How to get the perfect set up on your THORN bike.

Issue Number 9 Oct 2012

Do you currently have a bike?

YES → **Are you (were you) happy with the set up?**

- YES → **Would you be happy with this set up on your new bike?** Please bear in mind that it may be for a different purpose.
  - YES → **Does (did) this bike have the same type of bars as you wish your new bike to have?**
    - YES → YES
    - NO → **Please apply correction factor, see "measuring an existing bike" in following pages.** → YES
  - NO → **Can you indicate exactly how this position would need to change, in order for it to be suitable?**
    - YES → **Does (did) this bike have the same type of bars as you wish your new bike to have?**
    - NO → NO
- NO → **Did you keep the set up dimensions from a previous bike?**
  - YES → YES
  - NO → NO

Please fill in ALL the details requested in the section "Personal details"
We will use this data to calculate the set up of your new bike for you.
Alternatively, you can make an appointment to visit us.
UK 01278 441505
sales@thorncycles.co.uk

Please fill in ALL the measurements in the section "Measuring an existing bike".
We will use these dimensions to set up the position on your new bike.
You may contact us by phone or email.
UK 01278 441505
sales@thorncycles.co.uk

If you are also prepared to fill in ALL the details in the "personal details" section, you will be able to help us to refine our database. Please note:- We will NOT use these personal details to calculate the set up on your bike.

Personal details

The dimensions we need are really quite simple.

In order to make something as special as your next THORN bike, we must have very specific and perhaps to some people, very personal information.
We need every bit of the information requested in the table below.

Alternatively, you may be able to complete the set up details requested in "Measuring your bike".

Or, as a third option, you are of course welcome to visit us and we will be happy to measure you.

Without one of these 3 options being complied with, we are unable to guarantee the results and only your statutory rights will apply.

We can set your bike up in many different positions:-
UPRIGHT, VERY RELAXED, RELAXED, FAIRLY RELAXED, FAIRLY SPORTY and RACING.
We will even take instruction to split the difference between 2 of the main positions. If this is your wish, please tick both boxes.

On the next page, you will see photographs of Steve showing the main positions, these are:-
VERY RELAXED, RELAXED, FAIRLY RELAXED, FAIRLY SPORTY and SPORTY.

We have found that apposition between fairly relaxed and fairly sporty has been frequently requested by customers of our more sporty bikes, this has been especially so with Mercury and Audax bike builds we now call this position SPORTY/RELAXED.

It is important to note that with the **UPRIGHT POSITION**...we can't know what is meant by this...more time must be spent discussing **YOUR exact and specific** requirements. An **UPRIGHT POSITION would only** be achievable with comfort bars.

Please also note that we can't know exactly what is meant by **RACING POSITION** either. We believe that anybody requesting a racing position ought to be able to supply specific details.

Previous THORN customers please note; we are now asking for standover height in bare feet. We call this BFSO.

There are 2 problems with measuring BFSO:-
How far into the crotch should you push the square? The answer is, until it causes the soft tissue to gently touch bone.
It is possible to tilt the pelvis significantly without realising it, which makes a nonsense of the result.
To avoid tilting the pelvis, stand against a vertical wall, with your head, heels and shoulder blades touching the wall.
Now try and touch the small of your back and calf muscles against the wall, the pelvis is immobilised and a meaningful measurement may now be taken. Please see the diagram below.
You will need someone else to help you to take this measurement.
You may need to improvise to find a suitable square. Really big coffee table books are an option.
A carefully cut and folded sheet of card, taken from an extra large carton is another option.

ARM SPAN. This is very simple to measure. Stand facing a wall and, with your arms horizontal, touch the corner of the wall with the longest finger of one hand and then see how far you can extend the corresponding finger of the other hand. Mark this point. It is then easy to measure from the corner to the mark.

DATA FOR THE PERSON THE BIKE IS FOR: Name		
DIMENSIONS AND OTHER DATA. **We must have an answer in every box.**	**GENDER M OR F**	
	WEIGHT (Kg)	
	AGE	
	HEIGHT (bare feet in mm.)	
	BFSO (Bare foot stand over height in mm.)	
	SHOE SIZE (continental)	
	ARM SPAN (mm)	
POSITION REQD. **Please tick one box, or 2 boxes.** **If you tick 2 boxes, we will aim for a position between them.**	**UPRIGHT**	
	VERY RELAXED	
	RELAXED	
	FAIRLY RELAXED	
	SPORTY/RELAXED (Not illustrated)	
	FAIRLY SPORTY	
	SPORTY	
	RACING	
CHOICE of SADDLE and **TYPE of HANDLEBARS REQUIRED.** **Please tick one and state width required if Flat Track bars are chosen.**	**SADDLE LENGTH (mm)** **Or NAME and MODEL**	
	CONVENTIONAL DROPS	
	STRAIGHT	
	FLAT TRACK width (mm)	
	COMFORT	
OTHER ESSENTIAL INFORMATION **Please tick one box.**	Experienced, fit and confident cyclist.	
	Less experienced but keen and reasonably fit cyclist.	
	Casual and/or nervous cyclist.	



VERY RELAXED...this is a position which places a very considerable amount of the rider's weight on the saddle. The rider is leaning forward slightly but is sufficiently upright to enable them to look around easily. This position is ideal for gentle cycling, or for cycling slowly and defensively in traffic.
The very relaxed position is not efficient at speed, or in high winds but it is possible to exaggerate the bend in the arms, in order to obtain a lower position, for short periods of time.
PLEASE NOTE: The bike will look more aesthetically pleasing, if comfort bars are used to gain some of the considerable height which is required. A very relaxed position is often only achievable, for very tall cyclists, by using comfort bars.
This position is not achievable with drop bars.

RELAXED...this is a position which places most of the rider's weight on the saddle. The rider is leaning forward a little more than with a very relaxed position but is still sufficiently upright to enable them to look around, without appreciably changing their position.
This position may not be achievable with drop bars.

FAIRLY RELAXED...this is a position which places much of the rider's weight on the saddle. The position is efficient for fairly brisk riding and is suited to assertive riding in traffic. More of the rider's weight is supported by their arms and hands. The rider is still sufficiently upright to enable them to look around...but only when they make a positive effort to do so.

FAIRLY SPORTY...this is an even lower position, which spreads the rider's weight between saddle and bars. The position is fairly aerodynamic and much more suited to brisk riding The rider is still able to raise themselves to look around when necessary. It may be uncomfortable to ride sedately in this position.
It is unlikely that this position is achievable with comfort bars.

SPORTY...this is a much lower position and it is very efficient for covering long distances at a brisk pace efficiently and in comfort. The position is not as low as a racing position but most cyclists are not racing cyclists. It would almost certainly be uncomfortable to ride slowly for any distance, in this position.
The majority of cyclists ought to still be able to look around when necessary...others may have to ride with one hand to facilitate this. Please don't confuse "looking around" with being able to glance behind.
It is vey unlikely that this position is achievable with comfort bars.



VERY RELAXED



RELAXED



FAIRLY RELAXED



FAIRLY SPORTY



FAIRLY SPORTY USING SKI BENDS



SPORTY



SPORTY USING SKI BENDS



We have tried to be less subjective with our descriptions of position.

In the pics on the left, we have set Steve up in a number of different positions.
These positions have been given a title...you can see what we mean by the terms;
VERY RELAXED,
RELAXED,
FAIRLY RELAXED,
FAIRLY SPORTY
and SPORTY.
Steve is around average height for a man (1745mm). He also has average length arms and legs for his height.
Please note, we make allowance for height, BFSO, gender and for body type. We also add 20mm to the height of the positions shown and cut the cables to suit...this is our margin for error...you can easily drop the bars by 20mm when you receive the bike.
You can see that Steve's position with ski bends, on a fairly sporty set up is very similar to his position on the grips with a sporty set up.

Please note. In the pics above of the "sporty" position, the stem we have used is longer than we would use, on this size bike. Normally would have used a longer frame to achieve this position.
We fitted the 150mm stem simply to illustrate the "sporty" position. It also serves to illustrate that no one frame can be chosen for every set up position.

Measuring an existing bike

The dimensions we ask for, will enable us to set up your new bike exactly as your favourite machine.
Please provide either "L" or "H".

Experience has shown us that these dimensions are the easiest dimensions to take, that will plot exactly where your saddle is, in relation to your pedals. They also establish exactly where your bars are in relation to your saddle.

All these dimensions are necessary but no other dimensions are required. However, if you could spare us the time and also fill in the data requested in "personal details" it will help us improve our database.

Please use this method only.

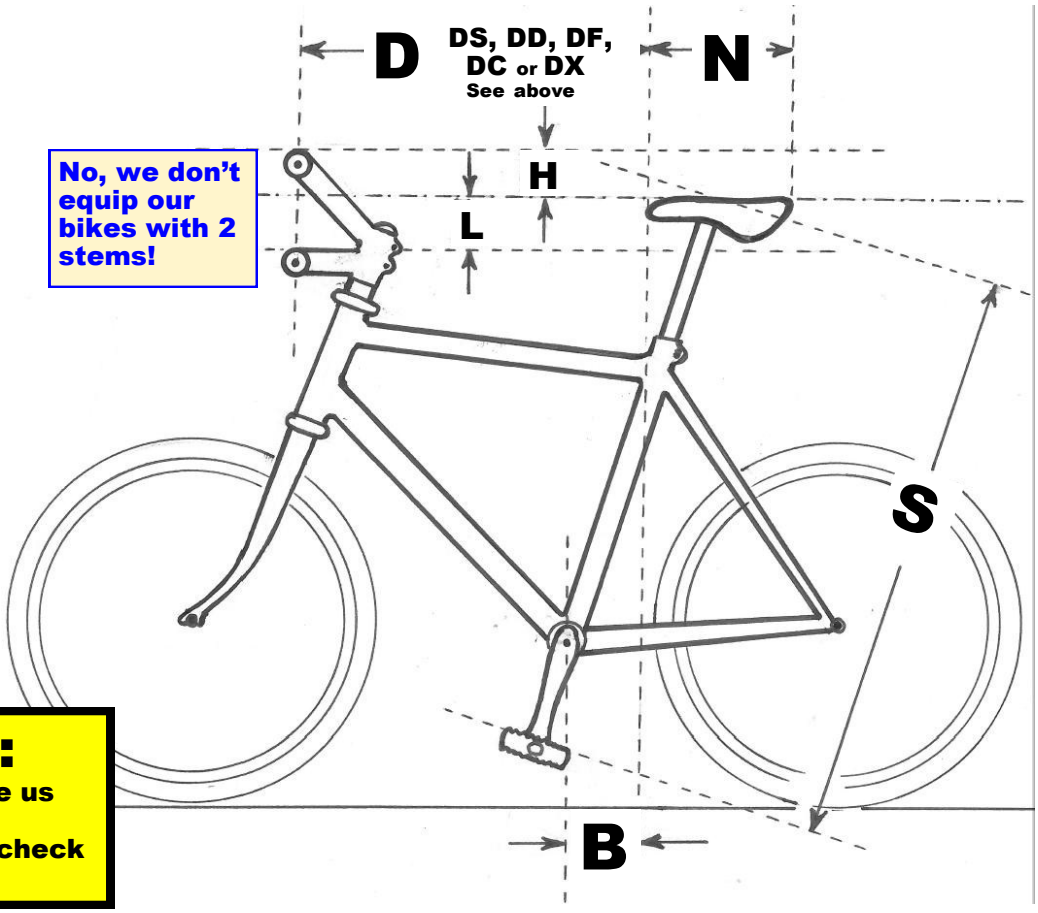
The dimensions we need to duplicate your position. Please refer to diagrams below.

N	**Overall saddle length in mm. And/or name of saddle.**
S	The distance in mm. **FROM THE UPPER SURFACE OF THE LOWER PEDAL** (with crank in line with seat tube) to the top of the saddle, measured along the seat tube. **MAKE CERTAIN THAT YOU GET THIS RIGHT...PLEASE CHECK CAREFULLY WHAT WE ARE ASKING FOR, IF YOU GET THIS WRONG YOU WILL ALMOST CERTAINLY GET THE WRONG SIZE FRAME.**
B	The distance that a plumb line falls behind the BB, when suspended from the nose of the saddle. **IF YOU GET THIS WRONG IT WILL SERIOUSLY AFFECT THE REACH.**
L	On a STRAIGHT BAR BIKE, this is the distance that the tops of the GRIPS are lower than saddle. On a DROP BAR BIKE, it is the distance that the top of the stem is lower than the saddle. Use a long bubble level or a straight edge with a small bubble level taped to it and measure from the top of the saddle. the bike must be on a level surface.
H	On a STRAIGHT BAR BIKE, this is the distance that the tops of the GRIPS are higher than saddle. On a DROP BAR BIKE, it is the distance that the top of the stem is higher than the saddle. You can use the same methodology as described in L above to measure this
DS	This is the distance from the nose of the saddle to the centre of the stem, on a bike with **3-5° STRAIGHT BARS.** These are the most common straight bars in use today, most MTB low rise bars are 5°. Our THORN STRAIGHT BARS and THORN NARROW BARS are both 5° BARS.
DD	This is the distance from the nose of the saddle to the centre of the stem, on a bike with **DROP BARS**
DF	This is the distance from the nose of the saddle to the centre of the stem, on a bike with **THORN FLAT TRACK BARS.** These have a 10° bend, which is probably unique.
DC	This is the distance from the nose of the saddle to the centre of the stem, on a bike with **THORN COMFORT BARS,** which have an 18° bend.
DX	This is the distance from the nose of the saddle to the centre of the stem on a bike with **ANY OTHER BAR. PLEASE NOTE...YOU MUST BE ABLE TO COMMUNICATE TO US EXACTLY WHAT THESE BARS ARE.**

Correction of 'D'

Compared to our 5° bend straight bars, the following table shows how much shorter, or longer a stem probably needs to be in order to achieve a similar position with a different type of bar.

DS	**0mm**
DD	**-55mm**
DF	**+15mm**
DC	**+35mm**
DX	**???mm**



PLEASE NOTE:

The dimensions that you give us must be accurate.
Please get someone else to check your measurements.