

Bow Tuning

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It is vital to use arrows that suit your bow. Heavier bows need stiffer arrows, and vice-versa. The following method uses traditional tuning techniques for a simple bow without attachments.

Draw length

Your draw length is the distance from the bottom of the groove in the arrow nock to the back (far side) of the bow.

Spine charts

Once you know your draw length you can use manufacturers' spine charts to find out which sizes of arrow are likely to suit your bow.

Nocking point

Use a bow square to place a nocking point on the string in such a position that the arrow will clip on to the string an eighth to a quarter of an inch above square. Shoot the arrow horizontally into a butt from a distance of 5 yards. Move the nocking point up or down the string in very small increments until the arrow lands horizontally or slightly tails high. Permanently fix the nocking point. You can also shoot through paper at two yards.

Tails left/right

Shoot the arrow horizontally into a butt from a distance of 4 yards. If the tails are to the left the arrow is too stiff for your bow. If the tails are to the right the arrow is too flexible for your bow.

Altering arrow spine

Arrows become stiffer when they are reduced in length. A lighter point also increases spine. It is not possible to increase the length of an arrow. So, starting with a shaft of maximum length, reduce it by small increments. Shoot the arrow into the butt horizontally at close range at each size until it lands with the tail near central. Even if the arrow looks a bit long it will fly better than if it were trimmed to your draw length. A heavier point can be fitted to reduce spine.

Brace height

Manufacturers specify brace heights within a range, often plus or minus half an inch. Brace height is measured with a bow square. The amount of energy transferred to the arrow may be altered by changing the brace height. This is accomplished by twisting or untwisting the string within limits. Reducing the brace height will increase the energy transferred to the arrow (ie. to suit an arrow that is slightly too stiff). Increasing the brace height will reduce the energy transferred to the arrow (ie. to suit an arrow that is slightly too flexible).

Pressure point

Move pressure point forward if the arrow is too stiff.
Move pressure point backward if the arrow is too flexible.
Move pressure point right if the arrow is too stiff (RH archer).
Move pressure point left if the arrow is too flexible (RH archer).

String weight/speed

String materials come in various weights and strengths. Dacron is heavier and more elastic than fastflight. The arrow best suited to a fastflight string will be slightly stiffer than that for a dacron string. The number of strands may also be changed within limits.

String silencers may be tied on to the string to absorb some of the bow energy.