

# *NAAMA Missile Combat Rules*

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## **Definitions**

**Missile** - Any projectile used as a weapon in battle. This includes (but is not limited to) arrows, javelins and siege munitions.

**Light Missile Combat** - The use of announced and lobbed missile volleys against regularly armoured combatants.

**Heavy Missile Combat** - The use of unannounced directly fired missiles against combatants with critical area protection.

**Critical Area Protection** - The minimum armour required for any combatant who is a valid target for heavy missile combat.

**Siege Engine** - For the purpose of rules application, a siege engine is any missile launcher which is stationary during battle, and would not have been historically used as a hand-held weapon. Siege munitions are any missiles launched exclusively from a siege engine.

## Missile Combat Classes

There are two distinct combatant classes provided for under these missile combat rules – light missile combat and heavy missile combat. The requirements for each are described below.

### ***Light Missile Combat***

Before each battle session, all combatants should be briefed on how to protect themselves from incoming missile volleys and what constitutes a kill.

Missiles may only be fired as part of an announced volley. Some sort of signal capable of being heard by all combatants should be used to announce a volley with three to five seconds warning before missiles are launched.

*Volley fire* constitutes missiles which will arc through the air with at least a 30 degree vertical inclination from the launcher. Missiles must not be fired with a flat trajectory at any time during light missile combat.

Missiles must be launched from a position which can be easily predicted by opposing combatants, such as directly behind a line of melee combatants. No missiles should be launched at combatants that are not prepared and could be hit in the face or neck – for example, a line battle has broken into a skirmish or missiles are launched from multiple positions simultaneously.

When the volley signal is given, all targeted combatants should immediately protect their face and neck by looking down and raising their shield (if applicable). Upon hearing the volley signal each combatant should take up the call 'arrows'. **Under no circumstance should a combatant look up into a volley of missiles.**

Combatants launching missiles may do so either on-field with the appropriate armour or from off-field with no armor but may not change from on-field to off-field or vice versa mid battle. Off-field combatants must 'die' when confronted by an armed combatant.

### ***Heavy Missile Combat***

**All combatants must meet *critical area protection standards* (see *Armour Standards*).**

All heavy missile combatants must be briefed on the inherent risks involved and the key rules as they apply to each battle. Combatants using missile weapons should be competent in their use prior to the battle. Combatants must be reminded not to expose their face or neck until the battle has finished or been paused.

Missiles may be fired at any time, at any opposing combatant, without warning. All missiles should be launched level with or from above the target (see *Armour Standards*), no rising missile impacts will be permitted.

### ***Exceptions***

At the discretion of the marshals, a battle may be fought where one side possesses missiles, is only lightly armoured and uses heavy missile combat techniques against the other side, which has heavy armour but no missiles.

Other exceptions may be made at the discretion of the marshals alone.

All deviations from the standard rules must be clearly explained to all participants prior to any combat taking place.

# Combat Authorisations

## **Combatants**

All combatants who wish to participate in a battle where missiles are in use must have the minimum standard of armour for that battle. For light missile combat, this will be standard NAAMA armour requirements. For heavy missile combat this will be critical area protection (see *Armour Standards*).

No combatant will be allowed onto the field unless they meet these requirements.

## **Weapons**

All combatants who wish to use a Missile weapon in combat must have both their launcher and munitions inspected prior to combat.

For archery this means having bows cited to meet any draw weight restriction (see *Heavy Missile Combat*), and having arrows checked to ensure they meet combat arrow standards. Arrows must be checked before each use.

For javelins this means checking they meet standards and are sound.

For siege this means checking they are sound and ensuring they can be safely used against other combatants either in light or heavy missile combat. Because each siege engine will be different, the definition of what is safe and how to measure this becomes difficult. This decision will be at the discretion of the marshals for each battle. As a guideline, to pass authorisation, the operator of the siege engine should be prepared to be shot at by their own engine, at minimum range wearing the minimum armour requirement for that combat class.

It is the responsibility of combatants using missiles to ensure their missiles are safe and in good condition. Arrows, bolts and other missiles should be inspected for damage regularly during combat (see *Weapons Use*).

## **Marshals**

Any marshal on the field where missile combat is taking place is required to wear appropriate safety equipment to protect themselves from stray missiles.

All normal NAAMA marshal rules and authority will apply during any missile battle.

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# Armour Standards

## **Light Missile Combat**

Normal NAAMA armour rules apply during light missile combat.

Each combatant must have the ability to protect their head, face and neck during volley fire. This can be achieved either by covering the head with a shield or hand, or in some cases by tilting the head forward.

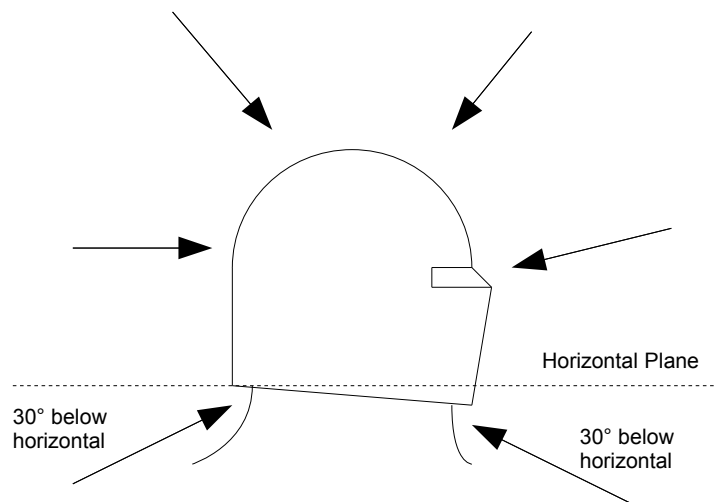
## Heavy Missile Combat

Critical Area Protection is required for all combatants taking part in heavy missile combat. Any person on a battlefield where heavy missile combat is being used must meet these requirements as they are a potential target. There is one exception – see *Weapons Use*.

### Critical Area Protection

A combination of helmet and padding which has no openings greater than 5mm in width and provides adequate protection to prevent injury from a direct minimum-range missile hit to the head or neck.

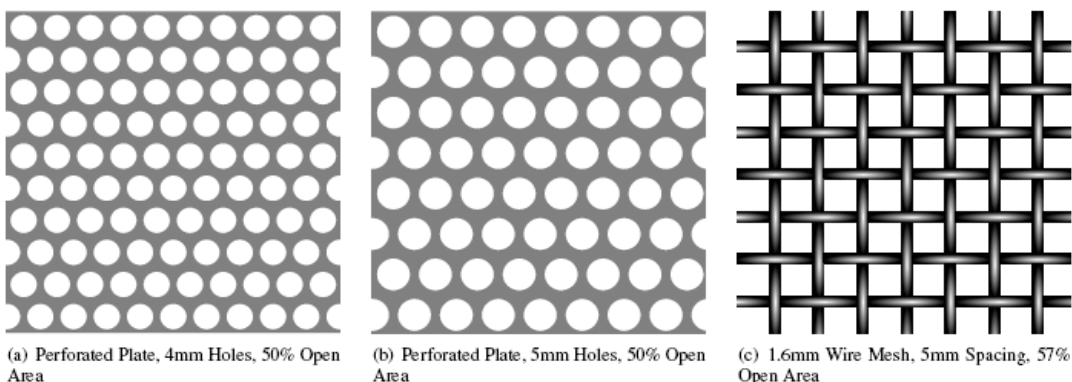
To test this, a 6mm diameter rod should not be able to touch the head from any angle higher than 30 degrees below horizontal, as per the diagram below.



### Archery Mesh

This includes eye protection. Any eye slots or openings must be covered by 1.6mm diameter heavy mesh or 1.6mm thick perforated steel with holes no larger than 5mm and 50% or less open area.

Some examples are shown below:



Other materials may be permitted provided they are generally accepted to be safe – this will be at the discretion of the marshals. Examples might include polycarbonate or other modern impact resistant material. Any material should be securely attached in such a way as to prevent deformation or detachment during impact. This is especially important when mesh is fitting inside eye-openings in helmets.

## **Removable Visors**

Mesh visors may be temporarily fitted to helmets provided the mesh is secure and cannot be dislodged during combat. Sharp exposed edges of visors must be rounded or covered so as to prevent injury to other combatants.

## **Safety Glasses**

Impact resistant safety glasses may be worn in some instances at the discretion of the marshals. These are not a replacement for archery mesh and should only be used with full-face helms where there is already good protection. These should be well fitted and not able to be dislodged by impact or normal battlefield use. Please be aware that combat arrows can impact with significant force and only strong safety glasses will withstand a direct hit.

## **Open-Face Helms**

Open-face helms will require special attention – any combatant wishing to modify such a helm to meet critical area protection standards will need to ensure that any mesh is well secured, is sufficiently padded to prevent serious injury (unsupported edges may be bent onto the head by missiles) and that no part of the head is exposed. Alternately any areas of the head not covered by 1.6mm steel should be well padded to the satisfaction of the authorising marshal. Chain over unprotected areas should be well padded as chain by itself does little to stop missiles causing injury. If you are in any doubt about this please contact a marshal before the event you wish to participate in.

## **Neck Protection**

Neck protection must be worn. Appropriate neck protection is a well padded fabric, leather or metal gorget which completely covers the neck where it is exposed below the helmet.

### **Strongly recommended protection includes:**

The following are not mandatory but will substantially reduce the risk of serious bruising and injury.

- Gambeson – full padded jacked, including spine protection.
- Groin protection (if not already covered by other armour).
- Joint protection – padded knees, and elbows.
- Arm and leg protection.

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## **Weapon Standards**

### **Bows**

For light missile combat, there is no restriction on bow draw weight.

For heavy missile combat, a bow must not have a draw weight greater than 30lbs (14kg). Recurve bows tend to develop more power for the same draw weight and should be lighter than 30lbs (14kg) to be safe. The draw weight of the bow is to be determined at 28" (711mm) draw length, as measured from the centre of the bow riser to the nock point on the string.

Compound bows are not permitted.

## Crossbows

There is no restriction on crossbow draw weight for light missile combat. However, bolts must be lobbed, which is difficult on most crossbows because they cannot be 'half-drawn' to alter their range. For this reason crossbows may not be suited for light missile combat. Compound crossbows are not permitted.

A crossbow used in heavy missile combat must not exceed 600 inch pounds (6.8 Newton meters).

This is calculated by measuring the distance from the resting point of the string at its centre to the nock point on the nut (the power stroke), then measuring the draw weight of the string when fully drawn to the nock point using a spring scale or some other appropriate measuring device. These two numbers are then multiplied together. For example:

draw length (inches) x draw weight (lbs) < 600 inch pounds

draw length (meters) x draw weight (kg) < 6.8 Newton meters

## Arrows

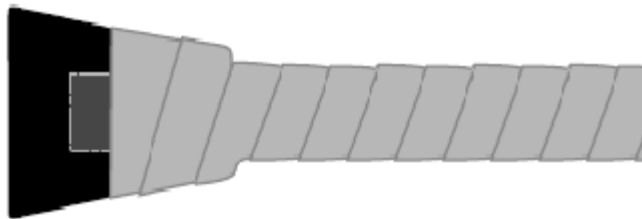
Shafts must have a diameter of between 8mm - 9mm or 5/16 inch – 11/32 inch.

Shafts must be no longer than 29 inches (737mm) – overall length.

Arrows must be tipped with an approved combat archery blunt. 'Riverhaven' blunts, as used by the SCA, are highly recommended. 'Redhead' or similar blunts as used in the UK are also allowed.

There are acceptable alternatives available but please check with an archery marshal before using them. All plastic knobs, most rubber chair-leg knobs and any blunt that does not completely cover the base of the shaft with at least 8mm of rubber are strictly prohibited.

Blunts must be taped onto the shaft so that they will not come off on impact or if the arrow is broken. Tape should not cover the end of the blunt – this is to allow inspection for 'punch-through', as shown in the diagram below:



The shaft of the arrow must be spirally or longitudinally wrapped with fibreglass filament tape, totally covering the surface from the front of the fletching to the tip of the shaft. The taping must be in good condition without any sign of the fibres lifting from the shaft.

**Target or hunting tips should NEVER be used for combat archery. Points of any sort must be removed and the shaft cut-off flat before fitting the blunt.**

**Arrows must have full-height feather flu-flu fletching. Normal target feathers (speed flights) are not permitted.** The recommended fletching is either with three or four full-height, 5 inch (120mm), straight fletched feathers, or two 8 inch (200mm) spirally fletched feathers.

Arrows and bolts may not be used as hand-held thrusting weapons.

Archers are responsible for ensuring the safety of their arrows or bolts during use. Arrows and bolts

should be inspected for damage prior to each use.

## ***Bolts***

Crossbow bolts must adhere to the same standards as for arrows (above), with the exceptions that there is no set length and they can be fletched with only two feathers, provided they can be demonstrated to be safe. A suitable demonstration is being shot by your own bolts while wearing the minimum armour requirement at the minimum distance.

## ***Other hand launched missiles, including Javelins***

A javelin is any hand-launched missile, usually a shaft with an impact point on one or both ends. Feathers or some other air-friction device may be employed to assist with flight characteristics.

It is recommended that javelins be approximately 1.4m to 1.6m in length and 14mm to 16mm in diameter.

Javelins must be hand-launched and must not employ spear-throwers or other mechanical advantage.

Any impact point must be covered by a suitable blunt, that at is at least 30mm in diameter, can survive repeated use, has been tested to be safe and has been checked by a marshal prior to battle. Javelins should be as light as possible without compromising strength or safety. Heavier javelins should employ a larger and softer blunt to absorb the extra force upon impact.

This class of missile weapon is by it's nature broad, so discretion should be used when constructing any javelin to ensure safety is paramount. Remember – the heavier it is, the harder it will hit.

## ***Siege Engines***

While historical siege engines made up for their lack of mobility with their great range and/or hitting power, missile combat versions must not hit any harder than the other weapons in play. This means that their range is likely to be no greater than hand-held bows etc., and possibly less.

For machines based around a bow as motive power and using arrows or darts as missiles the standard crossbow power restriction (i.e. 600 inch-pounds) applies. This also applies to bow-like devices such as ballistae etc. using twisted rope bundles (or even rubber bands).

Due to the huge variation between siege engines, their safety cannot be estimated without practical testing. A siege engine may be demonstrated to be safe by it's operator if that person is prepared to be shot by it wearing minimum armour at minimum range.

To avoid argument, a siege engine is any missile launcher which is stationary during battle, and would not have been historically used as a hand-held weapon.

## ***Siege Munitions***

To help avoid arguments over killing blows from small siege engines, the minimum size of siege munitions is one tennis ball or equivalent. Other munitions may be used provided that:

- No part of them is capable of fitting through a 5mm opening in a helmet.

- They are sufficiently padded to minimise impact injuries.
- They have no sharp edges or points.
- They can be demonstrated to be safe to the satisfaction of the inspecting marshals.

## **All Weapons**

All missile weapons, including those not specifically described above must adhere to the following rules:

- Missiles must not weigh more than 250grams, except siege munitions where they have been demonstrated to be safe.
- Any launcher or missile not specifically described in this document must be approved for use, inspected by a marshal and shown to be safe before use. Approval prior to an event is recommended to ensure a weapon can be used at that event.
- Any missile not classed as a *siege munition* falls under the classification of *hand-launched missile*.

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## **Weapons Use**

### **Missile Reuse**

All missiles must be inspected prior to use. For arrows and bolts this means inspecting them for damage by flexing them to check for shaft weakness and checking the blunt for detachment or 'punch-through'.

Missiles should also be checked if they have been trodden on or taken some other unusual impact.

Damaged missiles must not be reused until repaired.

### **Minimum Range**

The minimum range for any missile is 5 meters.

Missiles must not land outside the field of battle.

### **Voluntary Death**

Any combatant has the right to yield and die at any point during any combat. For example, an archer on the field may choose to voluntarily die rather than be struck by an opposing combatant when they get within melee range and risk damage to their bow. Combatants attacking archers and other missile combatants who have not yielded should be mindful of the fragility of equipment and either announce their presence before striking or strike in such a way as to minimise damage to equipment.

If a missile combatant is on the field and has appropriate armour, they may participate in melee combat with non-missile weapons if they choose to.