

IFAA

FIELD ARCHERY MANUAL

2015



Annexure to:
Level 2
Instruction Manual



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ACKNOWLEDGEMENT

World Archery (WA) kindly agreed that the IFAA may use their Field Archery Manual as the basis of this manual.

Various pictures and graphics have been copied from the WA manual as well as the text relevant to the IFAA of the following sections:

- Range Finding
- Special Field Conditions
- Practical Training
- Personal Care
- Safety

Some graphics and pictures have been modified to be more IFAA specific.

With thanks to Tim Stone and Martin Koini for their input and proof reading this manual.

This manual is an integral part of the IFAA Level 2 Instructors' Manual.

IFAA

INTRODUCTION

The topic of this module is archery on a field course, which includes the following disciplines in field archery: Field Round, Hunter Round, Animal Round, Unmarked Animal Round, 3D Standard Round and the 3D Hunter Round.

All these archery rounds practice archery in natural surroundings, such as shooting in a forest, uphill and downhill shooting in the hills or mountains, across lakes and slopes and with all kinds of other natural obstacles with a minimal amount of clearance.



According to the type of bow that is utilized, we distinguish for each discipline the following shooting styles:

Shooting styles:

1. The compound bow

The IFAA distinguishes between the following shooting styles:

- a) No release (finger draw)
 - Barebow Compound (BBC)
 - Freestyle Limited Compound (FSC)
 - Bowhunter Compound (BHC)
 - Bowhunter Limited (BL)
- b) With release (Wrists or hand held release aid)
 - Freestyle Unlimited (FU)
 - Bowhunter Unlimited (BU)

2. The recurve bow

The IFAA distinguishes between the following shooting styles:

- Freestyle Limited Recurve (FSR)
- Barebow Recurve (BBR)
- Bowhunter Recurve (BHR)

3. The longbow

There is no distinction made between the various “longbows”, flat bows, etc.

4. The Historical Bow

There is no distinction made between the vast

numbers of different historical bows.

They have two common denominators:

- All bow models in this style must have proven ancestry from before 1900
- All bow models in this style must be made with “traditional” materials, not including modern glues and bow string.

Details of the style definitions are explained in Annexure 1 of this manual.

Age groups

The IFAA courses are set out in accordance with the recognised different age groups:

Veteran (V) for archers the age of 55 and over

Adult (A) archers of the age of 19 to 54

Young Adults (YA) of the ages 17 and 18

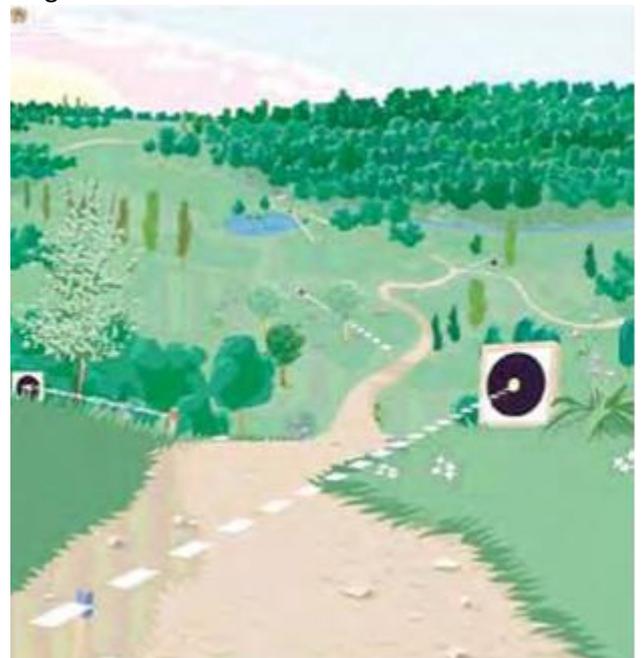
Juniors (J) of the age group 13 to 17

Cubs (C) of the age under 13

The shooting course:

An IFAA course consists of 28 targets, spread in numerical order along the two sides of a walking track. Such a track varies in length, but normally is between 2-4 kilometres.

Groups of archers, normally 4 or 6 archers in a group, are sent to their starting target, shoot the target, record the arrow score on a specific score sheet and continue to the next target, shoot that target and score, and so on, until they have shot all targets.



When all the targets have been shot, the archer returns to the administration tent and submits the score sheet.

This principle applies to all the types of field rounds.

SETTING OUT A COURSE

General

When setting out a field range, the basic principle of the IFAA must be taken into consideration at all times:

The IFAA is an archery association for all ages.

The IFAA has as logo the "Family of Archers", which depicts a man, a woman and a child.

The IFAA ranges must be set out in a manner that children and elderly archers can walk the ranges, even though the shots may be very difficult. The idea is that all gender and age groups can compete on the same course.



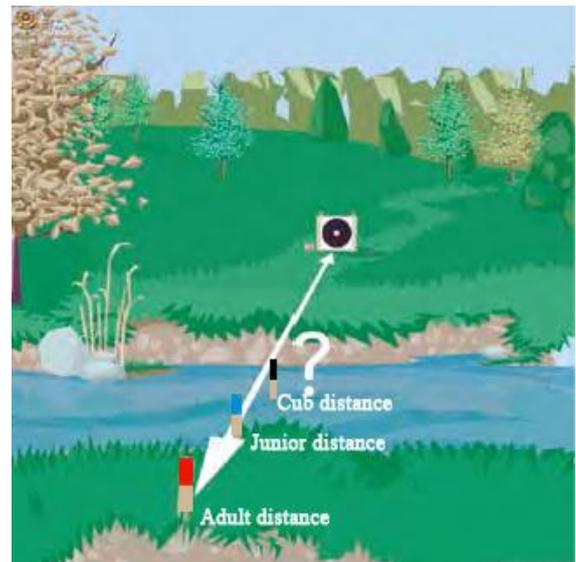
Therefore it is strongly recommended that when a course is set out, that the shorter distance that the children shoot is checked out first, before the adult distance on the same target is set out, especially when crossing obstacles, such as brooks and steep slopes. They may not fit and you may have to include an additional target butt at additional costs.

This consideration must be given when setting out a combined range that allows for shooting a Field Round on the first day and a Hunter Round on the second day and an Animal Round of the third day.

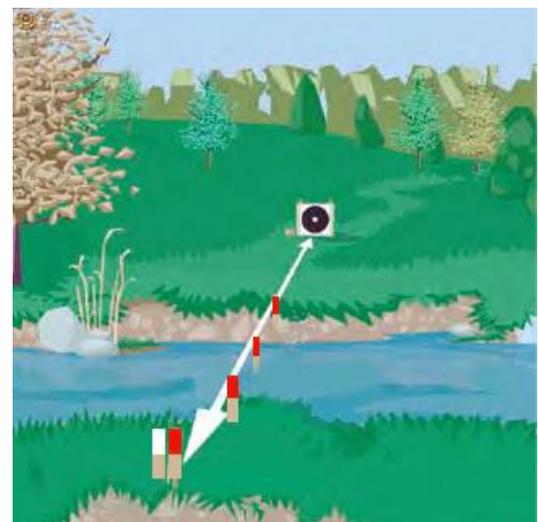
Distances are not the same for these rounds and it will become more complicated when Cub and Junior distances are included on the same range for the three days.

Other than the complications associated when combining age groups and Rounds on the same course, there are various other potential problems that must be taken into consideration.

They will be discussed as part of the setting out requirements of the various types of courses.



Cub distance is situated in the river. The target must be moved either away from the water or possibly closer to the water.



The Field distance (white marker) and Hunter walk-up distances (red marker) do not fit on the same target butt.

Typical field course layout

It is not possible to define a fixed layout of a field course.

Shooting distances are not sequentially fixed and depend on the layout and topography of the course area.

The rule is that the courses must be safe and fairly easily accessible and targets as well as the walking route must be properly indicated as part of this safety measure.

The rest is up to the course designer and the more experienced he/she is the better and more interesting the course may be.

Normally the courses for international events are pre-marked a few weeks or months before the event. Targets and markers are only placed in

position a few days before the event to minimise the chance of vandalism.



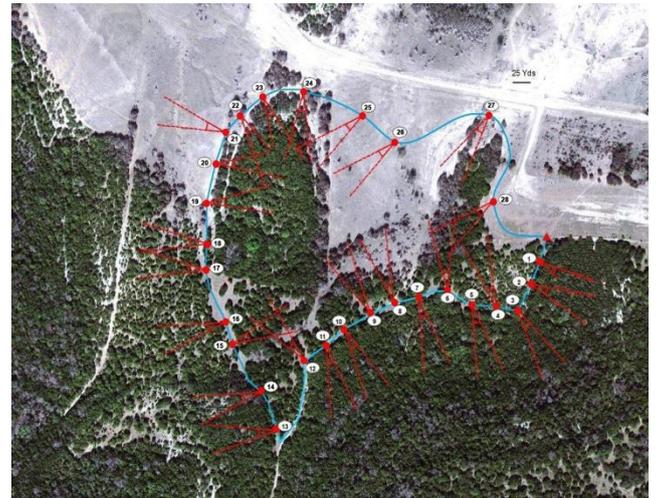
Figure 1: A typical 14 butt course layout for a field archery club.



The above layout could be a typical “once off” course, set out for a specific IFAA tournament, using Google Earth technology. The course will be dismantled on completion of the tournament. The range is set out with 28 targets in a “herring bone” pattern, meaning that the targets are set up on each side of an existing track. After drawing the arrows the archers must first walk back to the track to continue toward the next target. As archers do not walk directly away from the target towards the next target, this type of course normally takes longer to shoot as walking distances can be considerably longer.

Some “herringbone” courses are set out along a single straight track with target 1 on one end of the track and target 28 on the other end of the track. After target 28 is shot the target group will have to walk all the way back to target 1 and continue to shoot; a lengthy process.

The above range only has the first 7 targets in straight line and the remaining 21 targets in a circle, which will reduce the time required shooting, when compared to a full straight “herringbone” lay-out.



Above another typical circular course lay-out. The picture shows the potential arrow deflection of up to 15 degrees, something that should be taken into consideration when setting out a range. The picture was obtained from the internet and amended to show only 28 targets.

Neither of the two course layouts is ideal, as both are a “herringbone” design and result in much additional walking.

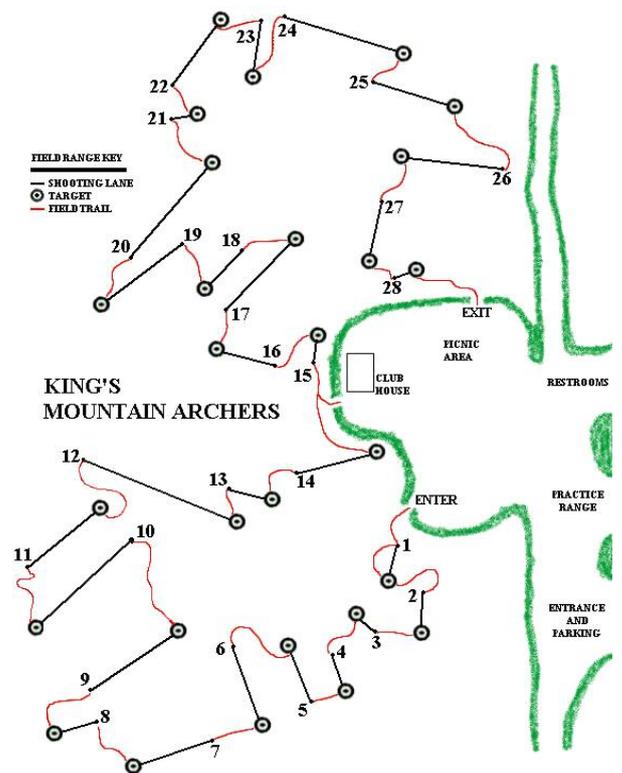


Figure 2: A typical double range layout as designed for Kings Mountain Archers.

Figure two shows a much better course layout where archers walk directly away from the butt to the next shooting position without having to walk back to the shooting line, thus reducing walking time.

Such a lay-out is also considered to be safer, especially when the archers walk away from the target at 90 degrees, rather than walking away from the target in line parallel to the shooting line.

This set up also reduces waiting time for the following target group.

The drawing also clearly shows two courses. A double range layout is a requirement for all IFAA sanctioned events, where targets are marked from 1-14 and 15-28. These are two individual ranges and each range must have all targets (see IFAA Rounds). There may not be any duplication on a single course (e.g. no two 80 yard walk-up on the first 14 targets and none on the second 14 targets). The advantage of above range layout that there is a central part where the courses meet and that single catering and ablution facilities can be used for the combined ranges.

Marking the shooting positions

The shooting position of an archer is marked by a stake or peg, which is hammered into the ground and clearly visible to the archer.

The markers have a specific colour, depending on the type of Round and the age group of the archer.

Age group	Field	Hunter	Animal	3D
Veteran, Adult, Young adult	White	Red	Yellow	Yellow
Junior	Blue	Blue	Blue	Blue
Cub	Black	Black	Black	Black

Marker colours

Where Adults and Juniors shoot from the same peg, the colours can be combined on one peg, however only the colour for adults will also be acceptable.

Two archers shoot side by side and it is recommended that each target has two sets of markers, one for each archer. The archer stands with the front foot against the marker or within 15 cm from the marker, but never in front of the marker.

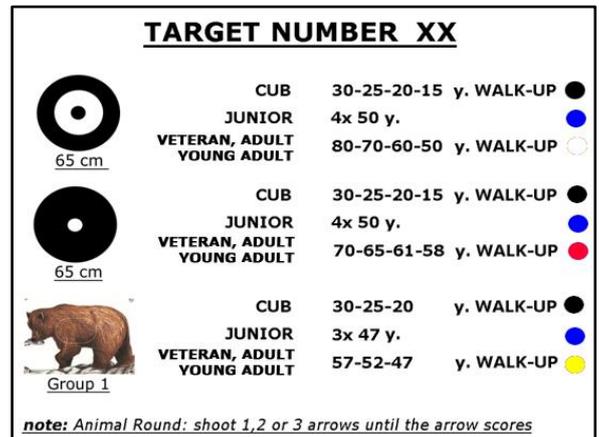
A single marker is also allowed, in which case the two archers stand on each side of the marker, no further than 3 feet from the marker and never in front of the marker or more than 15 cm behind the marker.

In the event of two markers, care should be taken that the standing conditions at each marker are similar.

Every marker shows the shooting distance!

The position of the first marker should be clearly marked with an indicator board that shows the relevant target information:

- Target number
- Shooting distance (marked rounds only)
- Target size or group



Typical indicator board for Field, Hunter and Animal Rounds, shot on a single range



Typical indicator board for an unmarked 3D Standard, Hunter or Unmarked Animal Round. The kill area must be clearly visible.

Measuring the shooting distance

The shooting distance is measured from the centre of the target to the shooting marker at navel height, using a steel tape or a high quality non-stretch nylon tape. The measuring tape must be held as tight as possible and must be in a straight line between the target and the marker.

All distances shall be correct within 150mm (6") and no deviation is permitted.

In the event of unmarked distance events, the distance may be measured with the use of a good quality range finder.

Basic setting-out requirements

The following course layout requirements should be considered at all times:

1. Marked Rounds

- a. The primary consideration for setting out a field range: The IFAA determines the best archer as the shooter with the highest score and not necessary the fittest archer. Ranges should be reasonable as far as walking is concerned even though the shots may be very difficult. The range should not be a physical fitness course and special consideration should be given to the veteran archers and the cubs. No one should be “forced” to leave the tournament because of physical or health problems. We are a “family” sport!
- b. Direction of the paths must be clearly marked to avoid archers walking into the shooting lane
- c. Shooting distances used shall be those given in the latest edition of the IFAA By-laws.
- d. All butts must be stable so there is no danger of tipping. If such a chance exists, then they must be braced or anchored.
- e. Shooting lanes must be cleared wherever possible so that the lightest bows can shoot an arrow to the target without it being deflected by overhanging branches. Special consideration should be given to the lady longbow division. It is advised that an area one quarter of the shooting distance shall be cleared in front of the butts.
- f. Any person, regardless of height, must have a clear view of the full face of the target.
- g. If the target has no backstop, one-half the shooting distance, to a maximum of 30 yards, shall be cleared behind the butt. If the butt has a backstop or is placed in front of an embankment, then the area to such backstop or embankment shall be cleared so that arrows may easily be found. Consideration must be given for our class “B” and “C” archers. Arrows are expensive and an excessive loss of arrows should be avoided.
Note: an embankment is seen to be a wall of earth or fine gravel. Rocks, boulders or big trees may not be used as a “back stop”.
- h. Paths between targets should be clearly marked and cleared enough for easy walking without obstructions.
- i. Paths shall leave the butt sideways and away from the shooting line. Paths that lead

back to the shooting line shall be at least 20 meters from the shooting lane.

- j. *Note: Normally this lay-out should be avoided.*
- k. Bales or butts must not leak arrows. They shall not be reinforced with any material that may damage arrows.

2. Unmarked Rounds

- a. Although the primary consideration for setting out an unmarked range is to determine the best archer and not the fittest archer, the IFAA Bowhunter tournaments are intended to represent a degree of “hunting” conditions. Targets should be placed in shooting lanes to simulate hunting conditions, but at the same time these shots should be good, clean (not clear) and safe. Remember, realistic bowhunting practice shots.
- b. Direction of the paths must be clearly marked to avoid archers walking into the shooting lane.
- c. All distances may be measured with an accurate range finder and shall be within the range given in the latest edition of the IFAA By-laws.
- d. All butts and/or 3D targets shall be stable so there is no danger of tipping over. If such a chance exists, then they must be braced or anchored.
- e. Although shooting lanes must be naturally clear to accommodate the lightest bows, archers must determine their shooting stance to avoid any overhead branches. Archers may have to bend down or even kneel for the shot.
- f. Any person, regardless of height, must have a clear view of the “kill” area on the target.
- g. If the target has no backstop, one-half the target distance shall be cleared behind the butt. If the butt has a backstop or is placed in front of an embankment, then the area to such backstop or embankment shall be cleared so that arrows may easily be found.
Note: an embankment is seen to be a wall of earth or gravel. Rocks, boulders or big trees may not be used as a “back stop”.
- h. Paths between targets should be clearly marked.
- i. Paths shall leave the butt/3D target sideways and away from the shooting line. Paths that bring the archers back to the shooting line should be avoided, but if that

is not possible the path shall be at least 10 meters from the shooting lane.

- j. Bales or butts and 3D targets must not leak arrows. They shall not be reinforced with any material that may damage arrows. In the event of 3D targets, the centre piece must be replaced or the entire target should be replaced if the target becomes shot out.

The practice course

The practice course is an integral part of the IFAA field tournament, be they either Field or 3D.

The practice course is mainly used for “warm-up” and adjusting sight settings and is used by most competitors on a daily basis.

Safety rules that apply for the tournament courses also apply to the practice course, if not more so.

Practice ranges are normally open two days before the start of the tournament, as well as in the early mornings before the daily briefing of the archers and in the afternoon, after the archers come off the courses.

During those periods the organisers are required to have range officer(s) on these ranges who control the movement of the archers.

Safety on a practice course.

Practice courses should be flat or have a slight uphill or downhill slope.

The area that is chosen must be separate from the tournament courses and may not be part of such a course.

Safety precaution is essential and the course must be set out in such a way that there is no path or road directly behind the course. Is there a path or road then the organisers will have to place a proper barrier behind the targets in a manner that is acceptable to the IFAA.

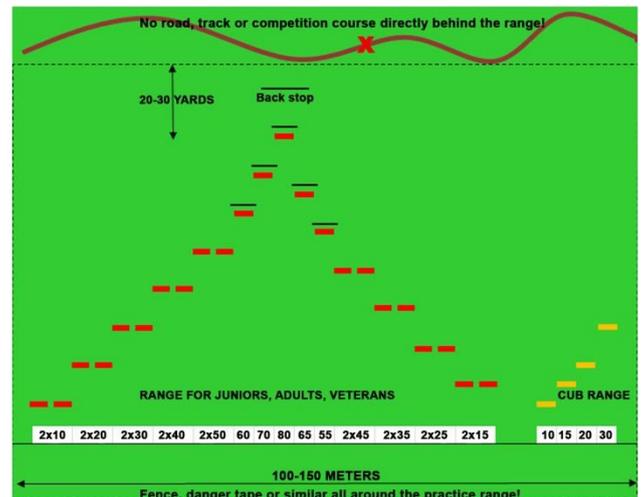
Spectators should also not be allowed to stand at the sides of the course. All archers and spectators must stand behind the shooting line.

Long distance targets must have a system that “captures” overshot arrows. This can be a net or can be straw bales.

Individual lanes may not be allowed to walk forward to collect arrows. All archers on the shooting line walk forward together after the signal is given by the course supervisor. Normally the supervisor uses a whistle to notify the archers. The use of traffic lights (red/green) is quite common on, but always in combination with a whistle.

Setting out a practice course for Field archery

Below a typical layout of a practice course for Field archery:



A practice range for 500 to 600 archers. For fewer archers the number of butts may be reduced. For more archers an additional range will be required.

When setting out a practice course, stick to the following principles:

- Fence off the practice course in some way or another.
- Clearly mark the shooting line, either by a chalk line or rope. **Distances must be clearly marked on the target butt.** There are so many butts on the course that an archer can easily mistake the butt he shoots at.
- No-one must stand in front of the shooting line when archers are shooting. (No arrow drawing while other archers are still shooting).
- The cub range should be separate from the main practice range.
- Place double butts on the shooting distances that are less than 50 yards. It reduces the chance of arrow damage. It also allows for more archers on the course.
- Place a back stop behind the long distance butts, especially when there are a lot of archers shooting unsighted styles. It saves time as fewer arrows will be missing after each session and searching time is reduced.
- Replace faces daily! The used faces from the shoot on the previous day may be used. Keep spare faces with the range officer.

Setting out a practice course for 3D archery

- The basic principles that apply to the Field archery also apply to 3D archery; however the maximum target distance is only 60 yards.
- Animal faces and/or 3D targets can be mixed. Some archers may prefer Field faces to set their sights
- Start using back stops from 40 yards. The numbers of participants in the unsighted styles normally far outnumber the sighted styles.

Allowing for equipment failure

The rules of the IFAA allow archers with equipment to leave the range under guidance of one of the range officials.

The archer is allowed reasonable time to repair the equipment, while the other members of the shooting group either wait (a short period only) or continue the shoot without the archer.

The archer later re-joins the group and continues the shoot. The targets that were skipped may be shot under guidance of the range official, but time is limited by the time the score cards must be handed in. No time extension will be given!

Current IFAA tournaments, especially the 3D events, are very large with five or more ranges, sometimes so spread out that special transport is arranged to bring the archers to and from the ranges.

There will simply be not sufficient time to go back to the central area of the tournament, fix the bow, have some practice shots and return to the range.

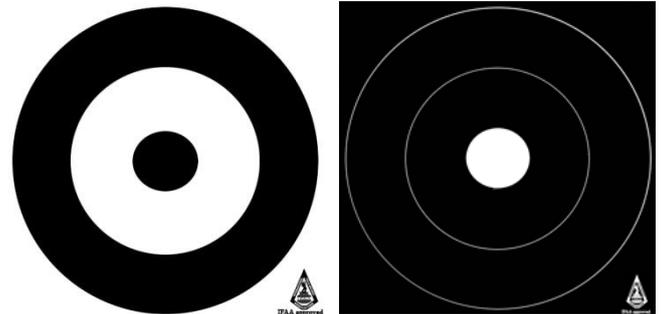
So the organisers must accommodate this problem, which can be done as follows:

- Many archers, especially compound archers, have a spare bow for the tournament. They bring these bows with them to the range. The organisers must allow for a secure and protected area where the spare bows will be kept. It is strongly advised that archers who bring in equipment for safe keeping receive a numbered token that corresponds with a number on the bow case. The official will retrieve the equipment from the safe keeping preventing unauthorised access by others. Such area for safe keeping should be either at the entrance of the course or at the nearest rest area.
- The organisers must allow for a marked practice butt to allow the archer a few shots to set the bow sight. The best place will be next to where the spare equipment is kept for safe keeping. (a target on the course may not be used!)

Targets used by the IFAA

1. Marked distances

The IFAA uses different target faces for the various Rounds:



Field Round

Hunter Round



Animal face

Target faces must show the IFAA mark of approval when used in IFAA sanctioned events.

Target faces have different sizes, depending on the distance that is shot. As a rule the longer the distance, the larger the target face.

The following sizes are used:

Field and Hunter Rounds: 65cm, 50cm, 35cm, 20cm

Animal targets faces are graded in accordance with their “high scoring” area (also named “kill area”), a marked area normally above the front leg.

They are graded as follows:

Group 1: 229x368mm, with rounded ends

Group 2: 178x267mm, with rounded ends

Group 3: 114x178mm, with rounded ends

Group 4: 64x92mm, with rounded ends

For all the above Rounds, the distance shall be clearly marked on the indicator board and on the markers.

2. Unmarked distances

The normal animal faces can be used for events where un-marked distances are shot.

The same grading applies as that of the marked distance,

The IFAA has no preference in 3D targets provided they last for the day's shooting and do not leak arrows.

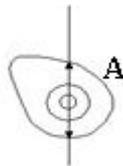
3D targets must be life size; the further the distance, the larger the animal.

It is recommended that targets are tested for durability before a large number is ordered for a tournament.



Also the 3D targets are graded in accordance with the size of the "high scoring" area, which is measured from the top line to the bottom line of the high score area through the centre of the "ring".

- Group 1: A>250mm
- Group 2: A=201-250mm
- Group 3: A=150-200mm
- Group 4: A<150mm



Neither the indicator board nor the markers must show the shooting distance!

Although the IFAA has no official ruling on what targets should be used and what should not be used, it is sound policy not to use faces that depict:

- Great apes like chimpanzee, gorilla, etc.
- Large cats like lion, tiger, cheetah, etc.
- Rhinoceros, elephant and similar
- Large raptors
- Other images that may be seen as offensive by the media or in any way may damage the image of the IFAA.

Setting out marked distances

The IFAA recognises various Rounds with marked (known) distances. They include the Field Round, the Hunter Round and the Animal Round. There are other rounds, however they are not that popular with the archers and not often offered as tournaments.

The Field Round

The Field Round is the first integral round of the IFAA in the World Field Archery Championships and the various Regional Field Championships.

The Field Round consists of a standard unit of 14 targets which is made up of the following marked distances and target sizes:

Number of faces ¹	Diameter of face in cm	Number of shooting positions	Distance in yards		
			Veterans Adults Young Adults	Juniors	Cubs
1	Ø 65	4x1	80,70,60,50	50	30,25,20,15
1	Ø 65	1x4	65	50	30
1	Ø 65	1x4	60	45	25
1	Ø 65	1x4	55	40	20
2x1	Ø 50	4x1	45,40,35,30	As adult	20
2x1	Ø 50	4x1	35,35,35,35	As adult	20
2x1	Ø 50	1x4	50	As adult	20
2x1	Ø 50	1x4	45	As adult	15
2x1	Ø 50	1x4	40	As adult	15,15,15,15
2x2	Ø 35	1x4	30	As adult	10
2x2	Ø 35	1x4	25	As adult	10
2x2	Ø 35	1x4	20	As adult	10
2x2	Ø 35	1x4	15	As adult	10
4x4	Ø 20	4x1	35,30,25,20 ft	As adult	20 feet

Junior distances may not be more than 50 yards and Cubs shoot distances no more than 30 yards.

The colour of the shooting markers for the Field Round may differ for each age group to avoid possible confusion.

Field Round markers:

Age group	Target size	Distance	Marker colour
Adult, Veteran, Young Adult	All sizes	All distances	White*
Junior	Ø 65	50, 50, 45, 40	Blue
	All other sizes	All other distances	White*
Cub	All sizes	All distances	Black

*: The marker can be a combined white and blue colour to avoid possible confusion by inexperienced juniors.

¹: The number of faces depicted allows for shooting the face with four archers in the target group without having to score and draw arrows after the first two archers have shot. If half the number of faces is used (i.e. 2=1 and 4=2) arrows must be drawn after the first two archers have shot and scored to minimize damage to arrows.

A single or double marker lay-out may be used; however a double marker lay-out is preferred for IFAA sanctioned tournaments.

The Hunter Round

The Hunter Round is the second integral round in the World Field Archery Championships and the various Regional Field championships.

The Hunter Round consists of a standard unit of 14 targets which is made up of the following marked distances and target sizes:

Number of faces ¹	Diameter of face in cm	Number of shooting positions	Distance in yards		
			Veterans Adults Young Adults	Juniors	Cubs
1	Ø 65	4x1	70-65-61-58	50	30-25-20-15
1	Ø 65	4x1	64-59-55-52	50	30
1	Ø 65	4x1	58-53-48-45	45	25
2x1	Ø 50	4x1	53-48-44-41	41	20
2x1	Ø 50	1x4	48	As adult	20
2x1	Ø 50	1x4	44	As adult	20
2x1	Ø 50	1x4	40	As adult	20
2x1	Ø 50	4x1	36-36-36-36	As adult	15
2x2	Ø 35	4x1	32-32-32-32	As adult	15-15-15-15
2x2	Ø 35	4x1	28-28-28-28	As adult	10
2x2	Ø 35	2x2	23-20	As adult	10
2x2	Ø 35	2x2	19-17	As adult	10
2x2	Ø 35	2x2	15-14	As adult	10
4x4	Ø 20	1x4	11	As adult	20 feet

Junior distances may not be more than 50 yards and Cubs shoot distances up to 30 yards.

The colour of the shooting markers for the Hunter Round may differ for each age group to avoid possible confusion.

Hunter Round markers:

Age group	Target size	Distance	Marker colour
Adult, Veteran, Young Adult	All sizes	All distances	Red
Junior	Ø 65	50, 50, 45	Blue
	Ø 50	41	Blue
	All other sizes	All other distances	Red *
Cub		All distances	Black

*: The marker can be red and blue to avoid possible confusion by inexperienced juniors.

¹: See comments below the Field Round Markers table.

A single or double marker lay-out may be used; however a double marker lay-out is preferred for IFAA sanctioned tournaments.

The Marked Animal Round

The Marked Animal Round is the third integral round in the World Field Archery Championships and the various Regional Field championships.

The Marked Animal Round consists of a standard unit of 14 targets which is made up of the following marked distances and target sizes:

No. of faces	Group size of face	Maximum number of shooting positions	Distance of furthest marker in yards		
			Veterans Adults Young Adults	Juniors	Cubs
1	1	3	60-40	From adult	30-25-20
1	1	3	3x5 yard walk-up	front marker	30
1	1	3			25
1	2	3	45-30	As adult	20
1	2	3	3x3 yard walk-up		20
1	2	3			20
1	3	1	35-20	As adult	20
1	3	1	Single marker		15
1	3	1			15-15-15-15
1	3	1			10
2x1	4	1	20-10	As adult	10
2x1	4	1	Single marker		10
2x1	4	1			10
2x1	4	1			20 feet

Marked Animal Round markers:

Age group	Target group	Distance	Marker colour
Adult, Veteran, Young Adult	All groups	All distances	Yellow
Junior	Group 1		Blue
	All other groups	All other distances	Yellow *
Cub		All distances	Black

*: The marker can be yellow and blue to avoid possible confusion by inexperienced juniors.

A double marker lay-out shall be used for all IFAA sanctioned tournaments.

Combining marked Rounds on a single course

When tournaments are hosted with less than 120 participants, the three Rounds can be combined on a single course.

In this way the course is “maximised” and the same target butts can be used for the full tournament, thus greatly reducing the costs as well as minimizing the required number of Range Marshals and other maintenance volunteers.

Care must be taken when setting out a combined course: Always set out the Cub distance first to

assure that there are no obstacles closer to the target. (see illustrations on page 3)

The way to read the chart:

Setting out unmarked distances

The IFAA recognises three different unmarked Rounds, all of which are shot in the Wold Bowhunter Championships and the various Regional Bowhunter Championships:

Combined marked rounds on a single course										
Size of target face			Cub distances		Junior distances			Young Adults, Adults & Veterans		
Field	Hunter	Animal	Field / Hunter	Animal	Field	Hunter	Animal	Field	Hunter	Animal
65cm	65cm	Group 1	30-25-20-15 yds	30-25-20 yds	front marker	50 yds	front marker	80-70-60-50 yds	70-65-61-58 yds	Group 1
65cm	65cm	Group 1	30 yds	30 yds	50 yds	50 yds	front marker	65 yds	64-59-55-52 yds	Group 1
65cm	65cm	Group 1	25 yds	25 yds	45 yds	front marker	front marker	60 yds	58-53-48-45 yds	Group 1
65cm	50cm	Group 2	20 yds	20 yds	40 yds	front marker	front marker	55 yds	53-48-44-41 yds	Group 2
50cm	50cm	Group 2	20 yds	20 yds	as adult	as adult	as adult	45-40-35-30 yds	40 yds	Group 2
50cm	50cm	Group 2	20 yds	20 yds	as adult	as adult	as adult	35-35-35-35 yds	36-36-36-36 yds	Group 2
50cm	50cm	Group 3	20 yds	20 yds	as adult	as adult	as adult	50 yds	48 yds	Group 3
50cm	50cm	Group 3	15 yds	15 yds	as adult	as adult	as adult	45 yds	44 yds	Group 3
50cm	35cm	Group 3	15-15-15-15 yds	15 yds	as adult	as adult	as adult	40 yds	32-32-32-32 yds	Group 3
35cm	35cm	Group 3	10 yds	10 yds	as adult	as adult	as adult	30 yds	28-28-28-28 yds	Group 3
35cm	35cm	Group 4	10 yds	10 yds	as adult	as adult	as adult	25 yds	23-20 yds	Group 4
35cm	35cm	Group 4	10 yds	10 yds	as adult	as adult	as adult	20 yds	19-17 yds	Group 4
35cm	35cm	Group 4	10 yds	10 yds	as adult	as adult	as adult	15 yds	15-14 yds	Group 4
20cm	20cm	Group 4	20 ft	20 ft	as adult	as adult	as adult	35-30-25-20 ft	11 yds	Group 4

Read the distances from left to right.

The first target will have a 65cm face for the Field Round and the Hunter Round and a Group 1 face for the Marked Animal Round.

On that target the Cubs shoot the four arrow 30 Yard walk-up for the Field and Hunter Round and the three arrow walk-up for the Animal Round.

The Veterans, Adults and Young Adults shoot on the same target, but they shoot the four arrow 80 yards walk-up for the Field Round and the 70 yards walk-up for the Hunter Round.

The Juniors shoot 50 yards on the same target.

For the Marked Animal Round the Veterans, Adults and Young Adults shoot the same distances (see the table in the left column) as a walk-up of maximal three arrows and Juniors shoot all arrows from the front marker.

Keep in mind that distances do not follow the chart in sequence, but distances are mixed at random.

The Unmarked Animal Round

The lay-out of the Unmarked Animal Round is identical to the Marked Animal Round; however the shooting distances are not marked on the indicator board or on the markers. The walk-up distances however are the same.

Markers are the same as those for the Marked Animal Round. (Double marker lay-out)

The Unmarked Animal Round can be either made up of animal faces or 3D targets, but may not be combined on the same course.

Unlike the Marked Animal Round, where a standard unit consists of 14 targets, the Unmarked Animal Round standard unit consists of 28 targets.

The 3D Hunting Round

Like the Unmarked Animal Round, this Round also consists of 28 targets.

This round only allows for 3D targets and faces or silhouettes may not be used.

A single or double marker layout is permitted.

Markers are the same as those of the Unmarked Animal Round (yellow, blue and black).

No distances shall be shown on the indicator board or on the markers.

The distances for each group of target will be as follows:

Target Group number	Number of targets per Group	Maximum distance		
		Veterans/Adults/Young Adults	Juniors	Cubs
1	6	60 Y	50 Y	30 Y
2	6	45 Y	45 Y	25 Y
3	8	35 Y	35 Y	20 Y
4	8	20 Y	20 Y	10 Y

The 3D Standard Round

Like the 3D Hunting Round, this round also consists of 28 targets and only 3D targets shall be used. The 3D standard round however has two markers, each at a different distance from the target.

The distances for each group of target will be as follows:

Target Group number	Number of targets per Group	Maximum distance of first marker		
		Veterans/Adults/Young Adults	Juniors	Cubs
1	6	60 Y	50 Y	30 Y
2	6	45 Y	45 Y	25 Y
3	8	35 Y	35 Y	20 Y
4	8	20 Y	20 Y	10 Y

The distance from the first marker and the second marker is not fixed and left up to the discretion of the course designer.

A single or double marker layout is permitted.

Markers are the same as those of the Unmarked Animal Round (yellow, blue and black).

No distances shall be shown on the indicator board or on the markers.

Combining unmarked Rounds on a single course

Unmarked Rounds may **not** be combined on a single course. If only one course is available then the Range officers must change the position of the markers and if need be the target on each day before the shoot of the day starts.

For IFAA sanctioned events it is the norm that unmarked ranges are set out on “unknown” terrain that was not previously used and that each detail only shoots the course once. E.g. for IFAA events four ranges are a minimal requirement.

SHOOTING AND SCORING

The marked and unmarked rounds have a variation of shots and a variation in the scoring.

Normally the scoring is indicated on the score sheet that an archers carries with him during the day’s shoot to record the score of each arrow.

On completion of the day’s shoot the archer summarises the score and signs the score sheet off as being correct, countersigned by the scorer of the target group. Irrespective of what the scorer records, the archer must check the score before signing off. The archer remains responsible for the correctness of the score!

It is recommended that waterproof pens are used for score recording, especially in rainy weather.

EVENT NAME

Name:

Registration No.:

Style:

Date:

Round: **FIELD or HUNTER**

Range name:

Standard Unit 1					Standard Unit 2								
Target No.	Score per arrow				Target score	Running score	Target No.	Score per arrow				Target score	Running score
	1	2	3	4				1	2	3	4		
1							15						
2							16						
3							17						
4							18						
5							19						
6							20						
7							21						
8							22						
9							23						
10							24						
11							25						
12							26						
13							27						
14							28						

Scores are: 5, 4, 3 or 0 (miss) TOTAL SCORE

Scores have been checked and are correct

Archer

Scorer 1

Scorer 2

Submit this score card to the administration office after the day's shoot !

Entering a tournament

Pre-registration over the months preceding the event is normally required to allow the organisers to set up the correct number of courses.

Nevertheless participants must register at the tournament also.

At registration each participant will be given the tournament information in writing and the equipment needs to be checked for correctness.

The IFAA uses a specific inspection form to record the archer’s equipment. Most organisers also issue the score cards for the full tournament.

At IFAA sanctioned events the participant is required to show proof of membership with an IFAA affiliated association as well as his/her classification/score card.

The day prior to the start of the tournament the representative of each of the attending associations

will be called in for a briefing, when the various aspects and rules of the tournament are explained so that they in turn can inform their archers.

Every day before the start of the shoot there will be an assembly of all participating archers so that any issues from the previous day can be mentioned and clarified.

After the assembly each archer goes to the marker that indicates the name of the range. This marker normally is carried by the Range Marshal who is responsible for the running of that course with the help of a few Range Officers. He will walk to the range (or bus transport to the range if walking is too far) and the archers allocated to that range will follow him.

It is important that archers shoot in the correct target group on the correct course.

Archers in the incorrect target group **must** be moved to the correct target group before the day's shoot can start.

This can delay the start of the shoot considerably.

Each archer is allocated a target to start from. Normally there are four archers in the group (called target group) but there can be as many as six in a group, depending on the type of tournament and the shooting style(s) in the group.

The target groups in the tournaments with unmarked distances tend to be larger than those in the marked distances as there are fewer arrows shot in those events.

The target groups have a fixed composition:

The first listed archer is the Target Captain; the second listed archer is the first scorer. The next listed archer is the second scorer and the fourth member of the group normally draws the arrows. Other archers in the group have no distinct function in the group.

Once all archers are on the correct target, the Range Marshal shall give the start signal and archers may start shooting arrows.

Shooting sequence

Shooting positions and shooting sequence vary from Round to Round and from target to target:

Marked distances

Field Round.

This round has ten targets with a single shooting position, meaning that there is only one marker per shooter and each shooter shoots four arrows from the same marker.

There are also three targets with four "Walk-up" shooting positions. These targets have four markers per shooter at different shooting distances. The archer shoots a single arrow from each marker, a total of four arrows.

The fourteenth target has a "Fan" shooting position. There are four side by side markers at equal distance from the target. The markers are three feet apart.

The archer shoots a single arrow from each marker, thus making up the four arrows.

If two faces are set up, the left face is shot from the two left side markers and the right face is shot from the two right side markers.

The archers in the Target Group will decide which two archers will start shooting first. They shoot side by side on the first target and complete their four arrows and thereafter the second two archers shoot their four arrows.

On shooting distances less than 55 yards there should be two faces and thus two archers per face.

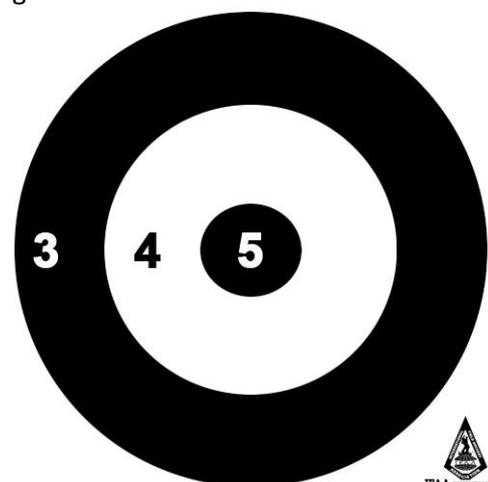
If there are more than four archers in the group, the Target Captain may decide that arrows are also drawn after the second two archers have completed their shots.

Some of the unsighted shooting styles struggle to place all their arrows in the target centre (also called "the Spot"). If there is a "spread" of arrows over the face, drawing of the arrows may not be necessary. The decision lies with the target group.

This sequence of shooting remains the same for the full standard unit.

If two standard units are shot, the archers change shooting positions at target 1 and target 15. The two archers who shot first will now shoot second and the archer on the left marker now shoots from the right marker.

Scoring the arrows:



An arrow must **break** the score dividing line to be scored the higher value.

An archer can shoot a maximum of 20 points on each target; a maximum total of 280 points per standard unit.

Hunter Round

The Hunter Round is shot in a similar fashion as the Field Round and scoring is the same.

This round has four targets with a single shooting position, meaning that there is only one marker per shooter and each shooter shoots four arrows from the same marker.

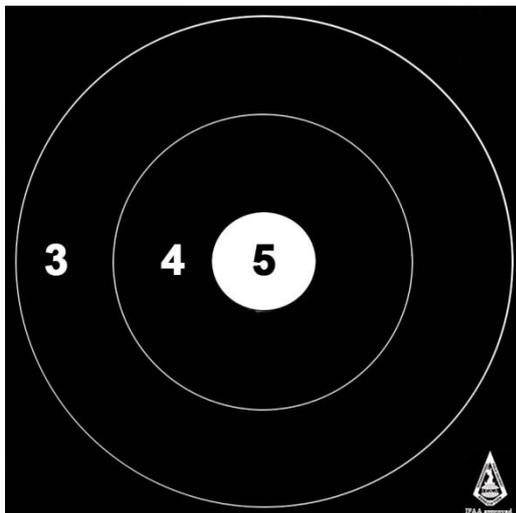
There are four “Walk-up” targets each with four markers per shooter, each at a different distance to the target. One arrow is shot from each marker.

There are three “Walk-up” targets each with two markers, each at a different distance to the target.

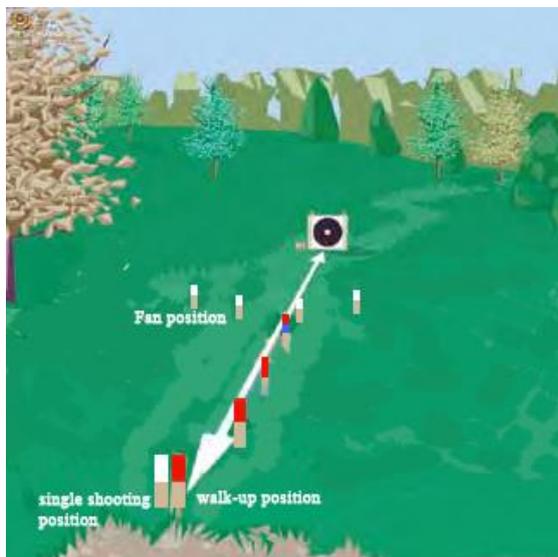
Two arrows are shot from each marker.

Three targets have the “Fan” shooting positions.

Scoring the arrows:



Scoring rules are similar to those of the Field Round.



Various shooting positions

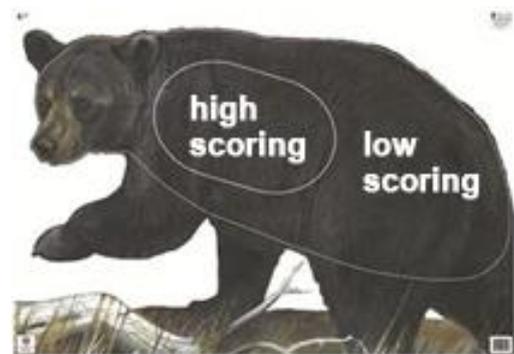
Marked Animal Round

The Marked Animal Round is a round where an archer continues shooting until the arrow hits the scoring area. Thereafter the archer stops shooting at the target as no higher score can be achieved. Up to three arrows may be shot.

If no arrow has hit scoring area by that time, there is no score on that target.

An animal target is divided over two scoring areas:

1. The high scoring area, also called “kill area”
2. The low scoring area, also call the “wound area”.



Scoring of the arrows will be as follows:

Arrow	High scoring	Low scoring
1 st	20 points	18 points
2 nd	16 points	14 points
3 rd	12 points	10 points

To assure that the correct arrows will be scored, all arrows shall be marked with one ring, two rings or three rings at the back of the arrow, and must be shot in that sequence.

Scoring rules are similar to those of the Field Round.

Unmarked distances

The Unmarked Animal Round

The Unmarked Animal Round may either be made up of flat animal faces or 3D targets. They may however not be combined on the same course.

When faces are used, the scoring is exactly the same as that of the Marked Animal Round.

3D targets have a variation of different high scoring areas, which can be summarised as follows:

The high scoring area is measured over the full marked central area. Any “spot” marking is not considered.

Scoring rules are the same as those when faces are used.

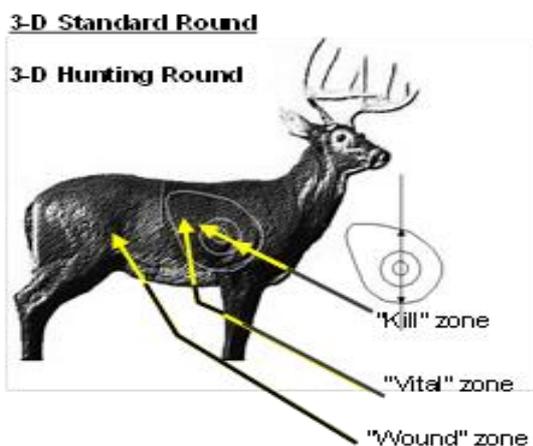
However for an arrow to score, it must remain embedded in the body of actual animal. Horns and antlers are not considered scoring areas. Arrows that rip through the hairline of the animal and do not remain embedded shall have no score.

The 3D Standard Round and 3D Hunter Round

Both rounds only use 3D targets and the scoring areas are similar:

The high scoring area is divided in a high scoring "Kill" area and a lower scoring "Vital" area. The "wound" area is similar as to that of the Unmarked Animal Round.

Scoring the 3D Standard Round:



Only one arrow is shot at the targets and scores as follows:

Kill	20 points
Vital	16 points
Wound	10 points

Scoring the 3D Hunter Round:

Two arrows are shot at the targets and scored as follows for each arrow:

Kill	10 points
Vital	8 points
Wound	5 points

Some general scoring rules

1. No arrows shall be touched until all arrows are scored and the scores agreed between the two scorers!
2. An arrow shall break through the score line to score the higher score or in the case that there is no score line, shall break into the higher score

area to be scored the higher score! (see figure 1 and figure 2)



Figure 1

The arrows must break through the line!

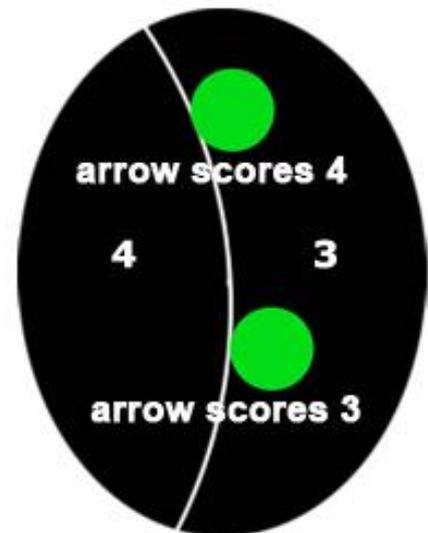


Figure 2

The arrows must break into the area!

3. No arrows in the target or butt may be touched until the arrows have been scored. Arrows passing through the target face but still in the butt may be pushed back by the Target Captain or deputy who did not shoot the arrow, and scored accordingly.
4. If an arrow hits the scoring area but bounces off the target or an arrow passes through the scoring area and is not retained in the butt, another arrow, which has been specially marked, shall be shot.
5. An arrow hitting another within the target and remaining embedded in that arrow shall have the same scoring value as that arrow. Arrows being deflected by other arrows shall be scored

by their position. In the event of a mis-shot arrow, an archer may shoot another arrow provided the mis-shot arrow can be reached with the bow from the archer's position at the marker.

6. Skids or glances off the ground into the target shall not be counted.
7. An archer who shoots from the wrong marker or at the wrong face will lose the score of that arrow. No new arrow may be shot.
8. Even though scoring is done by the two designated scorers, the correctness of the score remains the responsibility of the archer. The scores must be checked by the archer before signing the score sheets.
9. It is the archer's responsibility to assure that the score sheet is returned to the score recorder before the cut-off time.

Some general safety rules

1. The Field Captain is responsible for the safety of the shoot. Archers must accept the decision of the Field Captain, the Field Marshals or any other designated safety personnel.
2. Archers in the group who are not on the shooting line are required to look for any unsafe conditions and warn the shooters if such condition occurs.
3. A competitor must have at least one piece of clearly visible garment on his/her body.
4. No shooting after the archers are called off the course by the Field Marshal because of dangerous conditions, i.e. thunder storms, darkness, etc.
5. Removing of arrows should be done with care for the arrows as well as for the targets. The one hand method is recommended where one hand is on the 3D target or butt pushing and the other one on the arrow shaft close to the impact point, pulling

SPECIAL FIELD CONDITIONS

Uphill and downhill shooting

A sight mark or sight pin corresponds to a certain elevation of the bow while aiming. In field archery, when shooting uphill or downhill, elevation depends not only on the distance to shoot, but also on the difference in altitude. The "distance to aim at" can be different from "distance to shoot". The archer corrects by adding or subtracting a few yards according to the slope.

Distance to shoot + Correction = Distance to aim at

The archer has to learn by experience how much to correct in different situations.

How much distance to subtract, has to be discovered by each individual archer, it depends on the archer's equipment and shooting technique
BEST PRACTICE IS TO OBTAIN PRACTICAL EXPERIENCE AND KEEP RECORD ON SHOOTING DISTANCE AND ANGLE AND SO CREATE A PERSONAL COMPENSATION TABLE.

Distance correction for slopes is an art in itself and a correct shooting form is essential. In general: the distance to aim is less than the distance to shoot for both uphill and downhill shooting.

As a rule of thumb:

On slopes up to 10 degrees, no correction should be required.

On slopes between 10 degrees and 20 degrees about 5% of the distance may have to be deducted.

From 20 degrees up to 30 degrees up to 10% may have to be deducted – between 30 and 40 degrees even as much as 20°

In general: The steeper the angle gets, the more you need to deduct. If the distance of your shoot is exceeding 60 yards, pending on the speed of your arrow, the impact of gravity could well counteract this compensation rule.

Below are some popular corrections for inexperienced field archers:

Sighting for shooting uphill

- At a slight slope, and especially at long distances, add one or two yards to the real distance (dependent of the yardage and the efficiency of the bow).



- At a very steep slope, deduct at least two yards from the real distance (dependent of the yardage and the efficiency of the bow).



The steeper the slope, the more the archer subtracts; however, in uphill shooting above a certain distance, called the “jump”, the rule is “the steeper the slope, the less to subtract”. The distance of this “jump” is dependent on the efficiency of the bow.

Sighting for shooting downhill

- At a slight slope, deduct one, two or three meters from the real distance (dependent of the yardage and the efficiency of the bow).



- At a very steep slope, deduct up to 10 meters from the distance (dependent of the yardage and the efficiency of the bow).

We can calculate the “jump” as follows. Write down the sight marks from 10 yards up to 50 yards distance with a step of 5 yards in a table. Next we add one column to the table in which we calculate between 15 and 60 yards the difference between two adjacent sight marks. The differences (adjustments for 5 yards further) are fairly constant below about 40 yards. Between 40 and 50 yards the list of differences makes a ‘jump’, possibly up to double the previous differences, and then become approximately constant again as the distance increases.

When the distance uphill or downhill is not marked and has to be estimated, usually an uphill target is judged too short and a downhill target is usually judged too far. For this reason the archer should as a rule add a few yards to his estimation when shooting uphill and subtract a few metres when shooting downhill.

Note: Shooting more or less straight up or straight down, archers have to see it to believe it, let them try their 20 yards mark/sight pin.

Posture for shooting uphill with level feet position

The basic posture in all types of archery is always the ‘T’.



For slight uphill shots move the hips towards the target before the draw, for steep uphill shots put the bow foot forward and move the hips towards the target before the draw.



At even steeper uphill shots you could move the string foot a little backwards so that you get more room in the chest to hold the correct draw length. Too little ‘swing’ in the hips, gives a wrong shoulder and bow arm position, shorter draw length and probably a bad release.

Posture for shooting downhill with level feet position

For slight downhill shots move the hips away from the target before the draw.



The downhill standard position is a swing in the hips to the rear and a wide stance.

For steep downhill shots let the archer take an open stance and move their hips away from the target; have the archer straighten their upper body before the draw. The steeper downhill the shot the more the archer has to open their stance.



Or even face the target with whole body and twist upper body towards the target face. Although anatomical not reasonable it is only for a maximum of four shots and archer has a good balance.

Examples of common mistakes

- Hips not forward enough, giving wrong shoulder and bow arm position, shorter draw length and probably a bad release.
- Tilting the bow causing left or right hits.
- Bent knees give unstable shooting.



Posture for shooting uphill on sloping ground:

With very steep uphill shots, sometimes archers shooting position will become more stable if they kneel on their forward knee.



Posture for shooting downhill on sloping ground

For a downhill shot we put the feet wide apart and push the hips away from the target.



With a very steep downhill shot and an extremely steep hillside sometimes the archers shooting position will become more stable if they kneel on their rear knee.

In extreme slippery conditions an archer can push the bow stand into the ground to give support to the front or back foot and to avoid slipping down the hill.



Shooting across a slope

This section is especially important for archers who shoot in styles that do not allow for a spirit level (bubble level) i.e. All Bowhunter styles, the Longbow style and the Historical bow style.

When shooting at a target across a slope the probability of hitting on the downhill side of the face is greater than hitting on the uphill side.



The reason for this sideways grouping is that archer is leaning and that the bow is therefore tilted. Archers tend to lean downhill when standing on sloping ground.

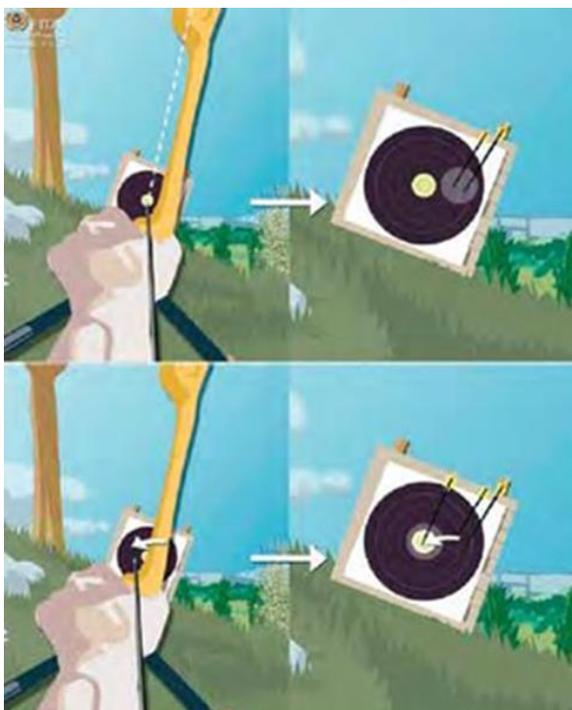


When shooting across a slope an archer should start drawing the bow with the tip towards the hill. This will prevent the archer from leaning away from the hill.

An archer should not adjust the sight when the arrows hit the downhill side of the target. He should just aim uphill on the next arrow or tilt the bow in the uphill direction.



Vertical body position reduces the downhill hitting effect. The archer can check this as follows:



- Try to find a level piece of ground. In a competition you are allowed to move a little behind the line (around but never in front of the peg), as long as they do not obstruct their competitor.

- Prepare the shot by leaning the top of the bow towards the hill. At full draw, check your vertical alignment using the image of the vertical trunk of a tree, or through an imaginary vertical line through the target.
- Line up your body in a vertical position, and make sure you are not leaning downhill.
- If you are unable to stand in a vertical position and your bow is tilting, you will have to aim a little to the opposite side of the tilt.
- Archers shooting Freestyle Unlimited or Freestyle Limited can of course check their level. Always start by leaning the bow towards the hill. This reduces the tendency of tilting the bow away from the slope.

Target appearance on steep slopes

The IFAA allows maximum uphill or downhill shots of 45 degrees with the horizontal.

Butts are normally slightly tilted to allow for the flight of the arrows and degree on entry in the butt as well to give the butt greater stability which prevents it from falling over. However the tilt should be no more than 15 degrees.

If the target is placed at 90 degrees in the vertical, the target will appear to be “deformed” and instead of appearing as a circle, it now appears to be oval in shape.

A 65cm target will appear to the archer to be only 45cm high and the spot only 9cm high, thus effectively giving the archer the illusion that the target is 30% smaller than in reality.

If the butt leans slightly back in uphill shots, the height of the targets will appear to be less than 45cm and may drop to 40cm and the spot as small as 7cm.

So in addition to adjustment to any sight settings for the steep downhill or uphill shot, you also will have to deal with the illusion that the target is no longer round but oval and thus much smaller.

An archer who uses non-adjustable pin sights or no sights at all will be greater affected than archers who use adjustable type sights



Directions: Away from or towards the bow riser, up and down and sideways.

Such type of sight is expensive and will set you back several hundred Euros.

Once the sight has been set up properly the only change that is required is the vertical settings for the different distances.



This sight has a 10cm ruler with millimetre markings on the side.

SETTING BOW SIGHTS

The IFAA recognises three basic ways of aiming at a target.

- Using an adjustable sight, either with or without a magnifying scope, used in the Freestyle Unlimited and Freestyle Limited styles.
- Using a non-adjustable pin sights with 4 or 5 pin settings that may not be adjusted during the shoot of a round. They are used in the Bowhunter Unlimited and Bowhunter Limited styles.
- The unsighted styles with various sighting techniques split into four groups: The Barebow style, the Bowhunter style, the Longbow and the Historical bow.

The sighting techniques of the above four styles will be addressed in another manual.

The adjustable sight

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The Vernier type as shown above is the more versatile model that can be adjusted in three

To calibrate the various distances that will be shot at any of the IFAA field or 3D courses, the archer needs to set the sight on a marked distance practice range that has distance markings from five yards to 80 yards in five or ten yards increments.

Every distance will correspond to a reading on the ruler, a reading that the archer records in his note book that he is allowed to have with him during a tournament. This system requires some degree of interpolation if the actual shooting distance lies between two of the set readings on the ruler.

Some archers record the setting for each actual distance that is shot during a tournament, which does not require interpolation but still requires the archer to have a large number of readings.

The non-adjustable sight



RANGE FINDING

The term “non-adjustable” is not actually correct. In fact the sight is also adjustable as can be seen in the preceding picture.

However tournament and shooting style rules of the IFAA stipulate that the archer may not adjust the sight during the round: i.e. he may not make any corrections to the sight in the event that the sights settings have moved for any reason.

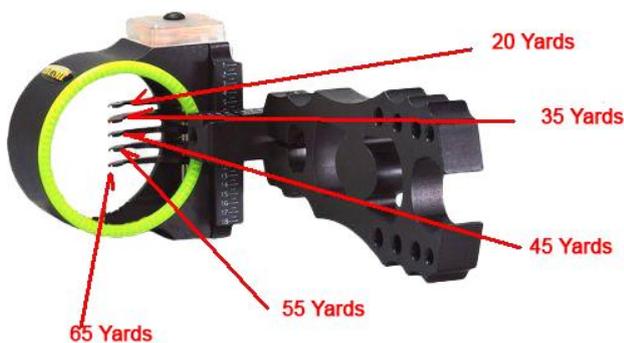
Unlike the Freestyle sights, the Bowhunter sight may not incorporate a visible spirit level; neither may a scope sight be included.

To be able to use this type of sight accurately in a tournament a single pin, like with the adjustable sight, would not suffice and the archer is allowed to have 4-5 pins.

Normally the pins have different colour markings to easily distinguish them

Each of these pins corresponds to a certain distance and may not be adjusted.

Below a typical example of a pin sight setting:



Each pin is set for a different distance, normally starting with the 20 yard pin on the top.

The position of the other four pins may depend on the type of Round and some archers have a sight for the Field Round and the Hunter Round.

When setting/calibrating pins the archer should keep in mind that by far the most shooting distances are less than 60 yards (Field: 20%, Hunter: 7% and Animal or 3D: 100%)

It stands to reason that pin settings may differ from Round to Round and that pins should be more concentrated for the distances between 20 yards and 60 yards. Quite often the maximum pin is set at about 65 yards.

The archer will need to learn various aiming points on the target face and which pin to use, especially on the longer distances where for instance the 35 yard pin can be more effective when aimed on the 3-4 score line above the spot to shoot 70 yards, rather than using the 65 Yard pin and aim just above the spot.

The IFAA Field tournaments are shot with known shooting distances, so range finding is not a requirement.

The IFAA Bowhunter tournaments are all based on unknown distances even though each target size corresponds to a maximum shooting distance. An IFAA archer should know that a Group 1 target (shown on the indicator board) has a maximum distance of 60 yards; a Group 2 target is maximal at 45 yards, etc. etc. So they are not really completely unknown.

Correctly estimating the shooting distance to a target also called “Range finding”, makes the tournament champion.

Dead ground, such as where archers are looking over a ridge at a target and can’t see the ground area between them and the target, or shooting over water, are notoriously difficult situations to estimate distance. The same is true, to lesser extent, when shooting across a valley where the direct distance is very different to the actual ground distance.

Generally speaking it is the longer distances the archer needs to concentrate on for guessing. At the shorter distances, the extent of compensation is by far less, especially when using a fast bow.

Shooting a lot of Bowhunter (3D) tournaments on unmarked distances will give the archers more and more experience, which also allows them to achieve higher scores.

The IFAA rules clearly state that the use of range finding devices is not allowed. However there is no rule that prevents the archers from measuring the distance to the target by applying their common equipment.

Archers are allowed to use any information from the Rules, i.e. Group size and personal notes.

So, they can have a list of all the distances each target must be set in for each bow style. The archer can come to full draw and then compare the size of a special part of the bow with the known size of the target face.

However because of the large number of 3D targets and paper animal faces now available, such notes would become very extensive and almost impossible to implement.

The archer however is not permitted to take notes while on the competition range; neither may the distances be discussed among the archers, until the whole tournament is completed. The use of mobile phones or radio technique is prohibited for the same reason. No archer is allowed to move

towards the target until all archers in the group have completed their shots

Exercise techniques to range finding

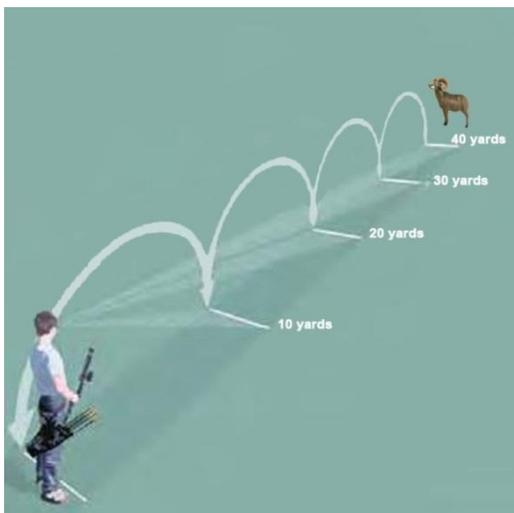
Unless you regularly practise the various techniques of range finding, you will never become a good 3D archer or “bowhunter” and you will lose or break many arrows during a tournament.

Range finding without using a sight

1. Judging by feel

This means that an archer learns to judge the distance by “feeling” the size of the target in relation to the distance. In order to do this he needs to practice a lot, e.g. take different 3D targets or animal faces and place them in the field at random and judge the distance and then measure them.

2. Notice the different sizes of animal faces or 3D targets on various distances (start with the maximum distances), shoot at the targets while getting accustomed with their sizes.
3. Locate the animal faces or 3D targets in the field, judge the distance by ‘feeling’, shoot at them, measure the distance using a measuring-line or by counting steps. Always remember the maximum distance 3D target according to the rules. It is common to judge the distance too short!
4. A good distance training exercise is that the archer takes a distance finder and goes for a walk in the countryside, woods or mountains. Guess the distance to randomly chosen trees, plants or objects. Then check the accuracy by measuring with the range finder.
5. Learn how distances of 10 yards look like in various terrains.



6. Find a point at 10 yards away from the archer; copy this 10 yard distance visually until close to the target. Add or subtract the remaining

distance. An error of X% in the 10 yards guess implies an error of X% error in the estimated distance.

7. Try to find a point half-way to a “target” and estimate the distance to that point. Then double this distance and find the estimated distance to that target. X% error in the half-way guess will result in a 2X% error in the estimated distance.



Range finding requires various techniques, depending on the preferred shooting style of the archer.

8. An archer can get some information by looking through the binoculars at arrow holes punched in the animal face or 3D target. If, for example, most of the holes are below the kill zone, it indicates that many of the preceding archers did underestimate the distance. An archer might therefore deduce that the target is further away than it looks like.

Irrespective of the position of most of the arrow holes, trust your own judgement!

All the above methods are not the Alpha and Omega of getting a correct estimate. There are simply little aids to assist an inexperienced archer. There is only one way to get good at estimating/guessing distances and that is experience.

Range finding with the use of a sight

The technique of estimation a distance is based on using two fixed points of a sight and measure against certain parts of the 3D target or animal faces.

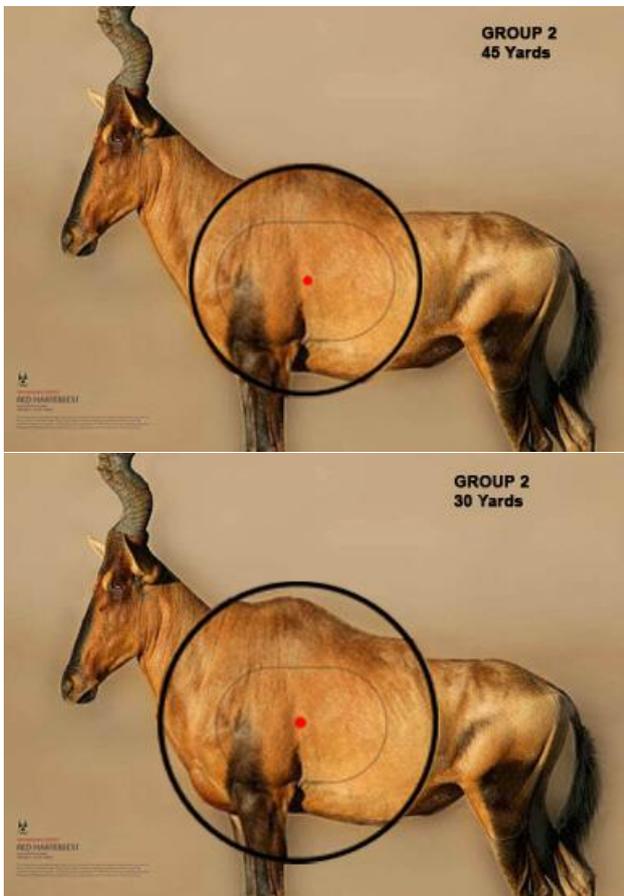
The large number of 3D targets and faces that are now available but availability is usually regional, with some of the larger suppliers selling worldwide.

So techniques are usually “regional” as it is almost impossible to obtain sight settings for each target or animal face at various distances.

The only part of the various types of targets that is constant is the kill and vital areas, which are not easily visible without a scope sight.

Archers who shoot the Bowhunter Unlimited or the Bowhunter Limited styles, that have fixed pin sights that may not be moved during the day’s shoot, will find it quite difficult to use the positions of the pins in the sight unless they have extensive notes that apply to a large number of target faces of 3D targets.

An example of using the sight scope to determine a distance:



The two maximum settings of a Group 2 Animal target are between 30 yards and 45 yards. The kill zone for all group 2 faces is exactly the same. So by comparing the area within the scope of these two distances with the size of the kill area, you can quite accurately estimate the target distance.

Archers are allowed to have these notes with them during a tournament.

To attempt a similar method for the 3D targets would be an extensive exercise as the height of the kill/vital area is not fixed but falls between a

minimum and a maximum dimension which may differ by 25-20% and there is no minimum target distance defined either.

This would mean that each target should be known to the archer as well as the dimension of the target within the scope area for several distances and not only two distances.

This would mean extensive personal notes and probably only the most common 3D targets.

PRACTICAL TRAINING TIPS

- As the stance is the basic for body alignment and consequently for a good shot, let the archer practice all possibilities that we meet when shooting in natural surroundings.
- Always start a training session with a warm up. An archer must be made aware that the warming up procedure on the field can be interrupted. The regular warming up before shooting on the practice range may have to be repeated after the archers are taken into the field to their target. It may take 30 minutes or more before the competition actually starts so that the archer should also do a small warming up at the starting target. During the day it can happen that, while rotating from one target to another, the archer has to wait because there is a “jam” which can last half an hour or longer. It is recommended in this case to do a warming up before starting to shoot again. (An elastic band in the backpack is recommended).
- An archer should get in the habit of watching the target every time he starts to shoot so that he gets a good recognition of the target.



- To practice shooting on soft ground use an inner tube from a tyre, filled with air to approximately three quarters and a strong board placed over it in the middle. Let the archer focus his attention on the target which will distract his attention from the stand.

Open and closed stances should be practiced.

- Place a chair with the back facing the target and let the archer shoot with one foot on the seat. Observe the body alignment; the standing leg, on which the archer puts the bodyweight, should be in a straight line with the body whilst the other leg is 'resting' on the chair.



- Do the same with the other leg position with the chair facing away from the target. The foot / toes should point in the same direction as the knee to avoid twisting the knee and lower leg.



- Place a chair towards the target and place a strong board on the seat of the chair—a different length of the board will give a higher or lower angle slope, place the chair at different angles towards the target and you will achieve a different view on the target face. Let the archer

shoot standing and kneeling to get the feeling of shooting uphill and downhill.



- For practicing non-level positions in the field, place a small board under one foot. Placed under both feet it can simulate shooting on an upward or downward slope.



- Closed stance and open stance should be practiced for field archery. The stance depends on the position of the shooting peg in relation to the target.



- Practice the uphill and downhill circumstances by stretching all the way up as far as possible and then come back to straight shooting position when you haven't got a target placed at high position
(Arrows should not be in the bow for this exercise).
- To simulate shooting uphill you could make use of a target at high level with a pulley construction, downhill can be practiced from a table platform as used by building contractors.



- Practice shooting in different light conditions by turning of the light on the targets and have light only on the shooting position or turn of the light on the shooting line and have only light on the target. Or if possible, have only light halfway to the target.
- Use original animal faces or 3D targets.
- Use the binoculars after each shot to get used to the rhythm in the field to analyse each shot.
- Keep in mind that there is only a maximum of three shots in the Unmarked Animal Round, one, shot in the 3D Hunter Round and two shots in the 3D Standard Round per target and that the next target will be different all together.

PERSONAL CARE

The field archer needs to plan for the whole course, decide what kind of food and drinks they need for a whole day of competition, which spare equipment to take along on the field. They have to carry whatever they need through the field them self. As weather conditions can change, they have to learn to experiment with clothing and equipment in order to be prepared for 'everything'. Clothing

Footwear

The archer has to make a choice of footwear, waterproof walking boots. Try out the boots in all

kind of weather conditions and with a couple pairs of socks to be used only at training sessions and tournaments.

Make sure that the walking boots have a good profile to deal with the natural surroundings that may be very slippery due to rainy weather and soft underground. Solid walking boots are necessary for a good stance in the field, to protect the ankles (to avoid a sprained ankle) and for a safe walk from one target to another in natural surroundings in all weather conditions.

For rainy weather or for high grass, boot protection is advisable and some form of canvas gators may be appropriate.



Clothing in cold weather

Clothing varies for all weather conditions.

In cold weather the clothing should be "breathing" at all times and must not be too loose around the body to avoid string contact.

A woollen jumper or sweater is very good for field archery in cold weather as wool has the ability to hold the warmth of the body. During rain it becomes wet but will still hold the body temperature.



Gloves are recommended for the periods between shooting. Also a pouch (self-made) attached to the archer's belt to warm the hands is recommended; there are different kinds of warming devices which can be placed into the pouch.



Trousers with pockets on the side of the legs where the archer can reach them easily are very handy.

Clothing in hot weather

It is recommended that people on a Field course wear long trousers at all times to protect the legs from insects and annoying plants like nettle and ivy, which could distract the archer while shooting. The shirt should have long sleeves, also to protect the archer from insects and annoying plants. The field archer has one big enemy in the field and these are the ticks and leeches. Although ticks and leeches are not everywhere in the world, certain countries have them.

From 10^o Celsius the ticks settle in bushes and branches. Leeches are more frequent in warmer countries, especially in wet and humid conditions. Ticks and leeches are parasites that suck blood of humans and animals and may by doing so transfer contagious infections and illness. So it is important that archers cover their body with sufficient clothing and that they check their entire body after a tournament for these parasites.

Clothing in rainy weather

Good waterproof wet weather clothing is of importance as the field archer will be in the field the whole day and cannot sit in a tent or go to the car to fetch clothing for differing weather conditions. The field archer will have to decide if they take wet weather clothing along with them at the start of the tournament. It is advisable to have some kind of lightweight wet weather clothes available.



Suitable is a large plastic (garbage) bag where at the bottom and side holes are cut out to fit the arms and head to be worn over the shooting clothing and under a woollen jumper/sweater.

Also suitable is the tight body fitting clothing which is used in the bicycle fraternity.

Try out the wet weather clothing during training sessions so you know what suits you best and so that you have no unexpected encounters during a tournament.



You should consider taking an umbrella. An umbrella is useful for different reasons: keeping you dry if it rains, protection against the sun, as a temporary bow stand and a really handy walking stick for getting up slippery and tricky slopes.

Accessories

Binoculars

The IFAA allows the use of binoculars in all types of Field events. However in the unmarked distance shoots binoculars may not have a rangefinder or similar incorporated and the focus dial must be free from any markings.



Binoculars should be easily reachable to use. Get used to using the binoculars after each shot or even before shooting to gather information from the target face.

As arrows are shot from different angles at target faces and 3D targets the impact of the arrows are such that the archer may see the arrow nock in the "4" while the arrow point lies in the "5".

"Spotting", meaning that another archer in the target group checks the position of the arrow and let you know, is allowed in IFAA archery, however always keep in mind that you always will be responsible for the arrow score and have no cause to ask for another arrow when the "spotter" reads the position of the arrow wrong. Always check the arrow position with your binoculars before you move away from the shooting marker.

Backpack and belt

An archer should familiarise himself with the sort of backpack or belt that would be best for him. A good backpack is a must for field archery as the archer may stay out on the field course the whole day without the opportunity to leave the field and fetch something.

The archer needs for example up to 2 litres[#] of drinks, food, spare parts and possibly wet weather clothing.

Note #: IFAA tournaments require at least two rest areas where drinks and food will be available. During very dry and hot conditions free water must be made available to the competitors on every seven targets.



Some archers may carry with them a small first aid kit and spray against insects and sun protection. Some archers prefer a belt to carry their needs, besides the quiver, during the field tournament but many archers prefer a backpack with a seat so that they can sit down during the waiting time at targets.

A good backpack must be waterproof and strong enough to sit on, have different compartments, good shoulder pads / carrying strap.

Such backpack should include a small towel to dry parts of the equipment as well as cleaning aids for the various sight parts and glasses.

Try and get used to carrying the backpack on two shoulders. Carrying the backpack on one shoulder could overburden this shoulder.

Spare parts

The IFAA allows an archer to leave the course under guidance of a Range Officer in the event of a genuine equipment breakage (e.g. broken limb or riser, snapped bow string, trigger release, etc.).

Damage to equipment caused by wear and tear is seen to be part of bad equipment maintenance and the archer will need to make repairs on the range.

Decide which spare equipment to take along on the field course. This is an individual matter for the archer and the shooting style. A compound archer will most probably take more spare parts into the field than a longbow or bare bow archer.

A knife should be part of the archer's equipment.

Nutrition

Decide what kind of food and drinks to take along for a whole day of competition.

Nutrition is one of the most important aspects for athletes because of the increased need for energy. The energy expenditure of an adult amounts to approximately 2000 to 2800 calories per day. Physical activity by means of competition will increase the daily expenditure by 1000 to 2000 calories, depending on physical fitness, duration, and type of intensity of the activity. For this reason an archer must adapt the energy intake by increasing food consumption, according to the level of daily energy expenditure.

This increased food intake should be well balanced. Large perspiration losses may pose a risk to health by inducing severe dehydration, impaired blood circulation and heat dissipation, leading to heat exhaustion and collapse.

Food and meals to be ingested shortly before and during training, or during a small break between training or competition periods, should be adapted to specific ingestion and assimilation conditions,

which depend on the nature and circumstances of our sport.

The archer should find the right balance for food intake and drinking. It has to be tried out during training and competition.

As field archers may have to carry their food and drinks for the whole day (i.e. not use the catering facilities on the courses), the archer should carefully consider what to take. Advisable are the rich in carbohydrate biscuits, chocolates and other high energy foods as well as isotonic drinks that replenish salts that are lost through perspiration.

Again it is up to the archer to see what food and drinks suits best and the only way to experience that is during an intensive training program and competition. Always insure that there is sufficient water available.

Below are some basics concerning food and drinks:

- Have breakfast at least two hours the competition.
- Drink only small amounts before the competition.
- Drink and eat small portions all day. If you thirsty or hungry during the competition it is too late, you are already dehydrated and it could influence your concentration.
- Archers need up to 4 litres of liquid a day especially during competition.
- After a day competition eat a carbohydrate rich meal within two hours.
Shortly after the activity the body takes up the carbohydrates more easily than at a later time. A spaghetti or macaroni meal is excellent.
- Be careful with caffeine products such as coffee as they have the tendency to waste body fluid (not to mention the heartbeat effects).
- Do not drink liquid that is too cold.

SAFETY

Safety in field archery

Although serious injuries or accidents rarely occur in Field archery a system must be in place to deal with them if they occur.

During competition the archers must adhere to the safety guidelines but it is the organizers that are responsible for the overall safety procedures.

Facilities

- Secure the course with signs and tape to keep out wanderers, mountain bikers or even horse-back riders.

- No tracks or roads may be situated directly behind a target.
- Inspect the field for hazardous objects especially after stormy weather conditions.
- Inspect the targets in the mornings, before the shoot starts: the target butts or 3D should be firmly anchored so that they will not tip over.
- Beware of the safety zones especially with uphill targets before the start of the shoot and make sure all is free of obstacles, and livestock.
- Have danger tape to mark safe walking paths to each target.
- Have reserve target faces laid down behind the targets.

Directional signs / Danger tape

Care must be taken in the placement of the safe path directional arrows. Although not mandatory in law, they are there for the guidance and safety of the archers when they are travelling between targets.

They must not direct the archers, or spectators into areas where there is a risk of flying arrows, or an area that may be considered a hazard due to the terrain.

If needed, extra directional arrows should be used, and an alternative route sought to guide those persons away from any hazard, but keeping them within the course boundaries.

Where an alternative cannot be found, the targets in the area concerned must be relocated accordingly.

Any dangerous areas shall be taped off with the use of danger tape.

Unused tracks need be closed to archers and spectators to prevent people wandering around the course.

Entrance to and exit from the course must be clearly indicated, as well as any emergency exits.

Under no condition are archers or spectators allowed to walk back against the layout "flow" of the course!

Emergency action plan

The tournament organisers should be in the possession of an action plan for emergencies for every field course so that everyone is clear of their responsibilities.

It should contain at least the following aspects:

- The Range Marshal should be in contact with the Tournament Captain at all times by mobile phone or portable radio. Range officers should be in direct contact with each other and the Range Marshal.

- An emergency vehicle i.e. ambulance and first aid personnel must be stationed at a central part of the course(s) and be contactable at all times.
- A map that shows points of entrance to the various courses will be available at the emergency vehicle as well as at all rest areas.
- Rest areas should be accessible by motorised transport.
- Everyone on the course must be aware of the basic IFAA rule to stop shooting when the arranged emergency signal is given (e.g. three loud blasts or shots).

First aid

It is the duty of every tournament organizer to have a first aid station, supervised by a competent person, established to cater for all situations likely to occur.

At World or Regional Championship tournaments the tournament organisers will require a mobile emergency vehicle or ambulance for the duration of the tournament.

In addition a means of communication must be present, to enable help to be summoned from emergency services such as fire, police and ambulance. This can be in the form of a mobile telephone or two way radio base station, regardless of which, it must be tested by a competent person to ensure that a connection can be made to the relevant Services before the event commences.

Individual safety

- Behave in a responsible manner and behave in the manner described in the IFAA Code of conduct.
- Do not move into dangerous terrain.
- Watch where they walk going to a target to score, and when walking on to the next target.
- When going downhill try and keep equipment in one hand, away from the hillside, thus keeping the other hand free for safety reasons.
- Be alert for the unexpected in the field such as wanderers, bikers, dogs, horse riders, etc.
- Do not run!

Safety within the target group

- Safety in the group is the responsibility of all the members in the group. When two archers are shooting the rest of the group will be on the lookout for any dangerous situations.
- Under no circumstances should anyone shoot if someone is in the field near the targets, this also includes all animal life.
- Care should be taken when drawing arrows out of the target, especially when there is an uneven area in front of the targets.

- When looking for lost arrows make sure a bow is placed in front of the target, or place a person near the target, so that it is visible for oncoming archers to see that the target is not available.



Keep in mind that “looking for arrows” may not delay the following groups. An archer is expected to bring enough arrows to complete the day’s shoot.

Duty of care of participants

- It is the responsibility of each archer participating in any field archery event to ensure that the equipment they use is in a safe condition and within the guidelines laid down by the equipment manufacturer and rules of the tournament, and is capable of withstanding the requirements of a field archery course.
- It is their further responsibility to decline any shot that they consider too dangerous. The target captain shall report to the Range Officer any matter that is deemed to be hazardous to the health and safety of any participant or spectator.
- Participants can also be in breach of the duty of care regulations by not adhering to laid down rules and regulations, which result in negligence, caused by their own acts or omissions.

Personal protective clothing

Field Archery can be a hazardous sport both from the equipment in use and the condition of the course. It is the responsibility of each archer to take whatever steps deemed necessary to ensure their personal safety and protection against equipment failure in addition to the elements of weather and terrain.

For cubs, the onus is on the tournament organizers or appointed guardians to ensure those in their care are suitably protected

Lost arrows

Every effort should be made to recover lost arrows on the course.

If they cannot be found during the course of the day's shoot (you are not allowed to unduly delay the following group), the archer is expected to come back later and try to retrieve the lost arrows.

Archers who find lost arrows that do not belong to him are expected to bring these arrows at the end of the day's shoot and deposit them in the collection bin at the registration offices.

Normally a concentrated search should be carried out to recover any arrows, so as to reduce the possibility of injury at a later date to either pedestrians or livestock.