CHAPTER 8:
STARTING WITH A TRADITIONAL BOW

This chapter is dedicated to introducing archery to novices using an unsighted traditional bow. Consequently, only the specific differences in the learning process as compared to the other forms of archery are covered. Refer to the other chapters of this manual for general archery coaching techniques and information.

8.1. Equipment

8.1.1. Bow:

WORLD ARCHERY defines a "traditional bow" as one that is contained in one of the following divisions: "English Longbow," "American Flatbow," "Longbow," and "Traditional Recurve". For competitions WA defines traditional bows as the following divisions: Longbow and Instinctive Bow. The WA traditional divisions are slightly restrictive as, in general terms, a "traditional bow" includes any bow from the primitive bent stick to a modern traditional recurve bow. There are other traditional bows that are not included in World Archery events, such as "Yumi" for Kyudo, bows used on horseback, etc. Broadly speaking, the more ancient and primitive the design of the bow, the harder it is to be precise while shooting. In other words, the same archer will almost always score better with a modern traditional recurve than with an English Longbow. The differences in performance are a consequence of the geometry, balance and efficiency of the different designs. Nonetheless, an archer can enjoy and strive to shoot their best with any traditional bow.

8.1.2. Arrows

Traditional arrows may be made of wood, aluminium alloy or carbon and maybe fitted with feathers or vanes. Shooting with vanes only works properly when the bow has an arrow rest. Feathers are much better when the arrows are shot from the shelf. For competition purposes, the archers must ensure that their arrows comply with the rules of the division in which they wish to compete.

8.1.3. String Finger Protector

A tab or shooting glove is a protective piece, usually made of leather that covers the string fingers while shooting. The bow string can put a large amount of pressure on an archer's string fingers, causing pain – especially at higher draw weights. In order to prevent this discomfort, and its detrimental effects on the loose of the bowstring, some form of finger protection is necessary. A finger tab is usually the best solution for protecting the fingers while maintaining accuracy. However, some archers find a tab to be difficult to use or uncomfortable. In these cases a shooting glove that covers the string fingers may be used instead.

8.1.4. Bow Hand Armguard/Glove

Longbows often have a lower brace height than modern recurves. Thus it is quite normal for the string to touch or even hit the forearm on almost every shot. An armguard is a piece of protective gear that covers the forearm and prevents the string from striking it. Traditional archers usually use a large and substantial armguard to provide the tough protection that the forearm requires.

Additionally, a bow hand glove may be necessary for archers shooting some historical bows such as the English longbow. These bows are designed without an arrow shelf, so the arrow rests directly on top of the bow hand. Natural feathers in particular may have a rough quill that can hurt the archer's hand as the arrow leaves the bow. Usually bow hand gloves for traditional shooters protect only the thumb, forefinger and the space in between.

8.1.5. Bow Sling

A bow sling is a device used to promote a relaxed bow hand and prevent the archer from dropping his or her bow. Bow slings are permitted in all divisions, but are mainly useful in modern recurve bows with a pistol grip. The sling prevents the bow from jumping out of the bow hand during the action and reaction of the release. Archers who shoot a longbow tend to hold the bow with a light grip, preventing the bow from jumping out of the hand. This grip should be light enough to stop the bow from falling to the ground but not so tight as to cause torque to be applied to the bow.

8.2. Form

Reminder:
This chapter highlights a few key differences with the other forms of archery covered in the other chapters of this manual.

The archer's form when shooting a traditional bow must be kept as close as possible to the standard form any beginner would learn.
This being the case, most of the exercises to teach the correct shooting technique for a traditional bow can be taken from chapter 6.

8.2.1. Stance.

At least two different stances are used in traditional archery.
Some traditional archers adopt an upright stance, similar to the stance of target archers, and hold their bow vertically.

A traditional shooter with an upright stance

Others, particularly those shooting instinctively or intuitively, bend the knees slightly and flex the upper body slightly forward. In this stance, the bow is canted to maintain a right angle between the bow and the eye axis.

Traditional shooters using a tilted stance.
Note the right angle between the eye axis and the bow on the left picture from Dietmar VORDEREGGER

8.2.2. Binocular vision and Dominant Eye.

Shooting with both eyes open will help novices reach their best level in traditional archery, whatever the aiming method used, and it is especially important if unconscious references are used (i.e. intuitive or instinctive aiming). Hence shooting with both eyes open is recommended when shooting traditional archery. To be truly effective when shooting with both eyes open, it is paramount that the archer shoot according to their eye dominance.
Binocular vision allows your brain to estimate distances while reducing anxiety and peeping/peeking tendencies that often result from the lack of a sight. The dominant eye focusses on the target and watches the direction of the arrow subconsciously. At the same time, the non-dominant eye completes the visual information, allowing the brain to estimate distance and trajectory.
Ways to determine the dominant eye can be found in chapter 4 of this manual. A method recommended for the traditional archer to determine the dominant eye can be found in section 4.2.4.1. Based on this, the novice traditional archer should shoot right or left handed. Following the dominant eye criteria will stand the archer in good stead for better results in the future.

8.2.3. Bow Hand

The shape of the grip on a longbow usually forces the archer to have a low wrist. Nevertheless, the pressure exerted by the bow hand on the grip is more or less the same as in shooting an Olympic recurve.
Pressure must be kept on the top half of the bow's grip, with the bow hand and fingers as relaxed as possible. The archer should feel a uniform pressure of the bow in the web of the bow hand above the lifeline (i.e. between the life line and the root of the thumb). This pressure zone is in line with the radius bone in the forearm and allows the force of the bow's draw weight to be transferred efficiently through the hand and wrist directly in line with the arm bones.

8.2.4. Bow Arm/Elbow

Due to the "kick" of many designs of traditional bows the archer's bow arm has to be straight, or almost straight but not locked. It must be straight enough to be consistent and stable for every shot, as well as staying steady when releasing the string. Keeping the arm not locked will help prevent future repetitive use injuries in the elbow and shoulder.

8.2.5. String grip

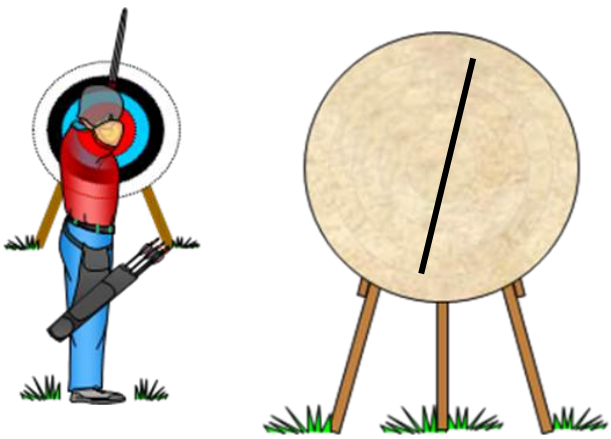
Most novices should start with the usual string grip with the index finger above and the middle and ring fingers below the nock on the string. The grip should hold the string between the second and third joints of the fingers.
For a novice struggling with this string grip, three fingers below the nock is an acceptable alternative.

8.2.6. Canting the Bow

Canting is the act of holding the bow so that the limb tips are not vertically aligned.

Common bow canting

Modern traditional recurve bows can be held and shot vertically, while ancient designs could need up to a 20-degree cant to be consistent. A slight cant of the bow allows the archer to see the aiming spot with both eyes and keep the arrow aligned with the dominant eye.
It is important to note that canting the bow doesn't mean canting the hand. The canting should come from the inclination of the body toward the toes. The hand position must be as close as possible to the standard form by holding the bow with a relaxed hand, even on a straight grip longbow.
A right-handed archer will cant their bow "to the right," meaning that the top limb tip is further to the right compared to the target than the bottom limb tip. If a right-handed archer were to cant their bow to the left, they would risk the arrow falling off the shelf, rest or bow hand with unpredictable and potentially dangerous consequences. Naturally, a left-handed archer will do the opposite. To determine the proper angle of cant, the archer should try to hit a line drawn vertically down the centre of the target. The more the archer cants the bow to the right, for a right-handed archer, the more the arrow will go to the right. Hence if arrows hit left side of the line, the canting angle is too small and vice-versa if an arrow hits on the right side. Naturally, left-handed archers will respond to the mirror-reflection of this concept. This canting of the bow will have very little effect on close targets but will have a large effect on mid-to-long range targets
American flatbows are designed to be canted until the window is vertical. Other bows without window or even arrow-rest has to be canted more because the arrow points more to the left (for a right-handed archer).



Novices can learn to use the same canting angle through the following exercise: Have the archer shoot from a distance of five to ten meters at a target butt that has a piece of visible tape affixed at the correct angle for the

bow. When the archer raises the bow, they can check the canting angle by comparing the bow with the tape and making any adjustments necessary to bring the bow into line with the tape. This exercise can also be done with closed eyes after obtaining the correct stance. The archer should open their eyes when the drawing hand reaches the anchor point.

8.2.7. Facial Marks/Anchor and Forces Alignment

The most common facial reference mark for a traditional shooter is to place the tip of the index finger next to the teeth and touching the corner of the mouth. This reference usually positions the arrow directly below the dominant eye when the archer is using proper form. Different face shapes, however, could lead to some differences in the ideal anchor position. To be most consistent, two more references are desirable; the thumb under the lower jaw and the first joint of the first finger below cheek-bone.

To control the proper draw length, the coach should stand beside the archer, giving feedback on the archer's form and references. This should be repeated several times until the archer can feel the correct facial reference point. Using a mirror to let the archer watch and verify their own forces alignment (arrow / string forearm alignment) and anchor position will further reinforce this feedback. During this process the coach must help the archer to find the correct overall feeling and body sensations, including their bow arm, drawing elbow, shoulders, bow elbow, chest and upper body position, and back tension in addition to their to facial marks.

Note that changing the facial marks (anchor) and/or using different arrow lengths, are not allowed during a single competition. Hence it is not recommended to teach the beginners to use two facial marks (a technique called "Face Walking"); one for short distances and one for "long" distances. Face walking is sometimes considered when shooting at longer distances with light bows in order to keep the point of the arrow close to the centre of the target while aiming. Similarly it is not recommended to have the novices use different sets of arrows for different shooting distances.

For the other components of shooting form please refer to chapters 1 and 6 of this manual.

8.3. Aiming methods

Through experience and depending on the shooting distance, beginners may use various references or aiming methods; here are the most popular ones in traditional archery.

8.3.1. Without Conscious References

Commonly known as "instinctive" (although there is no truly instinctive aiming in archery) or "intuitive" shooting, this method uses the natural abilities of humans to aim and throw things. Senses, perception, intuition, kinaesthetic sensations, and the brain's calculating capacity all combine to aim the bow and arrow. They are the same abilities that are used in any ball sport or when throwing a simple paper ball into a trash basket, for example. It is based on practice, trial-and-error, correction, and repetition. It is the most natural and ancient method and it has allowed humans to use the bow and arrow as a weapon for millennia. One of the most important facets of intuitive aiming is that the position where the nock touches the string should be precisely aligned vertically under the aiming eye.
For this style of aiming, the coach must advise the archer to watch the centre of the mark, or the smallest spot visible on target as focal point.
Subconscious references are better for moving targets, speed shooting and close distances.

For beginners, the intuitive method is the easiest and most natural to learn, and allows the archer to enjoy shooting at its best.

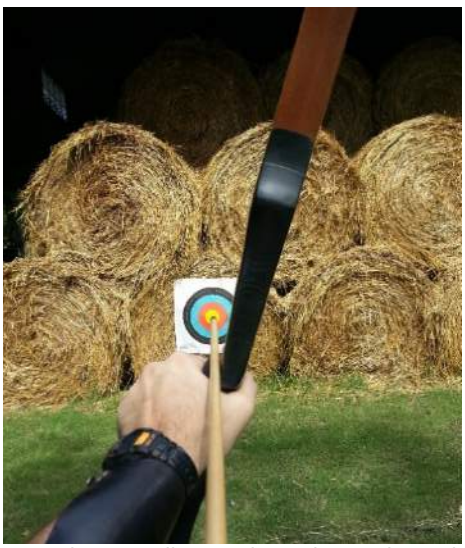
8.3.2. With Conscious References

An archer using a conscious reference point has to first evaluate the shooting distance, and then, depending on the estimated shooting distance, has to set the arrow point a related place on the target face. From this point, two aiming options are possible:

- Focussing the visual attention where the arrow point is located;
- Keeping the arrow point in the peripheral vision and focusing on the centre of the target.

8.3.2.1. Visual focus on a particular spot of the target face

This aiming technique is also called Point-on Aiming Distance Method, or POD. The first requirement of this aiming method is to determine the shooting distance at which, in order to hit the target's centre, the arrow point is visually positioned on centre of the target face or spot, when the archer is aiming at full draw. It is usually 30m or less if three string fingers are under the arrow and 30m or more with the Mediterranean string finger grip.
From this reference distance, the arrow point's visual location while aiming changes in height as the archer moves closer to or further from their target. For closer distances, the archer chooses a location on the target face that is below the spot and focuses on this location. For longer distances, the archer chooses and focusses on a mark above the spot. In this method, once the archer has set the arrow point at the proper spot, he focuses on that spot, not the centre of the target (unless on POD).



The shooting distance allowing the archer to direct the arrow point at the centre of the target face

At a longer distance than the POD, like in Gap Shooting (see below), the arrow shaft covers the view of the centre of the target or spot. The advantage here is that the archer focusses on the high spot; hence is not disturbed by not seeing the centre of the target (as in Gap Shooting).
When the tip of the arrow is seen close to the centre or above, this aiming method is effective. However, when shooting a small target at 5m for example, the next method below in which the beginner focusses on the centre of the target often performs better than choosing a spot on the grass.

8.3.2.2. Visual focus on the centre of the target face

This method is known as "Gap Shooting". It is when the archer consciously uses the distance (gap) between the tip of the arrow and the centre of the target as an aiming aid. In this aiming style the main visual focus is always on the centre of the target or spot.

This method works well from zero distance to the POD. Beyond this distance, the arrow shaft covers the view of the centre of the target, the gap disappears, and it becomes impossible for the archer to focus on the centre of the target or spot.

8.3.3.3. Aiming follow-through

It is natural for any archer to be tempted to watch the arrow in flight, but this is generally detrimental to the aiming process. Ideally, the archer's focus will be always on the spot or reference chosen until the arrow hits the target.

8.4. Traditional Archery Training and Practice

The effect that the size and shape of the target face has on accuracy is tremendous for archers aiming intuitively. The Standard Teaching Process presented in chapter 6 of this manual is also valid for the level 1 traditional archery coach. The adaptation of the shooting skills and sequence of the traditional archer works best by initially shooting at targets that are easy to focus on and gradually progressing the archer through more difficult targets.

Small, three-dimensional, bright-coloured, centred single-spots against a large, dark background are the easiest targets to focus on and deliver good groupings quite naturally.
For example a little red balloon or a tennis ball against large black paper or rubber backing is a good starting target.

In this case, the archer focusses automatically on the spot without any effort at all. This scenario makes the archer feel confident, with little chance of missing the butt, and allows easy tight grouping.

Multiple, un-centred, multi-coloured targets on similar backgrounds are the hardest to focus on, make the archer hesitate or have doubt about the result, and generally produce poor grouping.

A three-spot World Archery target face placed close to the edge of the butt is an example of a poor choice of targets for a beginner.

Always start with "easy" targets and at close distances until good grouping appears, and then change only one variable at a time.
After the archer masters consistent technique, different distances can be introduced. Start with shooting at 40-cm World Archery face at a distance of 5m. As soon as 3 arrows are constantly hitting within the red circles move the archer back to 7.5m, then to 10m and to 12.5m. At the distance of 15m and 17.5m the 3 arrows should hit within the blue circle. From 20 m, the increment of the shooting distance can be of 2.5 or 5m pending the accuracy of the beginner. At the distance of 20m, 25m and 30m the 3 arrows should be within the black circle and finally at the distances of 35m, 40m and 45m the 3 arrows should be within the white circle. This is a good exercise to go through every year before the outdoor season starts.

To develop and practice the ability to keep focused, have the archer shoot from different distances. Changing the shooting distance within a training session helps to develop the subconscious mechanism of adjusting the aiming references to the new shooting distance. When the archers have mastered controlling their focus at different distances, distractions such as flags, colourful balloons, ribbons, or similar items can be added to the targets. This helps to improve concentration, especially on a windy day. Since motion attracts focus, it is very difficult to keep these extra items from diverting the archer's focus from the target.

8.5. Basic Tips for Maintenance of Traditional Archery Equipment

8.5.1. The Bow

A traditional bow will perform well for many years if a few simple procedures are followed to keep it well maintained:

- Between shooting sessions, traditional bows are best stored horizontally, unstrung and in a cool, climate-controlled room.
- Archers should always use a bow stringer when stringing and unstringing their bow.
- Ideally the bow will be kept at a consistent bracing height for each shooting session. An easy way to promote a consistent bracing height is to keep the same number of twists in the string. Thus, when unstringing the bow, it is a good idea to either leave the string on the bow, or to lock the string loops when taking the string off the bow. To lock the string loops, simply feed one through the other and then vice-versa. Doing this will keep the string at a consistent length and therefore a consistent bracing height. It is still a good idea to measure the bracing height from time to time, especially before tournaments, to make sure it is at the right level.
- Extreme heat may cause damage to the bow, so it should not be left in a car during summertime or near a heater, for example.
- Putting the bow in a breathable fabric cover will prevent damage during transport.
- In the case of a long journey, for example by plane, it is wise to put the bow (longbow or one-piece bow) into a plastic tube for extra protection. The equipment, up to 2 long tubes for bows and 4 smaller tubes for arrows, usually fit comfortably in a ski-bag.
- String walking (adapting the height of the location of the string fingers on the string to correspond with changes in shooting distance) with a traditional bow causes unequal stress to the limbs and may eventually cause a catastrophic failure of the bow.
- Only the owner of a traditional bow should shoot it. This is especially true when considering allowing archers with longer draw lengths than the owner to shoot the bow.

- For safety, check the bow regularly for damage or excessive wear.

8.5.2. Arrows

Traditional arrows require attention and maintenance to keep them straight and undamaged between shooting sessions.

- Arrows should be stored vertically with enough space for the feathers. This way they will not touch each other and cause damage. Ideally, traditional arrows are stored by hanging the arrows upside down with the point stuck to a magnet.

- Wet arrows should not to be left in the quiver. They should be dried while hanging or standing vertically with enough space for the feathers to be free from any contact.

- Storing natural feathers near a piece of cedar or using cedar shafts for your arrows will discourage moths from damaging them as they do not like cedar.

- The nock of the arrow has to fit the string. Nocks that are too loose on the string may slip off causing the archer to dry fire the bow, which can seriously damage the bow. Consequently, nocks that are too loose should be replaced.

- If the nock is too tight on the string there is the possibility of it breaking during release making the arrow deviate from its intended flight path. A nock that is too tight may also damage the string. In a worst case situation the string could be broken. Therefore, nocks that are too tight should also be replaced.

- Wooden arrow shafts require extra care for safety and consistency. Inspect all shafts for damage after use and discard if any damage is evident. An arrow breaking on release could damage the bow or cause a severe injury to the bow hand or forearm.

- If the quill of the feathers is injuring the archer's hand, then adding a drop of glue to the front of the feather or raising the nocking point may help.

8.5.3. The String

A bow string will shoot optimally for many arrows if it is maintained properly. Here are a few key elements to keep an eye on for ideal string maintenance and wear:

- A (Dacron) string should be waxed from time to time to keep the strands together.

- To avoid the string breaking it is recommended to check it regularly for damage. Depending on the string material, after several thousand shots, it will need to be replaced

- The string has to suit the bow, with the recommendations of the manufacturer being respected. The material and number of strands are related to the bow's draw-weight and construction. Care must be taken to ensure compatibility of these factors.

8.6. Conclusion

Like all archers, traditional shooters have the goal of shooting the centre of a target. Traditional archery comes with its own unique set of challenges, but the reward of hitting a target with minimal aids one that is respected by all knowledgeable archers. Using proper technique and efficient equipment maintenance, this most primitive form of the sport can be an effective and fun demand on the skill of any athlete.