Marksmanship Principles

Lesson 6

Eye Dominance

- Extend arms forward and form opening between the hands
- With both eyes open, look at a distant object through opening
- Bring hands to face while looking at object – Opening will be aligned with the dominant eye

Military and Alternative Positions

0715. The Military Position. In this position, the body is at an angle of approximately 45° to the line of fire. The legs are straight, either closed or, more often, spread apart. This position may be useful for small cadets.

0716. The Alternative Position. This is the normal position used in target rifle shooting, using a single-point sling. In this position the body is only at an angle of 5° to 15° to the line of fire with the right knee drawn up to approximately 45° to the line of the spine. The left leg is straight and parallel to the spine.

Left Arm

0719. The left hand and wrist must be in a straight line with the left arm, with the fore-end of the rifle resting on the heel of the hand (NOT across the base of the fingers). The fingers and thumb should be relaxed, clear of the stock and must not be in contact with the barrel of the rifle as this can influence the 'jump' of the rifle.

0720. The sling should be high on the upper arm to minimise the pulse beat and support the weight of the rifle. The upper arm supports the weight of the body and the lower arm enables the hand to support the rifle.

Left Elbow

0721. The left elbow should be almost under the rifle, so that the wrist remains straight. This may be checked by opening the left hand so that it is not gripping the stock and removing the right hand from the rifle. If the rifle remains steady and pointed at the target, the elbow is correctly positioned. If the rifle attempts to fall to one side and muscle power is needed to bring it upright again; the elbow must be moved until muscles are not needed.

0722. The most common fault is to have the elbow too far left. It is sometimes gradually pushed left by beginners, to realise the tension of the sling. This may have the effect of throwing shots laterally across the target.

0723. The left elbow should be reasonably far forward if the position is not to collapse or be illegally low.

Right Elbow & Hand

0724. The right elbow should be reasonably far away from the body. The weight should not be taken on the bone at the tip of the elbow. Instead, the inner side of the elbow should be in contact with the ground.

0725. Beginners sometimes roll the rifle over the left elbow by rolling the body to the left and pulling the right elbow close to the body. Instead, the right elbow should be placed to the right and the left brought in to compensate. The correct right elbow position is usually achieved by placing the right hand on the stock (after the butt is placed in the shoulder) and then setting the right elbow on the ground.

0726. To ensure the right elbow is in the correct position, place the right hand on the stock (after the butt is placed in the shoulder) and then set the right elbow on the ground.

0727. The right hand should not influence the direction in which the rifle is pointing.

Position

Support & Position - the firing position must be comfortable and the hold firm enough to support the rifle – with a sling.

a) Chest as flat on the ground as possible.

b) Left elbow almost under rifle.

c) Left wrist straight.

d) Right elbow out a little from the body.

e) Rifle across palm of hand, not base of fingers.

f) Left hand at point of balance of rifle.

g) If sandbag is used - it supports left wrist or forearm, NOT back of hand.

Natural Point of Aim

Pointing (Natural Alignment) - the rifle must point naturally at the target without any physical effort or strain. The body position must be adjusted until this state is achieved.

a) Shoulder and arm muscles must be relaxed - let the rifle point where it wants to.

b) To move rifle up or down, move stomach and feet back or forward.

c) To move rifle left or right, move feet and stomach right or left.

d) Only small movements are needed.

Sight Alignment

Aiming (Sight Alignment) – the aim or sight alignment must be correct and the aim picture consistent.

a) The head must be as upright as possible

b) Look through the center of the rear sight, line up front sight with target.

c) Focus on the front sight, NOT the target - a sharp front sight and blurred target is acceptable.

d) Unacceptable - a sharp target and blurred foresight.

Taking the Shot

Release of Shot – the shot must be released and followed through without disturbing the position or aim.

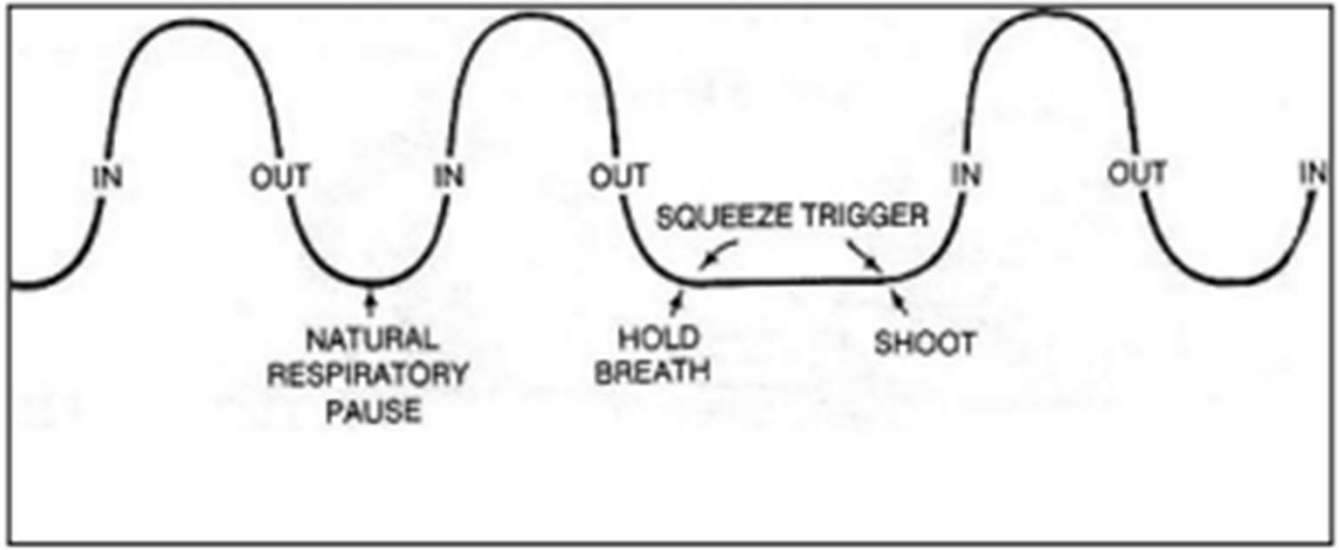
a) The first pressure (if applicable) is taken up while settling down.

b) The trigger is squeezed GENTLY through the second pressure without 'pull' or 'tug'.

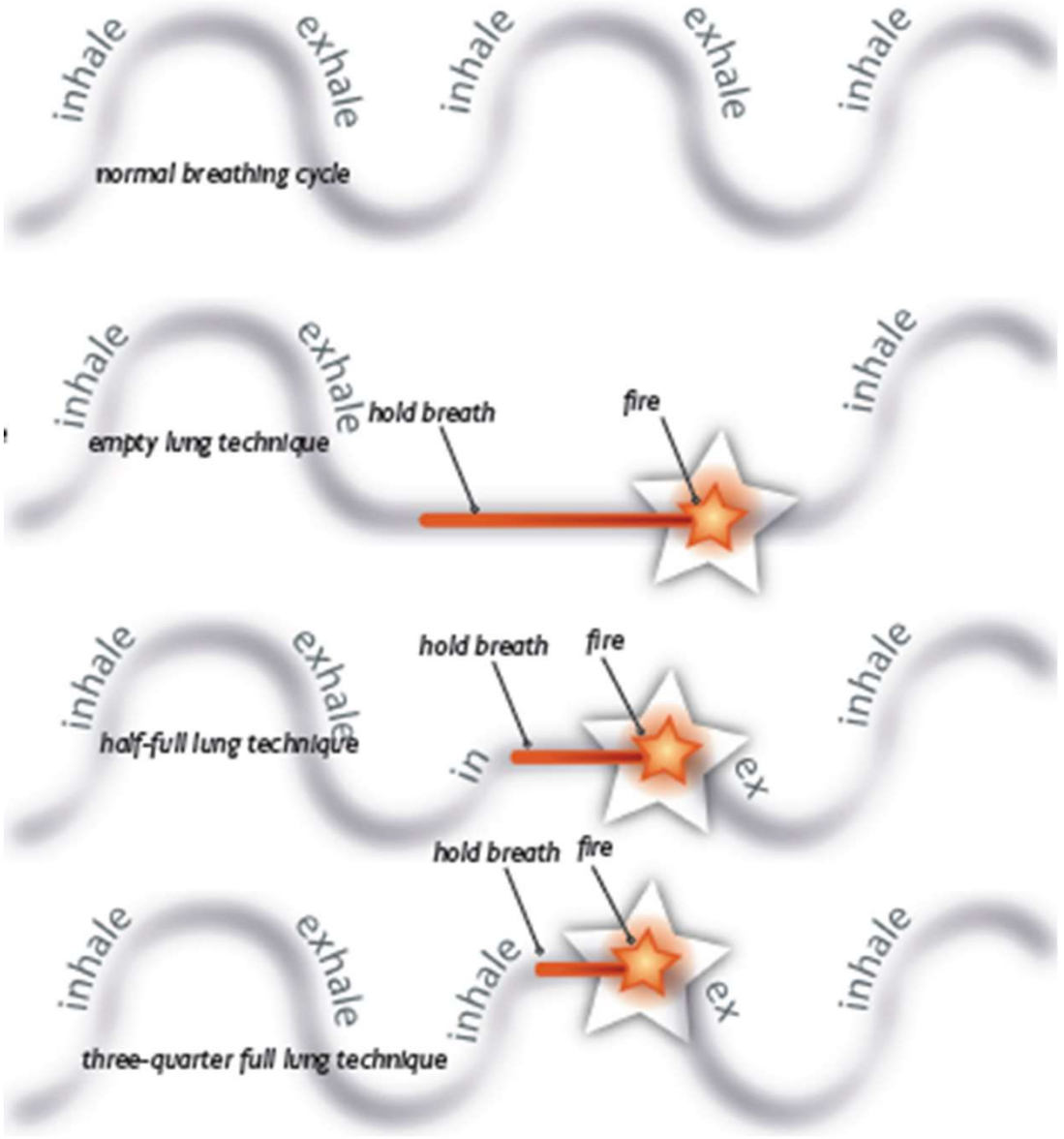
c) 'Follow through' means that, when the bullet has fired, there is no further movement for a second or so.

d) Breathing must be controlled for a steady shot to be released.

Breathing


IN
OUT
IN
OUT
SQUEEZE TRIGGER
IN
OUT
IN
NATURAL RESPIRATORY PAUSE
HOLD BREATH
SHOOT

Breathing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normal breathing cycle
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hold breath
fire
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empty lung technique
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exhale
hold breath
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inhale
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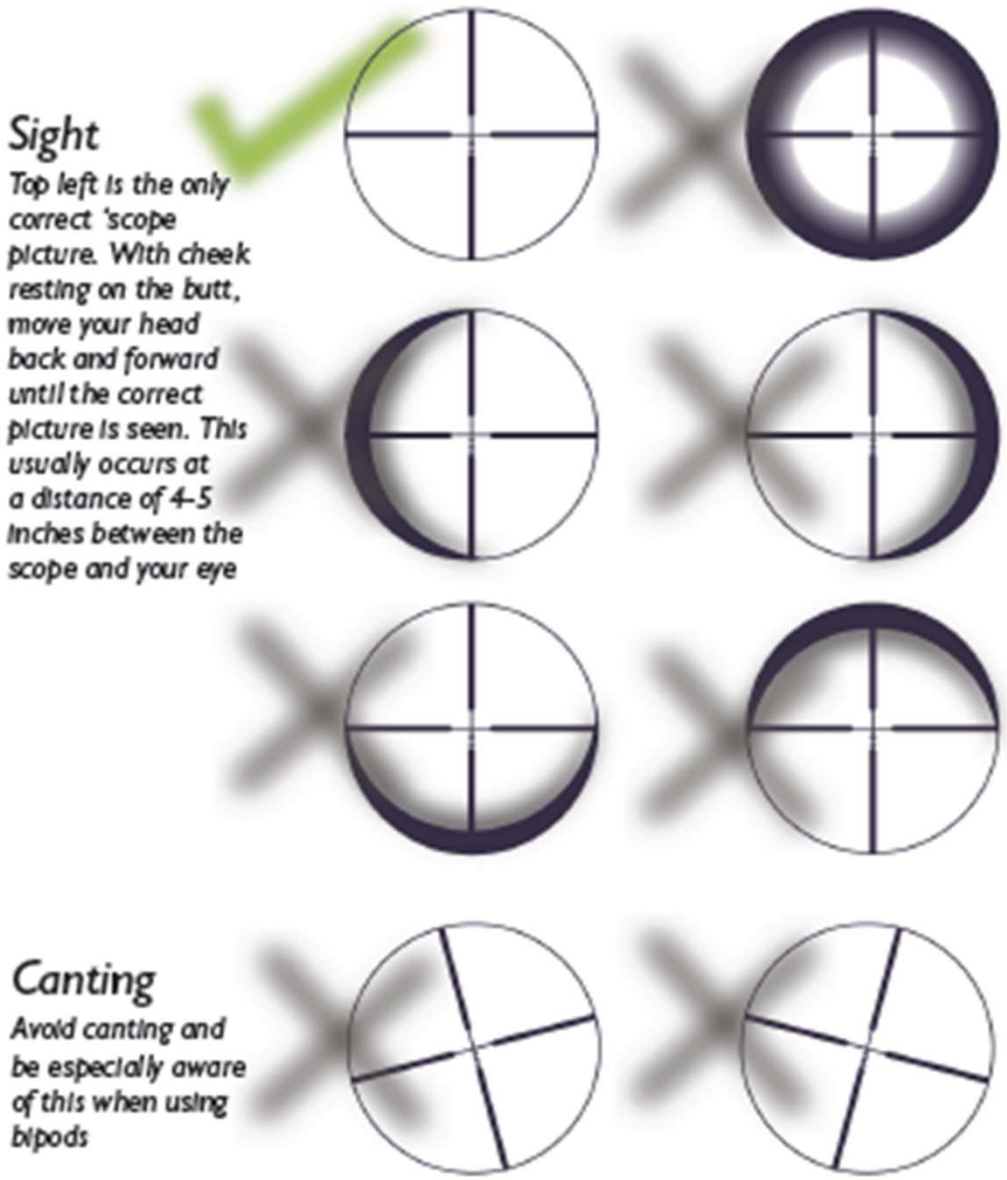
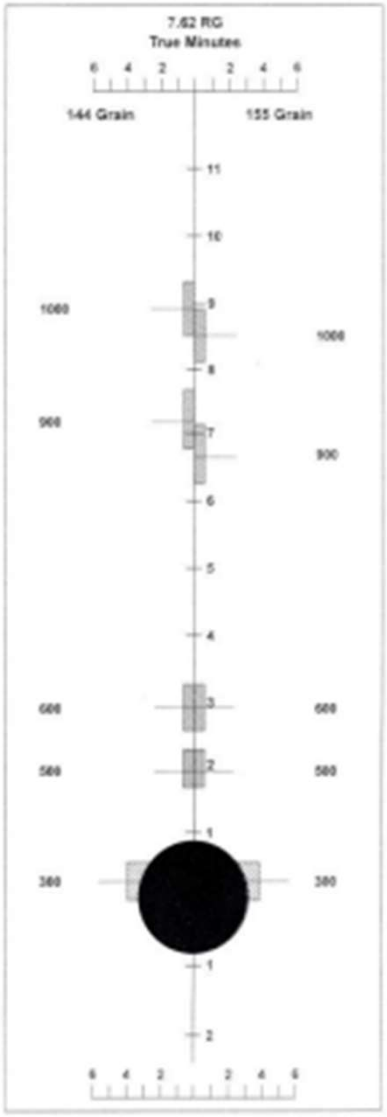
three-quarter full lung technique

Sight Picture



Zeroing



Using the Bisley Zero Range & Zero Target

The rifle must be correctly prepared. Lay out the firing point so that it is comfortable and everything is to hand.

The Zero Target must be pinned to the frame so that it hangs vertically. Check this by using a plumb line. If the target is not positioned vertically it will result in incorrect zeroing.

If a rest is preferred, use it only to steady/support the wrist and not as a rest for the rifle. Take care not to cant the rifle.

There will always be some small differences in elevation between different batches of ammunition so it is important to record the batch number used and ensure that different batches are not mixed together.

Lateral or Wind Scale

1. Set the vernier elevation scale to shoot between 600/900 yds. This will avoid spoiling the aiming mark, the lines denoting the distances and the shot holes are easier to see and record.

2. Set the lateral or wind scale at zero and fire a shot. If it is not on the vertical line, adjust the wind scale and fire again. Repeat until the fall of shots cuts the vertical line.

3. Loosen the screw holding the Vernier scale plate, move it to read zero and re-tighten the screw. The wind zero should now be correct.

Vertical or Elevation Scale

1. With the wind scale at zero the Vernier elevation scale is set to what is known or assumed to be the setting for 600 yds. (This is to avoid spoiling the aiming mark, and the shot holes will also be easier to see and record).

2. Fire a shot. If it is not on the 600 yds line, adjust the elevation setting and fire another shot. Repeat until the fall of shot cuts the vertical line in the 600 yds block.

3. Lower the elevation setting 10½ minutes. This should now be the setting for 300 yds or close to. Fire a shot to check although this will spoil the aiming mark.

4. Loosen the screw holding the Vernier scale plate and set the plate to read a suitable value for 300 yds. Re-tighten the screw. Ideally the elevation scale, when set for 300 yds, should read 2½ minutes, but this is not always possible. It is easier to pick a 5 minute or 10 minute rise as a base reading for 300 yds and work up from there. This will then allow for adjustments for a batch of ammunition with a lower elevation than the one used for zeroing.

5. As confirmation, further shots may be fired at the different distances and the readings recorded.

While on the zero range, shots fired after lowering the rearsight to 300 yds (or if raised to 900/1000 yds) which show impact either to the right or left of the vertical line, can indicate that the foresight is not straight and should be checked.

The elevation settings should now be checked on the range at their true distances, adjustments made if necessary, and the readings recorded for future use.

Further Guidance

- CCRS Training Guidance
- ISSF Prone Position Guidance