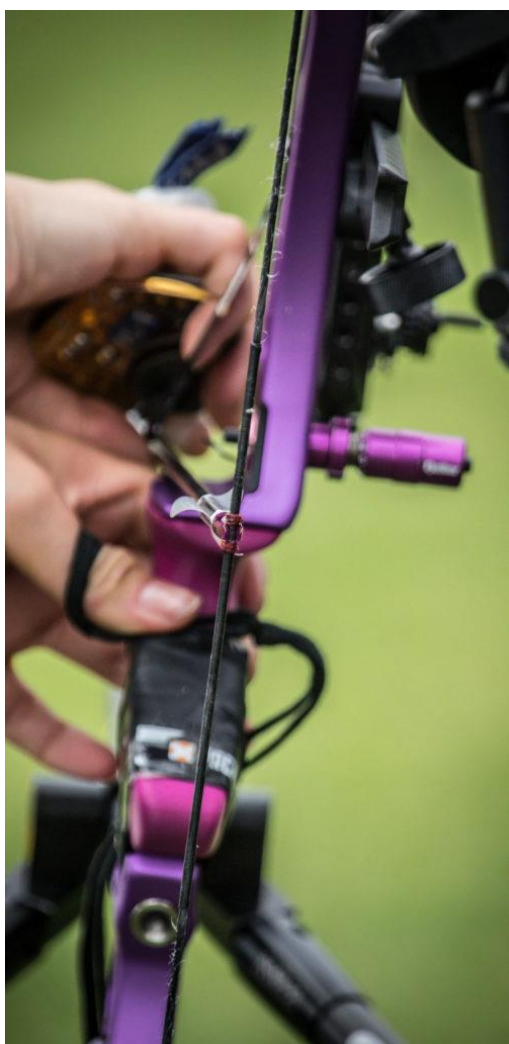


## Straight Bow?

It goes without saying that your latest shiny new bow is 100% straight – right? Unfortunately all equipment is made to a price, within reasonable manufacturing tolerances, so this may not be the case straight out of the box.

The methods used to make a bow straight are well understood, however, I still find that the most fundamental adjustment is always missing from bow manuals. No documentation these days suggests checking that your limb tips unfold and close straight, but it's more important than you might think.

Most archers will set up their bow with the string running through the centre of the limb bolts and Beiter limb gauges, but pay no attention to the more important issue as to whether this adjustment upsets the limb tip alignment.



*A bow with off-centre limb tips is less efficient, less accurate and inconsistent from shot to shot*

The limbs might be 100% straight, but it is assumed they are twisted as the adjustment required to straighten the tips sometimes puts the string very slightly off centre to the riser.

Much is made of the string position but it is not a big deal and why we have the limb alignment adjustment built into the riser. *(See Ask The Experts issue 142)*

A bow with off-centre limb tips is less efficient, less accurate and inconsistent from shot to shot, losing you points and making the selection of the correct arrow spine difficult. The string is also

in the wrong position as it runs down the riser, which is then used as the basis for other bow set-up procedures and ends up magnifying errors.

## Draw weight

Good scores are all about being able to control your bow and your shot, but the shorter the time your arrow is in the air, the less of an influence the weather will have on where it lands, so competitive archers should never sell themselves short on the draw weight they are shooting.

However, a bow that is too heavy to draw back or in mass weight will just lead to injury and help you to miss faster, so when selecting a draw weight a delicate balance is required.

Ideally, as a guide you should be able to hold your bow at full draw for 20 seconds for at least 10 repetitions and be able to shoot the last arrow of a round as if it was your first.

## Bow tuning

The objective of your bow set up and tuning is to help launch the arrow to the ten with as little interference from the bow and you as possible. There are many short cuts and systems to help guide you through the process.

It is important to spend time making sure things are right, and especially checking measurements like bracing height each time you assemble your bow.

However, archers put far too much emphasis on these tests, rather than feeling and knowing when things are right and fall in to the trap of using these results as a security blanket, at the expense of good practice. I see it all the time on forums, people asking for help starting off with "my bow is set up properly but..."

The most important piece of equipment that will make bow tuning and set up quick and easy is selecting correctly spined arrows. Far too many archers confuse bow tuning with trying to manipulate incorrectly spined arrows to fly straight.

## Arrows

Archers throw far too many points away without even knowing it – good shots, within reason, go where they are meant to. How badly you are punished for a bad shot in terms of lost points will depend on your arrow selection.

"If in doubt a stiff arrow spine is more forgiving than a weaker spine" is a statement that I hear all the time, although I have yet to see any evidence that this is true. What you require is the correct arrow spine for your ability.

As mentioned earlier, if you have the wrong spine arrows bow tuning turns into arrow bodging to get them to fly better. For most of us without expensive slow motion cameras capable of at least 3000fps, this selection can only be achieved by shooting a fletched arrow and a balanced bareshaft ("balanced" – the front of centre balance (FOC) of both arrows are the same) so the only difference is the lack of steerage from the vanes. This will really tell you what the two arrows (fletched and bareshaft) are doing.



When choosing shafts a bareshaft test can be done at 18m and it involves comparing a range of spines suggested on the charts. After shooting a few ends you will be able to select the correct spine this being where the fletched and unfletched shafts of the same spine land closest to each other.

If you are not confident with this there are archery dealers that for a small charge will guide you through the process. Correctly spined arrows will make bow tuning simple, as the bow and especially the button will require little adjustment to get good groups.

Fine tuning: weak or stiff? When you have a poor release your arrow will behave stiffer because you slow down the arrow speed. For a right handed archer at 70m the arrow will land to the left of the gold and the poorer the release the further away it will be from the centre.

Even shooting over 600 points for a WA70 most of us are still shooting more average shots than good shots. So by tuning your arrows slightly weak, the bareshaft landing more to the right side (RH archer) of your average sized fletched group will mean an arrow that should be gold with a good shot will be an eight rather than a four or five with a less than perfect execution.

This is a personal choice and you may not have a clue what is best at this stage, so in this instance go with the bareshaft landing within your average group at 18m.

## Improving your group size

If you have a good bareshaft test at 18m you should find your arrows are flying well at 70m and proper practice and refining your form will reap better and quicker results than fiddling with grub screws.

Most of us can only afford one full set of quality arrows that we use for competition and practice, so it is important to regularly check that all your set group together.

One of the keys to achieving your goal is not to throw away cheap points and any damage to shafts, nocks, pins and points will affect arrow flight and cost you points.

Keep an eye on your arrows by regularly inspecting them and plotting arrow positions; there are quite a few free scoring apps that will make the latter quick and easy.

## Sight

- Don't be afraid to move your sight pin to get arrows centred on the ten ring. In competitions those nines that turn into tens make all the difference. Learn to identify the centre of your groups through your spotting scope and act quickly.
- Always make notes in your notebook about how much adjustment was made, which you can refer to later, these are especially useful when you re-visit a tournament venue.
- Check that the position of your clicker is correct and check it regularly, as you become more archery fit your posture will improve and so will your draw length.
- On the shooting line always stand in the same place with the same feet position, use foot markers to help with this. Standing in a different place affects your aim and changes your body posture, which will show up when you are tired and you will find your arrows randomly drifting left and right.



For further information



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