

REQUIRED READING

AHA Marksmanship Handbook

Practical shooting principles for pest management operators

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1. Introduction

This handbook is a practical guide to marksmanship — the ability to shoot accurately. It is not a theory document. It covers the principles and techniques that will help you put rounds on target consistently, safely, and humanely.

As an AHA member, you are required to read this handbook before attempting your shooting qualification. There is no written test on this material. The test is practical: 5 shots within a 75mm grouping at 100 metres.

The principles in this handbook are drawn from Australian Defence Force marksmanship doctrine and established hunting marksmanship practice. They apply whether you are shooting at a range, using a Virtual-Shot simulator, or operating in the field on a pest management engagement.

The AHA Shooting Standard: 5 shots within a 75mm grouping at 100 metres. This is the minimum proficiency standard for all AHA-certified operators. If you follow the principles in this handbook and practise them consistently, you will meet this standard.

2. The Five Fundamentals of Shooting

There are five fundamental elements of rifle shooting. They work together as one integrated process — not as five separate steps. Practise them together.

2.1 Aiming

Align your sight with the target. Whether using iron sights or a telescopic sight, the principle is the same: the front sight, rear sight (or reticle), and target must be in alignment.

With iron sights, correct **sight alignment** means the top of the front and rear sights are in the same line, with the front sight centred in the rear sight notch. Correct **sight picture** means the aligned sights are placed on the target where you want the round to strike.

With a telescopic sight, centre the reticle crosshair on the target. Ensure you have a consistent cheek weld — your cheek in the same position on the stock every time — to avoid parallax error.

Key point: Keep your aiming time brief. You cannot maintain the firing fundamentals effectively for long periods. If you find yourself holding too long, lower the rifle, rest, and start the process again.

2.2 Breath Control

Your breathing moves the firearm — even small movements are enough to shift your point of impact at 100 metres. Control it with this technique:

1. When you are ready to shoot, draw a deep breath and exhale about half of it.
2. Hold your breath as you squeeze the trigger.
3. If you hold your breath too long, your heart rate increases, your pulse becomes noticeable, and the firearm begins to move. If this happens, take another breath and start over.

In the field, the excitement of spotting game will make breath control more difficult. Recognise this, relax deliberately, and follow the correct procedure. Rushing the shot because you are excited is how wounding shots happen.

2.3 Hold Control (Stability)

Learning to hold the firearm steady is a challenge. Rather than trying to eliminate all movement — which is impossible — concentrate on two things:

- **Focus any necessary movement on the target.** Your natural wobble area should be centred on where you want to hit.
- **Minimise the area of movement.** Use a stable firing position, support the rifle properly, and use a rest or bipod whenever possible.

2.4 Trigger Control

Jerking the trigger or abruptly clenching the trigger hand will move the rifle enough to cause a miss. This is the most common cause of poor shooting.

- Grasp the wrist of the stock firmly but not with a death grip.
- Position your fingertip on the trigger — the pad of your finger between the first joint and the fingertip.
- Apply slow, steady, rearward pressure until the rifle fires. The shot should surprise you slightly — if you know the exact moment it will fire, you are likely anticipating and flinching.

2.5 Follow Through

After the rifle fires, continue the squeeze. Maintain your firing position, keep your cheek on the stock, and keep your eye on the target. This prevents you from flinching or jerking the rifle before the bullet has left the barrel.

Follow through also allows you to observe the strike of the round and assess whether a follow-up shot is needed — which in pest management, it sometimes is.

3. Firing Positions

There are four standard rifle firing positions. Choose the position that gives you the best combination of stability and visibility for the situation. In pest management, you will use all four depending on terrain, vegetation, and the target species.



Prone

The steadiest position. Best for mastering fundamentals. Use whenever terrain allows — flat ground, clear sight lines.



Sitting

Both arms supported by your legs. Next steadiest after prone. Good when vegetation blocks a prone shot.



Kneeling

One arm braced. Less steady but faster to adopt. Good for quick engagements in medium vegetation.



Standing (Offhand)

The least steady position. Requires the most practice. Use only when no other position is available.

For your AHA shooting qualification: You will shoot from a supported position at a range — typically prone or benchrest. Use the most stable position available to you. There is no requirement to shoot from standing or kneeling for the qualification.

Position Principles

- **Bone support over muscle support.** Wherever possible, rest the weight of the rifle on bone structure (elbows on knees, forearm on the ground) rather than holding it with muscle tension. Muscles fatigue and tremor. Bones don't.
- **Natural point of aim.** When you settle into a position and close your eyes, then open them, your sights should still be on the target. If they've drifted, adjust your body position — don't muscle the rifle back onto target.
- **Use a rest.** In pest management, use every available rest — bipod, fence post, vehicle bonnet, backpack, tree fork. There is no prize for shooting unsupported. Use whatever gives you the most stable platform.

4. The B.R.A.S.S. Method

B.R.A.S.S. is a simple memory aid that puts the five fundamentals into a sequence you can follow for every shot. Use it every time.

B

Breathe — Draw a breath, exhale half, hold.

R

Relax — Relax your muscles. Let the position and the rest do the work.

A

Aim — Align your sights on the target. Confirm your sight picture.

S

Squeeze — Apply slow, steady pressure to the trigger.

S

Squeeze more — Follow through. Maintain position and trigger pressure after the shot breaks.

At the range: Run B.R.A.S.S. for every single shot during your qualification. Don't rush. You have time. Five good shots are better than five fast shots. The 75mm standard is achievable for anyone who follows this sequence consistently.

5. Rifle Marksmanship for Pest Management

Pest management shooting differs from target shooting in several important ways. Understanding

these differences will make you more effective in the field.

5.1 Know Your Zero

Your rifle must be zeroed — meaning you know exactly where it shoots at a given distance. For pest management work, a 100-metre zero is standard. This means your point of aim and point of impact are the same at 100 metres.

At distances shorter or longer than your zero distance, you will need to hold over or under. Know your rifle's trajectory at common engagement distances (50m, 100m, 150m, 200m). If you don't know it, find out at the range before you go into the field.

5.2 Distance Estimation

In the field, you rarely know the exact distance to the target. Misjudging distance is the single most common cause of missed shots on pest species. Use a rangefinder if you have one. If you don't, practise estimating distances at the range and in the field until you can judge 100 metres reliably.

5.3 Shot Placement

AHA requires head or heart-lung shots for humane dispatch. Anything less falls below the standard.

- **Head shot:** Instantaneous. Required for kangaroos under the RSPCA Code of Practice. Small target — requires confidence in your distance estimation and a stable position.
- **Heart-lung shot:** Larger target area. Place the round immediately behind the front leg, one-third up from the bottom of the chest. Effective on all pest species.

If you are not confident in the shot — if the distance is too far, the animal is moving, the wind is strong, or your position is unstable — **do not take the shot**. A clean miss is always preferable to a wounding shot.

5.4 Wind

Wind deflects bullets. At 100 metres, a moderate crosswind can push a bullet 50mm or more off target — enough to turn a heart-lung shot into a gut shot. Read the wind before you shoot. Look at grass, leaves, mirage, and dust. If the wind is strong and gusting, wait for a lull or close the distance.

5.5 Follow-Up Shots

In pest management, follow-up shots are sometimes necessary. After your first shot, maintain your position, work the bolt smoothly, reacquire the target, and apply the fundamentals again. Do not rush the follow-up shot — a second poorly placed round helps nobody.

6. Shotgun Techniques

Shotgun marksmanship differs fundamentally from rifle marksmanship. With a rifle, you aim at a stationary or slow-moving target using your sights. With a shotgun, you point at a moving target with the barrel. The principles are different.

6.1 Shotgun Fundamentals

1. Stand with feet shoulder-width apart, weight balanced, so your upper body can swing freely left and right.

2. Mount the shotgun: bring the stock to your cheek first, then back to your shoulder. Cheek first, shoulder second.
3. Look at the target, not the muzzle. Your eyes lead, the barrel follows.
4. Swing smoothly. Practise the swing until it is fluid and natural.
5. Shift your weight to the front foot and lean slightly into the shotgun.
6. Slap the trigger firmly — don't jerk, don't hesitate. Commit to the shot.
7. Follow through with the swing during and after the shot. If you stop your swing as you pull the trigger, you will shoot behind a moving target.

6.2 Swing-Through Lead

This is the best technique for most shooters and the one to learn first.



1. Point your shotgun just behind the moving target and swing with it.
2. Increase the speed of your swing so the muzzle passes through the target.
3. Fire as the muzzle moves past the target into the space ahead of it.
4. Continue the swing after firing — follow through.

6.3 Sustained Lead

A more advanced technique that requires experience and consistent timing.



1. Point the shotgun ahead of the target as you swing.
2. Swing along the flight line at the same speed the target is moving, keeping ahead of it.

3. Fire while maintaining the lead distance.
4. Continue the swing after firing.

For pest management: Shotgun work is typically close-range — rabbits flushed from warrens, foxes in thick scrub, feral cats at close quarters. The swing-through method is the most reliable for these scenarios. Practise it until it becomes instinctive.

7. Field Application

The range is where you build your fundamentals. The field is where you apply them under real conditions. Here are the practical realities of shooting in a pest management context.

7.1 Use a Rest — Always

In pest management, there is no reason to shoot unsupported if a rest is available. Carry a bipod. Use fence posts, vehicle bonnets, hay bales, backpacks, tree forks — anything that makes your shot more stable. Your ego is less important than a clean kill.

7.2 Know Your Limits

Every shooter has a maximum effective range — the distance at which they can reliably place a round in the kill zone. Know yours. It is almost certainly shorter than you think. If the target is beyond your effective range, close the distance or let it go.

7.3 One Shot, One Kill

The professional standard is one round, one clean dispatch. This is not always achievable — animals move, wind gusts, things happen. But it should be your intent on every engagement. If you are consistently needing multiple rounds to dispatch a single animal, your marksmanship needs work.

7.4 Cold Bore

Your first shot of the day — from a cold barrel — may strike differently from subsequent shots from a warm barrel. Know your cold-bore shift. At the range, note where your first shot of the day lands relative to your group. In the field, your first shot is often your only shot.

7.5 Low Light

Much pest management work happens at dawn, dusk, or at night. In low light, your ability to confirm the target, judge distance, and place the shot accurately is reduced. Use appropriate optics. If you cannot clearly identify the target and confirm what is behind it, do not fire. The four clearance questions apply especially in low light.

8. Your AHA Shooting Standard

To earn your AHA certificate, you must demonstrate shooting proficiency by placing 5 shots within a 75mm grouping at 100 metres.

How to Meet This Standard

- 1 Use a stable position.** Prone, benchrest, or supported. Use the most stable platform available to you.
- 2 Use a rest.** Bipod, sandbags, or a benchrest front rest. There is no requirement to shoot unsupported.
- 3 Zero your rifle.** Confirm your zero at 100 metres before attempting the qualification group.
- 4 Run B.R.A.S.S. for every shot.** Breathe, Relax, Aim, Squeeze, Squeeze more. Every time.
- 5 Take your time.** There is no time limit. Five deliberate, well-executed shots will group tighter than five rushed shots every time.
- 6 Photograph your target clearly.** Show the grouping with a ruler, coin, or known-size reference object for scale. Upload through your AHA portal.

75mm at 100 metres is achievable. A 75mm group is approximately the size of a tennis ball. With a zeroed rifle, a stable position, a good rest, and consistent application of the B.R.A.S.S. method, any competent shooter can achieve this. If you are struggling, the issue is almost always one of the five fundamentals – most commonly trigger control or breath control. Go back to basics, slow down, and focus on the process rather than the outcome.

Australian Hunting Association

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