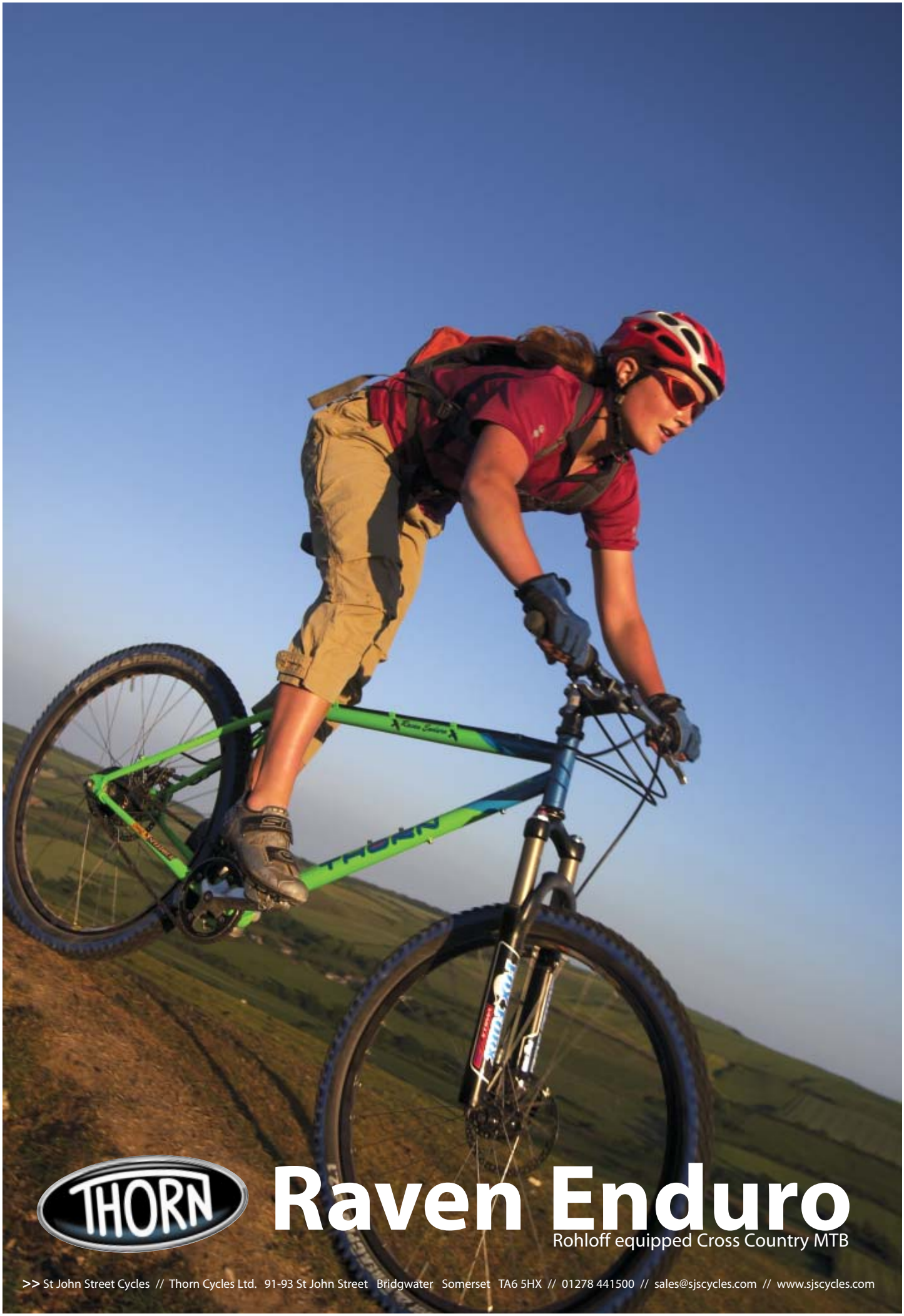

THORN
Raven Enduro
Rohloff equipped Cross Country MTB
>> St John Street Cycles // Thorn Cycles Ltd. 91-93 St John Street Bridgwater Somerset TA6 5HX // 01278 441500 // sales@sjscycles.com // www.sjscycles.com

Why are we making a mountain bike now, when we've never made one before?

The staff here have always been into mountain biking, Andy who designs our bikes, has owned and ridden MTB's since 1984.

But we have never thought that it was commercially viable to make one, and we never thought that we had anything new to offer… until now!



Thorn Designer, Touring Guru & Test Pilot Andy.B.

Our interest in the Rohloff hub for expedition touring bikes has developed into a passion.
(See 'living with a Rohloff hub')
Out of that passion came the realisation that the hub would be perfect for an MTB designed for real world UK conditions.

✗ Who enjoys spending more time cleaning and servicing their bike than riding it?
✗ Who enjoys the sound of a chain slapping on the stays?
✗ Who thinks that stopping to free the muck from front and rear derailleurs in order to be able to change gear is fun?

5 minutes with a hose and the application of an enduro motorcycle chain lube every four rides or so is all the routine care the Raven Enduro needs… plus a ten minute oil change once a year.

Does this sound good? →

✓ Can you then imagine the benefit of being able to change gear at any time, whether you are pedalling or not?
✓ Being able to get every last bit of service out of your chain ring, sprocket and chain?
✓ Not having to worry about trashing your derailleur on a rock?

Other benefits of the Rohloff hub are;
☆ there are 14 useable gears evenly spaced at 13.6% intervals.
☆ The cable adjustment is not critical…all the "indexing" takes place inside the hub!
☆ All the gears are obtained via a single twist grip, which is as bombproof as the hub.
☆ There is a perfect chain line in all the gears, this means vastly reduced chain wear.
☆ There is no possibility of chain "suck" or chain slap.
☆ The rear wheel is dishless and the spokes are shorter, which produce a much stronger wheel.
☆ When built in to a wheel the hub and the shifter actually weigh slightly less than the parts they replace.

☆ Most importantly of all Rohloff have **NEVER had an internal failure** and some hubs have now covered 80,000Km of demanding cycling!

For more detailed information please see "living with the Rohloff Speedhub"

This is not just something new… this is something revolutionary!

Look at the high specification and you will see that it is also a bargain!

RAVEN ENDURO





Why are we using steel for the frame?

Reynolds 853 is the highest quality steel available; our exclusive, medium weight, conical tubeset is in our humble opinion the finest 853 tubeset possible. Unlike some manufacturers, we also use ultimate quality steel for the stays, 853 stays are not available so we use Reynolds 725... it is a huge mistake to compromise on the quality of the stays because they contribute more than the main triangle to the quality of the ride!

If you have not ridden one of our state of the art steel frames you will be amazed at how comfortable, resilient and sweet it feels. You will soon see why we say "steel is real".
Top quality aluminium and cheap titanium frames feel vastly inferior. High quality Ti frames feel almost as good as our steel, but they are always expensive, they have few fittings and they often develop cracks. Perhaps it may become possible to join lightweight carbon tubes reliably one day... we will see.
We continue to use steel because we believe it is the best material available and we guarantee our frames for life. These are not just empty words, we will still be in business to honour that guarantee if we need to!

How is the frame constructed and how well thought-out are the fittings?

√ We really like neatness and we hate cable ties (we dislike the look of them, the way they collect muck and the way they cut wet hands), we have had considerable experience with touring bikes (!) So we know how frustrating it can be to have poorly considered braze-ons, it is easier to provide fittings with a steel frame... you may not always wish to use all the fittings, but if they were not there you would have no choice!

√ The frames are beautifully TIG welded with TIG welded ISO disc mount and gusset. The frame has brazed dropouts... these are our own exclusive, socketed, stainless steel, Rohloff-specific dropouts (which obviate the use of a torque arm) the other fittings are silver brazed, they are;

√ Comprehensive cable guides for fully enclosed gear cables and brake line... the cables route on the top of the top tube to avoid as much muck being collected as possible and to remove any painful points of contact with shoulder blades if the bike is carried in this way. The guides on the seat stay minimise the possibility of branches snagging the cables/brake line.

√ Bosses for a Crud Catcher and two sets of bottle cages; the down tube set are high on the tube to allow easy reach of a 'sticky' drink, to allow a Crud Catcher to shield the bottle from muck and to allow maximum shoulder room (if the seat tube bottle bosses are not being used) if the bike needs to carried in such a way, the seat tube set are positioned to allow the largest possible size bottle to be used if and when necessary.

√ 2 pairs of bosses on the seat stays to take our stainless steel micro rack (available late summer) which will carry a dry bag or rack pack weighing up to 4Kg. This is the most energy efficient way of taking some of the things you must have, to be self-sufficient, on epic rides in the high country, allowing you to use a much lighter hydration pack.


Thorn - Rohloff specific dropouts.


Comprehensive cable guides.


Fully enclosed brake & gear cables.



Why the eccentric bottom bracket?

Because, quite simply, it is the best solution to chain tensioning.

Using "track ends" would mean that a torque arm had to be used; this would make wheel removal a chore. Sliding dropouts are more fiddly to adjust than an eccentric bottom bracket. We have sold literally thousands of tandems fitted with eccentrics and as a consequence, we have the most simple, trouble free solution available to us.

A chain tensioner really is a non-starter for us, when the transmission wears, or you fit a new chain, the tensioner will allow the chain to jump. Heck it even gives you something to aim at a rock or jam with mud!

Why don't we have a full suspension frame?

Our bike is for cross country use with minimum maintenance and long life.

For down hill racing or fairly extreme free-riding, we accept that you need a full suss frame… indeed, we would want one ourselves (a Nicolai obviously) for these styles of riding! We also accept that, in certain situations, a full suss XC frame has the edge on a hard tail.
But we are convinced that, when using a carefully set up Thudbuster suspension seatpost, our steel hard tail is almost as comfortable over long distances as the most expensive full suss XC frame. But when you get out of the saddle and push hard, there is no comparison… our bike really flies!

Remember our bike is a **steel hard tail**… in fact to call it a hard tail is most unfair on it… really we should call it a "resilient tail"!

In UK conditions the six or eight pivots now used to try and replicate the ride of a hard tail when pushing hard are very time consuming and costly to maintain. Sooner or later this will consign your new toy to the bin. Furthermore there is not enough clearance on any full suss XC bikes we have seen (or owned) for winter conditions and 2.1" tyres.

Our bike is much cheaper to run, will last much longer, won't clog with mud and most importantly… when you are trying hard it is more responsive too.

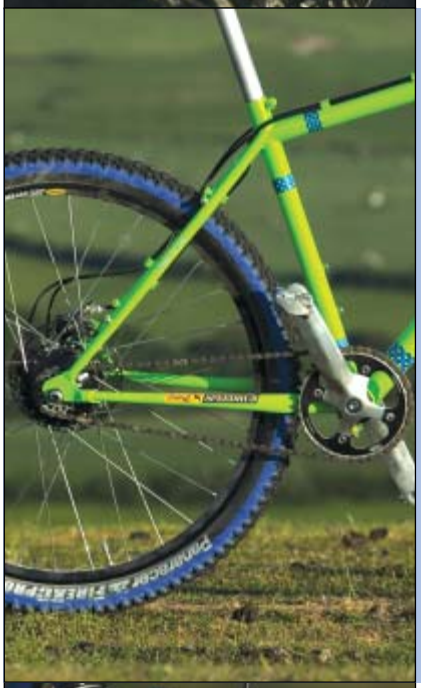


Why do we use disc brakes when we don't fit them to our touring bikes?

Top quality 'V' brakes on ceramic rims are as powerful as discs in dry conditions, they even have a better feel than discs. But discs, especially the new Hope discs, work really well in muddy conditions and they have no mud-trapping straddle wire, so they are almost essential on a serious UK MTB.

We like neatness and unused 'V' brake bosses look horrible, so our MTB is built exclusively for disc brakes.

(We are still not offering disc brakes on our touring bikes; the rotors are vulnerable to careless baggage handling, discs need service tools and special skills, they get in the way of pannier carriers and we believe that a touring bike which may be weeks away from a good bike shop should be as simple as possible.)



Why do we use such short chain stays?

Because we can!

The question should be "why doesn't anybody else use such short chain stays?" The answer would then be "because they can't!" We don't have to accommodate three chain rings so there is room with our 73mm bottom bracket shell for 2.1" tyres and as much UK mud as you stick to them! The short stays allow powerful climbing and acceleration, nimble handling on single-track and (perhaps surprisingly) the 16" stays also allow fearless descending because you can get your weight right over the rear wheel.

We are well known for our touring bikes, these have long chain stays because they need them to be able to carry big pannier bags and give you heel clearance. Our MTB has been designed for long distance XC use and does not need to carry much luggage. It will carry a small rack top bag, which is useful when you are on a 12 hour ride.




Fox Vanilla RL.

What forks do we recommend for our frames?

We have designed the two smallest frames (533S & 534SXL) to work best with 80mm travel forks, to keep the top tube as low as possible. The larger frames (559M & 589L) are designed for 100mm travel… in our humble opinion anything more than this is not necessary on an XC bike.

If you fit 100mm to the smaller frames they will be even more stable on fire roads but not as nimble on single track. The converse is true with the larger frames if you fit 80mm travel forks.

For value for money, reliability, performance, accurate steering and low running costs the FOX Vanilla RL is the best available. If you have deep pockets the FOX F80X or F100X offer outstanding performance and are the choice of most pro riders who are allowed (in their contracts) to use them.

Our geometry is perfect; it is tried and tested and tested and tested… in fact, whenever we make anything we try it out extensively ourselves and make sure that it works properly before we go into production… **that is why a "100 day money back if not satisfied guarantee" is exclusive to us.**


Fox F80X/F100X TerraLogic.

Fork Specifications:

Fox Vanilla RL
100mm travel (80mm travel on 533S & 534XL)
Currently the most reliable, laterally rigid, bomb-proof fork on the market!
☆ High-flow, open-bath damper with Shimmed Damping Control and 3-Way top-cap adjusters for on-the-fly convenience.
☆ Pre-load adjustable Coil main-spring with coil negative-spring system.
☆ 12-click, externally adjustable, Rebound damping. > On-the-fly lock-out feature.
☆ Approx Weight: 4.24lb (1.92kg)

Fox F80X/F100X TerraLogic
100mm travel (80mm travel on 533S & 534XL)
The Ultimate Enduro fork! ☆ TerraLogic technology distinguishes between rider induced forces from above the bike and bump induced forces from the ground. The inertia-valve then chooses between ultra-fast lock-out mode and glued-to-the-ground traction mode. ☆ Adjustable air-spring with coil negative-spring. ☆ Ultra low-stiction FLOAT Air-Spring System works in unison with the FLOAT's damping circuits to provide the perfect balance between efficiency, control and position-sensitive bottoming resistance. ☆ FOX unparalleled steering precision. ☆ High-Flow, open-bath damper for fade-free traction & big-hit control. ☆ 12-clicks of externally adjustable Rebound damping. ☆ Approx Weight: 3.52lb (1.59kg)

3 Colours

Matt Black Powder Coat



RAVEN ENDURO

Pearl Blue/Metallic Silver Powder Lacquer



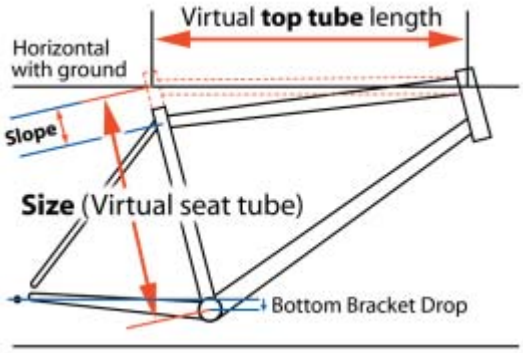
RAVEN ENDURO

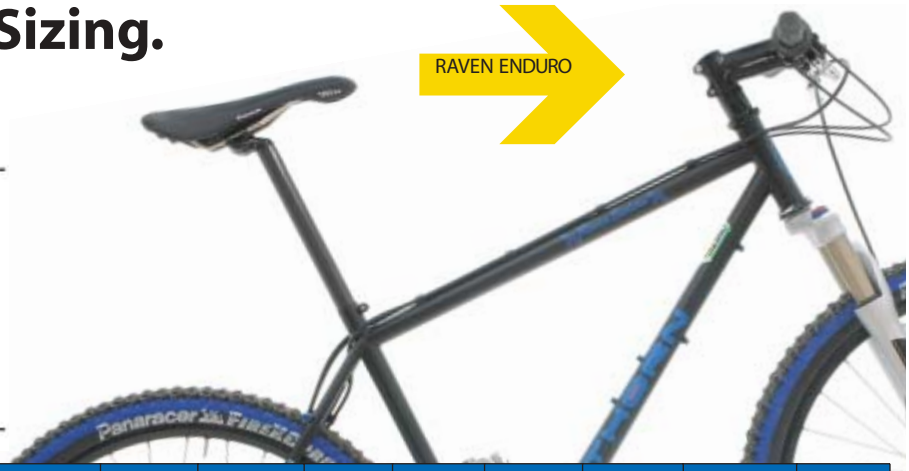
Pearl Blue/Flo Green Powder Lacquer



RAVEN ENDURO

Frame Geometry & Sizing.





Size Virtual Seat Tube (mm)	**Frame to suit Riders...**	Seat Tube (centre to top) (mm)	Seat Tube (centre to centre) (mm)	Slope (mm)	Fork Travel (mm)	Virtual Top Tube Length (mm)	Seat Angle° (degrees)	Chainstay Length (mm)	Bottom Bracket Drop (mm)
533 S	Mainly for women (short top tube) 5'4" or taller	380	330	203	80	570	74°	408	32
534S XL	People with short legs & long bodies (long top tube) 5'6" to 5'10"	410	360	174	80	615	73.5°	408	32
559 M	Average sized men & tall women 5'8" to 6'	444	394	165	100	600	73°	408	25
589 L	Taller men (very tall women?) 5'11" to 6'3"	482	432	157	100	625	72.5°	408	25

Why the bikes are called Ravens

Rohloff have long used the raven as their logo; we asked their permission to use their artwork and the name 'Raven' on our new, Rohloff-specific bike, and Rohloff were kind enough to grant us permission.

Had Rohloff used a wild boar as their logo, we would not have asked to use the name.

We admire ravens because they are considered to be the most intelligent of birds, they are also very social birds and in the wild they are only to be found high up in the mountains.

We like to think that fellow cyclists are intelligent, social creatures and cycling is usually at its best in the mountains.



UNIQUE THORN 100 DAY PLEDGE

Find out for yourself why so many of our customers own more than one Thorn bike!

☆ We are so convinced of the superiority of our product that we will make you the following offer...

☆ Buy a Thorn Raven Enduro, ride it for 100 days & if you are not totally delighted, we will give you all your money back...

Beat that!





is it heavier?... No!

Raven Enduro - Order form

Frame Only... £600

The THORN Raven **Enduro** is available as **frame only**

Frame Only: Alloy eccentric FSA Orbit XL II black headset (fitted), Thorn Micro-adjustable alloy seatpin, touch-up paint & all stainless screws. (please choose frame size & colour below)
Enduro Frame £600 ☐

Frame Kit... £1250

Buy this Kit... buy or supply a 32 hole rear rim of your choice and we'll build the wheel and set up the Rohloff cables for you... easy!

Frame Kit includes: Raven Enduro 853 frame, alloy eccentric, FSA Orbit XL II black headset (fitted), Thorn Micro-adjustable alloy seatpin, touch-up paint & all stainless screws, Rohloff 14 Speed disc hub, 32 x DT Swiss stainless steel spokes, Rohloff specific disc Rotor to suit your ISO disc brake 160mm minimum (Please specify), rear wheel build labour. (please choose frame size & colour below)
Enduro Frame Kit £1250 ☐

Frame Change... from £1400

Send us your ISO disc equipped MTB... We'll transfer all relevant parts to an Enduro frame, simply buy or supply any extra parts required. We'll send you back the completed Enduro and all unused parts.

Frame Change includes: Raven Enduro 853 frame, alloy eccentric, FSA Orbit XL II black headset (fitted), Thorn Micro-adjustable alloy seatpin, touch-up paint & all stainless screws, Rohloff 14 Speed disc hub, 32 x DT Swiss stainless steel spokes, Rohloff specific disc Rotor to suit your ISO disc brake 160mm minimum (Please specify), bike build labour, rear wheel build labour. (please choose frame size & colour below)
Enduro Frame Change from £1400 ☐

(32 hole rear rim required, 80-100mm travel fork, ø160mm max disc diameter ISO)

Complete Bike Without Fork... £1799

Standard Specification.

Got a recent high quality 80-100mm travel MTB fork?... Supply us with a suitable fork and we'll use it to build up a complete Raven Enduro. Please choose your desired frame size, frame colour & standard component options below (excluding fork).
Complete Bike Without Fork £1799 ☐

Complete Bike... £1999

Standard Specification.

Individually hand build to your exact specification... Please choose your desired frame size, frame colour & standard component options below. **Complete Bike** £1999 ☐

Size & Colour

* = Please √ tick box required

Size: **533 S** ☐ **534 XL** ☐ **559 M** ☐ **589 L** ☐

Colour: **Matt Black Powder Coat** ☐ **Pearl Blue/Metallic Silver Powder Lacquer** ☐ **Pearl Blue/Flo Green Powder Lacquer** ☐

Fork

* = Please √ tick box required

Standard

Long life... long service intervals

Fox Vanilla RL - 100mm travel (80mm travel on 533S & 534XL) ..... ☐
Currently the most reliable, laterally rigid, bomb-proof fork on the market! > High-flow, open-bath damper with Shimmed Damping Control and 3-Way top-cap adjusters for on-the-fly convenience. > Pre-load adjustable Coil main-spring with coil negative-spring system. > 12-click, externally adjustable, Rebound damping. > On-the-fly lock-out feature. > Approx Weight: 4.24lb (1.92kg)

Upgrade

This is the fork the pro's use! Fox's legendary reliability with cutting edge technology!

Fox F80X/F100X TerraLogic - 100mm travel (80mm travel on 533S & 534XL) ..... £240 ☐
The Ultimate Enduro fork! > TerraLogic technology distinguishes between rider induced forces from above the bike and bump induced forces from the ground. The inertia-valve then chooses between ultra-fast lock-out mode and glued-to-the-ground traction mode. > Adjustable air-spring with coil negative-spring. > Ultra low-stiction FLOAT Air-Spring System works in unison with the FLOAT's damping circuits to provide the perfect balance between efficiency, control and position-sensitive bottoming resistance. > FOX unparalleled steering precision. > High-Flow, open-bath damper for fade-free traction & big-hit control. > 12-clicks of externally adjustable Rebound damping. > Approx Weight: 3.52lb (1.59kg)

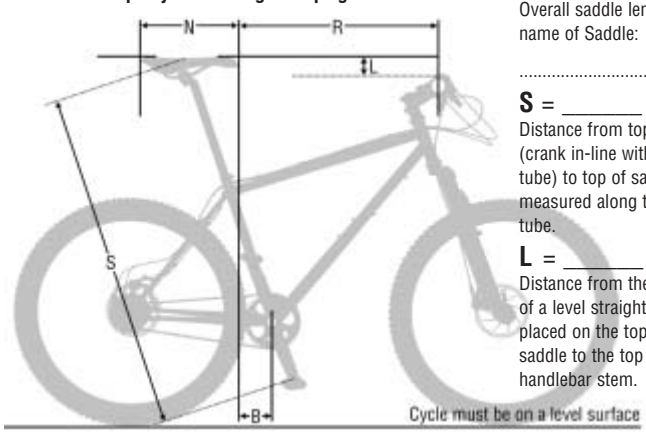
Set-up Dimensions

Standover Height = _____ mm

Height = _____ mm

Preferred riding position =

Relaxed ☐ **Sporty** ☐ **Racing** ☐ **Upright** ☐



The following dimensions will enable us to set up your New MTB exactly like your favourite machine.

N = _____ mm
Overall saddle length & name of Saddle:
.....

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

L = _____ mm
Distance from the bottom of a level straight edge placed on the top of the saddle to the top of the handlebar stem.

B = _____ mm
Distance that a plumb line (weight on a bit of thread) falls behind the centre of the bottom bracket when suspended from the tip of the saddle.

R = _____ mm
Distance from tip of saddle to the centre of the handlebars.

Note: The dimensions you send us must be accurate, otherwise this is a meaningless exercise... Get somebody else to check your measurements.

Invoice Nº

Title: Mr / Mrs / Miss / Ms / Dr

First name _____

Surname _____

Address _____

_____

_____

Town _____

County _____

Postcode _____

Country _____

Telephone Number

Home _____

Work _____

Mobile _____

Email address

_____ @ _____

Call: ☎ **01278 441500**
online: www.**sjscycles**.com

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 difference in function. No surcharge will be made.

St John Street Cycles is a trading style of Thorn Cycles Ltd (incorporated in England 4121096 - registered office: St John Street Cycles 91-93 St John Street, Bridgwater TA6 5HX)

Raven Enduro - Upgrades

Standard Components & Options (no pedals included)

* = Please √ tick box required

Headset - 1 1/8" threadless FSA Orbit XL II (aerospace bearings... currently **the best** available), black

Wheels - Rohloff Speedhub 500/14 Disc fitting 32 hole rear hub in silver (135mm rear O.L.N) with external gear mech, quick release skewer.
Rohloff sprocket (steel)* **16t** ☐ **17t** ☐
32 hole Hope XC 6 bolt quick release front hub* **Silver** ☐ **Black** ☐,
32 hole Mavic® 717DISC rims in black, DT Swiss stainless steel spokes, presta valve inner tubes, Velox rim tape.
Panaracer tyres* **Fire XC 1.8"** (folding bead) ☐ **Fire XC 2.1"** (folding bead) ☐

Chainset - > Thorn Vision alloy 104PCD 4 arm chainset - crank length* **165mm** ☐ **170mm** ☐ **175mm** ☐
> Thorn alloy 104PCD 4 arm chainring - size* **38t** ☐ **39t** ☐ **40t** ☐
> SRAM PC48 chain.
> Sealed bearing bottom bracket.

Brakes - Hope Mono Mini hydraulic disc brakes, 160mm Rotors, Hope Mini levers

> Rohloff Twist shifter

Stem - Thorn 1 1/8" alloy "front loading" threadless stem (length/angle + alloy spacers to suit)

Stem - Length _____ mm Angle° _____ **(Internal use only)**

Handlebars* > **Thorn alloy Comfort bars Mk1** - (designed in consultation with a senior physiotherapist) butted (3.0/1.8) 6061 T6 alloy, 18° (easy ± adjustment of reach simply by rotating the bars) ☐
High quality alloy straight bars ☐
> Comfortable handlebar grips & bell

Saddle* **Brooks Competition** - Lightweight saddle, 270g, FEC alloy rails **(NOT Leather)** ☐
Selle Italia XO Race - FEC alloy rails, 335g, black ☐

> Thorn alloy micro-adjustable seatpin.

Transmission Upgrades

> SRAM PC99 chain .....(Highest Quality)..... + £20 ☐

> Shimano Deore M510 Hollow Tech splined (Octalink) chainset (104 PCD, 4 arm)* **170mm** ☐ **175mm** ☐ in **Silver** ☐ **Black** ☐, Deore ES50 splined (Octalink) bottom bracket ..... + £55 ☐

> Shimano XT M752 Hollow Tech splined (Octalink) chainset (104 PCD, 4 arm)* **170mm** ☐ **175mm** ☐ **180mm** ☐, XT ES71 splined (Octalink) bottom bracket .. + £105 ☐

Wheel Upgrades

> Rohloff hub in **Black** anodized finish .... (Improved resistance to winter salt corrosion) ..... + £25 ☐

> Continental Supersonic Ultralite 100g!!! tubes 26"x1.75"-2.3"..... Pair + £16 ☐

Handlebar Upgrades

> Thorn Comfort bars Mk2 **- New improved design -** Designed in consultation with a senior physiotherapist. Double butted (1.8/3.0/1.8mm) 2014 alloy, 18° sweep. Extra wide 25.4mm centre section gives more room for attaching bar bags, computers & lights etc. (easy adjustment of reach simply by rotating the bars) 285g ..... + £10 ☐

> Thorn Carbon Riser bars - Designed in consultation with a senior physiotherapist. Carbon Kevlar wrapped 2014 butted alloy (easy adjustment of reach simply by rotating the bars) ..... + £40 ☐

> EASTON MonkeyLite XC Composite Riser Bar, Lo rise (32mm), ø25.4mm, width 660mm, 8° sweep, 4° upsweep, 170g ..... + £90 ☐

> EASTON EC70 Composite XC Bar, ø25.4mm, width 580mm, 3° sweep, 125g .... + £55 ☐

> Thorn Carbon Anatomic carbon bar ends - perfect shape for a secure comfortable grip & only 44g each! ..... + £50 ☐

Stem Upgrades

> EASTON EA70 MTB Stem, Forged Aluminium, 2 bolt composite-friendly faceplate, replaceable hardware... no more stripped bolts! ± 6° flip-flop rise, takes ø25.4mm bar, 135g (110mm)* Length: **90mm** ☐ **100mm** ☐ **110mm** ☐ **120mm** ☐ **130mm** ☐ + £50 ☐

Saddle & Seatpost Upgrades

Gents Saddles
Fi'zi:k CP3 Nisene Titanium rails ..... + £25 ☐
Selle Italia Flite Titanium rails, black ..... + £35 ☐

Womens Saddles
Terry Liberator X womens saddle - black ..... + £20 ☐
Terry Liberator X Ti comfort womens saddle - black ..... + £25 ☐

Seatposts
Carbon seatpost, 400mm length, micro adjustable alloy head, 250g + £30 ☐

Suspension Seatposts
Cane Creek 3G Thudbuster suspension seatpost... 3.9 inches (9.9cm) of plush travel, 400mm length, 590g, includes neoprene cover ..... + £135 ☐

USE XCR Alien (with layback) suspension seatpost - 64mm travel, 400mm length, including shim, silver - heavier, but really helps take out the big bumps ..... + £90 ☐

Rear Carriers

Thorn Stainless Steel rear carrier (Available Autumn 2004) ..... £POA ☐

Pedals

SPD type
Shimano (M424) SPD double sided pedals with resin cage, choose to clip in or ride on the cage platform (inc cleats) ..... £30 ☐
Shimano (M520) SPD double sided pedals (inc cleats) Silver ..... £20 ☐
Shimano LX (M540) SPD double sided pedals (inc cleats) ..... £40 ☐
Shimano M959 SPD double sided pedals (inc cleats) ..... £75 ☐

Clip & Strap type
Tioga Surefoot VI pedals, including toe clips & straps - **S** ☐ **M** ☐ **L** ☐ **XL** ☐ ..... £28 ☐

Other pedals please specify: _____

Accessories

Thorn SuperLite Carbon Fibre Bottle Cage... 35g, securely holds 0.5/0.75L bottles ..... £18 ☐

Thorn SuperSlick Full Wrap-Around Carbon Fibre Bottle Cage... 40g, securely holds 0.5/0.75L bottles ..... £18 ☐

Cateye Enduro cycle computer, heavy-duty wire (fitted) ..... £22 ☐

CRUD Racepack - Crudcatcher & rear Raceguard, black (fitted) ..... £14 ☐

Rohloff Spares

Rohloff sprocket tool for Speedhub 500/14 ..... £20 ☐

Rohloff sprocket (steel) for Speedhub 500/14 .....
15t ☐ **16t** ☐ **17t** ☐ ..... £20 ☐

Rohloff 2 stage full oil change kit for Speedhub 500/14 - includes cleaning oil & all season oil ..... £12 ☐