

Common Bows

Recurve or Olympic: The only type of bow allowed in Olympic competition, as yet. Its limbs curve away from the archer. This is the direct descendant of the bows of antiquity, differing only in the materials used and refinements. The force required to pull a recurve bow increases directly with the distance pulled.

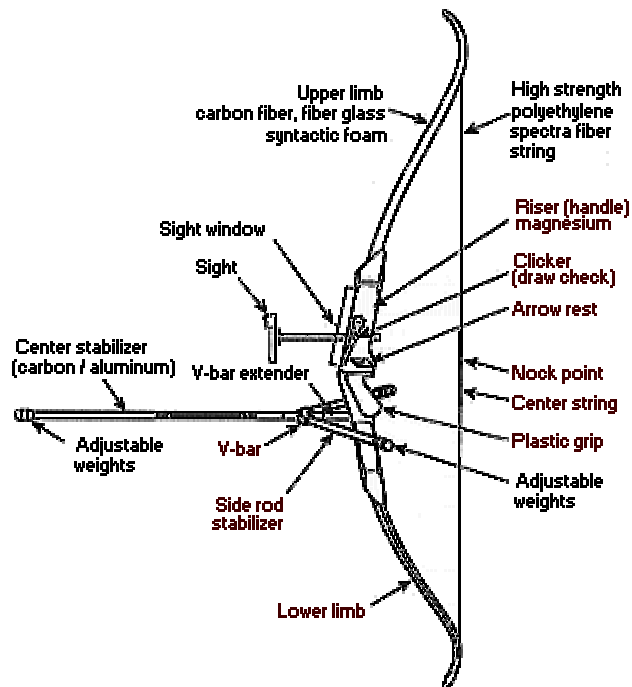
Compound: This bow uses cams and cables to make the holding weight less than half of the draw weight. These bows are favored by bowhunters because of their greater accuracy, flatter arrow trajectory and their ease of use.

Beginners are often referred to the recurve bow to start with, because it has a variable draw length, better string angle for drawing with the fingers and because it is a better tool for learning proper form and technique. Mastery of the recurve bow results in better muscle tone and overall archery habits; once that is accomplished the compound bow represents a leap forward in ease of use and force. Also, a compound bow is built for a particular draw length, which may not be easily changed. Growing bodies will grow out of compound bows swiftly in the teen years.

Barebow: This is a recurve bow without a mechanical sight or stabilizers. There are two types in use: the primitive, or traditional, longbow, made of wood with no arrow rest or other accoutrements, and the modern longbow, which may use other materials and have a simple arrow rest. These are used in traditional archery events, as well as target, 3-D and other disciplines..

Crossbow: A short bow mounted horizontally at the end of a stock that is similar to a rifle stock. The bow must be cocked before use, an arrow (or quarrel) inserted and the string released with a finger trigger, just as with a rifle.

The Recurve Bow



Bow handles (risers) are made of aluminum alloys and are machined for a combination of strength and lightness. Some bow handles are made of a magnesium and aluminum mixture which is heated to liquid form and poured into a mold. Once cooled, it is cleaned, final machined and painted. Some lower cost, childrens bows have wood risers, as do some rather expensive, hand made bows.

Bow limbs are generally constructed of man-made materials, such as fiberglass, carbon and syntactic foam. The limbs store the energy of the draw and release it to the arrow. The string and the limbs are commonly removed from the riser when the bow is not in use, allowing for easy storage of the "knocked-down" bow.

Bows have stabilizers to reduce torque (twisting) in the arrows upon release. They also have sights to aid in aiming and rests to help align the shot.

Most bow strings are made of either "Fast Flight", a hydrocarbon product that also has medical and other uses, or "Kevlar", the material used to make bullet-proof vests. The important point to be made about the string is that it must not stretch under normal environmental conditions, as that would change the bows pull weight and make consistency impossible. A layer of string material called the serving is placed where the arrow is nocked to snugly match the notch on the arrow, and a small ring is permanently placed on the serving to mark where the arrow rests when nocked. A small button, called the kiss button, is often used to assure that the back end of the arrow is always pulled

back to the proper, repeatable anchor point. When properly drawn, the kiss button rests right between the lips.

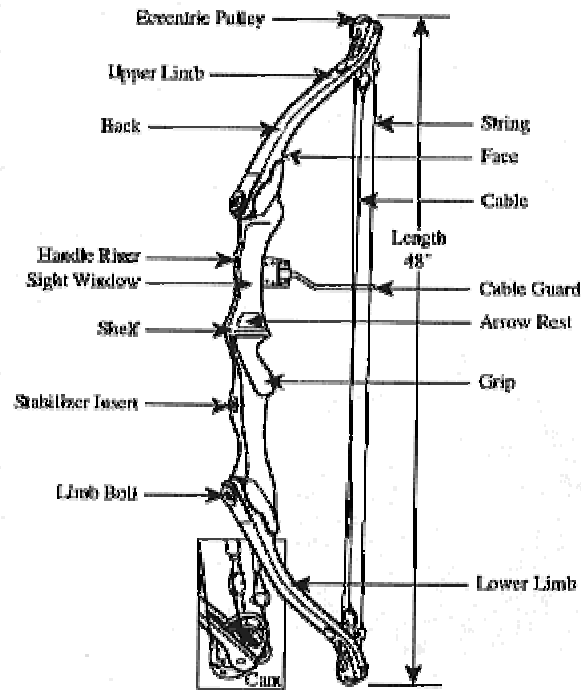
An arrow is pulled back to the anchor point using the middle three fingers of the draw hand. These fingers are often covered with a glove or a leather "tab" which protects the fingers. A tab may have a metal shelf built in so that the two fingers on either side of the arrow do not squeeze it.

On recurve bows a clicker is a small, spring-loaded lever that is held out away from its resting point by the arrow. When the arrow is drawn back to exactly the same point each time, the clicker slips past the tip of the arrow, producing an audible "click", which tells the archer he has the arrow at the same, repeatable release point. This causes very close to the same amount of tension to be used on every shot, so the arrow flight is the same.

A sight allows the archer, when the arrow is properly drawn, to line the bow up with the center of the target by eye. The sight generally has adjustments in up-down and left-right dimensions with caliper-style read outs so that ageing equipment, weather, temperature and distance to the target may be accommodated. Olympic archery allows for sights which do not have lenses or electronics associated with them.

Arm guards and chest protectors protect the skin from string burn, as well as provide a low-resistance surface that the string may skim over easily upon release. A pair of binoculars or a sighting scope allows the archer to see the arrows in the target, and thereby make corrections to the sight as required. A quiver to hold arrows and other peripherals completes the archer's accessories. The NAA, in accordance with FITA rules, has established a dress code that is used at all NAA tournaments; this accounts for the "whites" look of the competitors.

The Compound Bow



The Compound bow, unlike the recurve bow, is never knocked-down between uses. The great tension preset into the limbs can only safely be countered when the bow is couched in piece of equipment called a bow press. The cams are synchronized when this is done, and are held in place by the tension. Compound bow cases must be able to accommodate the entire bow.

Because the Compound bow's forte is accuracy, equipment which increases the accuracy is deemed fair for compound use while it is not for Olympic archery. The site may include electronics and/or lenses to increase accuracy, and a release, rather than fingers, may be used. A release is a mechanical "finger" that grips the string and releases it when the trigger is pressed by the draw hand.