

The Complete Crossbow

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In this document I attempt to reconcile all the sources I could find detailing crossbows in the AD&D game; including TSR material, internet articles, historical examples and my personal additions. I have made some assumptions and corrections to produce what I think is a cohesive and coherent system for crossbows in my FR campaigns, whilst remaining totally within the AD&D canon framework. Any comments are appreciated.

Note: This document is formatted to US Letter paper size. To reformat to ISO A4 size, make the side margins 3mm SMALLER and top and bottom margins 8.8mm BIGGER.

Now it's reformatted to ISO A4, with 2cm margins on all sides...

Sources:

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- *Phaidon Guide to Antique Weapons and Armour*, Wilkinson-Latham, Robert, Prentice-Hall, 1981
- excerpts from *The Book of the Crossbow*, Ralph Payne-Gallwey, Dover Publications, New York, 1995
- excerpts from *A Guide to the Crossbow*, W. F. Paterson, Society of Archer-Antiquities, 1990

TSR Sources:

- *Player's Handbook*, TSR Core Rules CD 2.0, 1998
- *Players Option: Combat & Tactics*, TSR Core Rules CD 2.0, 1998
- *Players Option: Skills & Powers*, TSR Core Rules CD 2.0, 1998
- *Arms and Equipment Guide*, TSR Core Rules CD 2.0, 1998
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- FR11, *Dwarves Deep*, Ed Greenwood, TSR Inc, 1989?
- *Oriental Adventures*, Gary Gygax, TSR Inc, 1985
- *Dragon 169 New Weapons For Old*, Jordan Clarke Hayes

Internet Articles:

- *Alternate Weapons Rules*, Ken Lipka, 1998 <<http://maniac.deathstar.org/~krlipka/ps/>>
- *Netbook of Half-Elves*, edited by GenDorsey, 1997 <autumg@m8.sprynet.com>
- *RPG Bible of Weapons*, Ian Shirm, 1998 <shadow@norwich.net>
- *Cat Dragon's House Rules*, Bobby Nicholls, 1999 <<http://www.midspring.com/>>
- *Weapons in My Forgotten Realms Campaigns*, Simon Gibbs, 2000
- *Armour of the Forgotten Realms*, Simon Gibbs, 2000
- Articles from WolfSoul's excellent page on the subject (a must see):

<<http://www.gci-net.com/~users/w/wolfsoul/medieval/crossbow/crossbow.html>>

1. *History of the crossbow*
2. *Crossbow diagram and crossbow/archery terminology*
3. *The crossbow vs. the longbow*
4. *About the stonebow*
5. *A diagram of a stonebow*

Introduction

A crossbow is a short, powerful bow mounted horizontally (transversely) on a wooden or metal rifle-like stock (called a tiller), with a groove to guide the missile and a trigger to release it. It resembles a small ballista, and is aimed and fired like a rifle. A conical or pyramid-headed bolt was the standard ammunition, and was shorter and heavier than an equivalent arrow. (Note that historically a quarrel was a square-headed bolt, but as AD&D use both terms interchangeably, so will I). About ten inches long, its maximum range was over 300 yards when fired from the powerful crossbows made possible by mechanical improvements in the Renaissance. It could be fired with considerable accuracy and was capable of piercing all but the stoutest body armour.

Historically, crossbows were much more powerful than conventional bows and had better hitting power at a greater range, but they were also far slower to reload. The English longbow (in the hands of an expert) was never decisively bested by the crossbow simply because a highly trained archer could fire four or more arrows to the heavy crossbowman's single bolt. Still, the crossbow was the leading hand missile weapon of the Middle Ages until the introduction of firearms.

History of crossbows

The crossbow was originally developed in China, culminating in a sturdy, reliable model during the Han Dynasty (around 200BC).

Little is known of the origins of the crossbow in the west. Some scholars believe Roman soldiers taken prisoner in Central Asia about 36BC saw oriental crossbows and brought the concept to Europe (although larger crossbow-like siege weapons such as the ballista and scorpion had been used in the west for centuries). Others suggest that the crossbow was transported to Europe along the east-west trade routes that existed in classical times, where they were first used primarily for hunting Europe in the 4th century AD. By 1000 AD, crossbows had been adopted for warfare, initially by the Italian city states. By the time of the Crusades (late 1000's to the end of the thirteenth century) crossbows saw widespread use in armies across Europe, particularly in the south: the Italians being the most talented makers and practitioners of the crossbow (perhaps due to cultural exposure to the Saracens, from whom they adopted the composite method of bow construction). Genoese crossbowmen were considered the best in the world, and hired themselves out as mercenaries to armies all across Europe. Crossbows proved especially effective at keeping horse archers away from infantry formations, since they far outranged the cavalry's lighter bows. Crossbows also had excellent penetration power, punching through armour that could stop most bow shots.

Such was its lethal effectiveness, as compared to conventional bows of the age, that several popes banned the use of crossbows (except against the infidel) on the grounds that its use constituted an atrocity (banned initially by Pope Innocent II in 1139 AD). It proved to be the most effective hand missile weapon of the Crusades era. Richard the Lion-Heart won the battle of Arsuf (1191) during the Third Crusade largely because of the havoc wrought among Saladin's forces by Christian crossbows, and was himself later killed at the siege of Chaluz in 1199 by a crossbow bolt in the neck. King John included many crossbowmen in his castle garrisons, and one of the clauses of the Magna Carta bound him to banish from the kingdom all foreign crossbowmen. By the late 13th century the Master of the Crossbowmen was a great dignitary in France and Spain, and crossbowmen were considered an elite corps.

In western Europe, the crossbow was slowly displaced by the longbow from the late 13th century onwards, mainly because of the latter's greatly increased rate of fire. The crossbow did not disappear completely: Henry V even had 38 crossbowmen at Agincourt. Companies of crossbowmen were formed for the protection of towns, some of which persist to the present day. European mercenary companies of crossbowmen were hired by both sides in the Wars of the Roses. In Europe, the crossbow persisted as the favoured missile weapon until the end of the 15th century, with the introduction of the arquebus.

Throughout the Middle ages the crossbow was also used for hunting, and with the decline of its use on the battlefield, it became increasingly popular for hunting and sport. Both Elizabeth I and James I were expert crossbow hunters. Crossbows still remain somewhat popular today for target and occasional game shooting (the American Bow Hunters Association is currently trying to limit the areas that crossbowmen can hunt in).

Crossbows versus the longbow

Under the AD&D rules, crossbows compare unfavourably with conventional bows (even with the admirable changes introduced in *Players Option: Combat & Tactics*).

On Earth, the crossbow was the leading hand missile weapon of armies in the middle ages prior to the introduction of firearms.

The relative merits of crossbow and English longbow were first tested on the field of Crecy (1346) when the longbow had the advantage; but the poor showing of the Genoese crossbowmen may be attributable chiefly to the inept tactics of their employers, the French knights. Also it must be remembered that the training and marksmanship of the English archers was without equal in Europe.

Advantages of a crossbow	Advantages of an English longbow
<ul style="list-style-type: none"> greater armour penetration and hitting power due to heavier draw (mechanically assisted); 	<ul style="list-style-type: none"> much faster rate of fire (this is a great psychological and tactical advantage): Up to 12-15

<ul style="list-style-type: none"> • heavier crossbows had longer range; • less training and strength required to use effectively; • can be carried loaded and ready to fire; • easier to use at close quarters; • ammunition was cheaper and less bulky; • could be fired from a kneeling, sitting or laying position; • its compactness made it better suited to firing from behind a wall or parapet. 	<ul style="list-style-type: none"> • arrows/minute compared to 2-4 bolts/min for a crossbow; • more accurate if bowmen well-trained and physically very fit and strong.
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Basic Crossbow Data

Weapon	Damage vs S/M	Damage vs L	KD	Wght (lbs)	Size	Type	SF to load/to fire	ROF	Range	Common in	Cost if com.	Rare in	Cost if rare
Standard Styles													
hand crossbow	–	–	–	4 (3)	S2	–	5av/2	1/rnd	–	–	–	ME, FR	150gp
hand quarrel	1d4+1 (d3)	1d4 (d2)	d4	0.1	S1/2	P	–	–	4/8/12	–	–	–	1gp
light crossbow	–	–	–	7	M3	–	7av/3	1/rnd	–	CR+, ME, OR	35gp	DA	60gp
light quarrel	1d6+1	1d8+1	d6	0.2	S1	P	–	–	12/24/36	–	1sp	–	1sp
heavy crossbow	–	–	–	14	M5	–	9sl/4 (10)	1/2 rnd	–	CR+	50gp	–	–
heavy quarrel	1d8+1	1d10+1	d6	0.5	S1	P	–	–	16/32/48	–	2sp	–	–
>>arbalest	–	–	–	20	L6	–	11sl/5	1/3 rnd	–	–	–	RE	200gp
arbalest quarrel	2d6	2d6+2	d8	1	S1	P	–	–	20/40/60	–	–	–	2sp
pellet crossbow (stonebow)	–	–	–	6 (5)	M3	–	7av/3	1/rnd	8/16/24	DA+, ME, OR	25gp	–	–
bullet	1d4+1	1d6+1	d4	0.5	S0	B	–	–	10/20/30	–	1sp (5cp)	–	–
stone	1d4	1d4	d4	0.5	S0	B	–	–	8/16/24	–	1cp/–	–	–
Other Styles													
disc crossbow	–	–	–	10	M4	–	7av/3	2/3 rnd	–	–	–	Realms	175gp
disc	1d8+1	1d8+1	d8	1	S1	S	–	–	12/24/36	–	–	–	5sp
double crossbow	–	–	–	9	M4	–	8sl/4	2/rnd	–	–	–	HY+	120gp
repeating (cho-ku-no)	–	–	–	10	M4	–	6av/3	2/rnd	10/20/30	–	–	OR	50gp

Notes:

- In the Speed Factor (SF) column, the first number is the speed factor if the wielder must load, point and shoot. The number after the slash is the speed factor when the weapon is already loaded, and the wielder must point and shoot. An optional (see First Round Firing) suggests that if the weapon is loaded, the target is sighted in and the wielder needs to merely shoot, then they may load up again that round.
- Cost for a score (20) of quarrels, pellets, bullets etc. is the same as buying 12 individual items, so it is cheaper to buy in bulk. Special purpose ammunitions (fire, silver, barbed, grappling etc.) must be purchased separately, usually at a cost of 2–5sp each.
- In the table (...) denotes original value that I have changed to promote consistency.

Columns:

Damage: Damage is divided into two categories: versus Small–Medium creatures, and versus Large or larger creatures. The target size dictates which rating to use.

KD: Knockdown roll. See *Players Option: Combat & Tactics*.

Weight: This is a measure of the encumbrance of the weapon: basically the weapon's weight in pounds and some consideration of the ease of carrying of the weapon (e.g. a long bow is more awkward to carry around than an equivalently weighted rock or backpack).

Size: gives an indication of length, bulkiness, fighting style and handability of the weapon.

SF (Speed Factor): Weapons are rated as *fast* (SF: 1–4), *average* (SF: 5–7), or *slow* (SF: 8+).

The number after the slash indicates speed to point-and-shoot if weapon is already cocked and loaded.

Missile ROF: This is the number of times per combat round that a missile weapon may be used to attack.

Missile Range: Range is expressed as three numbers. The first number is the outermost limit of short range, the second is the outermost limit of medium range, and the third is the outermost limit of long range. Missile ranges are given in combat system squares. **In normal melee scale, a square equals 5 feet. In missile scale a square equals 5 yards** (only used for outdoors or open battlefields).

Rules concerning crossbows

Crossbows require two hands to wield regardless of the wielders size (hand and light crossbows can be fired with one hand, but it takes two to cock and reload them).

Armour penetration

The construction, penetrative ability and sheer power of quarrels fired from crossbows helps them pierce heavy armour better than other weapons. At medium range, bolts fired from light and heavy crossbows and the arbalest reduce the AC of an armoured opponent by 2 points. At short range, the AC of an armoured opponent is reduced by 5 points. Other crossbows do not have this special ability.

Note that this armour class reduction only applies to that portion of a target's armour class that is derived from physical armour: dexterity, cover or magical bonuses are not affected. For example, an archer fires a heavy quarrel at a warrior wearing chainmail +2 and a shield with a Dexterity of 16. The chainmail is considered to be 2 points worse, so it has a base AC of 7, not 5. Overall, the warrior's AC drops from 0 to 2. If the warrior wore nothing but bracers of defence (AC 4), his AC would not be affected. (From *Players Option: Combat & Tactics*.)

Using crossbows underwater

Although bows cannot be used underwater, the crossbow can, since the tension produced by the weapon overcomes the water resistance. Underwater races such as the locathah, mermen, and tritons use both heavy and light crossbows. Range is 1/4 normal. Note that iron and steel crossbow parts will rust quickly if not oiled/dried or subjected to some special corrosion-curbing treatment.

Optional: first round firing

If the crossbow is ready to fire before combat is initiated (bolt loaded, target sighted and crossbow aimed up) then the wielder gets an extra shot at the end of the first round of combat (or a full round of reloading, if the crossbow normally takes longer than a round to reload). This rule is especially applicable to ambush situations, and accounts for the fact that a loaded and aimed crossbow takes almost no time to shoot before reloading can commence. Unlike a specialist, they do not automatically win initiative, however.

Standard Crossbow Styles

Hand Crossbow (aka. drow crossbow, handbow)

Description:

The smallest of the crossbow family, the fast and accurate hand crossbow features a thin steel bow and trigger assembly mounted on a metal pistol-like stock. It may be easily concealed beneath flowing garments such as cloaks or robes. It is easily aimed and fired in one hand; and can be held in one hand while being cocked with the other (or with a simple built-in cocking claw).

The hand crossbow is occasionally fitted with leather straps or a grip for the forearm, but these have minimal effect on accuracy for a proficient marksmen.

Campaign Notes:

The hand crossbow is thought to have been first developed by the drow as a weapon for personal defence and assassination, and it is certainly more common in their societies than any other. It is less common throughout the Realms (or any Renaissance-like setting), due both to its dark reputation as an assassins weapon (it may be outlawed in some lands), and because of the high technical proficiency required to produce the weapon (hence the cost). The city watch of Scornubel are known to wield these weapons whilst on patrol through the winding streets of the Caravan City.

Light Crossbow (aka. latch)

Description:

The rugged light crossbow, or latch, is the standard crossbow. The bow of a latch is usually made of wooden composite (usually horn and sinew bonded to ash or yew) to cut down on weight, and so the weapon can be drawn by hand. The tiller, or stock, is made of thick wood or metal (to provide strength and rigidity). It is cocked (spanned) with both hands (and either foot in a stirrup at the front end and the string pulled up, or with the butt supported on the knee and the string pulled down). The string is either pulled back with a (gloved) hand or with a short hook gripped in both hands (the handle of this hook can be built into the stock). Alternatively the weapon can be cocked using 'belt and claw' or 'cord and pulley' mechanisms (see glossary) where devices are attached to the string and the act of standing up spans the crossbow. Like the smaller hand crossbow the latch can be partially concealed beneath voluminous cloaks.

Campaign Notes:

Light crossbowmen are favoured by many military commanders, replacing regular archers in some armies and especially in militia levies. The crossbow requires less training than larger bows, and is easier to handle, making these soldiers cheaper in the long run to maintain. Each man normally has a light crossbow, a sidearm, and only light armour (as these crossbowmen fight hand-to-hand only to save themselves and will fall back if attacked). They expect pay of around 2gp per month, similar to a heavy footman, or about half that of a trained archer. On earth, Italian crossbowmen commonly wore padded armour and carried a long sword, buckler, and light crossbow. Burgundians wore a light coat of chain and carried no weapons other than their crossbows. Greek crossbowmen carried a variety of weapons including crossbow, sword, and spear or javelin. Crossbowmen can be mounted, usually on light unbarbed horses (note that heavier crossbows cannot be cocked on horseback), and are paid about the same as a horse archer or light cavalryman, typically 4gp per month.

Heavy Crossbow

Description:

The heavy crossbow is a fearsome weapon, capable of dealing out great damage at very long ranges. The spring steel bow is too stiff to be drawn by hand, so requires mechanical assistance to cock it. The weapon has a small cranequin (a simple winch operated by a geared lever or crank) that is built into the butt of the weapon to draw back the bowstring. A stirrup is often fitted at the front end of the crossbow for balance while the cranequin is worked.

Campaign Notes:

On Earth, Genoese mercenaries sometimes wielded heavy crossbows, as did Venetian soldiers serving on galleys. Dwarven mercenaries are often equipped as heavy crossbowmen, and their disciplined ranks can inflict massive damage of advancing troops and cavalry. Heavy crossbowmen are normally assigned to garrison and siege duties. Each normally has a heavy crossbow, short sword and dagger, and wears chain mail or similar medium armours. The services of a shield bearer is often supplied to each man. Monthly wages are about 3 gp, slightly less than a trained archer. They can serve as effective infantry when pressed.

On the battlefield, these crossbowmen often protected themselves with a tall door shield called a *pavise*, carried slung on their backs (or borne by a shield bearer) and propped up in front of them before combat to provide effective cover from missiles. The crossbowman would duck behind the pavise to re-load during a battle.

Arbalest (aka. siege crossbow, hand ballista)

Description:

The arbalest, also called the siege crossbow or hand ballista, is the largest and heaviest crossbow that is man-portable. It forms an intermediary between traditional crossbows, and ballista-like siege weapons. Heavy and slow, it is generally fired using a stand or other support, or with the wielder lying down, or kneeling on one knee and supporting his forward-thrust arm. The thick metal quarrel causes heavy damage to all targets. It is cocked with a windlass (two pedal-like arms attached to a cylinder around which the cable is wound. The winding arms are geared, or the cable run through a series of pulleys, to ease the force required to draw back the bowstring). The stock terminates in a stirrup that enables the soldier to hold the weapon in position with his foot while winding the cocking winch with both hands (this windlass is usually built into the butt of the weapon).

Campaign Notes:

The arbalest as described here is a fantasy weapon, probably being first developed by dwarves, and used particularly by mercenaries of the larger humanoid races (particularly hobgoblins and half-ogres). On Earth, crossbows were replaced by firearms instead of being developed in larger forms like this (although the smallest of ballistas, as used by some early cultures, notably the Syracusans, could possibly be categorised as arbalests).

Stonebow (aka. pellet crossbow, bullet crossbow)

[Note that this is the model as described in *Players Option: Combat & Tactics. Oriental Adventures* says a pellet bow is a normal bow that fires stones. Also although *Players Option: Combat & Tactics* describes pellet bows as the earliest and most primitive crossbows, this is actually incorrect (refer to *A Guide to the Crossbow* by W.F. Paterson, and *The Book of the Crossbow* by Ralph Payne-Gallwey).]

Description:

The lightest crossbow commonly available is the stonebow, which fires small stones, clay pellets or steel bullets (like a sling) instead of quarrels. It is primarily used for hunting small game such as birds and rabbits, and for target practice. It is also wielded by priests and other folk bound not to use blood-shedding weapons.

The most significant design difference between the crossbow and the stonebow is the tiller. The tiller of the stonebow is curved downward between the lock and the prod (bow), to accommodate the double string of the stonebow. The stonebow has two strings between which sits a small leather cradle or pocket (to place the stone, pellet, or bullet into).

The weapon is usually cocked supported on the knee and the string pulled down with both hands (or with a hinged lever arm, especially on dwarf-built examples) rather than having a stirrup. Due to the weight variability of stones, clay balls or steel bullets are the most common ammunition.

Campaign Notes:

On Earth, the stonebow was first developed in Europe in the late 14th century (ref. Paterson), or around 1500 (ref. Payne-Gallwey). Early stonebows were short-ranged due to the weak materials used (wooden bows with twine pockets) and poor triggers.

A more powerful version was introduced in Germany around 1600. It had a slim steel bar for a stock with a built-in hinged lever for spanning. The double string was introduced, with cross-trees to hold the strings apart (usually made from ivory or horn, but occasionally from brass or wood). The cord cradle of previous designs was replaced with a leather pocket, and more elaborate sights were mounted.

The stonebow reached its height of popularity between 1760 and 1810 in England. The designs of the period, remained popular even after firearms became available to the public, probably due to their cost and silence when shooting (making it a good weapon for poachers).

Other Crossbow Styles

Disc Crossbow

Unlike other crossbows, this weapon does not fire a quarrel, but instead a flat sharpened metal disc similar (though weighted differently) to a chakram. It is highly effective against unarmoured opponents, but not nearly as deadly against well-armoured foes. The disc-firing crossbow resembles a smallish heavy crossbow, but has a wood block with a slit through the headboard instead of a bolt shaft. Note a disc crossbow is +2 to hit and damage vs. no armour, but -2 to hit and damage vs. plate armours.

This weapon is often used by the gold (hill) dwarves of the South, who commonly encounter lightly armoured human nomads and humanoid raiders.

Double crossbow

The double crossbow is essentially two light crossbows (with their own bolt shafts and strings) mounted above and below the same stock. The design halves the crossbow's range in comparison to that of the standard light crossbow, although it fires the same type of bolt and causes the same damage. Both strings can be cranked back with a single hook, making this a rapid-firing weapon that can fire two bolts per melee round in the hands of someone who has proficiency with this weapon (this is a separate proficiency, so someone with standard light or heavy crossbow proficiency is not considered to have proficiency with a double crossbow). A warrior employing the double crossbow without having a proficiency with it can fire only one bolt per round until he has a chance to stop firing for one round to reload both boltshafts.

Weapon speed is 1 slower. If only one bow is loaded and/or fired, speed is the same as a normal light crossbow.

These crossbows are almost exclusively employed by expert human and dwarven missile troops because so few crossbow makers have the skill or knowledge to craft these devices. (See *New Weapons For Old* in Dragon 169, and the film *LadyHawke*). Their bulkiness and design means they cannot effectively take modifications (see the next section).

Repeating Crossbow (*cho-ku-no*)

Seen only in oriental settings such as Kara-Tur, the *cho-ku-no* is similar to a light crossbow, but holds up to 10 bolts in a magazine (a thin box) that rests on top of the weapon. The repeating action of the weapon is made possible by a pivoting lever arm that is pushed forward to draw back the bowstring and so cock the weapon. Range and armour penetration are less than a standard light crossbow, due to lower bowstring pressure (easing reloading) and smaller bowarms (to cut down on weight). This weapon uses normal light crossbow quarrels. Note that Paterson states that the Chinese only developed a self-loading, repeating crossbow in the 18th century.

Special modifications

There are also several modifications that can be made to standard weapons. All modifiers are cumulative (particularly cost):

Closer:

Standard Closer weapon (see Closer kit below). Gains +1 on saving throws and allows Closer to use their special abilities. Can be wielded in melee like a club (but there is a 50% chance to put out sights per successful hit, and crossbow is -1 to hit until resighted). Base cost is doubled.

Blade:

Crossbow with reinforced stock and twin heavy dirk-sized blades at the front. Can be wielded in melee (2 attacks for 2-5/2-5) if necessary. Base cost is 1.5x and weight is increased by 4lbs.

Lightning:

A range of modifications to increase rate of fire: greater crank strength with return springs, rubber panel on headboard and extra mechanical pulley-and-crank mechanism. Confers faster reloading time (+1/2 rate, though the weapon speed factor within the round is slowed by 1) but increases weight (+2lbs for light, +3lbs for heavy) and doubles the base cost.

Optima:

Quality-built crossbow with advanced sights and a specially enclosed and slotted bolt groove on the tiller (that extends further forward on a longer tiller). Confers greater accuracy at range (2 less penalties at medium and long ranges). Fires

only standard quarrels (exact tolerances of the bolt groove negate other bolts being used). Weight is increased by +2lbs and base cost is doubled. Not compatible with other modifications, except Closer option.

Sniper:

This modification allows the crossbow to be broken down into pieces for easier concealment. The stock (tiller) is made of tubular metal pieces (butt, trigger assembly and headboard). There are special hinges and latches that allow the stock to be broken down and the limbs to be folded into the body (after the reinforcing of the stiff but narrow bow has been removed). Alternatively, the bow can be removed and folded in two and slid inside the tubular pieces, so that the weapon resembles a piece of machinery (perhaps from a wagon's running gear). The cost of this modification is 2.5x base cost (if the weapon is legal, more if not). Overall weight is reduced by 1lb for lighter crossbows, and 2lbs for heavy crossbows (there is little point breaking down an arbalest, as it is still obviously a large weapon). Once assembled, other characteristics remain the same, except that every time it is fired roll 1d10: on a 10 a hinge will break or bow limb will snap, and the crossbow will be inoperable until repaired (repair costs equal normal base cost).

This unusual weapon was reputedly developed by the Melvauntan Rogues Guild a century or more ago, then under the malevolent guidance of the notorious half-elven killer, Caan Caius. It is said that he had some personal vendetta against the nearby city-state of Phlan and arranged for the assassination of great numbers of that unfortunate cities influential citizens. So famous are his exploits that about the Moonsea that this weapon is dubbed *Caan's Revenge*, and is used specifically for acts of vengeful assassination. They are illegal in most goodly realms due to their fell reputation and association with assassination (people found in possession of such a weapon in a well-policed realm will have it confiscated, and will certainly be either jailed, banished or watched closely).

Strength Modified (Biter):

Confers a stronger pull (string tension) on the bow and therefore increases hitting power, through greater crank gearing, stiffer bow, and a heavier (reinforced) frame. Weighs 2lbs extra and allows STR bonus up to 18 STR. Cannot be cranked if wielder's STR<14. Base cost is increased 2.5x normal and weapon speed is slowed by 1 (does not affect the point-and-shoot speed).

Sidearm:

Fitted with a hand crossbow rail beneath main stock and fired with a second trigger (similar to a double crossbow). Weapons are 2 lbs heavier, and base cost is doubled. The hand crossbow provides additional hitting power in emergencies or in an ambush situation.

Ultima:

Similar to, but more extensive than, an optima modification, the ultima is the rarest and most difficult craftwork commonly performed on a crossbow. Only a light and pellet crossbow can be effectively modified this way: hand crossbows are too small to incorporate the parts; and the bows of disc, heavy and arbalest styles cannot be further strengthened. Excellent craftsmanship, a wide stiff bow and a spyglass attached to the side of the crossbow allow a greater effective range than a standard light crossbow (effective range is doubled, the extra range being considered long). The cost for the crossbow is around 750gp. To achieve the extra range (and because of the exact tolerances of the bolt rail), only specially made bolts called *quadrello* can be fired. These distinctive 'kill-quarrels' cost 1gp each, have a pyramidal tip with a square base, and leather fins wound around the specially slotted shaft to make the bolt rotate in flight. The modifications to this weapon result in a 3lb weight increase, and no other modifications are compatible, except Closer option.

Crossbow Ammunition

(Note that historically a quarrel was a square-headed bolt, but AD&D use both terms interchangeably.)

Standard ammunition for crossbows is a conical or pyramid-headed bolt, which is shorter and heavier than an equivalent arrow. Lengths and weights of bolts vary, depending on the size of machine they are made to fit. Crossbows can fire smaller bolts, but they only gain the range and damage characteristics as if fired from the weapon it was designed for. The smallest bolts (for a hand crossbow) are about 7" long and weight as little as 0.1 lb. Bolt sizes increase up to the arbalest, whose bolts are well over a foot long and can weigh more than a pound. The disc crossbow fires flat, sharpened metal discs, around 6" in diameter and weighing almost a pound.

A wide variety of special purpose ammunitions are available, as befits the technical nature of crossbow manufacture and use. They must be purchased individually, for at least twice the cost of the equivalent standard bolt (glitter and stun bolts are very rare outside dwarfholds, and would cost 50–100gp or more).

Barbed bolt (ripper):

With a wickedly barbed, tined or hooked head, these bolts cause +d2 damage, ½ range. The wound inflicted is more bloody, and the bolt is difficult to remove. Good aligned folk won't use barbed bolts (not even for shooting fish).

Blunt bolt (*pulzone* in Italian):

These bolts are built with large blunt heads and are designed to stun the target, rather than kill. They have ½ normal range, and do 1d2 less damage. Damage caused is subdual-type (target is knocked out if reduced to zero hit points by one of these bolts. 25% of all damage caused by these bolts is permanent). Additionally, there is a 2% chance per point of attack over required THACO of instantly knocking out S-sized targets for 1d4 rounds.

Broadhead (war bolt):

With a heavier, harder and wider head, these bolts cause +1hp damage, and have ½ normal range.

Game bolt (*Dardo* in Italian):

A narrow-headed bolt with 2–3 steel points, used for hunting smaller game. Inflicts +1hp to S or M-sized targets and –1hp vs. L-sized. This bolt does not benefit from the armour penetration abilities of larger crossbows.

Frog crotch:

Standard quarrel fitted with a wide head shaped like a concave arc sharpened on the inner edge, for cutting ropes and banners. Looks like:)-----<<

Glass head bolt (bulb):

On this bolt the standard metal head is replaced with a small glass bottle for carrying liquids or powders. Due to the shape and size of the head, these bolts are –2 to hit and range is half normal. The bolts themselves cause half damage to the target and release the contents on impact when the bottle shatters.

Glitter bolt:

Similar to a stun bolt, this is a special ammunition used by dwarves, especially the gold dwarves of the South. This short shafted bolt has a head like a flat many-pronged star shape. Regardless of the size of the crossbow it is fired from, it has the flight characteristics of a hand crossbow quarrel (for ROF, range etc). On impact (use grenade-like missile table on a miss) the head shatters into a 5' radius cloud of glittering golden particles. Those in the area must roll a successful saving throw vs. spell or be blinded (-4 penalties to attack rolls, saving throws, and Armour Class) for 1d4+1 rounds. In addition, all within the area are covered by the dust, which cannot be removed and continues to sparkle until it fades (in 5 rounds). Note that this reveals invisible creatures. These quasi-magical items are believed to be made by skilled dwarven artisans using rare earths of the Underdark (a special type of mica) which shatter into incandescent splinters when subjected to impact shock.

Grapnel bolt:

Standard bolt fitted with light grapnel (fixed or, on more advanced examples, snap-out) and rope loop. Not designed to grip, but to snag on obstacles when reeled in. Due to its design a grapnel bolt can only be fired at short range (unless fitted with snap-out head then out to medium range) though when a rope is fitted this range drops by a further half. Does half normal damage if hitting a victim.

Stun bolt:

Commonly used by guards in larger dwarven holds, this special quarrel looks like a stone doorknob on a short, thin shaft. Regardless of the size of the crossbow it is fired from, it has the flight characteristics of a hand crossbow quarrel (for ROF, range etc). On impact it shatters into bright dust-motes, releasing a stunning magical shock of force that does 2d4hp damage to any being struck. Victims are stunned (unable to think or act) for the following round (no save). Only living creatures are affected. These quasi-magical items are believed to be made by skilled dwarven artisans using rare earths of the Underdark that are able to store potential energy until released explosively. (from FR11 Dwarves Deep)

Target bolt (*Verretto* in Italian):

Light, cheap bolt used for target competitions, with a light conical point and long shaft made of wood, steel, or cow horn (+25% range, ½ damage, ½ price).

Whistling bolt:

Has a hollow head that whistles loudly when fired. The hollow head can be stuffed with combustibles and set afire (and won't whistle in this case) for use as an incendiary round.

Wood biter/stone biter:

Expensive hardened heads designed to grip into wood or stone (different designs). Some elaborate dwarven and gnomish creations have small snap-out prongs on head. Half normal range (1/10 range with rope attached through the

rope loop). Variable % chance not to grip/hold (chance to successfully attach to the target surface as per *Complete Thief's Handbook*). Does normal damage if hitting a victim.

Bolts of special materials:

Bolts can be made of special materials, such as superior steel, silver alloy or arandur, and even incredibly rare (and expensive) metals like mithril or adamantite, that increase both cost and damage caused. See *Metals of the Forgotten Realms* for more details on these special materials.

Magic Crossbows

(Modified from *Dungeon Masters Guide*, *Alternate Weapons Rules* and *RPG Bible of Weapons*)

Most magic crossbows are light crossbows. About 10% of these weapons will be heavy crossbows, and 5% another type of crossbow.

Magical bolts +1, +2 or +3: provide bonuses to hit and damage. When a magical bolt misses its target, there is a 50% chance it will break or otherwise be rendered useless. A magical bolt that hits is destroyed.

Bolt of Slaying +3 (avenger bolts)

This is a *bolt* +3 with unusual physical characteristics: a shaft of some special material, feathers of some rare creature, a head of some strange design, a rune carved on the nock, etc. These characteristics indicate the bolt is especially effective against a specific target. If the bolt successfully hits the kind of creature it has been enchanted to slay, the missile will kill it instantly if it hits the target creature.

Glyphed bolt (priest shot):

These are normal crossbow bolts upon which a priest has placed a *glyph of warding* (as Pr3 spell), which detonates the round after the target is hit, unless they utter a short prayer (or make the appropriate sign of that faith) to the priest's deity. The cost and effect of the bolt depends on the *glyph* used and may include: cold, electricity, fire, light, darkness, faerie fire, silence.

Storm wood bolt:

Storm wood is the common name for timber harvested from trees growing on the wind- and stormswept mountain peaks of some of the outer planes (notably Ysgard, Arborea, Arcadia). If a bolt is made from this wood, it can be fired from 50% further (all range categories are increased).

Crossbow of Accuracy +3

This gives a +3 bonus to attack rolls with its missiles but not to damage. Has normal range, but has no penalties (all ranges are considered short).

Crossbow of Distance +1

This has double range in all categories. This weapon is otherwise +1 bonus to attack and damage rolls.

Crossbow of Speed +1

This item allows its possessor to double the rate of fire normal for the weapon. If it is grasped, the *crossbow of speed* will automatically cock itself. In surprise situations it is of no help. Otherwise, it allows first fire in any melee round, and end-of-round fire also, if applicable. The weapon has a +1 bonus to attack and damage rolls.

Crossbow of Enchantment

This weapon enchants any nonmagical bolt placed in it, enabling it to strike any creature that can only be hit by a magical weapon (though it confers no bonuses to hit or to damage).

Istishia's Crossbow

This crossbow, which has a to hit bonus of +2, may be fired normally underwater at the same ranges as a normal crossbow has on land. In the air the bolts shot by this crossbow will travel slowly and for little distance just as if it had been a bolt shot under water by a normal crossbow (1/4 normal). In addition it will not rust or otherwise degrade underwater.

Flamebolt Crossbow

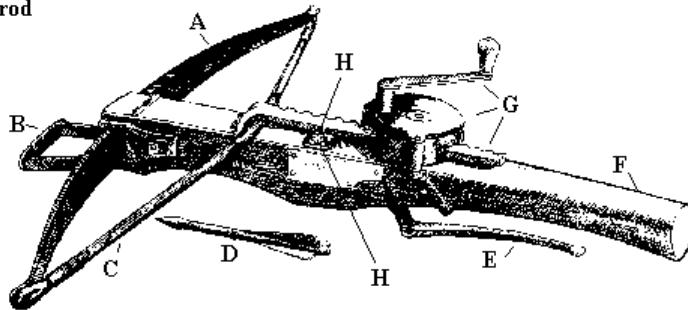
This crossbow confers a small enchantment on any bolt fired from it, so that they ignite with a small purple flame upon leaving the weapon (equivalent to a *flame arrow* spell: the bolts inflict normal damage to any target struck, plus 1 point of fire damage. They act as an incendiary, setting fire to combustibles.)

FoeBane, Dwarven crossbow +2

This bow appears to be a standard crossbow +1, but when wielded by a dwarf, its special enchantments become apparent: the crossbow confers a +2 bonus to hit and damage, and strikes for double base damage against any giant-class humanoid (any goblinoid or creature that dwarves have combat bonuses against).

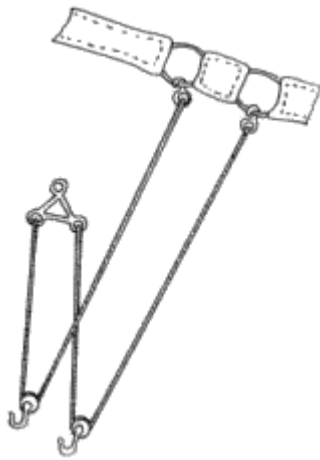
Crossbow Terminology

- A - lath (lathe) or prod
- B - stirrup
- C - string
- D - bolt
- E - lever-type trigger
- F - tiller or stock
- G - crannequin
- H - nut or catch



Barreled crossbow (slurbow): a crossbow with a wooden leaf on the top of the tiller with a slot on each side for the string. This device would have been useful for shooting in vertical or near vertical situations, or for mounted crossbowmen, who could keep the crossbow spanned and loaded while riding without the possibility of the bolt falling from the lath.

Belt and claw: a early (c.1180AD) device used to span a light crossbow. It consists of a belt with a rope attached to it at the front of the body, with a claw or hook attached to the end of the rope. The crossbowman spans the crossbow by bending down, attaching the hook to the string. The act of standing up spans the crossbow. Similar to the cord and pulley mechanism for spanning a crossbow.



Bolt shaft (bolt groove): groove or slot along the top of the tiller, to hold the bolt.

Braced bow: a bow that is strung and ready for shooting

Catch (nut): a catch/trigger mechanism with one or more notches that holds the string back when the crossbow is spanned.

Claw: 1. a hook attached to a string and a belt that latches on to the string and allows the crossbowman to span the crossbow by standing up. 2. a catch mechanism similar to the tumbler mechanism utilizing a transverse notch. Unlike the tumbler mechanism, the claw mechanism does not have a lower jaw, and uses a more curved upper jaw to hold the string.

Composite bow: a bow made from more than one type of material. Composite bows are often stronger and more resilient than plain wooden bows, and are more resilient and less likely to break than metal bows.

Cord and pulley: a mechanism for spanning a light or heavy crossbow (may also be applicable for disc and double crossbows). It consists of a belt with a rope attached to it at the front of the body, with a claw or hook attached to a pulley on the rope. The crossbowman spans the crossbow by bending down, attaching the hook to the string and the free end of the rope to the belt. The act of standing up spans the crossbow. Similar to the belt and claw mechanism for spanning a crossbow.

Cranequin (cric, rack): a mechanism for spanning a crossbow utilizing a winding device that moves along a ratchet bar via the use of toothed wheels. Standard spanning mechanism for heavy (and sometimes disc) crossbows. Used on earth from the mid to late 14th century.

Discharge (loose, release, shoot): releasing a bolt from a crossbow. (Note 'fire' should not be used as the word 'fire' refers to gunpowder weapons. 'Firing' a bolt should only be used when describing a flaming bolt.)

Fletching: the feathers or vanes on an arrow or bolt.

Gaffle (goat's foot): a mechanism for spanning a crossbow (not sure of its design). The goat's foot is an old name for a gaffle mechanism, the former used on Earth from the mid 14th century, and the latter the most common method during the 16th century.

Hinged arm lever: a mechanism for spanning a crossbow utilizing a lever with a hinged arm attached to it that pushes the string back to the catch. Used on repeating crossbows and later stonebows.

Nock: 1. a groove on the back of a bolt or arrow into which the bow string is placed, 2. one or more grooves on either end of a bow which hold the bowstring in place.

Peg-and-hole: a simple catch/trigger mechanism using a lever attached to the bottom of the tiller that pushes a peg up, forcing the string out of a transverse notch.

Prod (lath, lathe): The modern term for the bow portion of a crossbow. The portion of the crossbow that is flexed back and that gives the bolt its force and motion. Lath and lathe are older terms.

Screw and handle: a spanning mechanism roughly similar to a cranequin. The screw and handle are built onto the crossbow, and the screw portion is mounted lengthwise inside the tiller. The handle pulls the threaded screw backwards, and a hook on the end of the threaded screw pulls the string back to the catch. Standard spanning mechanism for disc (and sometimes heavy) crossbows.

Serving: material, usually thread, wrapped around the bowstring to prevent the arrow or the releasing device (be it hand for bows, or a nut for crossbows) from fraying the string.

Shaft: the main part of a bolt or arrow, that part lying between the point and the nock.

Sichern (safety straps): a rawhide or similar band which runs along the back of the prod and is tied to each end at the nocks. This is intended to reduce the chance of the shooter or a bystander being injured by a broken limb.

Span (bend, cock): the act of drawing the string back to the nut or catch of a crossbow.

Stirrup: a sturdy metal or rope loop on the tip of the lath to put one's foot through to aid in hand spanning a crossbow. Introduced on Earth in the early 13th century.

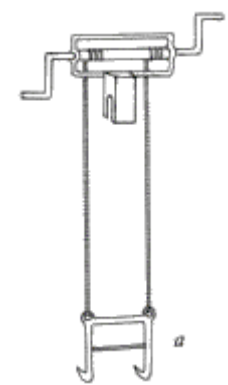
Stock (tiller): Main body of the crossbow that supports the bow. The tiller is positioned at right angles to the bow. The main body of a crossbow. (Tiller is the older term, derived from the old English word for beam.)

Trigger: any mechanism or device used to release the string from the catch

Transverse notch: a groove cut into the top of the tiller perpendicular to the length of the tiller that acts as a catch for the string when it is drawn back.

Tumbler: a catch/trigger mechanism utilizing a transverse notch. When the string is drawn back to the catch, it is placed between the forward facing upper and lower jaw which then rotate forward and trap the string against a transverse notch.

Windlass: a mechanism used to span an arbalest (siege crossbow) utilizing a hook and a hand crank attached to a pulley system (to increase the mechanical efficiency of the crank). Introduced on Earth in the late 13th century.



New Warrior Kit: the Closer

Description and Role:

The Closer is an expert crossbowman, a superbly proficient marksman like the more familiar Archer. Professional and dedicated, they can perform amazing feats with their specially designed and meticulously maintained weapons.

In the fantasy milieu of AD&D, crossbows as the missiles weapons-of-choice for a wide range of races, including dwarves, gnomes, drow, derro and duergar; and so a body of expert marksmen could be engendered. Also because of the millennia of crossbow development by these technically proficient races (especially dwarves) extremely advanced designs are possible.

Requirements:

Minimum STR: 12, INT: 11, DEX: 11. All alignments are possible.

Weapon Proficiencies:

Closers must specialise in a light or heavy crossbow, almost always the former (they are the most versatile). A hand crossbow is too limited, and the arbalest (siege crossbow) is too crude to gain the benefits of the kit. Rarely, a dwarven closer may specialise in the disc crossbow.

Closers will not wield bows, slings, polearms, lances or javelins. All other weapons are allowable.

Recommended Talents (PO: C&T):

Ambush, Camouflage, Steady Hand

Nonweapon proficiencies:

Bonus: Weaponsmithing (crossbows and bolts only)

Required: none

Recommended: Engineering (small construction), Weather Sense

Recommended traits (PO: S&P):

Keen Eyesight, Keen Hearing, Ambidexterity

Equipment:

Armour allowed: any leather or mail-based (no plate armours, as defined by the basic armour types in PO:C&T). Not trained to use any shields besides bucklers.

The most distinctive piece of equipment is, of course, the Closer's special crossbow. These well-crafted and personally modified weapons are the pride and joy of the Closer. Closer crossbows cost at least twice basic price. All Closers are skilled in the upkeep and repair of their weapons.

Special Benefits:

Unless otherwise stated the Closer conforms to the characteristics of a normal fighter.

A Closer must specialise in their chosen crossbow. With a special Closer crossbow, the kit provides the following benefits:

- +10 yards for each range (cumulative)
- Aimed Shot: if target in sight and weapon aimed for one round before shot fired: a flat +3 to hit; and +1hp extra damage per 3 levels.
- Shoot from Surprise (if aimed up): x2 base damage (1 round to aim up. Assumes surprise and a successful hit). Base damage means the set weapon damage (and does not include magic, strength or other bonuses). Cumulative with above.
- When using magic bolts, a Closer can extract the best out of this special ammunition: bolts do an extra +1/+1.
- If proficient in riding, the Closer can use a light crossbow when mounted (if that is his chosen weapon) with one less penalties.

Special Hindrances:

- If not using a special Closer crossbow, the Closer gets only the normal benefits of weapon specialisation, and not the additional advantages.

Wealth:

Standard. Note that Closer's must pay double for their initial crossbows.

Races:

Most are human or dwarves, but some are half-elves. Other races that produce Closers are derro, drow, duergar, gnomes and perhaps even hobgoblins. Elves prefer bows and so do not take the kit. Halflings are not very technically minded, and are too small to take full advantage of the crossbows ability, so cannot take the kit.

Levels of Crossbow Proficiency

From *Players Option: Combat & Tactics*

Ability Level	Comments																							
Nonproficient	Untrained. Rate of fire halved.																							
Familiar	All characters are automatically <i>familiar</i> with any crossbow if they have proficient in another crossbow type. Non-proficiency penalties are halved (round up).																							
Proficient	Basic training and competence. Allows the character to use crossbow with no penalties and employ all attack options and special weapon properties.																							
Expert	Character gains extra attacks as if they were a weapon specialist. Costs 1 WP slot.																							
Specialist	<p>Specialists with crossbows gain a +1 bonus to hit at any range, an increased rate of fire, and a point-blank range category, extending out to 60 feet, where the specialist has a +2 bonus to damage rolls. In addition, they can automatically fire first (before initiative) as a very fast action if they have their target in their sights and have a bolt loaded. Costs 1 WP slot.</p> <p>Specialist Attacks per Round</p> <table border="1"> <thead> <tr> <th rowspan="2">Weapon</th> <th colspan="3">Level of Specialist</th> </tr> <tr> <th>1-6</th> <th>7-12</th> <th>13+</th> </tr> </thead> <tbody> <tr> <td>Hand Crossbow</td> <td>1/1</td> <td>3/2</td> <td>2/1</td> </tr> <tr> <td>Light Crossbow</td> <td>1/1</td> <td>3/2</td> <td>2/1</td> </tr> <tr> <td>Heavy Crossbow</td> <td>1/2</td> <td>1/1</td> <td>3/2</td> </tr> <tr> <td>Repeating Crossbow</td> <td>2/1</td> <td>5/2</td> <td>3/1</td> </tr> </tbody> </table>	Weapon	Level of Specialist			1-6	7-12	13+	Hand Crossbow	1/1	3/2	2/1	Light Crossbow	1/1	3/2	2/1	Heavy Crossbow	1/2	1/1	3/2	Repeating Crossbow	2/1	5/2	3/1
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Weapon master	A crossbow master is a rare and powerful character. Point-blank bonuses increase to +3/+3, and the master gains an additional +1 to hit at all other range categories, for a total of +2. Costs 1 WP slot; minimum level 5th.																							
High Master	High masters who specialise in crossbows gain a new range category: extreme range. For all weapons, extreme range is 1/3 farther than long range. For example, if a weapon has a normal maximum range of 18 squares, in the hands of a master it can shoot 24 (1/3x18=6, 18+6=24) squares. Extreme range shots have a -10 penalty to hit before adjustments are made for the effects of mastery. High masters increase the speed factor of their chosen weapon by one category; for example, a slow weapon in the hands of a high master is automatically considered to be of average speed. High masters also score critical hits on rolls of 16 or higher rather than 18 (if the optional critical hit system is used) that hit their opponent by a margin of 5 or more. Costs 1 WP slot; minimum level 6th.																							
Grand Master	It is not possible to attain grand mastery with a crossbow (or indeed, with any missile																							

	weapon): the options and ability to use the weapon max out at high mastery.
	Fighting Style Specialisation
Missile Style	<p>Characters who choose to specialise in missile style gain two benefits:</p> <ul style="list-style-type: none"> • they can move up to half their normal movement rate and still attack with their full rate of fire, or make a full move and attack at half their rate of fire. • they gain a bonus of –1 to their AC against enemy missile fire while attacking with a ranged weapon.
Mounted Fire	<p>A proficient crossbowmen and rider who specialises in missile style gains a special benefit when mounted: any penalties he suffers for shooting while riding are reduced by 2. Normally, a character suffers a –2 penalty to missile attacks if his mount is moving at up to half its normal speed, and a –4 penalty if his mount is moving at full speed. Instead they suffer no penalty for half-speed firing, and only a –2 penalty for firing at full speed.</p>

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