stability...or I see no provision for luggage at all, with the rider looking like a cricket umpire, clothing tied around their waist...how cool is that...in both senses of the word?

I also frequently see the dangers and difficulties associated with toe overlap.

Titanium is two-thirds of the weight of steel...but even the top quality, cycle-specific tubes are much less stiff. To make a frame which is as stiff as a good, high quality steel frame, you have to use considerably more volume of material, which does not give that much of a weight saving! Many customers however want a weight saving with a Ti frame and they end up with a frame which is not stiff enough...this not only wastes energy...it can give a scary ride down steep hills!

You couldn't have these fittings on an alloy, carbon or titanium frame

Much of the titanium used today is not only of a very low grade but it is also "plain gauge" material, that is, it is not butted at all! If low grade steel frames can be nicknamed "gas pipe", perhaps these tubes should be called "nuclear reactor cooling pipe". Such tubes may be an improvement on "gas pipe" steel but they are far inferior to top quality steel, unless, of course, they *are* actually being used in a reactor!

They remind me of the story of "the Emperor's new clothes".

It is either impossible or extremely expensive to have the required fittings on a high quality butted Ti frame and furthermore, all such titanium frames, that we have known, have also broken! It is usually impossible to repair a cracked titanium frame. Perhaps there are some proper titanium frames, being made today, or which may be made in the future, that won't break...but we doubt it. We certainly wouldn't want to risk such a huge sum of money, when steel is almost as light, is much more durable and could be easily repaired if necessary, steel rides better, is relatively inexpensive and a steel frame can have all the fittings you require.

THORN 969 DOUBLE BUTTED SEAMLESS HEAT TREATED COLD-DRAWN CRO-MO

THORN **Steel is real!**

Thorn Sherpa

By Andy Blance

On the front cover, I say that the Sherpa is "the most durable, sweetest natured, derailleur-geared, go-anywhere, off the shelf touring bike, obtainable today...irrespective of cost." How can I justify such a bold statement?

A huge effort and many years of experience and experimentation has gone into the production of the Sherpa. I don't want to do anything which encourages or perpetuates today's so-called "throwaway society". I know that I could reduce the service life of the Sherpa considerably, by making it a little bit lighter but I don't want to do that and I believe that enough cyclists still want a bicycle that is made to last. I still believe that being "durable" is a good thing! How can a bike have a sweet nature? You'd need to own (or at least ride) one to find out! The Sherpa is designed to be very manoeuvrable at low speed (considerably more so than an MTB) but it is also reassuringly stable at high speed (with, or without, heavy luggage) it's down to its perfect geometry, more of that later.

The "go-anywhere" description of the Sherpa, refers to its ability to be at home on smooth tarmac, broken tarmac, dirt roads or on the worst gravel roads in the world. It is at home because the resilience of the steel frame and fork and the clever geometry mean that the bike is genuinely comfortable. The strong frame and clever geometry (again!) enable the bike to hold a chosen line perfectly, whilst maintaining responsive steering to allow you to choose a different line if desired (this is often necessary on difficult surfaces!) Because it can travel with such accomplished style on these roads, it will take bridleways, tow paths or any "Wild Wales" cycle routes in its stride!

"Off the shelf" means that we have all the sizes, in all the colours, actually in stock.

"Irrespective of price" means that, no matter how much money you have to spend, we sincerely believe that our Sherpa offers superior performance, at a really keen price!

Drop handlebars, straight bars, comfort bars or "butterfly" bars?

Drop handlebars are more popular amongst touring cyclists from the UK than they are with touring cyclists from any other country, with the possible exception of Californian Americans. Drop bars offer 3 different positions:- the brake lever hoods are, beyond doubt, the most frequently used position, accounting for about 90% of usage. The position on either side of the stem (usually referred to as "the tops") accounts for about 9% of usage, whilst the actual dropped section, (often called "the hooks") are used very rarely by touring cyclists...usually to get more leverage on the brake

levers than is possible from "the tops"

These two most frequently used positions (on drop bars) are duplicated by **straight bars with bar ends**, except that, instead of holding handle bar tape, the position using the "straight bit", can have very comfortable anatomical handlebar grips, from where a very powerful squeeze on the brake levers is immediately possible. This position is used for, perhaps as much as, 75% of riding. Bar ends are available in many different configurations and materials, the rubber covered, "ergo control" bar ends are the most comfortable that I have used. Bar ends allow a 90 degree rotation of the wrist, compared to the position offered by the grips, which makes them as different a position as it is possible to have.

(This is also the case with drop bars)

Bar ends are biomechanically efficient when climbing, particularly when out of the saddle.

Thorn Flat Track bars I have recently designed these new bars, which are essentially "straight" bars with a 10 degree bend, immediately after the stem. The centre swell has been reduced to a minimum, in order to keep as great a length of the straight 22.2mm diameter section as possible. These bars are black and 640mm wide. They have a numbered scale etched every 5mm into both ends of the bar, to facilitate shortening them to individual requirements, even at 480mm, it is possible to accommodate STI shifters, a suitably long grip and any bar end you wish.

Our own **Thorn comfort bars** were designed by a senior physiotherapist. They offer one supremely comfortable position. The reason that these bars are so comfortable is that they have an 18 degree bend, which puts the wrists into perfect alignment with the forearm and thence the elbow. The reason that there is only one position available is that the bends, which are necessary to achieve this position (and also to dampen out much road vibration) take up a lot of the room and there is physically not enough room to fit bar ends and average sized hands, onto the straight section. In my opinion, these bars are the perfect width for the "hands on the grips position" but are already too

In the quest for the perfect bicycle, you must choose, at the very outset, whether you will have dropped or butterfly bars or if you want straight or comfort bars and you must accept that a frame, which is perfect for dropped or butterfly bars, is very unlikely to be suitable for straight or comfort bars.

"It is somewhat ironic that mountainbikers wax lyrical about the "sweet handling" of their mounts, on singletrack, when actually, a well designed touring bike would literally "run rings around them!"

wide for sensible positioning of bar ends and to make them even wider, in order to fit bar ends, would not be sensible.
Fiona and I use Thorn comfort bars extensively when cycle camping, mountainbiking and for general cycling. During these activities we have several different hand positions, these include cycling and not cycling!
Butterfly bars are very popular in Europe, especially Northern Europe, which is blessed with an abundance of high quality, flat cycle paths and also with drivers who have a courteous attitude towards cyclists. Butterfly bars appear to offer many different positions but the most important position, the one that gives you access to the brakes, is a very narrow and uncomfortable position, furthermore, by virtue of the massive length of tubing needed, the bars also flex significantly when this position is used.


Modolo Yuma bars

This flexing is a positive thing, when riding slowly on flat cycle paths and at low speeds, it enhances comfort but at high speed down bumpy mountain roads (or hilly country lanes) it becomes alarming!
It is alarming and yet you have to hold the bars here, because that is where the brakes are.
In heavy traffic, the narrow position offered, when covering the brakes, can not be used to advantage, when filtering through slow moving or stationary vehicles, because, despite the very narrow hand position whilst "on the brakes", the overall width of these bars is very wide. On loose (or greasy) surfaces a bike is much easier to control, during heavy braking if it has wide bars.
We have very serious reservations about butterfly bars.

A bike which is designed for drop handlebars needs to have a shorter top tube than a bike which is designed for "straight" handlebars. The reason is simple...drop bars have a very pronounced forward throw, whereas straight bars have no such throw (indeed they usually sweep back, towards the rider, by a small amount). The brake hoods, which are the position used 90% of the time,

whilst cycling on drops, also throw the rider's hands forward. If drop bars are used on a bike designed for straight bars, they will produce a position which is far too overstretched.
Straight bars and, even more especially, comfort bars need to be used with frames with long top tubes (Please see " important notes" on page 16). Because they bend, so significantly deeply, back towards the rider, butterfly bars should only be mounted to very long handlebar stems. The stem must be long enough **(at least 120mm)** to place the rider's hands forward of the "centre of steering", when on the brakes. If you ride in a position, with your hands behind the centre of steering, you run the risk of, not only being unable to control a speed wobble but of actually precipitating one in the first place!
Most people who choose butterfly bars, are looking for a relaxed position, with the opportunity to "drop forward" into a more sporty position. Butterfly bars provide these positions and, like bar ends, also give a comfortable hand hold, with the wrists rotated through 90 degrees, at the sides of the bars.
Given the absolute necessity of using a long stem with butterfly bars, they are more suited to our short top tube frames.
If you are looking for a sporty position, which drops into a very aggressively racy position, you may choose butterfly bars with our long top tube frames.
It is also ironic that, because there are very few sizes of extreme length stems available, butterfly bars, which appear to offer such a wide choice of position, may in fact be unable to provide a comfortable reach for the position that you have to use for much of the time, in order to operate the brakes!

Derailleur gears

Derailleur gears need little explanation these days. There is the choice between where you have the shift levers with drops.
We can still mount down tube levers to your bike if you wish but we advise strongly against it, handlebar end mounted levers offer all the benefits of simplicity and longevity, with the advantage that your hands are always still holding on to something, which is part of the handlebar.
Many tourists have succumbed to the benefits of Mr. Shimano's "integrated into the brake lever" STI drop bar gear change system. STI is considerably more expensive to run and maintain, more difficult to keep correctly adjusted and may not always provide the instant, slick down-shift required, when a hill unexpectedly rears up.
Although we fit "drop bar STI" to our "Audax" and "Club Tour" bikes, we really don't recommend it for the Sherpa.
It's a different story with straight bar STI; Mr. Shimano had more room to make the mechanism larger and more durable. Straight bar Deore STI is standard equipment on the "trekking spec" option of the Sherpa.
We still have serious reservations about the long-term suitability of STI on expedition touring bikes.

26" wheels.

Whilst the traditional British, Continental and American, touring cycles of the past would have had 27" (630) or 700c (622) wheels, we favour the 26" (559) wheel for many applications and we have no doubt whatsoever that, in the most extreme of demanding situations, the 26" (559) wheel is not only vastly superior, it is also the only tyre size which can be obtained literally everywhere in the world.

The superb frame and easy availability, of a wide selection of different tyre widths and tread patterns, confirms the Sherpa's right to be called a "go anywhere touring bike"

Designing a bike to carry loads...the story of the evolution of the Sherpa.

It is very easy and incredibly cheap, to construct a bike which can carry large loads reliably...simply use lots of mediocre quality metal...witness the ubiquitous "Hero" bikes at work, in India!
It is much more difficult to construct a bike which can carry large loads reliably, in great comfort. Enough steel must be used to support and steady the load and absorb large bumps but not so much that the frame can not absorb multiple small impacts.
The only way to be certain of achieving this perfect balance, is by trial and error and much actual road testing. In 1983 I embarked on the long process of improving the design of touring bikes.
I live close to the edge of Exmoor (an area of severely pitched hills; there are many 20% gradients, a sprinkling of 25% gradients and a couple of 33% gradients for good measure!) I have always enjoyed descending at high speed on my bicycle. It was important to me, from the outset, to have the best-handling bike that I could possibly have. I soon realised that, if I really wanted this, I would have to design my own! Initially I concentrated upon high-speed handling but (in 1984) upon riding the newly introduced mountainbikes from the US, I was made to see that, having the ultimate in high speed handling (a quality, they had in abundance) was detrimental to low speed manoeuvrability (a quality of which they had little!) It is somewhat ironic that mountainbikers wax lyrical about the "sweet handling" of their mounts on singletrack, when actually a well designed touring bike would, literally, run rings around them!
By 1990 I believe that I owned and was riding, the very finest 700c touring bike to have been made (up to that time) the frame was made to **my exact and specific design** from Columbus SPX tubing by Argos Racing Cycles of Bristol. Shortly after this bike was built, my interest in riding tandem intensified and I became aware of the advantages of using the, newly available, 26" MTB road-going tyres for tandem use, on severely hilly and twisty audax rides.
I soon built myself a road-going, drop bar solo, from a Cannondale Cad 3 MTB frame, for winter "Wednesday evening club bashes".
Whilst the benefits of 26" tyres, on a solo, were not as earth shattering as they had been on tandem, the ferocious grip did inspire confidence on dark, hilly, twisty, mucky, poorly surfaced lanes. The Cannondale's handling left much to be desired and, whilst it was unbelievably stable at very high speed, it could not be steered accurately around road debris, on the steep climbs regularly used for training.
I enjoyed the grip, comfort and responsiveness of the 'Dale and the 26 x 1.5" Nimbus tyres but I missed the handling of the Argos that I'd designed. The next step was predictable and the Thorn Nomad was born.
The " Original (derailleur gear) Thorn Nomad" soon became the benchmark for expedition touring bikes. We began to see poorly conceived and poorly executed, copies of the Nomad appearing and we eventually decided to "copy" our Nomad ourselves!
We sought the finest frame builders in Taiwan, I tweaked the frame design a little and we called the bike the "Sherpa". We were truly astonished at the high quality of the work, yet it took a little time to realise that, if we were to give it the same quality tubes as the Nomad, the Sherpa would be a superior bike (to the Nomad) yet cost significantly less money. **Well we did and here it is!**

The Sherpa's geometry varies sensibly and precisely, with each frame size.

This has enabled us to offer a bike, which has no toe overlap, even with 26 x 2.0" tyres and wide mudguards, not even if you cycle in walking boots!
Each size of Sherpa handles perfectly, whether on tow paths, country lanes, city streets, twisty, alpine descents, on the diabolical surfaces found in South America...called "ripio", or Himalayan dirt roads.
The Sherpa is an absolute joy to ride, whether it is lightly loaded, loaded heavily at the rear only, or if it has the luxury of the weight being perfectly distributed in 4 panniers.
Having dedicated brazed on bosses for rear carriers, front lo-loaders and 3 sets of bottle bosses, means that almost all of the weight which is carried, is able to be secured directly to the bicycle frame, this is obviously superior to and safer than, using cable ties or hose clips to secure such carriers.

Nobody can be comfortable unless they are relaxed. It is impossible to relax, unless you have confidence in your abilities. No matter how accomplished a cyclist you are, you can only compensate so much for a bike that simply doesn't handle properly, or one which does not carry a load without wobbling.

SAFETY

The Sherpa handles its load perfectly and therefore it is obviously safer to ride, than a bike which doesn't!
The Sherpa is particularly stable in strong crosswinds, even on bumpy high speed descents and is obviously safer to ride in such demanding situations, than a bike with twitchy steering….Yet the Sherpa's steering is precise enough to allow it to manoeuvre accurately around road debris, whilst climbing a 1:4 slope.
It is exceptionally difficult to design a bike which can excel in all three of these areas. This is because changes to the geometry, which enhance performance in one of these areas can adversely affect performance in another.

It follows that the Sherpa, which excels in all of these requirements, will be safer to ride, in *everyday situations,* than a bike which falls short, in any one of them.

Reliability.

A touring bike is a "proper vehicle", genuinely capable of providing an alternative transport solution and, as such, it must be reliable. If it is not, at best you will "let the side down" by being late for work. More seriously, you could have your meticulously planned (and eagerly anticipated) holiday ruined. In some remote parts of the world, a mechanical failure can have much more serious implications; if a bike can't be pedalled, you must walk and push, which is between 4 and 6 times slower than cycling! This is a nuisance if you are an hour away from home, it's rather more serious if you are 2 days away from water!
In order to be able to offer the frame and fork with a genuinely meaningful lifetime guarantee, we have used the finest steel and we have not only specified the most appropriate gauge for each tube, we have gone the extra mile and also designed and specified our own Thorn tube sets!
The smallest frames' top and down tubes are "standard oversized tubes" (Inch and an eighth top tube and inch and a quarter down tube) this produces a more comfortable ride for riders who, on average, weigh considerably less than riders of the larger frames.
The larger frames' top and down tubes are made from extra oversize tubes (Inch and a quarter top tube and inch and three eighths down tube). When you also consider that a small frame is inherently stiffer and stronger, than a larger frame, you can see that this is a very sensible approach.

THORN 969 tubes are 100% seamless, cold drawn, conical, double butted, heat treated Cro-Mo.

"Seamless" means to have been drawn from a pierced billet of steel, rather than to have been formed by rolling a sheet of steel into a tube and then welding a seam along its length.
"Cold drawn", means that the drawing process needs to be done when the steel is cold, this aligns the molecular structure of the steel and thus "work hardens it". The down tubes and top tubes, are drawn down to a smaller diameter at one end producing a taper gauge (or, in plain English) a **"conical"** tube. Conical tubes are significantly stiffer, for a given weight of material, than a cylindrical tube. The tubes need to be drawn (with the aid of a mandrel) to a thinner gauge in the centre, to save weight and increase resilience, leaving the ends suitably thick (where tube joints are.) This process is called butting...if both ends are left with thicker walls, the tubes are said to be **"double butted".**
In the final phase of the manufacture of our tube sets, before they are sent to the frame builder, they are **"heat treated"**. Apart from significantly raising the ultimate tensile strength and making the tubing even more resistant to denting, heat treating the tubes massively increases a, difficult to describe but easy to notice quality, which is unique to steel frames, that quality is resilience!

It can cost more to heat treat a tube than it does to manufacture it (from iron ore to tube) in the first place! It is little wonder that very few steel frames are heat treated! You can be certain that if a frame doesn't claim to be heat treated, it wont be!

Regarding the standard options and upgrades, whilst we have not chosen the most expensive items, we have taken great care to choose reliable components. We have been especially careful with the specification of the wheel options!
You may individually specify every component, if you wish...but our standard options and upgrades, will always provide excellent service and...

...far better value for money!

Frame sizing.

I just have to smile to myself, when I see other suppliers making such a big deal about measuring you for a frame, when they can only supply you with:- small, medium, large or extra large! Can there really be anybody who, given the choice of those 4 options, doesn't know whether they are small, medium, large or extra large? Well that's marketing! The smile slips a bit, when I realise that these same four sizes are supposed to suit straights, drops or butterfly bars. Now, come on guys, that really is rubbish!
We can offer customers, who are looking for a derailleur geared touring bike, the choice of the traditional 700c Club Tour (in 10 different sizes!) or the more modern and, in my opinion, superior Sherpa (with 26" wheels) which is available in 11 different sizes!
There are 4 different sizes, with short top tubes, which are suitable for drops, or for a relaxed position with butterfly bars. We can also offer 4 different sizes with longer top tubes (slightly confusingly called XL) which are suitable for straight bars, or for a fairly aggressively sporty position with butterfly bars.
We also have 3 sizes with medium length top tubes (even more confusingly called L) these are suitable for some cyclists with long legs and a short body and arms (often female), who want to sit upright, with straight bars, or have a moderately sporty position with butterfly bars. These frame are also suitable for cyclists (usually male) who wish to use drops but who have long arms and back (compared to their actual height) or who wish to have a more stretched position.
I really must emphasise that we offer a "money back if not delighted" policy.
I can assure you that you will get the correct size frame, it may take a few adjustments for you to then achieve the perfect position, upon that frame but we guarantee that you will achieve it!
I sincerely believe that it is best to listen to what your own body tells you, about where **it** wants to sit and where **it** wants the bars, rather than to expect to find the solution, in a measurement, based completely on proportionally average sized body, of (probably) a different age to your own!
It is all but certain that you will have various weaknesses and injuries, for which you are already compensating, in your posture.
Your position, on the bike, needs to take account of these pre-existing conditions.
Of course, if you already have a bike upon which you are comfortable, you won't want to change that position and we certainly wouldn't want you to change it either! If you know where you want to sit, in relation to your pedals and where you want the bars, in relation to your saddle, we're able to...

duplicate this position...exactly!

I have developed an easy system, to accurately determine the minimum number of essential measurements, which are necessary to reproduce that position...exactly. Please see "Set up dimensions" on page 17.

For a complete bike. Buy a Thorn Sherpa, ride it for 14 days and, if you are not totally delighted, upon its return, either in person or safely packaged in a Thorn bike box, we will refund the purchase price.

How is that for confidence in the quality and performance of our product?

Unique Thorn 14 DAY money back pledge

As I've explained, our Sherpa is, in my (obviously unbiased) opinion, the very epitome of fine handling and the most superb luggage-carrying derailleur bike that you will have ever ridden. The original (derailleur geared) Thorn Nomad was the benchmark expedition touring bike...the Sherpa is better! You will only find out how good it really is by riding one yourself and we guarantee to refund your money, if you feel that it falls short, in any way, of being the exceptionally special touring bike, promised to you in this brochure.

Living on a planet with limited resources, it is frustrating to know that all touring bikes could be as good as this one... ...but the simple truth is that they are not.

Saddles

There is one question which I can never answer, "which is the most comfortable saddle?" It would be so easy if somebody made a saddle which was the most comfortable for everybody, but nobody does! And nobody ever will!

We are all different in that area.
Customers come to the showroom and press their thumb down into saddles and suck their teeth. If that was a valid test, most cyclists would choose a gel saddle. In fact I believe that almost everybody would find a gel saddle very comfortable, for a short period of time. I have yet to meet the person, who is happy to ride on one, for any great distance.

We sit on a part of our pelvis called the **ischial tuberosities** (sit bones). To protect the overlying muscle and skin from pressure, the ischial tuberosities are covered by a fat pad, the "bursa". By supporting the weight of our bodies on these bones, we protect the delicate structures between and in front of them (our perineum) from pressure, which could cause bruising, numbness, pain and could possibly lead to problems of swelling and infections. The bursie can be conditioned to become used to supporting weight, on a bicycle saddle, by gradually increasing the duration of the exercise. If too much is done too quickly, the bursas can become painfully inflamed, (bursitis). With a gel saddle, your bones sink further and further into the gel and you end up supporting your weight on the soft tissue. Add to that the absence of fresh air and you get sweaty too, which does nothing to alleviate the problem.
With a firm saddle your sit bones take your weight and prevent it from being borne, by the part of your anatomy, which is least capable of doing so.

Brooks leather saddles

have two reputations; they are famous for being extremely comfortable, yet they are also famous for being excruciatingly uncomfortable.
I find them comfortable! The firm hide supports the sit bones, gradually you break the saddle in, to your shape and the saddle breaks you in. If done sensibly, a great many people find their dream saddle with a Brooks, once they have broken it in.

Why try a Brooks?

The real point of trying a Brooks, is that it will mould to your shape and last for ages. If you like your Brooks, start breaking in a second one, on short journeys, because even they don't last for ever. With a back up Brooks saddle, you'll never be faced with the prospect of a big ride, on an unbroken saddle...this is the best time to consider a Brooks with titanium rails, which save weight and have even more spring.

We can sell you a bike, equipped with a Brooks B17 saddle upgrade, for significantly less, than it would cost you to buy a B17 later. Ride it only for short trips to start with and see if it suits, you can't know unless you try. If you waste money, sorry but at least you tried one.

If you then find a saddle that you really like, buy a load of them immediately because, these days, very few saddles remain unchanged for long, before long there will be a "new super whizz bang version", which may not be as good for you and the long search will begin again.

Women

Brooks B17

Our **Thorn Velo saddles** have a firm, but yielding plastic base and dense padding, you don't sink too far into them. We think that they are excellent saddles to find as original equipment on any bike.

Men's

Many cyclists find the **San Marco Rolls** saddle very comfortable, it is beautifully made with leather "upholstery" over dense foam. The Rolls is one of a small number of saddles which have remained fundamentally unchanged for decades. We buy the Classic saddle for use as OEM on our bikes. This means that the Classic finish costs you considerably less than the myriad of other finishes available on the San Marco Rolls.
If you get on with a Rolls, you'll have a friend for a very long time.

San Marco

Why are women's saddles shorter than men's?

I asked Fiona, who is a senior physiotherapist, she could offer no explanation. Nobody could offer an explanation. Eventually I realised; in Holland it was once commonplace for women to ride in cycling skirts.
Their bikes were typically short in the top tube and, when they dismounted, their skirts got hitched up on the saddles, so somebody invented the shortened women's saddles. Few women now ride in skirts, yet the shortened saddle still persists, does it matter? Yes, because the rails of a top quality saddle are springs. Springs provide comfort. Short springs are stiffer than long springs.
Ladies, don't assume you need a short saddle, you simply need a wider one, because your sit bones are probably further apart than a man's bones are.

Seat posts

Can the humble seat post really merit space of its own in this brochure?
The black alloy seat post that we fit as standard issue is a very nice quality item, it is micro-adjustable and it does its job well. There is little reason for choosing anything else.
You could spend more money and choose a Shimano Pro PLT seat post. It would save a little weight and look "sexier", if that's what you want from a seat post!

Wheels.

All Sherpas are supplied with 36h wheels. We hand build each pair of wheels for your Sherpa. The hubs we use are Shimano Deore. These are nice quality hubs and build into very strong, long-lasting wheels.

If you want and can afford, to have some really special wheels built, we recommend that you use Hope Pro 3 hubs. These have proven themselves to be very strong, with exceptionally good bearings. You can choose Hope Pro3 hubs in silver, black or red.

Rims

We have decided upon 3 different rims to offer with the Sherpa.
We offer the choice of the expedition quality **Rigida Andra 30** rim or the middleweight **Rigida Grizzly rim**. These rims are black anodised and they each have the option of having a super hard tungsten carbide brake surface (**CSS**). We also offer the DT Swiss XR 425 Rims.

Rigida Grizzly rims

These are our preferred choice for most Sherpa bike builds. They are reasonably light in weight but they're certainly not ultra lightweight rims, which would be a liability on a heavy touring bike. We wouldn't recommend them to anyone contemplating an epic tour or a tour on really rough roads.
Many cyclists may only use their Sherpas on good road surfaces and their trips may never be far enough away from civilisation to require a week's shopping for a hungry cyclist! Others may plan to drop off the camping kit, establish "base camp", go for a series of day rides, then perhaps move on to a new base camp. (Fiona and I also enjoy these methods of cycle touring too.)
If this is what you seek and, as long as you are not exceptionally heavy yourself, you will be delighted by the zip that reasonably light weight wheels, tyres and tubes can offer you.
The Grizzly rims are reasonably light because the walls of the rim are not as thick as the walls of an expedition rim.
If you don't use your brakes too much you will get good service from the standard Grizzly rims. Customers who clock up high mileages are advised to get the CSS option. Then you can have light wheels, which last a long time, as long as you keep to the remit that you originally set for them!

The Andra 30 rim

These build into the strongest wheels that we have ever sold. They stand up to tandem expeditions. The Andra 30 is not as heavy as our, previously favoured, expedition rim, the Sun Rhyno but the alloy is tougher and even the non CSS rims last a long time. If you are planning to go on a really long tour, or if you plan to do a lot of travelling on really rough roads, or if you are a very heavy cyclist, we advise you to select this option.

BUT PLEASE NOTE:-
For many cyclists these rims are overkill and the inevitable loss of performance could mar the enjoyment of your everyday cycling.

The CSS brake surface

CSS stands for carbide super sonic; tungsten carbide is (apparently) fired at the rim, in a plasma jet at 5 times the speed of sound! At this speed of impact, it fuses with the aluminium. The brake surface is subsequently ground smooth and the rim is ready for a really long and hard life.
There is only one downside, apart from the extra cost; these rims, particularly the front, can make the brakes squeal with an ear splitting intensity. In a short time, this will diminish and then disappear, provided you continue to use the brakes!
I tell you this now, so that you can decide for yourself whether or not, you can cope with this noise. Not all the rims squeal but it is best to assume that yours will. A paste of sandy mud, applied to the brake surfaces and some steep hills, will hasten the return of harmony.
You need specific brake pads for CSS rims. These are included in the upgrade price if you choose this option.

DT Swiss XR 425 Rims.

These are cross country racing rims. They are very lightweight and can certainly encourage you to make big efforts...they are seriously quick. They are only suitable for lighter weight cyclists on lightweight tours. **Please note:-** these rims are lightweight because they use less aluminium. This means that if you indulge in "comfort braking" (dragging the pads on the rims and also braking more than is necessary) or if you have to use your brakes a lot, because you are an urban commuter, you will wear these rims out very quickly...other cyclists may get many years' of excellent service out of them. You must decide whether these are for you.

Sapim stainless spokes.

We use the finest stainless 14g spokes on both wheels.

The Most important Ingredient in a wheel.

The "best" hub, the "best" rim and the "best" spokes are items which are often talked about by cyclists. The most important "best" ingredient in a wheel, is the person who built it!

Warning!

The best wheel builders cannot make a superb wheel out of second rate components but they can make a sound wheel...which would last well.

However a second rate builder can permanently transform top quality components, into second rate items.

We have the exclusive services of a master wheel builder...that's why many of our customers travel continuously, for years and never need a spoke key!

Tyres

Schwalbe Marathon EX

Fiona and I have recently returned from a tour in Uruguay, Argentina and Chile. We belted across the flat pampas and climbed the pre-cordilleras on pretty good roads, until we reached the Andes, where the roads rapidly deteriorated into Ripio. We used the new **Schwalbe Marathon EX** tyres on this trip. The Sherpa frames will accommodate 2.0" tyres and mudguards. 2.0" EX tyres are exceptionally lightweight at a mere 600g. Much of the weight saving has been achieved by using new generation materials for the carcass, especially the side walls. We had no problem whatsoever with the structural integrity of the new carcass.

Supreme

Fi and I have been using the **1.6" Marathon Supreme** on our tandem for Audax rides and we find it very quick and adequately comfortable. It would be a good choice on a high mileage Sherpa, which was going to be used predominantly on good road surfaces.

We've used **2.0" Schwalbe Marathon Supreme** tyres in India, on tarmac which varied from smooth to very broken and they were truly excellent. They were remarkably quick, comfortable and grippy but they could be deadly in any loose, or slippery, off road situation. If you only cycle on sealed roads, these are probably the ultimate tyre for heavy loads and long distances.

Pasela

Fiona and I have used **1.75" Panaracer Pasela Tourguard** tyres on our tandem and we still have them on our heavy touring bikes. They are lightweight tyres, which excel on smooth tarmac and bumpy country lanes. They are deceptively quick. Thanks to their really supple sidewalls they are very comfortable. They have even been on some dry tracks over the Quantocks, which are normally the preserve of MTBs. I would certainly use them on an extended tour of Europe or the USA, as long as I planned to stick to the tarmac. We did use them on a tour of Western Australia, which involved hundreds of miles on gravel roads. We managed to avoid falling off, even when the "gravel" was marble sized pebbles but that was despite the tyres, not because of them!
The Paselas would be hell on the ripio and I'd never choose to take them, as the only choice of tyre, to Africa or the Himalayas.
If you travel on fairly good roads the **1.5" Panaracer Pasela** tyres will provide some benefit from the reduced weight but the Sherpa frames are necessarily stiff and rigid and these tyres would be less comfortable and less efficient on all but the smoothest surfaces.

The new **2.0" Schwalbe Marathon Dureme** tyre weighs 590g and may be a better option than the EX tyres, or the Supremes, because it appears to be a very good all rounder. The Dureme is not as good as the EX on really rough (or slippery) tracks and it is certainly not as fast as the 2.0" Supreme on good surfaces. It doesn't corner as well as a Supreme on dry roads but it is better than either the EX or the Supreme on wet and greasy tarmac. It is not as good as the correct choice of EX or Supreme in specific situations but **that is the point of being a "Jack of all Trades".**

I am not a fan of the 1.75" Schwalbe Marathon Plus Smart guard tyre...it isn't fat enough to be comfortable and simply feels dead and heavy. It has its uses though. I had to concede that if I was travelling on glass strewn routes, through dodgy areas of certain cities, I may feel that risking a puncture, was also risking a mugging. There is no more reliable tyre than the Marathon Plus but, faced with the situation above, I'd look for another route, even if it was an extended loop!

Marathon plus Smart guard

Dureme

Conventional steel bead or folding?

All of my tyres have folding beads, they save 70g per wheel. I'd never worry about carrying an extra 140g of water but I do notice rotating weight and the steel bead offers no advantage at all, except to my bank account.

I used to hate seeing a new Sherpa leave the shop, with the heavy (780g) Marathon XR tyres on it, even though the 2.25" version of these were the best tyres we'd ever used on our big trips. I knew how much they sap performance on a smooth road, without a load, which is where the bike was about to make a first impression on its new owner. That impression would be entirely different, if the bike had 1.75" Pasela tyres. First impressions count and it takes time (or a rough road and a heavy load!) to create a better one.

Spare tyres

All the tyres that we recommend are highly reliable, for most trips you should not need to carry a spare.
If your trip is an epic adventure, you may wish to consider what you will do when you wear your tyres out. Swapping front to rear, every few thousand miles, will help get the maximum life from the tyres. Some trips may be so long that even this will not suffice. You must then decide whether you will carry your next tyres with you, whether you can purchase new tyres, of suitable quality, en-route...or whether it is best to rendezvous with new tyres at a pre-arranged point. 26" tyres, to fit the Sherpa, will be available in every country in the world but some of the tyres you will find will not last long, with heavy loads...they will enable you to keep cycling until you can arrange something better though. **Unforeseen events can occur and then we all have 20:20 hindsight.**
A 1.75" folding Pasela tyre weighs 430g and takes up little space...it makes an excellent spare for most situations.
You will find it for sale in the accessory pages.

My recommendation for tyres.

Unless I knew about a specific trip you were contemplating, I'd recommend that you purchase a Sherpa with 1.75" folding Pasela tyres and choose 45mm mudguards. I'd also advise you to buy a pair of 2.0" Marathon EX tyres and fit these for big trips, after removing the mudguards.
Mudguards don't travel well. They also mean that it is difficult to reduce the size of the bike. When on big trips, I've used an Ortlieb dry bag fitted along the length of the carrier as a very effective rear mudguard, which has invariably kept the insert in my shorts dry.
The combination of "Crud Catcher" and that necessary evil...the bar bag, has always prevented muck from getting in my eyes or teeth.
In very specific situations, where only sealed tarmac roads are to be used, the 1.6 Marathon Supreme could be the ultimate tyre for your Sherpa.

We Offer the Sherpa in a choice of 2 different specifications:-

(1) SJSC Special, drop bar specification (2) Trekking straight bar STI spec.

OPTION (1) SJSC Special drop bar spec.

The ***"SJSC Special"*** 27 speed Spec has been chosen specifically to be the longest-lasting, most reliable specification possible, with due regard to cost! There is a huge range of gears available to the Sherpa' s owner. The spread of gears is greater than anything currently offered by other manufacturers. We had to "think outside the box" and add mountainbike transmission to our Sherpa because we know how essential it is have really low gears, in severe terrain...especially when you have a touring load and more especially, when you are really tired!

Transmission.

The transmission we have selected, whilst not being expensive, is really rather nice, we have used a Shimano Deore 22/32/44 chainset and 11-32 Cassette with Deore derailleurs. This **100% Shimano transmission** works really well and produces an awesome range of gears (582% in fact) which should give most people a gear for every situation likely to be encountered on the Sherpa. If you prefer a tighter spread of gears, we can substitute a Shimano Ultegra 12-27 cassette for a small upcharge).
Alternatively, you can choose to have either the 26/36/48 Deore or even a 30/39/50 Tiagra triple chainset. (See notes on gearing on page 12)

We have chosen bar end shifters for the Sherpa, rather than STI integrated shifter and brake lever, there are several reasons for this.
[1] Bar end shifters are more reliable than STI in shifting performance, particularly between chainrings, they can always be relied upon to change gear in difficult situations.
[2] Bar end shifters will continue to shift nicely with part-worn chains, cassettes and rings that wouldn't stand a chance of working with STI.
[3] Bar end shifters are easy to set up and don't require much maintenance.
[4] Bar end shifters are less vulnerable to damage.
[5] It is far easier to change from one extreme of the gear range to the other (such as when cresting a summit) with bar end shifters.
[6] Bar end shifters have the longest service life of any component we use on a derailleur touring bike.
[7] Bar ends work with MTB front mechs, which work with 22/32/44 chainsets.
[8] Tektro brake levers may be used with bar end shifters, these brake levers actually work properly with V brakes and V brakes are much more powerful and easy to maintain than cantilever brakes.

Wheels and tyres.

The beauty of 26" wheels is that very strong and reliable, yet not excessively heavy wheels can be built economically.
We equip the ***"Sherpa SJSC Special"*** with a set of "proper wheels", hand built by a master wheel-builder. We use black **Rigida grizzly rims**, with 36 top quality stainless spokes to promise long-term reliability. We have specified the very durable and reliable **Shimano Deore sealed MTB hubs** with 135mm axle spacing, to reduce wheel dish. We fit **1.75mm Panaracer Pasela tyres,** which have a great reputation for grip, reliability, long life and, most importantly, comfort! Paselas don't pick up many punctures either! We also know that the 1.75" Pasela is adequately fast…almost certainly the quickest 1.75", puncture-resisting, non folding tyre ever made. Having sold literally thousands; we also know for certain that this 500g tyre is the most reliable.
If you have more specific duties in mind for your Sherpa you can choose alternative tyres please see "Choosing tyres" on page 6
The Sherpa frame can easily accommodate 2.1" tyres and mudguards, with enough clearance for them to be an asset, rather than a liability!

Brakes. We fit the SJSC spec Sherpa with Shimano Deore V brakes and Tektro V brake specific drop bar levers. These Tektro levers, unlike other manufacturers previous attempts to marry drops with V's, actually work and have great "feel".
You can take the expensive plunge, and specify the best rim brakes ever to have been made, XTR V brakes.

Finishing kit items specific to SJSC Special spec.

Good quality alloy, anatomical drop handlebars and a front loading, threadless, 1.125" forged stem are fitted to the SJSC spec Sherpa, these are wrapped with black cork tape. The appropriate width bars are chosen for each size of frame, please see "Default dimensions Matrix" on the bottom left of page 7.

For information on recommended and desirable upgrades, please see pages 10, 14 and 15

Sherpa SJSC Special spec, what you see is what you get!

Size Shown is

510S

Bike shown with upgrade to Rolls saddle

OPTION (2) Trekking straight bar STI spec

Many cyclists prefer to use straight bars (or comfort bars) for cycle touring. The Trekking spec Sherpa is the straight handlebar option of the SJSC special. **(please see important notes on Sherpa frame on page 16).**
Tyres up to 2.0 may be fitted into the Sherpa's frame and forks.
When fitted with appropriate tyres, the Sherpa is capable of very competent off road performance! It handles tricky, twisty sections with much more aplomb than an early rigid mountainbike!
A Sherpa ought not be your first choice, for extreme MTB riding! But, when suitably shod, it is the perfect choice to follow routes, which comprise a mixture of country lanes and bridleways.
It makes a "bomb proof" commuting bike (many city streets being in worse condition than some MTB routes!)
You could upgrade to our expedition carrier and fit our front lo-loaders (and some profile cages) and take the machine for a cycle camping tour, anywhere in the world, with total confidence in the bike's abilities!

Transmission.

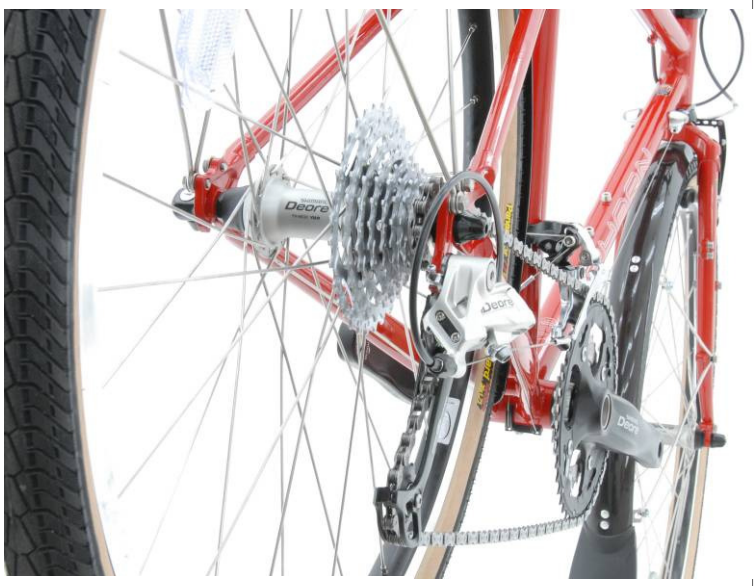
We fit a 100% Shimano Deore transmission with 22/32/44 chainrings and an 11-32 cassette. (Should you prefer a tighter range of gears, a 12-27 Ultegra 9speed cassette is available at an upcharge) We use Deore rapid fire STI pods and separate brake levers, these work really well, with a light action and a level of sophistication that wouldn't have been available on top of the range components, a few years ago.

Wheels and tyres.

We fit the wheels from the SJSC Special Spec, which are certainly strong enough to withstand serious trekking use. Tyre choice makes a significant difference to the performance of any bike. having such large diameter wheels, tyre choice makes an absolutely massive difference to the performance of a trekking bike. As the standard spec, we fit 26 x 1.75" Panaracer Pasela Tourguards, these give a wonderfully plush and secure ride on broken road surfaces, gravel cycle paths and hard packed, predominantly dry, bridleways.
For more information on tyres, please see page 7.

Brakes.

The use of straight bars allows us to fit V brake levers and callipers. Deore V brakes are very powerful, they have a nice "feel" and they are easy to maintain, what more do you need?



Checkout the upgrade to Ergon grips

Finishing kit items specific to Trekking spec bikes.

The trekking spec bikes are equipped with our own high quality straight (5 degree bend) handlebars. These bars are 580mm wide and are fitted with Herrmans grips not shown. For information on recommended and desirable upgrades, please see pages 14 and 15

Size Shown is

460XL

Bike shown with upgrades to Rolls saddle and Ergon grips.

Note, to allow accurate comparison of sizes, the 460L is shown at exactly the same scale as the 610XL on the next page

Trekking STI spec Sherpa, what you see is what you get!

Size Shown is

560S

This bike has many upgrades and is ready for a Sunday ride, a week in France or a World Tour!

Touring accessories and upgrades to your Sherpa spec, to make it an even more special bike.

The Standard specs of a Sherpa use very good quality items but you can specify even higher quality items at the time of purchase.
XTR V brakes are hideously expensive yet highly desirable.
If you are planning a really long trip, it is probably cost-effective to pay the extra for XT derailleurs.
Hope Pro3 hubs have an excellent reputation and having the best quality wheels you can get, is often the best advice.
The Shimano XT chainset is slightly lighter, the bearings are higher quality and the teeth last longer and shift even more precisely, this may be a worthwhile upgrade for you.

If the preceding advice sounds *wishy washy*, it is because you need a crystal ball to decide whether spending more money now, will save you money in the long run.

We do know beyond doubt that our carriers are the best you can buy and that the Profile bottle cage has no equal. You will need to add these to your bike to make it suitable for fairly serious touring.

Alternative but not necessarily recommended, drop bar STI spec

You will have read on page 8 why we have chosen to fit bar end shifters to the SJSC Special, drop bar spec Sherpa but you have the opportunity to choose

Ultegra STI shifters.

(Road STI needs Shimano BR-R550 canti brakes and a Tiagra front mech.

NOTE:- Road STI must be used with 26/36/48 (or 30/39/50) chainsets

Size Shown is

610XL

The ultimate derailleur geared touring bike.

This bike also has many upgrades and is ready to take on anything…
...a commute to work or a ride from Alaska to Terra del Fuego

You couldn't have these fittings on an alloy or titanium frame!

The same reasoning applies to upgrading the brakes, front and rear derailleurs and chainset, of the Trekking spec Sherpa, as it does to the Drop bar spec bike on the previous page.

The same comments apply regarding carriers and cages.

There is the opportunity to make some very desirable changes to handlebar grip and to add bar ends. In our opinion, these items result in a far better bike for extended touring and we prefer this option to a drop bar bike on such a tour.

As you will have read on page 9 the Trekking spec Sherpa uses STI. To transform a straight handlebar Sherpa, into the most suitable derailleur geared bike, available from anyone for expeditions, we seriously recommend that you use thumbshifters.
***Thumbies* were always the preferred long distance option but they were not as fashionable as STI and nobody makes a thumbie of suitable quality. Our Thorn bar end shifter conversion allows us to mount a Shimano Dura Ace bar end shifter, in such a way, that it becomes a top quality (index geared) Thumbie.**
I have no doubt that you will be able to make your transmission change gear, for twice as many miles, as you would be able to do with STI shifters.

"V" brakes *Vs* Hydraulic discs.

There is no doubt that hydraulic disc brakes are preferable to V brakes, in the deep, muddy conditions often found in UK mountainbiking. They are, however, very easily damaged (especially in transit) and a bent rotor is much more difficult to straighten than an "out of true" wheel. Indeed, if the rotor is warped enough, the wheel will not even turn! Don't compare the 8 to 10mm thick, cast rotors, found on modern cars and motorcycles, with the 2mm thick, stainless steel plate, rotors found on bicycles.

For every day use and for touring, we prefer the simplicity, ruggedness and ease of maintenance of V brakes. We even prefer the "feel" of top quality V brakes. We have rims available, with a tungsten carbide braking surface, which provides fantastic braking combined with exceptional longevity.

Please don't ask for a disc brake on steel forks, we simply won't do it!

We use raked blades, these are exceptionally comfortable, they will withstand the forces generated whilst cycling (and have done so for generations) but raked forks will not withstand the forces generated by a disc brake, which are very different to the forces generated by V brakes, even at the same rate of retardation. We have seen 3 ways that other manufacturers have "accomplished" this, they all seem stupid to us

(1) We have had customers complain that a well known custom builder's raked steel forks have permanently bent under braking.
(2) We have seen hideously uncomfortable, thick walled, straight blades used by another manufacturer, these forks don't fail, but I expect that an owner's hands and elbows soon would!
(3) The most ridiculous "solution" of all, is a heavy left blade and lighter right blade. The different blades must have different elastic properties (isn't that supposed to be the point?) and therefore the axle must twist, when a bump is hit. If the axle twists, then so must the front wheel. If the front wheel twists, then the bike consequently alters course.

Isn't hitting bumps comfortably and safely the main function of a bicycle's fork?

Why compromise comfort and safety, in order to fit a brake, which is not the most suitable choice, in the conditions that the steel fork will be used in?

Brakes.

Choosing your brakes with "straight" bars is easy.
The new Shimano Deore brakes now come with cartridge shoes. They have nice levers and they are very powerful. They are also very well made. I wish we had brakes like this 20 years ago! There is no point in spending any more money than this on brakes, unless you can make the quantum leap, in terms of price, to the XTR brakes. **XTR V** brakes are beautiful objects to behold but their real beauty is in the way they function.

The parallelogram mechanism maintains the same angle of attack on the rim. You can go from a new pad to a worn out pad without adjusting anything, other then the cable adjuster on the lever. You simply screw this adjuster back in, slide out the old pads, install the new ones and away you go again, without any more adjustment, simple.

The XTR brakes wear the pads out evenly too, other brakes wear the pads at an angle and the pad are scrap when they still have half the material left.
Shimano tried using this technology on less expensive models but, without Shimano's top level of engineering inside, these brakes became scrap very quickly. The parallelogram mechanism needs this level of precision engineering to be viable.

Each calliper pivots on an adjustable, replaceable bearing, which is sealed from the elements. There's a similar bearing in the levers as well. These bearings make the XTR V brakes exceptionally smooth and light to operate.

XTR brakes are not actually more powerful than new Deore brakes. A robot, equipped with an ABS sensor, could stop just as quickly with either brake. You could lock either wheel with either brake, both the Deore and XTR brakes are powerful enough to do this in the dry. But the XTR brakes have so much more modulation ("feel") that they allow you to get very close to the point of locking the wheel, without locking it.
Are they worth the money? It depends upon the way you ride your bike and/or how deep your pockets are.

Brakes for drop bar options.

If you choose to fit V brakes with drop bars, you must choose **Tektro drop bar V brake levers** and you must choose bar end levers.

Please Note

Drop bar STI levers will hit the bar before maximum brake force can be applied. Drop bar STI levers are best used with cantilever brakes,
(We say " best" because we don't like (or see the point of) the various widgets, that are offered, to modify the amount of cable that these levers pull)

Tiagra STI levers

Shimano BR-R550 Cantis

Cranks and crank lengths

A crank is simply a lever...a lever to which you attach the chainring and the pedals. The ideal length of the crank depends upon the length of your legs. If your cranks are too long, your knees will have more of a bend in them, when the crank is vertical and you are then more likely to suffer injury. If the cranks are too short, you may not be producing power as efficiently as possible.
On easy, flat terrain, a touring cyclist may perform 300 reps, with each leg, for every mile covered. (about 190 per kilometre) That's a lot of reps over a lifetime of cycling...it is important to make sure that you look after your knees!
The old "rule of thumb" was that the length of your cranks should be around 20% of the length of your legs. Some rules of thumb are more helpful than others, unfortunately this isn't one of them.

Men of above average height, or with above average length legs, should use 175mm cranks, as should women with legs this long.

Men of average height, with average length legs ,should use 170mm cranks, as should women with legs this long.

Women of average height and leg length (and men with shorter than average length legs) will benefit from using 165mm cranks. This length is only manufactured for the premium end of the market (Ultegra or XT and above) so you may never have tried 165mm cranks.

Cyclist's with exceptionally long legs, ought really to choose 180mm cranks but (once again) this length is only offered at the premium end of the market.

Please see default dimensions matrix on page 16

Gearing...a personal view.

Most bikes, in most bike shops, are geared too high. Pushing hard on the pedals at low revs is another sure way of damaging your knees. There are bikes available, off the shelf, which have higher gears than the 110" gear (53/13) that Eddy Merckx occasionally used...when he was sprinting for the line...at 50mph! That's bad enough but some bikes, which pretend to be touring bikes, also have such ridiculously high gears. This should be the clue you need, to be sure that the designer has never toured on a bike! We give you the option of having a 22/32/44 chainset on the Sherpa. When this is mated with the easily available 11-32 cassette this gives an awesome range of gears. (<18" to 104") The top gear is probably higher than you need, with a load but at least you have plenty of really low gears for hauling big loads over steep hills, when you are tired.
You could choose a 26/36/48 chainset; which is the smallest outer ring that will work with drop bar STI...if you must have STI; your gearing will then be too high. (21"-113") for serious loads, on serious climbs...especially when you are tired, or ill or if you've included one pass too many, in the day's itinerary!
Some cycle tourists are strong enough not to need low gears, especially if they have come from a racing background.
(But most are just too inexperienced at load hauling to know what can really be needed...at times!) We can offer a 12-27 cassette (as an upgrade) and even a 30/39/50 Tiagra chainset, if you'd prefer. This combination gives close ratio gears from <29" to 108" which, in my opinion, are best suited to fast touring, with moderate loads, over rolling terrain...which of course may be what you're planning!
To experienced cyclists, coming fresh to cycle touring, I'd simply say that "you need the same range of gears, as you'd use on a mountainbike."

Upgrades and Accessories

Hubs

The standard hubs on all of our derailleur bikes are Shimano Deore. These are nice pieces of kit and do the job well. But please note that our wheels are so well built, that we would expect the majority of our bikes to wear out the hubs before the wheel needed to be rebuilt. This is especially true if the tungsten carbide rims are chosen. The Hope Pro 3 hubs are available in silver, black or red, they have a 7075 machined body and use superb quality bearings. We recommend this very expensive upgrade very highly for high mileage dedicated cyclists. The rear hub is 9speed but has forward compatibility for 10sp...in case tourists are ever forced to use such items.

Dynohubs

For many cyclists it is probably more useful to upgrade the front hub to a dyno hub. Schmidt are the only manufacturer that I'd recommend, as a hub, they are top quality and run on top quality sealed bearings. They are the most efficient and reliable dyno hub on the market. Unlike other dyno hubs, the wheel spins almost as freely as a "normal" front hub, when it is not generating electricity and it is difficult to notice the drag, from the hub, when it is generating power. The Original Schmidt SON 28 is slightly less expensive and slightly heavier than the SON deluxe.

If you wish to use halogen bulbs the SON 28 is the only choice. It is the best choice if you wish to use it to recharge GPS batteries. **The SON 28 is only available in polished (silver) or anodised black.**
The new, more compact, lighter weight, SON Deluxe will only work with one of the new LED headlamps. It is a choice which many cyclists will make, if they want to use such a head lamp, for MTB 24 hour racing or for long distance Audax rides. The Deluxe will also charge batteries but it takes longer to do so...even with LED head lamps, the Deluxe does not produce power as well as the 28, at low speeds.
The SON Deluxe is available in polished (silver), anodised black or anodised red.

The new, more compact, lighter weight, SON Deluxe will only work with one of the new LED headlamps. It is a choice which many cyclists will make, if they want to use such a head lamp, for MTB 24 hour racing or for long distance Audax rides. The Deluxe will also charge batteries but it takes longer to do so...even with LED head lamps, the Deluxe does not produce power as well as the 28, at low speeds.

The SON Deluxe 36h hub is available in polished (silver) or anodised black

Dynamo lighting.

There is now a budget LED front light, which has made every halogen dynamo headlight obsolete... **the Busch & Muller Lumotec Lyt N Plus.** Whilst the performance of this light falls far short of the superlative Edelux, it costs a fraction of the price. The plus version also features a "standlight"

The Schmidt Edelux LED front light is simply awesome! It is awesome in terms of the quality of light output, it is awesome to think that one is producing such a light, without batteries and without noticeable effort! It is also awesome to consider how much it costs! But it is very well made. The casing is CNC machined from "the solid". The Edelux has a magnetic switch with 3 positions; on, off and sensor. The sensor position automatically switches on the light when light levels fall. The Edelux has a built in capacitor, which will produce several minutes of good light after the wheel stops turning. The LED itself has a copper heat sink to ensure a very long life and the lens is a superb example of optical technology. I have used 15W halogen rechargeable systems which give inferior illumination. **The Edelux is available in silver, black or red**

Brooks leather saddles

You will find brief descriptions of the saddles illustrated, along with current upgrade price in the upgrades to spec section of this brochure. We can't guarantee that you will find a Brooks comfortable, although very many cyclists swear by them. Now is your best chance to try a Brooks saddle because we can supply many of them at a bargain price on a new bike...especially the B17 standard.

Brooks B17 Standard

This saddle is available at a really super price because we buy lots as original equipment.

Rixen Kaul Mini map holder
Holds maps securely. Super tough Plexiglas. Quick release bracket, fits on either bars or stem
(Fittings for both options are supplied)

B17 Narrow

B68

Team Pro

B17 Ti

Swallow

Swift

Pedals

It's hard to advise what pedals to use on tour, it depends upon many factors. I have used SPD pedals for almost 2 decades now, I'd hate to use anything else. I feel really safe in them...my feet can't accidentally get bumped off the pedals. So far, I've always been happy with MTB racing shoes, the areas we like to cycle in are only cold at night! MTB racing shoes transfer power really well and they are exceptionally comfortable to cycle in. I always take another pair of shoes; either Gore-Tex walking shoes or sandals...depending upon where we are. I'd hate to only have one pair of shoes and so it doesn't matter if my cycling shoes look weird when I'm off the bike. You can try real Shimano PD M520 SPD pedals for very little money.

The PDM540 pedals are the next level up, they cost about twice as much. The very best of the SPD pedals, the XTR pedals are not suitable for touring, as you need a 10mm Allen Key to take them off the cranks. A 10mm key is a heavy bit of kit, with no other use on the bike.

If you've never ridden with SPD pedals, whether I'd recommend trying them really depends upon how old you are. You'll never have your feet still locked into them when you do but you will fall off once or twice, when you forget that you have them on. Getting used to SPD pedals, away from traffic is a good idea!

There is a nice pedal on the market, which I have used for several tours, the PD A530. This has SPD on one side and a flat platform on the other.

I can see the attraction for using flat pedals and walking shoes or sandals. The very best of these pedals, on the market are Shimano PD-MX30 DX. The large surface area reduces pressure when using flexible soled shoes. The stainless set screws help to grip slippery shoes.

The old favourite of using toe clips and straps would be my least favoured option. The straps get caught on things and the clips can kill your toes but that's just my opinion based on past experience. If you get on with them you'll find it hard to better the MKS GR9 with steel clips and nylon straps.

A computer is a nice thing to have, it gives you encouragement, and extra interest. It also allows you to determine when an oil change may be necessary on a Rohloff equipped bike

The Cateye CC-MC100W wireless computer is easy to use and it is undoubtedly the most reliable on the market.

There are a couple of front lights that I can recommend highly:-

When we are on our big trips, we don't actually plan on riding at night but we occasionally get caught out and we sometimes need to ride in urban areas.

The Cateye HL-EL 450 light (3 x AAA) can be seen from literally miles away...it can't really be used to see where you are going but, when being seen is a priority this is a nice bright, compact and reliable unit.

I also use the bigger and brighter (4 x AA) Cateye HL-EL530 light in the UK for Audax rides, when I know that there is a chance that I may still be on back roads in the dark. I can see where I'm going with this light but I do have to be careful not to cycle more quickly than is safe. I also use it in lanes in the winter, in conjunction with a dynohub. I aim the Cateye just in front of my wheel, which allows me to focus the Edelux even further down the road.

Regarding rear lights, I can see no logical argument for choosing anything other than the brightest, most visible light on the market...especially when this light is so reasonably priced. The Cateye TL-LD1100LED is **the rear light** to choose. It has 10 super bright LEDs, it is highly water resistant and reliable and each bank of 5 LEDs can be set in 4 different modes, this means that you can have 5 LEDs on constantly and 5 LEDs flashing! Run time 50 hours constant and 100 hours flashing.

Thorn 105mm Accessory bar. This useful device clamps directly to the steerer tube of the bike's fork, in place of some spacers. It can be used to mount various accessories, including lights and computers. The accessory bar is strong enough to accept a handlebar bag. The lower a bar bag is mounted, the less detrimental effect it will have on the bike's handling. Many bikes have their bars high enough to allow a handlebar mounted light, to shine over the top of a bar bag, that is mounted on one of our accessory bars.

There is no point in wearing a sweaty hydration pack on a touring bike!

The original "profile cage" of the early nineties was great...so great in fact that we got more made especially for us. It is very durable and comes very highly recommended, you should consider having 2 or 3 fitted.

You can see pics of our own heat treated, tubular Cro-Mo, front and rear expedition carriers (right and far right) these are the undoubtedly the strongest carriers on the market.

The Blackburn Mtn. Carrier will not carry a big load this isn't a problem as long as you never plan to carry more than 10Kg, in which case this will do the job really well.

Topeak mountain morph mini track pump (left)

This is a superb piece of kit to take on tour. It fits easily into a rear pannier or large saddlebag and makes short work of inflating tyres to the desired pressure for the prevailing conditions.

The Blackburn Mammoth pump (left) is the ideal pump for taking on day rides, with our 26" wheel bikes...it is the best of the mini pumps that I've used.

All sizes of the Sherpa have pump pegs which allow a Zefal HPX pump to be fitted to the LH seat stay **as long as tyres of 1.75" or narrower are used**.

This is a very convenient place to keep a pump, it doesn't reduce the number of bottles which may be carried and it doesn't need to be removed if the bike is lifted by the top tube. The Zefal pump is highly reliable and it makes short work of reaching the necessary pressure with fairly narrow 700c tyres.

Sizes 460S, 460XL, 485L, 510S, 510XL, and 535L take a size 1 pump.

Sizes 560S, 560XL, 610S and 610XL take a size 2 pump

PLEASE NOTE THE HPX IS NOW ONLY AVAILABLE IN SILVER AND NOT BLACK, AS SHOWN.

We have several upgrades which are recommended for the straight bar trekking option. The Ergon GP1-L grips (below) are very comfortable and highly recommended. We have fitted them to the bike shown on Page 9. We also recommend fitting the SJSC Ergo control bar ends (right) and also shown on page 11. Zoom ski bends are a traditional style bar end which still has a lot to offer and can be mounted inboard on or flat track bars.

SJSC Ergo Control

Zoom Ski Bends

Frame size	969 Tube set	Slope	Seat Tube C to C	Virtual top tube	BB Drop	Seat Angle	Chain Stay	Mid-Tube S/O (Standover height)	Height of top tube @ junction with head tube
460S	Standard Oversize	40	420	490	47	75	435	715	735
460XL	Standard Oversize	40	420	560	47	73.5	440	715	735
485L	Standard Oversize	45	440	540	47	73	440	735	758
510S	Standard Oversize	50	460	520	47	74	440	760	785
510XL	EXTRA Oversize	50	460	590	47	73	440	760	785
535L	EXTRA Oversize	55	480	575	42	72	445	780	808
560S	EXTRA Oversize	60	500	550	42	73.5	445	800	830
560XL	EXTRA Oversize	60	500	615	42	72	450	800	830
585L	EXTRA Oversize	65	520	590	42	72	450	825	858
610S	EXTRA Oversize	65	545	575	42	73	450	845	878
610XL	EXTRA Oversize	65	545	635	42	71.5	450	845	878

Important notes on Sherpa frames

In the table on the left you will notice that the smaller frames are made with **Thorn 969 standard oversized** tubing, these smaller frames are more resilient but will not carry such a large all-up load, **20Kg** is the maximum load at the rear and **8Kg** is the maximum for the forks. The larger sizes are made from **Thorn 969 extra oversized** tubing, these are used to keep the luggage carrying qualities of the Sherpa, proportional to its size. These larger frames are stronger but slightly heavier, they will carry in excess of **25Kg** at the rear and up to **8Kg** at the front.

You will also notice that some frames are marked as **"S"** this stands for short and means that the frame size is (almost) exclusively suitable for drops and "conventional" butterfly bars, which must use a long stem, such as the Modolo Yuma bars (see page4).
The **"XL"** frames are extra long, compared to drop bar frames (but actually only about the same length as our Raven Tour **L** frames for a given size).
These frames are designed almost exclusively for straight bars or comfort bars.
Some frames (485L, 535L and 585L) are marked as being **"L"** this is long relative to a drop bar frame, but shorter than a straight bar frame.
These sizes may be suitable for some people (mostly men with drop bars or mostly women with straight bars) who are not perfectly served by the **S** or the **XL** frames.

The reason for this confusion is that the original sizes of Sherpa frames were designed for drop bars and were available as short or long...the popularity of the Sherpa and the popularity of straight bars for touring, has led to the introduction of 4 new sizes, made for straight bars. We didn't want to re-classify the L frames as medium, as they are stamped "L"; so the new frames had to be called XL.

Sherpa 2011 size matrix
Sherpa default dimensions

Frame size	Steerer length	Stem length	Stem Angle	Crank Length Std cranks	Crank Length XT 22/32/44 upgrade	Drop-Bar Width
460S	240	80	6	170	165	42
460XL	240	90	15	170	165	N/A
485L	260	90	15	170	165	42
510S	280	100	17	170	170	42
510XL	280	100	17	170	170	N/A
535L	305	100	17	170	170	44
560S	330	110	17	175	175	44
560XL	330	110	17	175	175	N/A
585L	350	110	17	175	175	44
610S	380	110	17	175	180	44
610XL	380	120	17	175	180	N/A

Notes on default dimensions.

Unless you request otherwise, these are the dimensions of various components we will use, when building each size of bike. All dimensions are in mm (except drop bar width, which is traditionally measured in cm.) angles are in degrees. We always fit the stems "reversed"...which, in the case of a 17 degree stem, makes it parallel to the ground...this allows extra bar height to be achieved later, if required, by the simple expedient of "flipping" the stem.

PLEASE also NOTE

Stem lengths do not apply to butterfly bars, which must use stems at least 120mm long (larger sizes may require 150+mm)

Finish

The Sherpa frames and forks have a multi stage finish. The frames are treated internally, with a rust inhibitor. The outside surfaces are sprayed, with a rust-inhibiting primer. The frames are then coated, with a super tough and environmentally friendly powder coat finish, the decals are applied and the frames are given a second coat of powder, this time it's clear powder "lacquer". The decals are effectively "sealed into the finish" and you couldn't pick them off if you wanted to.

Colour options

The Sherpa frames are available in a choice of two colours… a very bold red, which we call "blood red", with silver decals or you can choose "satin black" with silver decals.
The red is completely "in your face", whilst the satin black is cool, sophisticated and melts into the background. I can't advise you on colour, other than to repeat, what is surely common knowledge, "red bikes are invariably the quickest".

THORN Sherpa ORDER FORM

Frame and fork kit..... £450 ☐
Complete bike...SJSC Special drop bar spec.....£1250 ☐
Complete bike...Trekking straight bar STI spec.....£1230 ☐

Size and colour

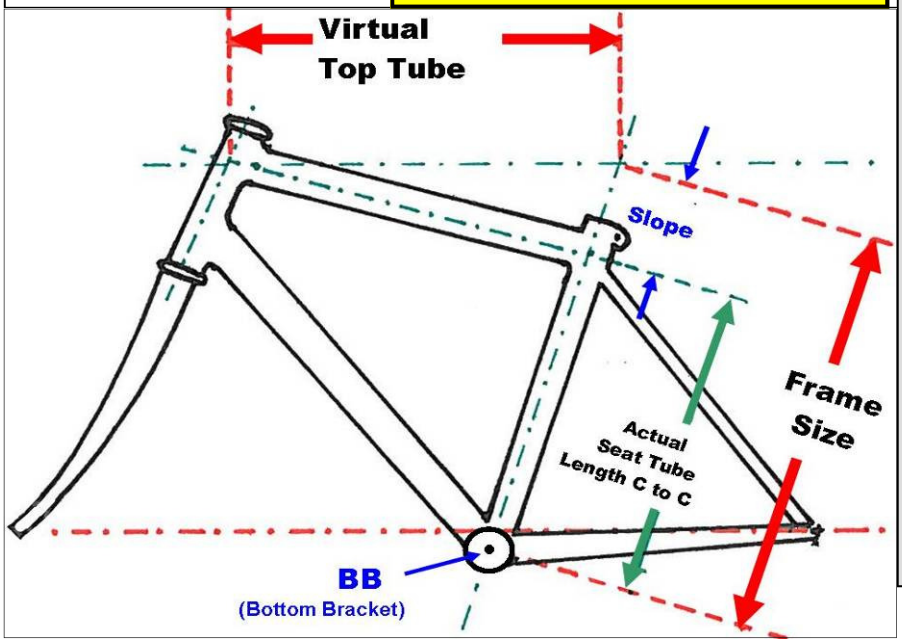
- ☐ 460S Ex Small short TT
- ☐ 460XL Ex Small long TT
- ☐ 485L Small medium TT
- ☐ 510S Small/Med short TT
- ☐ 510XL Small/Med long TT
- ☐ 535L Medium medium TT
- ☐ 560S Med/Large short TT
- ☐ 560XL Med/Large long TT
- ☐ 585L Large medium TT
- ☐ 610S X Large short TT
- ☐ 610XL X Large long TT

Red ☐

Matt Black ☐

You'll see lots of choices on pages 18 and 19 but please remember that either of the standard options makes a super day to day bike. Simply adding pedals, cages and a carrier will provide you with an excellent machine.

Just ring our helpful sales team.



Invoice No

Male ☐ Female ☐ Title_____

First name_____

Surname_____

Address_____

_____

Town_____

County_____

Country_____

Postcode

Telephone numbers.

Home_____

Work_____

Mobile_____

Email_____@_____

Call sales on 01278 441 505
Email sales@thorncycles.co.uk
Online www.thorncycles.com

St John St Cycles,
Thorn Cycles Ltd,
91-93 St John St,
BRIDGWATER,
Somerset
TA6 5HX

PLEASE NOTE:- Occasionally some items become unavailable for long periods of time. We reserve the right to substitute items of similar (or greater) value, where there will be no adverse affect on function. No surcharge will be made for this.
St John St Cycles is a trading style of Thorn Cycles Ltd (Incorporated in England 4121096 registered office: St John St Cycles, 91-93 St John St, Bridgwater, TA6 5HX)

Set up dimensions

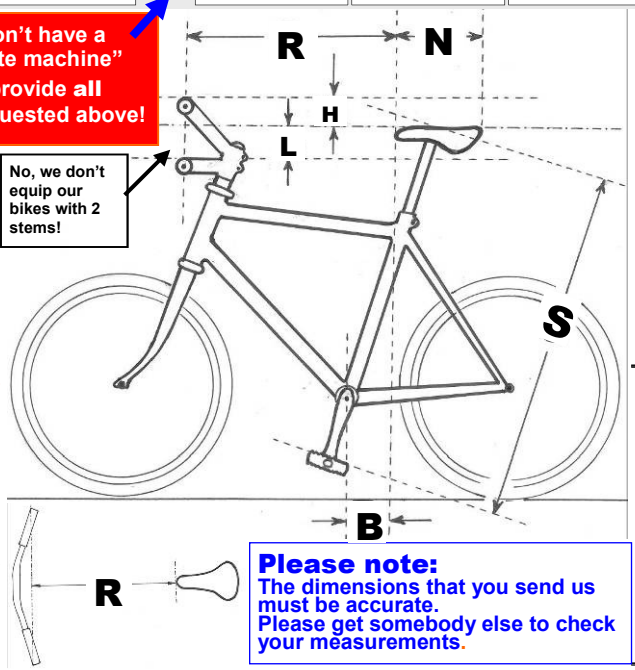
Height = _____mm Standover Height =_____mm Shoe size =-

Racing	Sporty	Relaxed	Upright	Dropped	Straight	Comfort	Other

The dimensions below will enable us to set up your new bike exactly as your favourite machine. Please provide either "**L**" or "**H**"

If you don't have a "favourite machine" please provide all data requested above!

No, we don't equip our bikes with 2 stems!



N=_____mm
Overall saddle length & name of saddle.

S=_____mm
Distance from top of pedal (with crank in line with seat tube) to the top of the saddle, measured along the seat tube.

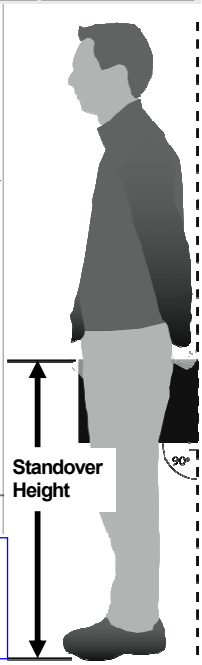
L=_____mm
Using a level straight edge; distance from top of the saddle to top of stem (with drops.)
Or to top of grips, with straight or comfort bars.
Bars are lower than saddle.

H=_____mm
Using level straight edge; distance from top of saddle to top of stem (drop bars). Or to top of grips, with straight or comfort bars.
Bars are higher than saddle.

B=_____mm
Distance of plumb line behind BB, from saddle.

R=_____mm
Distance from tip of saddle to a centre line through the handlebar grips. (Or to the straight tops of drop bars)
Please see diagram

Please note:
The dimensions that you send us must be accurate.
Please get somebody else to check your measurements.



How standover height is to be measured.

[1] Cycle shoes must be worn
[2] Measure the distance from the ground to the top of a tube (or thick book) which is parallel to the ground.
[3] Raise the tube (or book) as high as it will go, until contact with the crotch is made.

Standover height is NOT trouser length, trousers go down to the ankle... ...feet go down to the ground with shoes!

How to select your own specification for your Sherpa.

Upgrades which are recommended for a super bike, where costs are to be kept to a minimum are highlighted in pale orange. Drop bar specific items highlighted in pale yellow and straight bar specific items are highlighted in pale pink.

To build the best possible drop bar, derailleur geared bike for fast, lightweight European cycle camping choose yellow highlights.

To build the ultimate heavy duty, derailleur geared, straight bar, expedition touring bike choose red highlights.

Items which are suitable for both the best possible drop or straight bar bike are highlighted in orange

When an item is not only the best possible but also available at a reasonable price it is highlighted in green.

PLEASE NOTE:- Schmidt and Edeluxe upgrades always highly recommended, if you want lights to see with or if you need to charge batteries...say in a phone or GPS...they are excess weight and a waste of money if you don't!

Choice *(Please circle your choice)*	Cost
Drop Handlebars	
Anatomic handlebars 42cm wide Default option small sizes	£0
Anatomic handlebars 44cm wide Default option larger sizes	£0
Shimano Pro PLT Bars and Stem in black, comprising compact bars and stem (saves 150g) choose bar width and stem length and write in notes.	£30
Straight Handlebars	
Thorn Straight bar. 580mm wide. A dependable high quality bar with a 5 degree bend, black. Default option	£0
Thorn Straight bar. As above but polished (silver)	£0
Thorn Narrow bar. 515mm wide, 5 deg bend, our own special design, with a short centre swell, to allow a very narrow position. Too narrow for use on rough tracks.	£0
Thorn Flat Track bar. 640mm wide, short centre swell and scale markings allow bars to be easily cut to 480mm if required. 10 degree pull back gives natural position.	£0
Thorn Mk2 comfort bar. 620mm wide. Not everybody's choice but considered brilliant, by those who do like them silver.	£0
Thorn Mk2 comfort bar. As above but black.	£0
Modolo travellers bars...you can read what we say about butterfly bars on pages 3 and 4	£40
Grips and bar ends (straight bars only)	
Herrmans DD08B Dual Density ergonomic grips. These are nice but nowhere near as nice as the GP1-L grips. Default option	£0
Grab-On MTN1 closed cell grips...A high quality and comfortable alternative to anatomic grips	£8
Ergon GP1-L Anatomic grips large black. The most comfortable grip we have ever used very highly rec'd. Suitable for straight bars, comfort bars or trekking bars.	£20
Ergon GC2-L Anatomic grips, including mag micro bar ends. Not our choice, could be used with straight bars or comfort bars.	£30
SJSC Ergo control bar ends. A comfortable, rubber covered, anatomical "T" shaped bar end.	£16
Cane Creek Ergo control bar end grip II Black only suitable for use only with straight bars highly recommended.	£30
Zoom Ski bends. Traditional ski bends, work best with straight bars. Polished (silver) or black.	£15
Grab-On closed cell sleeve for Ski or Lo-Pro bar ends Not suitable for use with drop bar brake lever options.	£8
Upgrade to XTR V brakes see page 12	£175

Choice *(Please circle your choice)*	Cost
Hubs delete std spec hubs.	
6 SPARE POLISHED SPOKES If you order these now, our wheel builder will pick them when he builds your wheels...they will then be from the same batch.	£5
Pitlock silver F&R skewer set	£35
Shimano Deore 36h hubs **Black** Default option	£0
Shimano Deore 36h hubs Silver	£0
Hope Pro3 Silver 36h anodised F + R hubs. In our opinion, the best quality derailleur hubs on the market. 9sp with 10sp forward compatibility	£150
Hope Pro3 Black 36h anodised F + R hubs as above but black	£150
Hope Pro3 Red 36h anodised F + R hubs as above but red	£150
Rims	
Andra 30 36h An exceptionally heavy duty rim suitable for the longest toughest trips.	£0
Andra 30 CSS 36h Andra rim with tungsten carbide brake track for extra long life. Inc Blue Swissstop pads	£85
Grizzly 36h Other people's heavy duty rim; this is our medium duty rim. Ideal for road based trips. Lighter and quicker than Andra but not as "bombproof" or long lasting. Default option	£0
Grizzly CSS 36h The carbide brake track doesn't make it any stronger but it does give the Grizzly rims an exceptionally long service life. Inc. Blue Swissstop pads.	£99
DT Swiss XR 425 cross country racing rim. Very lightweight and quick. Sporty Touring only...not suited to those who constantly indulge in comfort braking.	£50
Drill any of above rims for Schrader valve. NOTE:- We believe that this is a downgrade...Presta valves we supply are a better choice for cycle touring.	£5
Dyno Hubs add to standard spec, or to Hope upgrade above and delete front hub from build, Deduct £50 if upgrade to Hope has been selected.	
Schmidt SON 28 Polished 36h (silver) An awesome bit of kit, heavier than the SON deluxe but probably better, if you plan to charge batteries at low speed or power up a light simultaneously. Expensive but much cheaper to buy now, when the wheels are being built, than to upgrade to later!	£138
Schmidt SON 28 Polished 36h (black) As above but architectural quality black anodised	£160
Schmidt SON Deluxe polished 36h (silver). Lighter in weight than SON 28, produces as much light with LED lamp, not the best choice for charging at low speed.	£158
Schmidt SON Deluxe 36h black As above but anodised in architectural quality black	£168
LED Head lamps for dyno-hub	
The Busch & Muller Lumotec Lyt N Plus. A brilliant budget headlamp!	£40
Schmidt Edelux LED headlamp The best and brightest LED headlamp available. Polished (silver).	£130
Schmidt Edelux LED headlamp The best and brightest LED headlamp available. Architectural quality Black	£130
Schmidt Edelux LED headlamp The best and brightest LED headlamp available. Red anodised.	£140
Tyres	
Panaracer Pasela Tourguard 1.5" Lighter weight. Only recommended for good road surfaces	£0
Panaracer Pasela Tourguard 1.75" Recommended for sealed roads and excellent or occasional dirt roads. Default option	£0
Panaracer Pasela Tourguard 1.5"folding. Lighter weight Only recommended for good road surfaces	£20
Panaracer Pasela Tourguard 1.75"folding. Very highly rec'd for fast sealed roads and excellent or occasional dirt roads.	£20
Schwalbe Marathon EX 2.0 folding tyre.	£25
Schwalbe Marathon Supreme 1.6" **folding** reflex. The definitive tyre for fast touring on B roads, even with heavy loads over long distances. Still scary off road!	£28
Schwalbe Marathon Supreme 2.0" reflex. Excellent on smooth + broken roads, heavy duty use. Scary off road!	£15
Schwalbe Marathon Supreme 2,0" **folding** reflex. The definitive tyre for brisk riding on smooth + broken roads, with heavy loads over long distances. Still scary off road	£30
Schwalbe Marathon Dureme 2.0" reflex. A rival for the Supreme? Slightly slower but some dirt road potential.	£18
Schwalbe Marathon Dureme 2.0" reflex **folding.** As above but slightly quicker, still with some dirt road potential.	£40
Schwalbe Marathon plus 1.75 smart guard. The best puncture protection available but we find them hard work.	£10

Choice *(Please circle your choice)*	Cost
Gearing	
Deore chainset 170mm 22/32/44 Default option small sizes	£0
Deore chainset 175mm 22/32/44 Default option larger sizes	£0
Deore chainset 170mm 26/36/48	£6
Deore chainset 175mm 26/36/48	£6
Shimano Ultegra 12-27 9speed cassette	£30
XT Chainset 22/32/44 165mm cranks	£132
XT Chainset 22/32/44 170mm cranks	£132
XT Chainset 22/32/44 175mm cranks	£132
XT Chainset 22/32/44 180mm cranks	£132
Tiagra Chainset 50,39,30 rings 170mm	£10
Tiagra Chainset 50,39,30 rings 175mm	£10
XT Chainset 26/36/48 rings 170mm	£132
XT Chainset 26/36/48 rings 175mm	£132
Dura Ace thumbshifters, straight bars only. See page 11	£30
Ultegra 9sp STI (Whilst stock lasts) includes Shimano BR-R550 cantilever brakes and a Tiagra front mech. **NOTE must be used with 26/36/48 Deore or XT** chainset (or 30/39/50 Tiagra chainset) See yellow box on page 10	£145
Upgrade to Shimano XT rear mech. See page 10	£30
Upgrade to Shimano XT front mech. See page 10	£10
Saddles...Brooks	
Brooks B17 Standard saddle. Suits Men and Women. How do you know it won't be bliss, when broken in, unless you try it? But you may hate it and it may never suit you. **Black with black steel rails. This is a real bargain because we buy B17 Standard in quantity to fit as original equipment.**	£20
Brooks B17 Standard saddle, as above but **Honey with black steel rails.** Honey breaks in more quickly	£20
Brooks B17 Narrow saddle, as the name suggests narrow and unlikely to suit male tourists, never mind the female anatomy! **Black with black steel rails**	£46
Brooks B68 classic wide saddle, highly unlikely to suit any male anatomy...too wide for most women **Black with black steel rails.**	£46
Brooks B68 classic wide saddle as above but **Honey with black steel rails.**	£46
Brooks Team Pro. An iconic saddle with big copper rivets, between B17 standard and B17 narrow in width, would suit very few women. **Black with chrome rails.**	£54
Brooks Team Pro. As above but **Honey with chrome rails.**	£54
Brooks B17 Ti saddle. Suits Men and Women. If you know you like a B17 this saves weight and is more comfortable but best not used in severe terrain. **Black with Titanium rails.**	£138
Brooks B17 Ti saddle, as above but **Honey with Titanium rails.** Honey breaks in more quickly	£138
Brooks Swift This is a slightly narrower saddle and is unlikely to suit the female anatomy **Black with Chrome steel rails.**	£86
Brooks Swift This is a slightly narrower saddle and is unlikely to suit the female anatomy **Honey with Chrome steel rails.**	£86
Brooks Swallow The return of an icon. This saddle is dramatically cut away **Black with chrome rails.**	£107
Brooks Swallow The return of an icon. This saddle is dramatically cut away **Honey with chrome rails.**	£107
Mudguards	
SKS P45 mudguards black Default option	£0
SKS P45 mudguards silver	£0

Choice *(Please circle your choice)*	Cost
Mudguards continued	
SKS P55 mudguards black	£0
SKS P55 mudguards silver	£0
Saddles...other	
San Marco Rolls Classic saddle. This is very well made and long lasting. It is highly regarded by some for value and comfort, it has an almost cult following.	£25
Selle Royal MEN'S Travel Lite Gel saddle. We've never met anyone who was uncomfortable on a good gel saddle for short periods of time, or anyone who was **comfortable** on one for long periods!	£0
Selle Royal WOMEN'S Gel saddle. The comments above also apply here.	£0
Thorn Velo **MEN'S** saddle nice quality, firm padding. Could be perfect for you, if you don't want a Brooks or San Marco Rolls. Men's default option	£0
Thorn Velo **WOMEN'S** saddle nice quality, firm padding. . Women's default option	£0
Other saddles can be fitted.	£'s Vary
Pedals	
MKS GR9 pedal a classic **platform** pedal. Single side, so no use without toe clips. Supplied with Small steel clips,& nylon straps	£36
MKS GR9 pedal as above but with Med steel clips,& nylon straps	£36
MKS GR9 pedal as above with Large steel clips,& nylon straps	£36
MKS GR9 pedal as above with X large steel clips,& nylon straps	£36
Shimano PD **A530** SPD one side and concave platform the other. Ideal for touring. You can use MTB racing shoes or "ordinary footwear" without changing pedals.	£56
Shimano PD **M520** SPD pedals. A bargain. You can try SPD pedals without great expense. Silver	£19
Shimano PD **M540** SPD pedals Silver. Good quality double-sided SPD	£45
Other pedals can be found in the accessory pages.	£'s Vary
Carriers and Accessories	
Thorn Expedition carrier. Heat treated Cro-Mo tubes. Super strong and rigid. Overkill for most Audax Mk3 bikes	£70
Thorn Mk5 Lo-Loader. Heat treated Cro-Mo tubes. Super strong and rigid. Over the top choice for any Mk3	£70
Blackburn Mtn. rear carrier. Ideal choice for lightly loaded Sherpas. Black supplied	£35
Profile Design Kage. The best cage ever for touring!	£8 each
Cat eye CC-MC100W wireless computer. All necessary functions. Ultra reliable, with back lighting.	£40
Cat eye TL-LD 1100 10 LED Opticube rear light. Fits bracket on our carrier. Exceptionally bright and visible.	£30
Cateye HL-EL450 LED light excellent for being seen. Very bright, lightweight, compact and ultra reliable.	£30
Cateye HL-EL530 bigger, brighter and heavier than the above light. Can be used with care, to see where you are going.	£60
Thorn accessory bar 105mm extension. Fits in place of some spacers on steerer tube. Allows bar bag to be fitted lower than would otherwise be possible, frees up space on the bars.	£16
Topeak mountain morph mini track pump. Superb piece of kit quickly reaches reqd. pressure. Best kept in a pannier.	£27
Blackburn Mammoth pump. Ideal as a day ride pump with our 26" wheel bikes.	£15
Zefal HPX pump silver classic finish only.	£20
Rixen Kaul Mini map holder Super, well made compact bit of kit.	£20
Other accessories can be fitted.	£'s Vary
Spares	
Panaracer Pasela 1.5"folding tyre	£32
Panaracer Pasela 1.75"folding tyre	£32
Schwalbe presta tube	£4

In remote areas, reliability is the most important quality to look for in a bike. A Thorn Sherpa is hugely reliable because we use the ideal tubes for the job, see page 5. Reliability ensures a long service life and peace of mind.

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