Dear Colleagues

**Techniques for intentionally shooting Xs**

**Problem:**Target Rifle shooters are now following in the footsteps of their F Class colleagues who seek to group within the X-ring. In smallbore, grouping in the 0.5 MOA X-ring has been the goal of leading shooters for decades. Yet, a large number of TR (and F Class shooters) regard the X-ring group as unachievable. As a result of increased emphasis upon holding the rifle dead still and releasing shots without generating a tremor, a number of TR shooters are now intentionally shooting an increasing proportion of Xs in a 10-shot shoot. Otherwise, other TR shooters find a 10-shot possible of V-bulls is enough to keep them occupied!

It is almost unknown for a TR shooter to score a possible of10 Xs. Likewise, very few F Class shooters in a club have scored a possible of10 Xs. An overriding technique difficulty for TR shooters concerns the sling, while for both TR and F Class shooters, it is the hand on the pistol grip. This includes all those who do not have the butt in contact with the shoulder. Those who pinch the trigger against the trigger guard encounter other difficulties.

This article describes techniques for TR shooters who set out to score a possible of Xs. Similarly, the techniques employed by F Class shooters are described in order to score a possible of 10 Xs.

**Practical:**TR and F Class shooters who release 10 shots into the smallest group need to master the following important techniques:

* selection of a foresight ring diameter and ring thickness, which has been proven through experiment to afford the smallest group (TR)
* confirm that the diameter of the rear aperture is the smallest which will allow normal light intensity to enter the eye, i.e. it is the diameter of the pupil in ambient light (TR)
* test and reset sling tension before starting a shoot (with the sling at unsure tension, bring the rifle onto aim, then suddenly command arm muscles to go limp; if there is the slightest drop of the foresight, then this indicates arm muscles were used to support the rifle; tighten the sling a notch and repeat the test until a drop does not occur) (TR)
* systematically adopt a body position with the forward arm vertically underneath the rifle, so that it can be supported dead still (TR)
	+ the pelvic girdle should be flat on the ground, with the right leg (of a RH shooter) straight and parallel to the barrel of the rifle [a few skilled shooters bend this leg]
	+ while in the prone position, imagine a line between the eye and target, then push the elbow forward as far as possible and onto the mound under the imagined line, keeping the elbow in that position without moving as little as 1 mm
	+ use the trigger hand to position the butt firmly against the shoulder, with the thumb acting like a shoe-horn to lever it in place as close as comfortable to the midline of the body
	+ look through the sight and note (a RH shooter) that it is aiming high-left, at the sky, well above the line of targets
	+ keeping the forward elbow in exactly the same position, move the left foot to the left by 1 cm or so, until the foresight is above the target
	+ keeping the forward elbow in exactly the same position, move the navel forward 1 cm or so, until the foresight comes down into the centre of the target
	+ do not compress arm and shoulder muscles by forcing the elbow sideways under the rifle
* prior toeveryshot, establish and adjust the natural point of aim for the rifle as above, overcoming slight changes that occur as muscle tissues automatically rearrange and provide better comfort during the shoot (TR)
* during the shoot try to keep every muscle still, if movement is necessary readjust the natural point of aim as above; otherwise adjust for movements that normally occur without the shooter being aware
* commence the shoot with at least one dry shot to confirm that the requireddegree of carehas been applied, so that release occurs with no trace of movement of the foresight or scope element; repeat this during the shoot if needed to re-establish the degree of care, e.g. if the group expands beyond the V-bull or 6-ring (TR, F Class)
* support the weight of the rifle and arm entirely upon the forward elbow, so as to minimise the number of muscle groups used to support the rifle dead still (TR)
* consciously relax muscles of the supporting arm to avoid unwanted tensions in that arm (support the rifle only with the sling and bones; some shooters call thisdeadarm) (TR)
* rest the rifle across the web of the thumb and upon the large thumb muscle (TR)
* the supporting arm and hand must be in line, with no bend at the wrist (causes pain)
* when the butt is lowered, pull the sling down from the wrist and position over the cuff of the shooting coat, causing the forearm to be supported by the sling and not at the hand or wrist (TR) [prevents the hand from positioning close to the forward sling swivel]
* confirm the position of the forward hand, to ensure during recoil that it is not close nor comes into contact with the front sling swivel or hand-stop used in smallbore (TR)
* confirm the position of the butt against the shoulder, to ensure it forms such a neat contact that the thumb is required to lever it into position (TR)
* ensure the hand on the pistol grip has such a conformation of finger positions and tensions, that the thumb does not absorb any recoil, the two large palm muscles and the large muscle behind the index finger are neatly in contact with the grip and fingers 3, 4 and 5 (TR, F Class) only form an anchoring position on the gip without applying tension
* the reloading hand applies exactly the same tension upon return to the pistol grip after each reload (TR, F Class)
* the trigger applies pressure against the index finger at the first joint; not against the muscles that cover the finger segment (TR, F Class)
* pull the triggerquicklyto start, concentrating the mind on how far the pull has moved to the point where it is felt the trigger begins to bite (TR, F Class)
	+ then complete pulling the triggervery slowly, concentrating the mind on how far the pull has moved, until release occurs as asurprise
	+ thinking of this enables follow-through to occur, while the surprise indicates that no tremor has been generated, enabling the shot to occur within a 1.0 or even 0.5 MOA X-ring group
	+ the total time for trigger release should be no more than for any other shot; so that with practise, shots can be released within 3 seconds of a coach saying the wordgo; otherwise expect to reload and release a shot within 13 seconds from the previous shot, taking a total time of about 2 minutes for an unmarked or electronically-marked 10-shot shoot (US Olympic Team standard)
	+ if possible reload at the shoulder, with adjustment of movements of the sling on the arm (say after 3-4 shots, or shots will appear above and below the group).

**Conclusion:**many shooters routinely practise this sequence of techniques to group within the X-ring, i.e. in both TR and F Class. Each step is practised until it occurs without having to think about it. At the 2018 Canberra Queen’s a TR shooter scored 50.9 at 500m, containing 8 Xs, 1 V-bull and 1 bullseye. Another TR shooter scored a 75.11 at 600m containing 9 Xs, 2 Vs and 4 bullseyes. Likewise, the F Class shooter who won the lead-up aggregate, was many points ahead of the next shooter.

Best regards

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