

## The Marksmanship Principles

Some time known as the lore of shooting or the meaning of life to some, are a set of guide line set out to help shooter hit what they are aiming at.

- ✚ The position and hold must be firm enough to support the weapon
- ✚ The weapon must point naturally at the target with out any undue physical effort
- ✚ Sight alignment and sight picture (i.e. Aiming) must be correct
- ✚ The shot must be released and followed through with out any undue disturbance to the position

The idea behind the principles is to allow the firer to build there shooting position, align onto the correct point of the target and release the shot so that it land where they intended. If the marksmanship principles are applied we area  $\frac{3}{4}$  of the way to achieving this. We still have to be able to constantly hit the same point, this is called grouping then we can adjust the sight to ensure our shots hit the point we are aiming at. That just leaves outside factors that affect the position of the shots on the target such as wind and light.

So let's look at the 4 principles in a little bit more detail.

The position and hold must be firm enough to support the weapon.

It is essential to adopt a correct position and hold of the weapon. Each individual has variations on the basic position due to differences in that individual persons build and height. How ever the position adopted must provide the maximum degree of support for the weapon.

To meet the requirement for maximum support we need to incorporate the following features.

- ✚ Stability – this is achieved by maintaining a firm contact with the ground with a firm support of the weapon through each hand and the shoulder. Practice is necessary to overcome any discomfort with the chosen firing position.
- ✚ Body – There are 2 recognised prone shooting position which are the basis of all other positions, the first is with the legs directly behind you in a line with the target with feet shoulder width apart toes pointed outward, the second position is with the body

slightly aligned to the left with the left leg in alignment with the weapon, the right leg is drawn up slightly and the toes are pointed outward this position will lift the chest higher of the ground reducing pressure on the diaphragm. Both positions are designed to take the recoil of the weapon firing into the body.

- ✚ Left hand and arm – The left elbow is positioned as close as possible to a point directly below the weapon, this ensures the weight of the weapon is supported by the bone at the out side of the elbow joint instead of muscular effort which is a variable factor in shooting. The hand guard/stock should go across the centre of the palm of the left hand and the finger hold the weapon lightly the grip should be no more than a stable platform for the weapon. This hand does not grip the weapon or pull the weapon into the shoulder this is a position of support only. The butt of the weapon should be positioned in the muscle between the shoulder joint and the collar bone it should not rest on the bone itself as this can cause pain when firing.
- ✚ Right hand and arm – This is the controlling hand and is most important factor in good shooting. The hand must grip the pistol grip neck of the butt in the web of the thumb and forefinger at the rear of the neck/pistol grip. The grip must be firm, pulling the weapon back into the shoulder taking care not to twist or cant the weapon. The forefinger must run naturally along the side of the trigger, the position of the right elbow is determined once the grip has been taken with the hand, the right elbow also serves to maintain a constant position for the shoulder.
- ✚ Head – The cheek must rest on the comb of the stock, it should rest lightly in a position that can be kept for successive shots the head should be upright. This ensures a instinctive sense of balance with the weapon, and the eye should end up directly behind the sight.
- ✚ Eye Relief – this is the distance between the rear of the sight and the firer's eye, the ability to get the correct eye relief is important in getting the correct sight alignment with iron sights. Optical sight the eye should be 25mm from the rear lens some sight have rubber cover to assist in maintaining the correct relief. Again with iron sight the best relief is 25mm and some weapons have sight that can be adjusted to achieve this other weapons have fixed sight and the eye relief is fixed at that distance.
- ✚ Consistency – throughout the building of the firing position the firer must endeavour to achieve a consistent position which should become instinctive to the firer this will aid accuracy and failure to achieve a consistent position will have adverse effect on the ability of the shooter.

- ✚ Relaxation – the shooter must learn to relax in the firing position, failure to do so will result in muscle strain and subsequent movement of the weapon and sight picture. This can be achieved through practice, however a conscious effort must be made to relax without disturbing the alignment of the rifle to the target area.
- ✚ Checklist - A mental check list is a good way to help new shooters build up there firing position.

Leg position

Butt position

Left hand Grip

Left elbow position

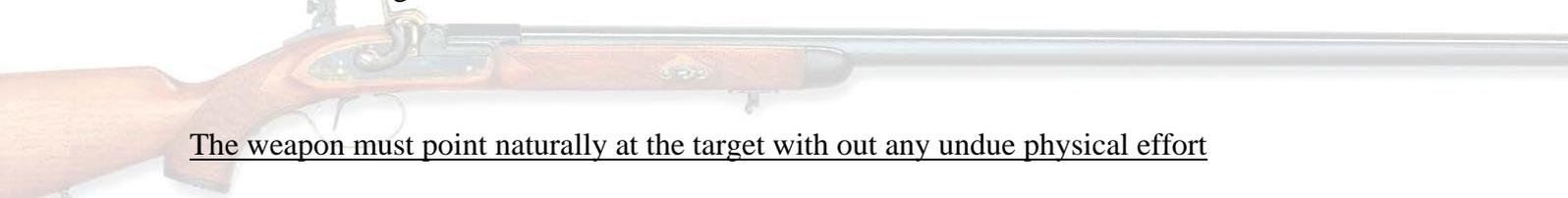
Right hand grip

Right elbow position

Head position

Relaxation in position

Breathing



The weapon must point naturally at the target with out any undue physical effort

The second marksmanship principle requires that the weapon points naturally at the target. The weapon becomes an integral part of the firing position and hold. The align of the position as a whole controls the alignment of the weapon.

After a firing position is adopted, if any undue physical effort is needed to point the weapon at the target, it will tend to settle where influencing forces are equal at the moment of firing it will move against the strain being imposed and since this movement will occur before the bullet exits the barrel the shot will be displaced on the target.

On firing there is some movement of the rifle but a naturally pointing weapon will help prevent inconsistencies in such a movement As you gain experience with adopting your shooting position it will become second nature to holding your position and pointing naturally at the target until then a good way to practice this is align onto your target and get comfortable then close your eyes lower your weapon then raise the weapon back up and adopt your shooting position with your eyes still closed if you were naturally pointing at the

target you should still be on target, if not you need to adjust your position and repeat this process until you are on target when you bring your weapon back up.

Sight alignment and sight picture (i.e. Aiming) must be correct

Aiming requires the firer to align a number of different points.

Iron Sights

Eye

Back sight

Front Sight

Point of aim on your target

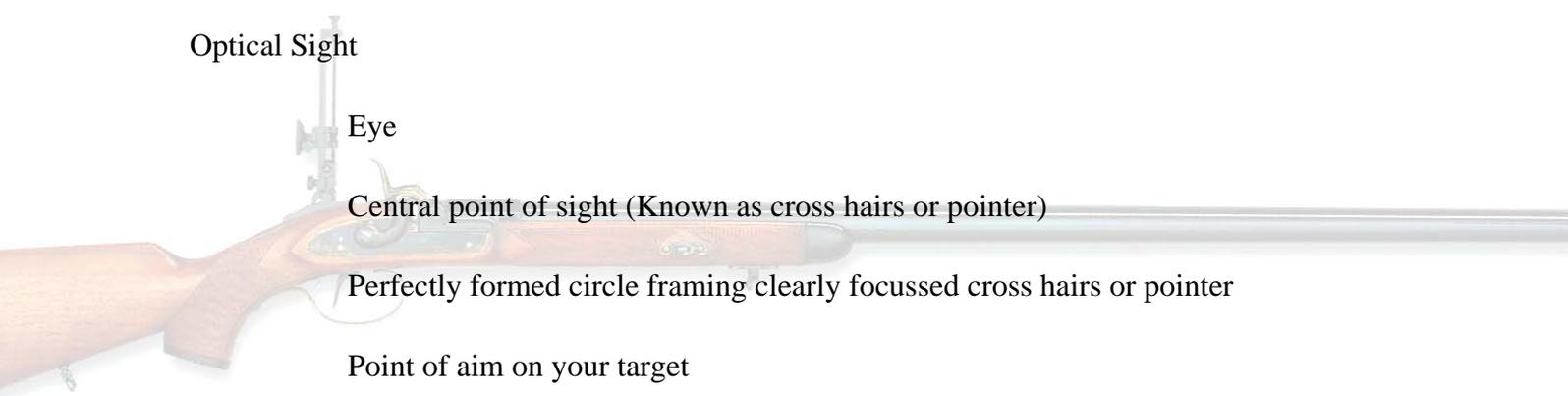
Optical Sight

Eye

Central point of sight (Known as cross hairs or pointer)

Perfectly formed circle framing clearly focussed cross hairs or pointer

Point of aim on your target



To obtain the correct aim picture you must place the correctly aligned sight onto the point of aim on your target (Centre of target).

Focus – Correct focus is essential to correct sight alignment. It is important that the shooter recognises that two objects at different distances from the eye can not normally be focused on at the same time. To cope with this we have to switch focus when aiming from the pointer/cross hair or foresight blade to the point of aim on the target and switch back before pulling the trigger, with practice this becomes second nature. It is important to concentrate when aligning the sight to ensure that the correct relationship is maintained through the firing process the greater the distance you are shooting at the larger the error will be if you do not maintain the correct alignment. Some common misalignment are caused by firer not having correct eye relief on optical sights so they are looking through sight incorrectly aligned and with iron sights not having the front sight in the centre of the rear sight again this is an alignment problem.

The shot must be released and followed through with out any undue disturbance to the position

There are 3 main points that require to be coordinated in order to master this principle, they are breath control, trigger operation and the follow through. We will consider them separately but they must be integrated by the firer to achieve a good shot.

✚ Breathing control – Breathing is a natural body function which happens without conscious thought on the part of the individual, this process causes body movement which must be controlled. There are 3 aspects of the breathing cycle that are important, during the breathing cycle the lung are neither fully filled or emptied, after breathing out there is a natural pause and the whole process take about 5 seconds. It should be apparent that we need a pause in the breathing cycle to fire our shot so we should extend the pause when we breath out to 6 or 7 second to allow us to take our shot with out disturbance. To do this we should take 1 or 2 deep breaths this will hyper-oxygenate the body to assist with concentration whilst taking our shot. You should not extend the pause over 7 second as you will lose concentration, if this happens start again.

✚ Trigger operation – The trigger is to be pulled during the pause in breathing the aim must be perfect and the trigger operated smoothly to allow the shot to be fire without disturbing the aim picture or grip of the right hand. The trigger finger should only touch the trigger whilst taking the slow breaths the slack on the trigger should be taken up, when the breathing is paused if the sight picture is correct the trigger should be squeezed lightly to the rear increases this pressure slowly until the shot is fired. When the shot is fired keep the pressure on the trigger for a couple of second to allow the shot to leave the barrel this is part of the follow through you should be concentrating on the aim picture as you are carrying out these actions until the weapon settles. You can now release the trigger and commence breathing as normal at any time if the aim picture is not correct don't take the shot but start the process of aiming and taking the shot again.

✚ Follow through – It is important that once the shoot has been fired that nothing is done that will influence the action of the rifle before the bullet has left the barrel. Keeping the pressure on the trigger and keeping the correct point of aim for about 1 second will allow the bullet to exit the barrel on the correct flight path by eliminate any movement of the weapon this is known as the follow through, whilst this is

happening you should be able to see were the sight picture move on firing this should give an indication of where your shots will land on your target.

### Summary

Good shooting technique is not easily achieved but by applying the marksmanship principles and concentrating with each and every shot taken and practicing your shooting procedure each shooter will be able to improve there group size and zero there weapon so there rounds land in the centre of there target.

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