

Tuning in

You've got your new kit and made sure it's right for you, but what else do you need to know about setting it up?

Andrew Smith explains what to do

Getting the right equipment to suit you will give you a head start in the sport and be an invaluable aid to progress. Pro-shops and coaches will help with this initially, but I also feel at some point it is good to understand how your bow works.

Most recurves come with a range of adjustments to allow the archer to adjust the angle of the limbs and the limb alignment. It is unusual for these to be factory set, and mixing and matching handles and limbs from different manufacturers is common, so there's no guarantee of a perfect fit straight out of the box. All of the adjustments mentioned here are checked with the bow strung but when altering anything it is best to do this with the bow unstrung, as

it reduces the chances of damage to the threads and locking screws. All bows have different adjustment systems so it is worth familiarising yourself yours before you start, but the only tools you will need in the initial tuning stages are the ones supplied with the bow and a bracing height gauge

One: Limb alignment

When we draw the bow up we require the string to come back in a straight vertical line, as if the string deviates left or right it's drawn back it will follow this same wonky path when it's released, instantly making the bow less accurate and efficient. So step one is to ensure that both limb tips are straight when the bow is strung.

Checking this is quick and easy. Hold the

bow by the tip of the top limb, ignore the handle completely and just look straight down the string. When you are lined up super-impose the shoulder (sometimes the tip is not filed straight) of the limb tips on to the back of the limb and it should sit in the middle of the limb. If it does not, use the bow's alignment adjustment to move the limb in the right direction so that it is straight, then repeat for the other limb. This will give you a straight, shootable bow. However, the string might not line up with the handle and run through the exact centre of each limb bolt locking screw. It might seem strange, but this is not important (most handles are not 100 per cent straight due to the manufacturing process). If you do adjust the bow to run through the centre without attention to the

Learning how to tune a pressure button helps you get good clearance



limb tips the bow will look straight, but over time this can risk putting a permanent twist in the limb.

Two: Tiller and draw weight

Many years ago this was the sole domain of the bowyer. Nowadays these adjustments are built in to the handle to give archer more control of the bow set up and to allow for the use of limbs and risers from different manufacturers. The mechanics of adjusting the weight and tiller are simple; loosen the locking bolts at the back of the limb bolts and wind them in to increase the draw weight, or out to decrease it, being careful not to wind them past the manufacture's recommendations.

We do not hold the bow in the centre, so we pull the top limb back further than the bottom one, which means when we release the string the bottom limb will finish first. However, we want the limbs to stop at the same time. To do this we adjust the top limb bolt so the measurement from the string to where the limb meets the handle is four to six mm bigger at the top than the bottom. Exactly where this should be will depend on your limbs, bow hand position and your stabiliser set up, but four to six mm is a good place to start.

Three: Bracing height

This is the measurement of the gap between

the string and the throat of the grip or the centre of the first button hole. Initially it is important to keep this within the manufacturer's guidelines, while later on you will learn how to adjust this for optimum performance. For now, the most important thing is to ensure that each time you string the bow it is the same, to ensure consistency. For example, a 68" bow would have an average bracing height of 8.5". As with measuring tiller, a bracing height gauge is the easiest way to measure this.

Four: Arrow rest and pressure button

As I've said before, it is not necessary to put a button and wire-type rest on the bow from day one; a plastic rest keeps things simple until you have got used to your equipment. When fitting a wire rest and button, attach the rest so that the hole in the rest is central to the pressure button hole – if the handle has two holes, use the one closest to you when holding the bow. The height of the rest

is determined by the size of your arrows, so don't stick it down too hard in case you need to move it. The button should connect with the centre of the arrow shaft – adjust this by moving the rest up or down.

Set the spring tension on the button to a middle position. For low poundage bows – say below 25lb, take it off another turn but make sure it still works. Setting the centre-shot for a right handed archer is done by ensuring the tip of the arrow is showing to the left of the string when looking down the back of the bow. This will help the arrow to be launched more or less straight with good riser clearance.

Five: Nocking points

Nocking points should be set 1/8th of an inch above square, measured using the bracing height gauge resting on the bottom edge on the arrow rest. Setting it in this position will give you better arrow clearance. Simple brass nocking points are fine to start with, but Beiter or tied on nocking points would be better in the future.

Six: Sight

Once you have fixed the sight block to the riser and fitted the sight, the final adjustment should be to line up the sight vertical rail with the bowstring. The two should be parallel, and by doing this you should not have to move the windage adjustment left or right as you move the sight pin up and down.

If you follow these steps you will have your bow nicely set up and ready to shoot. As you improve and your groups get smaller, the next stage is to refine the tuning – although there are no substitutes to hard work and practice, there are finer adjustments that can be made. ☺

