



FITA  
Coach's  
Manual

**BAREBOW**

Module

Intermediate  
Level



# FITA Coaching Manual

## Intermediate Level

### Module

## BAREBOW

### Contents

<b>1. Introduction</b>	3
<b>2. Equipment</b>	3
2.1 Bow riser (handle)	3
2.2 Grip	3
2.3 Limbs	3
2.4 String	4
2.5 Button (Plunger)	4
2.6 Arrow Rest	4
2.7 Nock points and arrow nocks	4
2.8 Arrows	5
2.9 Tab	5
<b>3. Shooting Technique and Tuning</b>	6
3.1 Starting barebow shooting	6
3.2 Stance and body alignment	7
3.3 Drawing	7
3.4 Aiming methods	7
3.5 Anchor point or 'facial mark'	8
3.6 Gap Shooting	8
3.7 Face Walking	8
3.8 String Walking	8
3.9 Combination of Face and String Walking	9
3.10 String walking with Gap Shooting	10
3.11 Release	10
3.12 Follow through	11
3.13 Analyzing	11
3.14 Sighting corrections	11
3.15 Tuning	11
<b>4. Conclusion</b>	12
<b>5. Glossary</b>	12

### 1. Introduction:

Barebow archery and recurve archery are much alike, therefore in this barebow module we concentrate on those elements of archery that are typical for barebow and refer for the common elements to the recurve module.

The barebow is defined for competition by FITA rules. (FITA Constitution and Rules, book 4, Chapter 9.3). It can be described as a bow that is shot without any extraneous equipment such as sight, sight marks on the bow, draw check indicators etc. Archers who want to shoot a barebow must realize that barebow is mainly shot in the FITA disciplines Field, 3D, 3DI and that barebow is not an Olympic discipline. There are indoor and outdoor competitions for barebow.

Shooting a barebow is a good start for novices in the sport of archery. Beginners will without any instruction, most probably draw the bow and aim along the arrow, which is acceptable in the beginning of their learning. After a while they will notice that there is more than just drawing, aiming and release, especially when they shoot at different distances. In different parts of the world shooting traditional bows, with aiming over the arrow, is part of the culture.

Barebow archers develop a good feeling for their bow and can later switch to a recurve or a compound bow if they want to. Shooting a barebow is more and more accepted as a learning process for beginners. In some countries, for example Sweden, beginners in archery shoot a few months with the barebow, to learn every aspect of shooting, with a feeling for the bow. After the barebow introduction they make their choice for any discipline they wish to pursue.

Instinctive shooting is a special method for using a barebow. It is achieved by focusing on the target and releasing the arrow without any conscious attempt to calculate the distance to the target; the shot is executed with a minimum of conscious visual references, such as locating the arrow point at a specific place of the target face pending the shooting distance. This form of archery can be quite accurate, but takes time to master. The concentration required for this form of archery is not conducive to the shooting of the number of arrows shot in major tournaments. Barebow archers rarely use Instinctive shooting in competition.

### 2. Equipment

According to FITA rules the un-braced barebow has to fit through a ring of 12.2 cm diameter. Stabilizers are al-

lowed, but when mounted on the bow must pass the ring test.

### 2.1 Bow riser (handle)

A riser of the so called 'shoot-through' type is not allowed. Metal or carbon recurve risers are allowed for barebow, any colour is permitted, even camouflage. It is recommended that the sight window is squared and high enough to support 'gap shooting'.



It is not allowed to have marks of any kind that may assist with sighting, in the sight window. The configuration of the cut-out of the window as seen by the archer at full draw should not show a 'protrusion' that can be used as a sighting aid.

Additional mass may be added to the riser to stabilize the bow. Some risers are manufactured with fixing points in the lower section to enable the attachment of weights. The same result can be achieved if mass is added directly to the riser if the bow does not have such fixing points. Torque Flight Compensators may be mounted directly to the lower part of the riser.

To determine the right balance of a barebow, so that after the shot the upper bow limb does not move towards the archer.



The initial rotation of an un-stabilised bow is the top limb rotates toward the archer.

It is advised that the archer applies, with tape, some lead (as used in fishing) on the lower part on the back of the bow handle at the designated place. Now shoot some arrows at different distances and watch the performance of the bow. By adding or decreasing the weight of lead the archer can determine the extra mass that needs to be put in place to stabilize the bow; but when mounted the un-braced bow must be able to pass through a 12.2 cm ring.

### 2.2 Grip

Take care that the bow grip has no contact beyond the life-line of the archer's hand (no contact at the side of the little finger). There is generally no sliding of the grip to either side; the hand pushes towards the pressure point, the bow should leave the palm of the hand straight forward. Leave it up to the archer's feeling of comfort whether they choose a high, a low or a medium grip. You can resize the grip or even make a new (wooden) one.

Cover the bow grip with Vaseline, have the archer shoot and check to see if their hand is sliding sideward. If that happens, add a layer of material to the corresponding place or scrape away on the opposite side. It is normal that the archer's hand moves towards the throat of the bow.

If we put extra material to the grip, thus making it more suitable to our way of gripping, we are in danger that slight inconsistencies in positioning the wrist joint will change the groupings.

### 2.3 Limbs

It is not allowed to have marks that could be of use in aiming, on the front side (inside) of the limbs. Barebow limbs should be 'stiff', to maximize side stability, so that the bow will not dance around on release. The following figure gives you an idea of the differences in limbs.

Material	Speed of Limb	Draw Feeling
Wood	Very slow	Very weak
Wood/Fibreglass	Slow	Weak
Wood/Carbon	Fast	Weak to hard
Wood/Ceramic	Fast	Weak to hard
Wood/Carbon/ Ceramic	Very fast	Hard

Note that barebow archers shoot up to 50 metres, uphill and downhill.

#### 2.4 String

All kinds of string material and colours are allowed. The centre serving should not have markings for aiming. The heavier the string (the more strands) or the heavier the centre serving (double serving), the slower the string. The top of the centre serving may not exceed eye height; otherwise it could be construed as being used as a measuring aid.

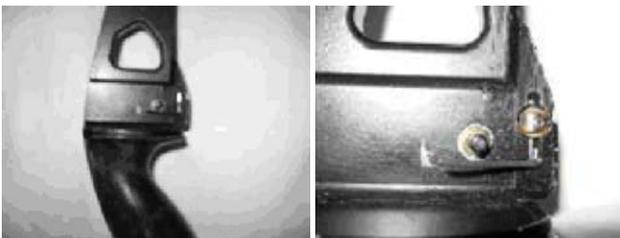
#### 2.5 Button (Plunger)

Any kind of adjustable pressure button is allowed as long as the pressure point is not placed any further back than 2 cm (inside) from the throat of the handle (pressure point). The pressure button is set up exactly the same as for a “freestyle recurve bow”.

#### 2.6 Arrow Rest

Use a strong arrow rest. An arrow rest needs to be reliable and sturdy for barebow archery. Most standard flip rests are robust enough to withstand the pressure the arrow puts on the rest at short distances when string walking. At longer distances (like 50 metres) there is little influence of the arrow rest on the arrow flight. The draw point is close to the arrow; the arrow leaves the string close to a straight line and will have sufficient ‘clearance’ while passing the arrow rest.

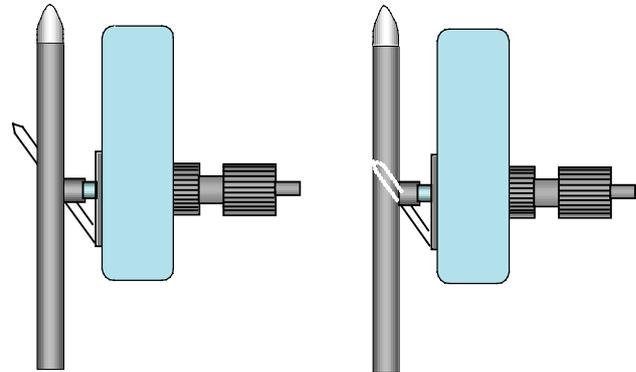
At shorter distances (like 30 metres) the archer’s fingers are placed low on the string, away from the arrow, which will create downward pressure of the arrow on the arrow rest. On release the arrow may ‘jump’ from the rest. A thick support arm (more than 1.5 mm diameter) causes the arrow to ‘jump’ even higher.



Bad clearance causes bad grouping. With a long support arm of the arrow rest, there is chance that the fletching (or even the nock) makes contact with the arrow rest.

Hence, the arrow rest support arm position is critical to achieve good clearance.

Nock an arrow on the string and lay it on the arrow rest. Shorten or adjust the arrow rest support arm, so that the end of the wire is not visible outside of the arrow shaft when observed from an overhead view.



Not Correct

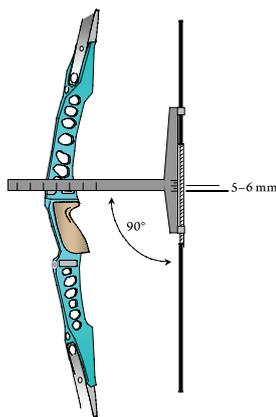
Correct

#### 2.7 Nocking points and arrow nocks

All types of nocking points are allowed – Some commercially available nock locators have the advantage of consistent thickness, but they can tend to break and are not suitable to fit thicker strings. When using the nocking points/arrow nocks combination, the angle between the string and the arrow doesn’t play a role, but the arrow nocks of this arrangement are easily damaged by hits of other arrows on the target. Take care to have an adequate spare supply; special nocks may not be readily available at all archery outlets.

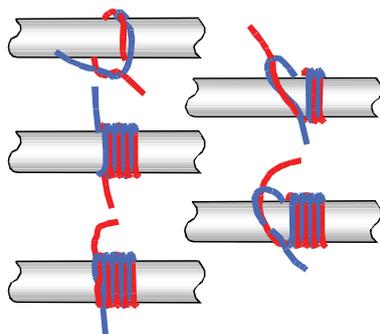
When the arrow is shot from between the index and second finger (Mediterranean release), the arrow is more or less perpendicular to the string. When shooting with three fingers under the arrow, the arrow takes up a sharp angle with the upper part of the string. We can use two nocking points to avoid the arrow nock sliding down the string. Two nocking points on the string should be mounted far enough apart to avoid pinching the arrow between the nocking points.

As a starting position have the top of the bottom nocking point approximately 5 – 6 millimetres above square.



A self-made nocking point is a good and reliable alternative. Whichever type of nocking point being used, it is important for consistency from string to string, that the nocking point is always positioned at the same place on the string.

Shown in this picture is a suggested way of tying in a nocking point.



The best way the nock point can be checked for barebow is with the bare-shaft test. The theory behind bare-shaft tuning is that a bare shaft will continue to fly in the direction it was launched from the bow. Shoot at least three fletched arrows and two un-fletched arrows at targets at 15 and 30 metres. The 15 metres will cover the short distances whereas the 30 meters is just over half of the longest distance for the barebow discipline Field Archery. It is important that the coach watches that the archer shoots identical shots, especially with the same finger position on string and facial location.

If the un-fletched shafts impact above the fletched shafts, the nock point is too low, if the un-fletched shafts impact below the fletched shafts, the nock point is too high. It is sometimes desirable to have the bare shaft impact just slightly below the fletched shafts to ensure that the nock point is not too low, as this could cause clearance problems. It could also be considered in having the bare shaft impact slightly to the left of the fletched group to compensate for the string reflex.

## 2.8 Arrows

Archers can shoot any kind of arrows with the barebow but they have to be aware that they should be able to reach 50 metres under comfortable sighting conditions. With this in mind an archer who intends to shoot aluminium arrows should have a bow with a draw weight of around 45 lbs. With medium weight aluminium/carbon arrows the draw weight should be around 42 lbs. With light weight aluminium/carbon arrows a bow of 35 lbs should be sufficient to reach the required distance with ease. These suggestions will depend on the archers draw length – with the longer the draw length the power stroke will be longer; this will impart greater power into the launch of the arrow.

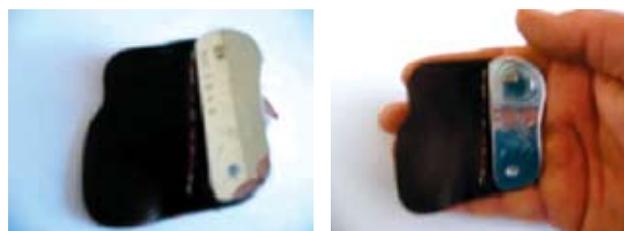
See the selection chart from your manufacturer, or refer to an Arrow Flight Simulator program commercially available for use on personal computers.

It is recommended for beginners to start with arrows, which are longer than the measured draw length, because after a few months of intense practice the draw length could increase up to one inch or more, due to the strengthened muscles of the shoulder girdle and better use of the chest cavity through good breathing techniques. Accordingly, the arrows chosen should be one or even two spine values stiffer than recommended in preparation for the increase in draw length.

## 2.9 Tab

The purpose of a tab is to protect the fingers. A smooth tab with a uniform surface reduces the friction with the string and affects a clean release. The smoother the tab, the weaker the arrow reacts. Bad surface texture of a tab can result in differences in dynamic spine. A little talcum powder on the tab ensures a smooth surface, and extends the life of the tab.

In contrast to the tab used in “freestyle recurve archery”, the face of a tab for barebow archery has no cut-out between the forefinger and second finger.



The barebow tabs are available in small, medium and large sizes for either right or left hand shooters. The face should be just long enough to cover the drawing fingers

when the fingers are curled around the string. Any surplus may be cut off.



A tab with an anchor shelf is only suitable if the facial reference is located under the jawbone. It is preferable for a barebow archer to use a tab without an anchor shelf, to obtain a firm and repeatable facial reference. Some tabs are adjustable and allow the location of the facial reference to be varied. These tabs permit the archer to have a lower anchor point, if required maybe under the cheekbone.

Stitches of approximately 3 mm assist in finger placement on the string when string walking is used. An adjustment of the finger placing on the string of 3 mm equates to making a sight adjustment for approximately 5 metres depending on the draw weight of the bow, the archer's draw length, the weight of the arrow and the archer's technique. Practice will confirm these parameters to the individual archer. Positioning of the fingers on the string for string walking can be accurately determined by using a tab; a shooting glove gives less accurate measurement.

### 3. Shooting Technique And Tuning

#### 3.1 Starting barebow shooting:

In the FITA Coaches Manual, Entry Level the beginning archer has been taught the basic elements of shooting, we now go on with the aspects that concerns shooting with the barebow. In barebow, the recommended technique to instruct beginners is 'point of aim' (aiming over the arrow point), which basically the barebow style.

Beginning archers have to learn and stabilize the shooting routine and find out the fundamentals of barebow shooting. It is recommended for beginning archers to start at a short distance, say 15 metres (depending on age and draw weight sometimes 5 to 8 metres will suffice). This will allow the archer to shoot with both eyes open or one eye closed and to have one constant string position and anchor point, so that they can concentrate on getting the smallest possible arrow groups.

Draw and anchoring are vital parts of the routine and must be consistent before going to other distances. It's a good idea for beginners in order to find the correct anchor point to use a kisser button which has to be adjusted by the coach, thus the archer can correct himself quite easily.

The point of aim can vary with the distance to be shot. The beginning barebow archer should not worry about any aiming procedure until they feel comfortable handling and performing the basic fundamentals of the barebow like stance, drawing, anchor point, release and follow-through. When a general understanding of fundamentals of the barebow is acquired, the archer should concentrate on aiming and getting small groups of arrows at one constant close distance (5-8 metres or 15 meters) on a large Gold (cut from a 122 cm target face) and thereafter at various distances.

When the archer's head is in the correct position, the archer tends to 'look through' the bow string. The setting and checking of the bowstring alignment becomes automatic with experience and most of the concentration for aiming purposes must be directed to the arrow point. Before the archer starts focusing on the gold, and whilst drawing the string towards their anchor point, the archer should align the bow string and bring the point of the arrow in their focus line on the gold.

Most archers prefer on the longer distances, to set the arrow point just underneath the centre with the top edge of the arrow point just touching the lower border of the gold, so that the arrow point will not cover the whole gold. On the short distances they prefer to set the arrow point on the gold. 'On the job' training is the best teacher.

New archers shooting barebow have the tendency to release the arrow as soon as they are in the gold without properly aiming ('snap shooters'). Let them hold for one to two seconds as soon as they are 'in the gold' for proper aiming.

After the archer has acquired experience in aiming with the barebow the archer can practice with the correct target faces at the correct distances. It is also recommended, as barebow is mostly shot in the Field or 3D discipline, to practice with 3D animals on their specific distances.

There is a subjective, kinaesthetic feeling, the experienced barebow archer attains when the arrow point is placed on the gold during the aiming process prior to release. Progress is made only through intense attention, and nothing must be allowed to interfere with the intensity when the arrow point is placed in the gold.

As soon as a good basic form has been mastered the concentration switches over to the aiming process and the degree of scoring success one has whilst shooting barebow. One must be aware of what effect on the accuracy of the arrows the weather conditions have at different velocities and directions. (Of course, different weather conditions have their specific effect on the arrow flight). Aiming adjustments have to be made and the experience in different weather conditions becomes the best teacher.

Through extensive practice over a long period of time, the archer increases skills related to barebow shooting and kinaesthetic awareness, to correct responses to different conditions, e.g. changing wind speed and directions. These factors and others, enable the skilled archer to adjust rapidly as they look over the arrow point towards the intended target.

### 3.2 *Stance and body alignment:*

It is desirable that the archer's stance is consistent, but as barebow is mostly shot in Field or 3D competitions, the terrain, which can change from post to post, dictates the stance. This regards especially the lower body; the upper body can keep consistency in shooting under most terrain circumstances.

The base for a good body alignment is a well-balanced stance. Novices should at first build up a consistent shooting form on an even shooting range. They should think of a tall straight tree reaching for the sky, with the roots deep in the ground. In non-extreme field conditions the frontal plane of the body is in the shooting plane, shoulders, hips and feet in line, chin and nose pointing towards the target. Maintain your preset posture while raising and drawing the bow.

Barebow archers have to practice all kinds of stances and learn how to balance on uneven terrain, where the weight of their body often rests mainly on one leg only. (With uphill and downhill shots the lower leg is carrying the main load). Very steep downhill shots sometimes force the archer to kneel on their rear knee. The same applies, the other way round, to very steep uphill shots, where the archer may kneel on the knee pointing towards the target (front leg).

Whereas the recommendation in target archery is that the body weight is evenly distributed over both feet, the recommendation for barebow archery is that the distribution of body weight is approximately 60% on the front leg (the one closest to target) and 40% on the rear leg. In

the end the archer should feel comfortable and balanced according to the different situations.

### 3.3 *Drawing*

Drawing is pulling the string to the anchor point in one smooth movement. The most important aspect in barebow shooting is the consistency of the draw length. This is difficult, because there is no draw length indicator such as a clicker on the recurve bow or the valley/wall on the compound bow.

To control the consistency of the draw length of the archer for practice purposes, may attach a white tape on the inside of the bow window with a marking on the tape. While the archer is at full draw mark the arrow in line with the marking on the tape, or make a mark on the arrow in line with the front/back end of the sight window.

To come to the correct draw length for barebow shooting it is advisable to start the draw a little higher than shoulder height. The bow shoulder will be pushed towards the butt as far as possible, thus is not contracted or allowed to collapse towards the spine, whereas the shoulder blade of the string side should move toward the spine as the bow is drawn.

### 3.4 *Aiming methods*

There are three methods of aiming in barebow shooting. A combination of these methods can be adapted to suit the individual archer.

Gap shooting

Face walking

String walking

Combinations:

Face and string walking

String walking with gap shooting

All the above mentioned methods use the tip (point) of the arrow for height sighting and the string/bow window edge for windage sighting. Below are two pictures showing the most common sighting pictures. Development of a method of sighting for a barebow archer is a long process.



### 3.5 Anchor point or 'facial mark'

The anchor point depends on how the archer wants to aim. Preference for a particular anchor point usually is dictated by the facial contours and the type of shooting. It is recommended that novices in barebow start with string walking (which is the most accepted style) and a fixed point of anchor on the face, preferably the cheek bone, just underneath the eye. Anchor points/facial marks are usually described as being high or low on the face. An anchor point/facial mark on or under the mandible or jaw bone is termed low. An anchor point/facial mark on or underneath the cheekbone is called high. Both types of anchor points/facial marks can be used effectively for any kind of barebow shooting.

### 3.6 Gap Shooting

Gap shooting involves maintaining the same finger setting on the string and the same facial reference at different distances while sighting with the tip of the arrow on different points above or below the target centre. The correct gap (point of aim outside the target centre) has to be determined for various distances and under varying shooting conditions, which is time consuming and can be a frustrating exercise. The point of aim is usually below the target centre at shorter distances and above the target centre at the longer distances.

### 3.7 Face Walking

The anchor point (facial mark) changes ('walks') on the archer's face depending on the distance of the target. The photographs below show the variation in contact between the hand and face at various distances. The facial reference is closer to the eye for the shorter distances. Photos of LINHART Reingild (AUT), the 2002 World Champion Women Barebow in Canberra (Australia).



The advantage of this method is that the tune of the bow does not alter with distance because the draw fingers are in the same position on the string for all distances. The disadvantage is that left and right variations occur due to the hand position following the anatomical shape of the face, that is, when the hand is located on the cheekbone it is further out with respect to the eye than when located at the corner of the mouth.

Different facial references are not as reliable as a fixed anchor point and finding the exact reference point for each distance can be difficult to achieve making this method of aiming unreliable. Face walking is mostly used with the long bow.

### 3.8 String Walking

This method of shooting barebow is most common in field archery. String walking means that the archer's fingers change their position on the string when changing the distance, while the anchor point (reference point) is constant. The closer to the target, the lower the archer's fingers are located on the string, (the arrow nock is closer to the eye). The further away from the target, the closer the fingers are to the nocking point on the string, (the arrow nock is lower with respect to the eye).

The archer's aim is over the point of the arrow. The point of the arrow is sighted on the centre of the target, whenever possible, while the position of the arrow nock is varied by altering the finger position up or down the string for the varying target distances, in other words walking the string means that the arrow point is constant on the target centre while the finger position on the string determines the elevation for the distance to be shot.

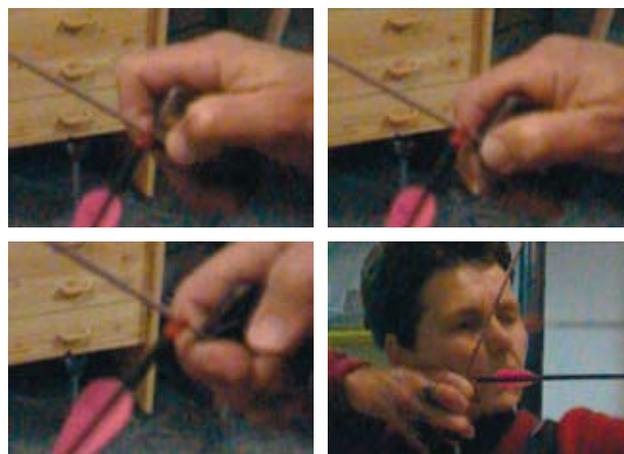
If thicker thread (0.5 mm) for the centre serving is applied, then string walking can be done by counting the threads, otherwise we use the tab. Start with the top edge of the tab touching the nock, then move the thumbnail

down to the point on the string opposite the place on the tab which the archer has determined for the distance to be shot; keep the thumb nail on that point and move the tab down the string so that the top edge aligns with the thumb nail. Then place the draw fingers on the string in the usual way. Some barebow archers have a longer and straighter thumbnail for string walking.

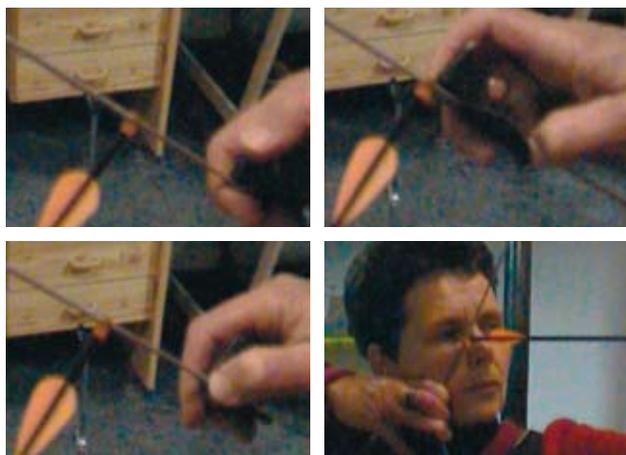
With string walking the archer can shoot different distances with reliable aiming and with a lot of checkpoints. The standard grip on the string for string walking is with three fingers under the nock. The facial reference point is the tip of the forefinger touching the corner of the mouth while having the index finger located firmly underneath the cheekbone.

The following pictures demonstrate what is described above for a shot at a short distance of approximately 10 metres.

The following pictures show the fingers placement for the longer distance of 50 metres. Marking the distance and setting the finger at the right location, with the use of the tab and thumb.

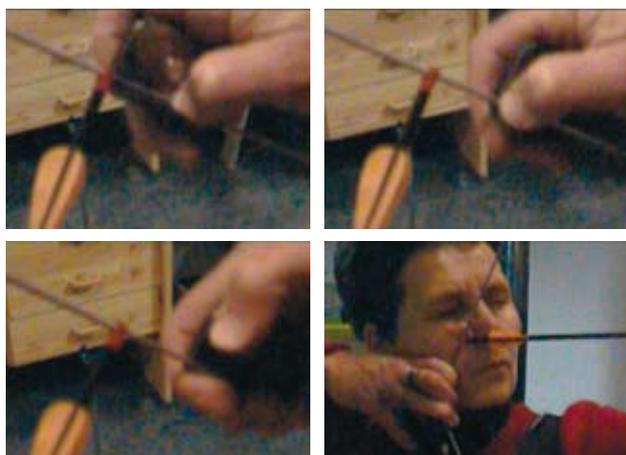


Notice the distance between the nock and the eye.



Notice the distance between the nock and the eye.

The following series of pictures shows the finger placement at the middle distance of 30 metres. Marking the distance with the thumb and setting the fingers at the right location, with the use of the tab and thumb.



Notice the distance between the nock and the eye.

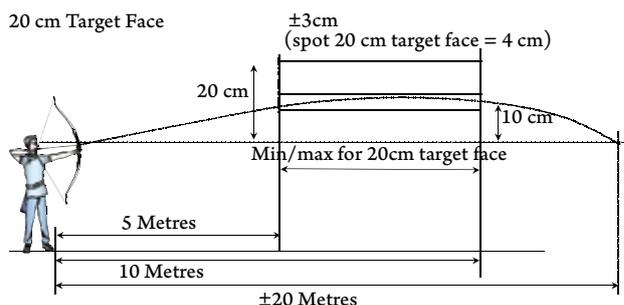
### 3.9 Combination of Face and String Walking

In this method of aiming the archer uses two or three anchor points and combines these with different locations of the fingers on the string. This method is useful for Long Bow archers. These bows expel the arrow at a much lower speed so that the archer needs more anchor points to achieve the correct elevation.

#### 3.10 String walking with Gap Shooting

This method of aiming becomes more and more popular and is simpler than string walking. The archer has a table that maps each size of target face (20cm, 40cm, 60cm and 80cm) to a location on the string. This location corresponds with more elevation than is needed on the longest distance with the particular target face. We anticipate on the relatively straight flight of the arrow on these distances.

Example; measurements when using a 20 cm target face:





of the body, they then relax the fingers until it drops/ glides away from the fingers. This 'mental picture' is the same as releasing the string. The archer should try to remember this while practicing a perfect release.

### 3.12 Follow through

Follow through is essential for consistent performance and minute accuracy. The arrow hits the target before the archer relaxes. The follow-through should be always the same, no matter if the archer shoots at a long or short distance, thus getting the sound of the arrow impact after different time spans.

### 3.13 Analyzing

After every shot the archer should analyze their routine and the outcome (score). Detected inaccuracies and possible reasons:

#### ***Arrow hitting the target face in the upper region:***

- Throwing the bow upwards on release
- Finger position on the string too high: Place fingers lower.
- Make sure the archer is not pushing against the bow grip with the entire hand or palm of the hand.
- Make sure the archer has the right anchor point/facial mark.
- The archer should take time to aim, so that they release the string when the arrow is pointing to the proper aiming point.

#### ***Arrow hitting the target face in the lower region:***

- Keep the wrist stabilized and extended at release so no extra motion occurs in that joint.
- Finger position on the string too low: Place fingers higher.
- Make sure the archer has the right anchor point/facial mark.
- Make sure the archer has the right draw length while releasing and not creeping forward at full draw.
- The archer should take time to aim so that the release will coincide with the arrow point intersecting the desired aiming point.
- Maintain the correct bow arm position without lowering it until the arrow hits target.

#### ***Arrow hitting the target face on the right:***

- Check the archer's stance: align the body with the target, it may be being rotated to the right.

- Check the archer's head position: align the head upwards, the archer may be "leaning: into the string.
- Adjust the archer's grip to eliminate any possibility of a clockwise torque of the bow upon release.
- The left handed archer may also push too hard with the bow arm which causes high- right hits.
- Check to see if the archer's string alignment has not moved to the left.
- The archer should concentrate on the relaxation of finger joints (the flexor muscle) during the release.
- Archer should concentrate on extension of the bow hand in a straight line toward the target.
- Check the archer's anchoring, it may be inconsistent as they may be pushing it too hard into the face or just brushing it.

#### ***Arrow hitting the target face on the left:***

- Check the archer's stance: align their body with the target instead of rotating it to the left.
- Check the archer's head position: align the head upwards as archer may be 'leaning it backwards'.
- Check the archer's bow grip as they may be grabbing the bow, use a bow sling.
- Check the archer's position of the elbow on the bow arm, the elbow should be fully extended at all times as archer may be flinching or flexing the elbow at release. (The same applies to the bow shoulder which should be pushed out at its maximum).
- Check the archer's anchoring/facial marking, as archer might be pushing it too hard into the face or just brushing it.
- Any extra action such as plucking the string will cause a group error to the left.
- Archer should concentrate on extension of the bow hand in a straight line backwards.

### 3.14 Sighting corrections

On the recurve bow the bow sight is always moved to the arrow grouping area. When shooting barebow it is just the opposite:

- Arrow grouping too high, the archer must alter their finger placing to LOWER on the string.
- Arrow grouping too low, the archer must alter their finger position to HIGHER on the string.

### 3.15 Tuning

Archers have to tune their bow from time to time. Bow and arrows are bought independently from each other, the

bow to a recommended bow length and draw weight and the arrows to a rough estimate from an arrow selection chart. When first acquired, the equipment is not suitable for shooting until basic tuning is carried out. Tuning is required by all types of bows to ensure that the equipment fits the archer and is capable of achieving good groups.

Barebow archers who use only gap shooting and/or face walking (with only one draw point on the string), tune their bow just the same as recurve archers; they have only one draw point on the string. The (fixed) draw point on the string is one of the parameters for tuning. In string walking we use different draw points on the string, for tuning we use a middling draw point.

Most bows are reasonably tolerant to small deviations of the normal static tiller. The static tiller is the distance from the upper limb base (or limb pocket) to the string minus the distance from the lower limb base (or limb pocket) to the string. Check the manufacturers recommended measurements for setting the static tiller on the particular bow being used. Keep the static tiller as small as possible on your barebow for good results. Tiller adjustment is carried out as for recurve bows.

The force generated at the nock of the arrow during the release and arrow acceleration varies with different finger positions on the string. The nocking point height for string walking is a compromise that will give acceptable arrow flight at both short and long distances. The nocking point is usually set for correct arrow flight at a mid-way distance. Start with the top of the bottom nocking point 5 to 6 mm above square. Shoot some arrows and go through the tuning method found in the Recurve Bow section of this manual.

#### **4. Conclusion**

Coaching of all forms of barebow archery should concentrate on correct style with emphasis on the facial refer-

ence and string alignment. The basic upright posture as introduced in the FITA Entry Level Coaching Manual should be encouraged. Variations to this form is inevitable if used for Field Archery due to the uneven feet position in the field but a good sound basic form should be developed. The facial reference is the rear sight and as such must be consistent. Depending on the archer's style their facial reference will be dictated by the aiming method used. Both the Straight Line and the Triangle method of aiming are comprehensively covered in the Entry Level Coaching Manual.

#### **5. Glossary**

##### ***Draw point***

Point on the string where the fingers pull the bow

##### ***Face walking***

Method of aiming on the target centre over the arrow with fixed draw point, where the facial mark is chosen according to the distance to shoot

##### ***Gap shooting***

Method of aiming over the arrow with fixed draw point and fixed facial mark, where the point of aiming is chosen according to the estimated distance to shoot, above or under the target centre.

##### ***Post***

Place of shooting line in field archery.

##### ***String walking***

A method of aiming on the target centre looking over the arrow with fixed facial mark, where the draw point is chosen according to the distance to shoot.