



## An Introduction to **CROSSBOW TARGET SHOOTING**



Prepared by the Archery Australia Crossbow Committee.

Archery Australia is affiliated with  
The World Crossbow shooting Association.

Gratitude is expressed for the kind co-operation and permission granted by The National Small Bore Rifle Association Inc. for use of the format and appropriate text from “An Introduction to Small Bore Rifle Shooting.”

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Archery SA . 2018.

# SAFETY

**Never, for any reason point a crossbow at anyone!  
Treat every crossbow, at all times, as though it is loaded!**

- ✓ Leave crossbows UNSPANNED, with NO BOLT loaded when not shooting.
- ✓ Keep FINGERS CLEAR OF TRIGGER unless aiming at the TARGET.
- ✓ Always OBEY INSTRUCTIONS of the FIELD CAPTAIN.

It is requested that ALL ARBALISTS adhere to the  
VOLUNTARY STORAGE, MARKING & TRANSIT CODE.

The future of the sport is in your hands – misuse it and lose it.

**REMEMBER – SAFETY IS NO ACCIDENT**

# **VOLUNTARY CROSSBOW STORAGE, MARKING & TRANSIT CODE**

**Regardless of the legal requirements in the particular state or territory of the Arbalist concerned, the Archery Australia Crossbow Committee recommends that all Archery Australia registered Arbalists abide by the Voluntary Crossbow Storage, Marking & Transit Code.**

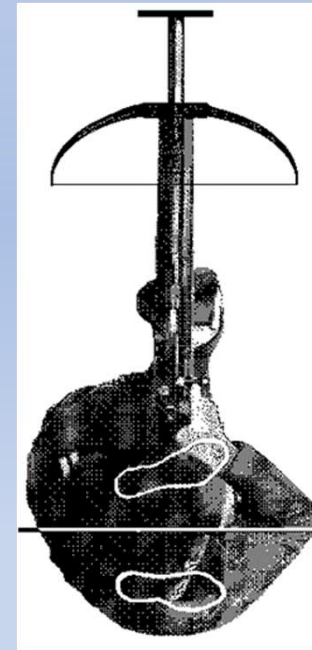
1. All crossbows should be stored when not in use in a secure, lockable cabinet.
2. Crossbows should be stored without bowstrings or bolts. Strings and bolts need not be under lock and key.
3. If practicable, stored crossbows should have the prod removed.
4. Crossbows should be engraved or otherwise permanently marked with a serial number or other mark/name and the owner's driving or shooting licence number. Such marks and other descriptive material/photographs should be lodged with the Arbalest's club and Regional Governing Body and local police, if possible. Another copy of this information should be held in a separate safe location by the Arbalest.
5. Crossbows in transit from storage to the shooting range should be carried in an unstrung condition, preferably without the prod fitted.
6. Crossbows in transit should be out-of-sight and under cover, preferably in a suitable case. Where the transit requires the crossbow to be stowed in the cargo hold of a public vehicle, and therefore away from the owner's immediate care, such transit cases should be securely locked.

# EQUIPMENT

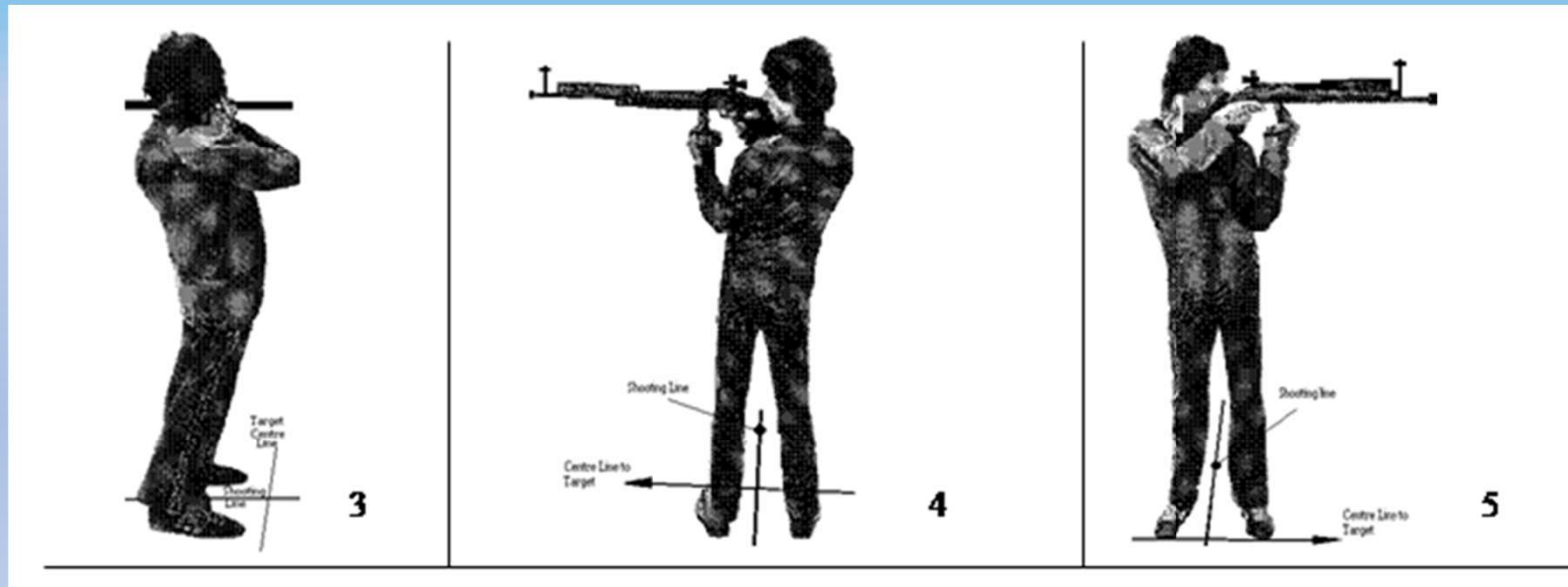
- 1. CROSSBOW.** High quality commercially made crossbows are available, however excellent target crossbows can be made at home if adequate tools, time and knowledge are at hand. Seek advise of experienced crossbow shooters before purchasing a crossbow.
- 2. BOLTS.** Use top grade aluminium or carbon fibre shafts for highest scores. Your bolts must be straight and of the same weight and length.
- 3. CLOTHING.** Camouflage clothing, Shooting gloves, belts wider than 50mm, Open toe shoes, ankle supporting shoes or boots and body supporting clothing are NOT permitted.
- 4. HAT.** Some protection from UV rays and distracting light is highly recommended. Shooting hast are permitted.

# STANCE

1. Stand at an angle of 90 degrees to the direction of aim, placing the feet shoulder width apart and straddling the Shooting Line.
2. Knees must be straight and the body weight evenly distributed on both legs.
3. Hold the head straight and upright, if necessary, canting the crossbow towards the face.
4. The bone structure, NOT the muscles, MUST support the crossbow



# STANCE



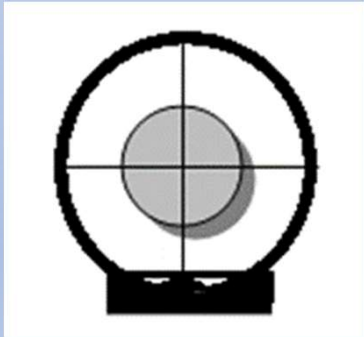
Bend the upper portion of the body slightly backwards so that the crossbow lies within the body's centre of gravity (3 & 5), ensuring that the crossbow is held as high as possible without detracting from the stability of the hold.

The supporting arm **MUST** be firmly against the rib cage and the elbow transmitting the weight through the hips to the legs.

Adjust the crossbow to the shooter, **NOT** the shooter to the crossbow. Eyes should be level and the head upright.

# SIGHTING

Perfect eyesight is not required. Some of the world's best shooters wear glasses.



1. Keep both eyes open. Use a blinder if necessary.
2. Look as straight forward as possible.
3. Focus on the front sight element sharply. The target should appear slightly blurred.
4. Avoid staring at the sight picture longer than a period of 6 to 8 seconds, or retina burn occurs.
5. A level bubble in the line of sight is recommended to correct the cant of the crossbow.

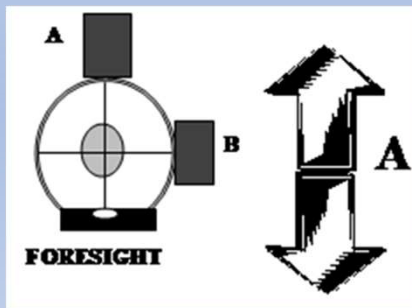
**FORESIGHT :-** A metal element or Perspex aperture is generally used, the average diameter of which is about 5mm (inside).

**REARSIGHT :-** The rear aperture diameter can be varied, but is usually about 1.0mm in diameter. The sight arrangement should be such that the head is erect – NOT cocked over to the side.



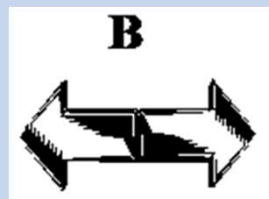
# SIGHT ADJUSTMENT

Usually only the foresight is adjusted for shot position. A rifle type rear sight can be fitted to provide additional adjustment of shot position. If a micrometre rear sight is used, the adjustments are REVERSE to that of the foresight shown below. IE move the foresight to the shot or mover the rear sight away from the shot.



To correct HIGH shots move the foresight **UP**.

To correct LOW shots move the foresight **DOWN**.



To correct RIGHT shots move the foresight to the **RIGHT**.

To correct LEFT shots move the foresight to the **LEFT**.

# TRIGGER CRAFT

SENSITIVITY is required for the trigger of a crossbow. Triggers vary greatly in the release pressure. Only experience will enable the shooter to feel when the sears are about to separate.



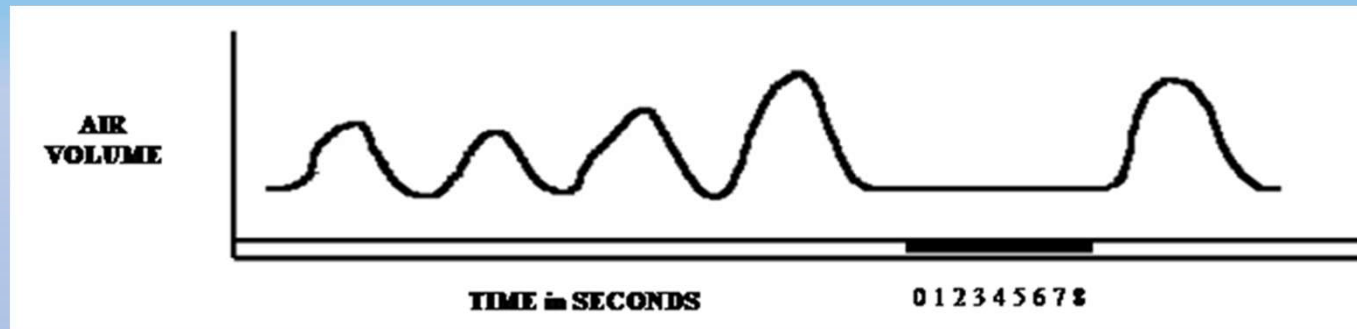
1. When the HOLD begins to settle, pressure is applied to the trigger and increased for as long as the sight picture is good.
2. Trigger release should become a semi-automatic response to a steady hold and good sight picture.
3. If the hold or sight picture deteriorates, STOP, breathe normally, and BEGIN CYCLE AGAIN.
4. If using a heavy trigger, place the 1<sup>st</sup> joint of the finger on the trigger.
5. For a lighter trigger use the tip of the finger on the trigger.

The action is SQUEEZE not JERK.

The only body muscles in tension should be the trigger finger tip.

..... **RELAX** ..... **RELAX** ..... **RELAX** ..... **RELAX** .....

# BREATHING CONTROL



Correct breathing is essential for proper body function.

Oxygen is important for ..... MUSCLE CONTROL.

..... STEADINESS.

..... CLEAR SIGHTING.

1. Breathe normally until hold begins to settle.
2. Hold breathe at natural end of exhale.
3. Hold breathe for a maximum 6 to 8 seconds.
4. If shot is not made – STOP – BREATHE - begin cycle again.

# CHECKLIST

EVALUATE your actions.

- Observe the shot impact.
- Did the shot impact at the point of aim, on the release of the trigger?
- Did the conditions affect the shot?

Be PARTICULAR about –

- ✓ STANCE.
- ✓ RELAXATION.
- ✓ BREATHING.
- ✓ HOLD.
- ✓ SIGHTING.
- ✓ TRIGGER RELEASE.
- ✓ FOLLOW THROUGH.

# CHECKLIST

Be PARTICULAR about

- ✓ CONTROL.
- ✓ PHYSICAL AND MENTAL CONCENTRATION.
- ✓ PERFORMANCE.
- ✓ CONSISTANCY.

# PHYSICAL CONTROL

Good health and physical fitness are essential for the degree of control needed in shooting.

The recipe for success is –

- Balanced Diet.
- General fitness training.
- Adequate rest.
- Avoidance of drugs, including nicotine, alcohol, tea and coffee.
- Shooting – specific fitness training.

This provides the basis for an effective training program which should include provisions for –

- Physical conditioning.
- Technique training.
- Gradual build-up to specific goals.
- Mental conditioning which will ultimately play a major role.

# MENTAL CONTROL

Once the basic techniques have been mastered, the factor of mental control assumes extreme importance. At the highest level, about 90% of an archer's attention and effort must be directed towards this area.

Remember that each shot is an exercise in perfection. Many average shots make for an average score.

The improving Archer can and should be trained to develop these and other aspects of MENTAL CONTROL.

- ✓ DETERMINATION
- ✓ CONFIDENCE
- ✓ DETACHMENT
- ✓ AWARENESS
- ✓ MENTAL REHEARSAL
- ✓ FOCUSING of ATTENTION
- ✓ CONCENTRATION on PERFORMANCE

# PROGRESS

SO ..... YOU WANT TO IMPROVE?

1. Buy **QUALITY EQUIPMENT**.
2. **PRACTICE** frequently and productively - live shooting and dummy shooting. Remember all shots should be competition shots and shot to perfection.
3. **EXPERIMENT** to perfect position and technique - **BUT** - change only one thing at a time, then test & analyse thoroughly.
4. **WATCH** and **DISCUSS** shooting problems with your coach or with the most experienced Arbalist you know. Evaluate what you hear and see.
5. Regularly participate in **COMPETITIONS**. Compete against yourself. The perfect score can be beaten. Compete against others and you will be dragged down to their level.
6. **TEST BOLTS** and **CHECK EQUIPMENT**. Keep records and compare results.
7. Complete a **QUALIFICATION PROGRAM**.



# SUGGESTED CROSSBOW QUALIFICATION PROGRAM

Following a beginner's instruction course an Arbalist should complete a qualification program to prepare them for competition. The object is to achieve a score of 550 points or greater before moving on to the next round. ( refer "GRAPH OF PROGRESS." )

1. Crossbow Geelong. ( 90 bolts at 30metres on a 60centimetre target face. )
2. Crossbow Darwin. ( 90 bolts at 40metres on a 60centimetre target face. )
3. Crossbow Melbourne. ( 90 bolts at 50metres on a 60centimetre target face. )
4. Crossbow Short Canberra ( 30 bolts at each 50/40/30metres on a 60centimetre face. )
5. Crossbow Canberra ( 30 bolts at each 60/50/40metres on a 60centimetre face. )
6. TC 900 ( 30 bolts at each 65/55/45metres on a 60centimetre face. )

# YOU WANT TO IMPROVE SOME MORE

**Be aware of Light, Temperature and Wind changes as these affect the bolt impact point. Only practice and experience will give you the edge on these factors.**

## **THEN KEEP A DIARY!**

Make notes on :-

- ✓ What produced a good shot.
- ✓ How you felt physically and mentally.
- ✓ Which muscles you were aware of.
- ✓ What you learned about each shot.
- ✓ What you learned about yourself.
- ✓ How you developed concentration.
- ✓ and so on ad infinitum!

# YOU WANT TO IMPROVE SOME MORE

## Record details of :-

- |            |                      |
|------------|----------------------|
| - Range    | - Time of Day        |
| - Distance | - Bolts              |
| - Date     | - Weather conditions |
| - Scores   | - Equipment settings |
| - Groups   | - Flag readings      |

- Any change made in equipment, position or technique

# IF YOU WANT TO BE A CHAMPION.

## YOU MUST : –

- ✓ Have the desire.
- ✓ Access your potential for greatness. Know yourself, your strengths and weaknesses.
- ✓ Establish a goal, make it difficult to achieve, and when you come close, establish a new one.
- ✓ Have dedication and determine what you are willing to sacrifice to attain your goal.
- ✓ Have pride in yourself. Confidence comes with pride and confidence implies that you have mastered fear, doubt and anxiety.
- ✓ Develop a willingness to work tirelessly.
- ✓ The two most important actions to be a CHAMPION are :-
  - A. Execute the perfect shot.
  - B. Repeat action “A”.

# INCIDENTALS

**CROSSBOW TARGET SHOOTING CAN BE ENJOYED BY ALL REGARDLESS OF AGE OR SEX.**

**IT CAN BE :-**

- ✓ a good family activity.
- ✓ an enjoyable recreation.
- ✓ a serious competitive sport.

**INTERNATIONAL EVENTS.**

- World and Regional Championships.

**OTHER EVENTS.**

- National, Master, State and Club Championships.

**DISTANCES SHOT.**

- Indoor Target – 18m & 25m

- Outdoor Target – 20m up to 70m

- Field - 5m up to 60m

- Clout – 80m up to 180m.

# TYPES OF CROSSBOW

THIS PRESENTATION HAS DELT SPECIFICALLY WITH THE “TARGET CROSSBOW”  
HOWEVER THERE ARE SEVERAL OTHER TYPES OF CROSSBOW THAT  
MAYBE OF INTEREST.

SPORTING CROSSBOW.



MEDIEVAL CROSSBOW.



For more information on and a competition rules for crossbow shooting go to the  
World Crossbow Shooting Association website – [www.worldcrossbow.com](http://www.worldcrossbow.com)

\*\*\*\* **GOOD SHOOTING.** \*\*\*\*\*