BFTA COURSE DESIGN GUIDE 2018

Constructing The 'Perfect' Course

This is a simple user guide to constructing or designing a Field Target (FT) course that is suitable for competitors at WFTF level. It gives an insight to the 'positives' and also the 'negatives'.

The following sections will attempt to explain what is required to be done from the beginning to completion with regard to the design and construction of a modern, suitable BFTA FT course.

A balanced FT course will test all shooting skills, in a creative and imaginative way that avoids testing the same skills repeatedly. A 55yd target is an excellent test of range finding, accuracy and judging wind drift, however setting out a number of the same 55yd targets consecutively becomes boring and repetitive. Similarly, setting out a large number of reduced hit-zone targets on a steep elevation just repeats the test of a specific skill. Keep it interesting and make the best possible use of the ground and terrain you have available to you.

Walk The Course

Ideally the course should be on virgin territory, i.e. ground that hasn't been used for a course before. Initially you should walk the ground at the time of year the competition is going to be held (4 months possibly 6 months beforehand) and write down/take note of points of interest and/or potential 'ideal' target locations. When walking the ground it is important to logically map out and locate the firing point/firing line from the beginning. Use a notepad, take photographs and have a course design brief that you can work from.

The firing line should be on fairly level, firm ground. Avoid wet or damp areas which will cut up and become muddy/slippery with potentially 150+ competitors all using the same spot over the duration of the competition. Uneven ground, especially rocky and/or exposed tree roots should be avoided due to trip/slip hazards. Look out for potentially unsafe trees and/or branches, these should be cut down or avoided completely due to health and safety risks to competitors.

Firing Line

The firing line should be on fairly level, firm ground. It should run along the course in a safe, even line avoiding situations where competitors in another lane are in front of the muzzle of another competitor in a different lane.

The gradient of the ground should take into consideration shooter comfort and also thought for left handed shooters. A left handed shooter has a much different view point and position than a right handed shooters.

Ensure the firing position is not in a hollow piece of ground which could restrict the view of targets downrange or the target being obscured; especially for smaller shooters. When picking a firing point for a lane, make sure there aren't any objects close to the lane that could be hit by mistake and cause a dangerous ricochet back towards the firing line. E.g. a tree branch crossing the firing line, or large rocks/stones only a few yards away from the lane. Any substantial obstacles should ideally be at least 10yd away from the lane.

Sighting – this is viewing EVERY target from the firing line with a rifle and scope and it should be done from the sitting position by a small person to ensure that every single target placement is visible from all shooting positions. Care should be taken to ensure each target is positioned that there are no gaps between the paddle and the hit-zone.

Carefully ensure that the pathway to the targets are unobscured and free from vegetation and twigs/branches. This is a crucial factor often forgotten and also note that during the summer months a once 'clear' lane can have the vegetation grow back in only a few days (especially grass). Clearing lanes two weeks before the competition is fine but it will also need checking and in many instances re-doing again a few days before the start of the competition.

Each firing position/lane should be marked by two posts, these ideally should be wooden posts and hammered into the ground sufficiently to ensure they cannot move during the competition. Ideally they should be 1yd apart and allow a clear view of both targets from the middle of the two posts. The posts need to be rigid/strong enough to support the weight of the firing line string/ rope under tension. The marker designating a standing/kneeling lane must be both visible and clearly designate that the lane is to be used for a discipline shots.

Targets

Targets should be well maintained and of a suitable quality. The BFTA recommends both nockover targets from the UK and tecno targets from Spain. Targets need to be high quality, consistent, reliable and constructed from quality materials, the mechanism needs to be robust and flawless.

EVERY target should be checked over, ensuring the paddle is not bent, making sure the mechanism is rust free and well oiled (avoid grease as this attracts dirt and dust). The mechanism should be checked that it is working properly by an approved target checker.

If the target is not new, remove all previous old layers of paint, scraping it off with a paint scraper or using a heat torch and wire brush – scrape it back to the bare metal on both the faceplate and paddle. This removes all previous old layers of paint that have built up; once resprayed the target will look like new with a clean, fresh, even coat of paint that will not flake off or chip in large chunks, especially the paddle.

Reset string problems can be avoided by adding a length of flat bar to the post where the reset string is attached to the target. This bar (10mm wide x 100mm long) should be attached using a small *lock-nut, 100mm is long enough to ensure the reset string hangs below the hinge. This will prevent the reset string from 'snagging' (becoming trapped) in the hinge.

If the string gets caught in the hinge it inevitably results in a ceasefire and time wasted to reset the target.

The string should be attached to the target securely and via a large fishing swivel, this will eliminate the string becoming twisted and tangled.

*Lock nuts ensure that the bar cannot come loose during the competition due to excessive use. Targets should NEVER be screwed to a tree directly. Screwing into soft wood will harm the tree but more importantly the target will become loose during the competition from constant use by a large number of competitors. The simplest method is to attach the target securely to a metal bracket (simple L-shape). The bracket is then attached to the tree via a ratchet strap. The ratchet strap can be tensioned to ensure that the target is secure and cannot come loose. It also protects the tree from any unwanted damage. When using a tree to attach a target, ensure that it falls and resets correctly making sure small branches and twigs don't interfere with its operation. The paddle and faceplate should not contact the tree when it falls.

Using medium sized G-clamps to attach the target to the bracket allows the target to be positioned correctly towards the firing point once on the bracket has been attached to the tree. If the target is attached to the bracket by lock-nuts then it is important to carefully position the target to correctly face the firing point – from experience, it's common that tightening the ratchet can move the target position off line (take care).

Placing targets on posts is a common and popular way of building a course. The post needs to be strong and hammered into the ground securely. Remember that the target the post is supporting will be pulled many times during the competition. It must be firm, solid and strong. The target should be attached securely via a bracket/baseplate which should not move once in position. Always attach targets to baseplates and/or brackets securely using lock-nuts. Lock-nuts due to their design do not loosen with use and/or vibration, it will ensure the target does not become loose during the competition and one less thing to worry about. 50 targets becoming loose half way through the first session of competition could ruin the day!

Targets should be placed so that the faceplate is perpendicular to the firing point, they must be directly facing the firing point with no gaps between the hit-zone and paddle. +/- 5 degrees will ensure that a target shouldn't be facing away from the firing point by more than 5 degrees horizontally.

A small spirit level should be used to ensure that targets are level; angled targets are unreliable.

Placement

This section describes ways to introduce variety, challenge and interest to a course design. Using areas of dark and shade alongside areas of open bright light can add challenge to range finding.

Using two different angles from the shooter at the firing point to the targets within the lane will ensure that wind direction and strength estimation is different for each shot. Placing both targets straight ahead (90 degrees) from the firing point lane after lane is one dimensional and allows the shooter to get a good 'read' on the wind.

Avoid making the shooter move between shots in order to shoot both targets in the same lane. It should be possible to shoot both targets from the middle of the lane i.e. between the posts. Avoid crossing strings with another target in a different lane. As well as proving a distraction it can be frustrating when a string is being pulled across your view of the target as you are about to take an important shot.

Your view from the firing point/lane; both targets (both hit-zone and faceplate) should be clearly visible. Too many targets visible from the lane is confusing, it potentially can lead to incorrect shot selection and shooting the wrong target. Numbers should be clearly visible from the lane, they should also be beside the target.

Targets should not be placed at extreme vertical angles, 30 degrees and under is fair and reasonable. Forcing a shooter into an uncomfortable, unfamiliar body position is unsafe and can potentially risk injury. It should also be noted that balancing a heavy rifle at the extreme of its hamster depth in order to shoot an extreme angle, very high target, has the potential to slip off the knee and an uncontrolled, accidental shot discharged (potentially towards other competitors)!

Why Take The Risk?

Highly elevated targets e.g. up a tall tree; it is a good idea to 'double-string' it. This means to attach two re-set strings to the target, one is brought back to the firing point (lane) whilst the other is left beside the tree. In the event of the main reset string breaking, the other spare can be utilized very quickly without the need for ladders, climbing etc. It will save time during the competition if a ceasefire is required to replace the string.

The reset string should follow a direct, unhindered line directly from the target to the firing point. It should not contact branches or twigs which could trap it or restrict the target from falling properly.

Avoid having too many targets on the course all at the same or similar distance, especially in the same section of the course. Mix it up and try to ensure that consecutive lanes don't replicate each other.

Targets should be painted in the approved colours; yellow, black and white with the appropriate contrasting colour e.g. yellow faceplate with black hit-zone.

Discipline targets; spread these around the course and avoid having them all together in one sector.

Although FT was originally started by a group of hunters and many of the targets still used in the sport today are animal / bird shaped, FT is not a hunting simulation and there is no need to restrict target placement to emulate hunting conditions. Some thought should be put into making the target placement visually appealing and memorable.

Balance & Course Content

You can have all the technical, marshalling and logistical aspects perfect for the event however get the balance of the course wrong and it can completely ruin the competition. A boring course that is one dimensional, repetitive and has not been thought out properly in terms of target distance can take experience and know-how but is achievable. Too many targets all at similar distances is frustratingly boring whilst too many targets placed too close can be too easy; too many placed at maximum distance can be too challenging and difficult. In areas where the wind is very slight with low speeds then the course designer will have to think of ways to increase the challenge, i.e. use reduced diameter hit-zones however with a limit on these, other factors need careful consideration e.g. using the upper limit distance on discipline targets and a heavier percentage of targets at the upper limit of the max distance.

The following system gives an excellent balance of target distances and will always provide enough variety and challenge to test all abilities.

Careful consideration is crucial to target placement for all close range targets especially with regard to a safe backstop, targets at less than 20 yards have extra risks due to lead splash back and potential ricochets.

10 targets = 20% @ 10-29yrds (9-28m)
10 targets = 20% @ 30-39yrds (29m-35m)
10 targets = 20% @ 40-49yrds (36-44m)
10 targets = 20% @ 50-55yrds (45-50m)
10 targets = 20% @ discipline (kneeling & standing)