



# Back to Basics

A solid set up will help you get the best results out of your tuning efforts – Duncan Busby shows you how to start

**W**e all know that in order to get the best performance out of your bow it is important to make sure it's well tuned. But before you start the tuning process, it's important to make sure your bow is set up correctly, and what follows is the procedure I use to make sure that my bow is shooting relatively straight before I start tuning...

Whether you're setting up a brand new bow or re-setting you're current model, it's important to make sure your bow is set to its factory measurements (axle to axle length, brace height etc.). To do this, make sure both limbs are wound all the way in. Even if it looks like they are you still need to be sure; this is important as your bow's factory measurements are taken from this position. To check this, use an allen key to tighten the limb bolts as far as they will go – but be careful not to over-tighten them as this may damage your limbs or limb pockets. It's a good idea to mark the

limb bolts at this point, so you can keep track of their position if you move them at a later date.

Once you are sure the limbs are wound all the way in, you need to measure the bow's brace height and axle to axle length, and to do this you will need a tape measure and a bow square/brace height gauge. Firstly, measure the distance between the bow's axles, remembering to measure from the middle of the axles. This should be the same as the manufacturer's recommended measurement, and you should be able to find all your bows measurements on the manufacturer's website. If not, contact the manufacturer directly and they will be able to help. You then need to check the bow's brace height, by attaching your bow square to the string and measuring the distance between this and the throat of the grip. Again, this should read the same as the manufacturer's measurements. If yours are off, you need to add or take some twists from both the string and





the grip of your bow. Start by attaching your bow square to the string; align the bottom line of the scale to the centre of your nock point, then move your arrow rest up or down so that the bottom edge of the bow square just touches the top of your launcher or blade. Once the rest height is set you can adjust the windage, and many bow manufacturers give a centre shot measurement to help with this, which is the distance from the side of your bow to the middle of your arrow. You can find this measurement in either your bow's manual or on the manufacturer's website. To adjust the windage, nock an arrow on the string and sit it on the launcher, take a tape measure or ruler and place it against the side of the bow close to the rest hole; measure to the middle of the arrow then move the rest left or right till it is in the correct position. If you can not find a manufacturer's

Make sure both limbs are wound all the way in ... your bow's factory measurements are taken from this position

cables by using a bow press; untwisting will increase the axle length and decrease the brace height, whereas twisting does the opposite. Make sure you don't under or over twist your strings as this can lead to things becoming problematic. Sometimes it can be very difficult to get both measurements exactly right, but if this is the case don't worry, getting them as close as possible will be fine.

This is the best time to set your cam position. The manufacturer will usually put "timing" marks on the cams, which will line up with either the limbs or strings. This is the position they recommend you set the cam for optimum performance, and while it is not always essential to have the cam perfectly in line, it gives you a good starting point to work from. To find your bow's optimum cam position, either consult the manual that came with your bow, or the manufacturer's website. The cam position is altered by adding or taking twists from the cable or cables. If you have a twin or hybrid cam bow, you also need to make sure the cams are in sync. You can do this by drawing the bow and checking that the stops on both the top and bottom cams are hitting the cables at the same time. If they aren't, you can change their rotation by again adding or taking twists from the cables; getting them as accurate as possible will greatly improve the bow's performance.

The next step is to tie on your nock point; it needs to be in the correct position in order to give you the best arrow flight.

A good place to start is to set the nock point level, so the arrow is 90 degrees to the string. Attach your bow square to the string and line up the bottom edge with the middle of the arrow rest hole, then place a nock on the string level with the bottom line of the scale on the bow square. Now tie a small amount of serving above and below the nock, these should hold the nock in place but should not pinch it. Once you have tied your nock point on you can attach your D-loop (if you're using one), the size of D-loop you use is down to personal preference, but make sure you can get into a comfortable and consistent reference point with it, and if not, make further adjustments as necessary.

The final setting on your string should be the installation of your peep sight. Make sure you are careful when separating the strands. I find the safest method of installing a peep is to use a bow press; this takes the tension out of the string making the strands easier to separate. Once your peep sight is in the correct position, tie it in well to make sure it doesn't move when you're shooting as this will affect your reference point and sight marks.

You now need to set your arrow rest position; a good starting point is to set it level to your nock point and central to



Setting your arrow 90 degrees to the string is a good starting point for tuning



measurement, a position of around 3/4" from the side of the bow will work well for most models, or simply look down the back of the bow and line up the string with the centre of the bow then line the arrow up with the string.

Once you have your bow set up correctly you can adjust it to your desired poundage, remembering to wind the limb bolts out by equal amounts.

Following these steps will give you a good foundation for when you begin to tune your bow, as it's important to set up your bow up correctly if you want to get the most out of your equipment and shooting; a badly set bow will make it hard for you to tune and give you poor results.

Look out for the next issue when I will outline the tuning process I use when setting my bow up for the outdoor season. ☺



Line up the bow square with the middle of the arrow rest hole to give you your nocking point position

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