

AHL – Variant Rules Part 1

For use with the classic Traveller rule set. Part 1 of these rules expands on the standard shipboard/indoor combat rules of *Azhanti High Lightning*. A copy of that game is required in order to make use of the following rules. Ideally, Book 1 (or an equivalent rule set such as *Starter Traveller* or *The Traveller Book*), Book 4 and Book 8 of the classic Traveller rules should also be at hand.

WEAPONS TABLE 1 – MELEE WEAPONS

TL	Weapon	Strength Mods		Melee	Range -----		
					Effective (8+)	Long (10+)	Extreme (12+)
-	Claws	-	-	+2	1 (1)	-	-
-	Teeth	-	-	+1	1 (2)	-	-
-	Horns	-	-	+1	1 (3)	-	-
-	Hooves	-	-	+0	1 (2)	-	-
-	Stinger	-	-	+2	2 (3)	-	-
-	Thrasher	-	-	+1	2 (4)	-	-
-	Hands	6 (-2)	9 (+1)	+0	1 (0)	-	-
0	Club	5 (-3)	8 (+2)	+0	1 (1)	-	-
1	Dagger	4 (-2)	8 (+2)	+1	1 (1)	5 (0)	10 (0)
3	Blade	5 (-2)	9 (+1)	+1	1 (2)	5 (1)	10 (0)
3	Foil	5 (-1)	10 (+1)	+2	2 (2)	-	-
3	Cutlass	7 (-1)	10 (+1)	+2	2 (2)	-	-
1	Sword	6 (-2)	10 (+1)	+2	2 (3)	-	-
1	Broadsword	8 (-4)	12 (+2)	+1	2 (4)	-	-
1	Hand ax	7 (-2)	11 (+2)	+1	2 (3)	-	-
2	Battle ax	8 (-4)	12 (+2)	+0	2 (4)	-	-
2	Bayonet	5 (-2)	9 (+1)	+1	2 (3)	-	-
0	Spear	5 (-1)	9 (+1)	+0	3 (2)	8 (1)	15 (0)
2	Halberd	6 (-2)	10 (+2)	+1	3 (3)	-	-
1	Pike	7 (-3)	10 (+1)	+0	4 (3)	-	-
0	Staff/Cudgel	5 (-2)	8 (+2)	+1	2 (1)	-	-

WEAPONS TABLE 2 – ARCHAIC MISSILE WEAPONS

TL	Ammo	Weapon		Range -----		
				Effective (8+)	Long (10+)	Extreme (12+)
1	1	Sling	- stone	25 (1)	50 (3)	100 (0)
1	1	Short Bow	- arrow	15 (1)	30 (0)	200 (0)
1	1	Long Bow	- arrow	30 (2)	120 (1)	240 (0)
1	1	Composite Bow	- arrow	30 (2)	120 (1)	300 (0)
1	1	Light Crossbow #1	- bolt	30 (2)	60 (1)	200 (0)
1	1	Heavy Crossbow #2	- bolt	30 (3)	60 (2)	240 (0)
2	1	Arquebus #1	- ball	20 (2)	50 (2)	200 (0)
2	1	Wheellock Pistol #1	- ball	6 (1)	12 (1)	30 (0)
2	1	Matchlock Musket #2	- ball	30 (3)	60 (2)	200 (0)
3	1	Flintlock Pistol #1	- ball	6 (1)	12 (1)	30 (0)
3	1	Flintlock Musket #1	- ball	30 (2)	60 (2)	200 (0)
3	1	Flintlock Rifle #2	- ball	120 (3)	240 (1)	360 (0)
4	6	Percussion Pistol #1	- balls	12 (2)	20 (1)	40 (0)
4	1	Percussion Rifle #1	- ball	120 (3)	240 (2)	480 (1)

#Nbr. indicates the number of full turns needed to reload. Increase by one if evading. Other weapons reload normally.

WEAPONS TABLE 3 – MODERN WEAPONS

TL	Ammo	Weapon	----- Range -----			
			Effective (8+)	Long (10+)	Extreme (12+)	
7	6	Body Pistol	6 (1)	12 (1)	24 (0)	
8	6	Snub Pistol				
		- Tranq	5 (0)	10 (0)	20 (0)	
		- Gas	5 (0)	10 (0)	20 (0)	
		- HE	5 (2)	10 (2)	20 (4)	
		- HEAP	5 (4)	10 (4)	20 (4)	
5	15	Automatic Pistol	10 (1)	20 (1)	40 (0)	
5	6	Revolver	12 (1)	25 (1)	50 (0)	
13	15	Gauss Pistol	20 (3)	40 (2)	60 (1)	
5	10	Carbine	100 (2)	200 (2)	400 (1)	
7	30 (4)	Assault Rifle	150 (2) +2	300 (2) +2	600 (1) +2	
10	20 (4)	● ACR				
		- DS	300 (4) +2	600 (2) +2	900 (2) +2	
		- HE	200 (2) +2	400 (2) +2	600 (2) +2	
4	5	Bolt-action Rifle	200 (3)	400 (2)	800 (2)	
5	20	Rifle	200 (3)	400 (2)	800 (2)	
6	20 (4)	Auto Rifle	200 (3) +1	400 (2) +1	800 (2) +1	
5	30 (4)	Submachine Gun	30 (1) +2	60 (1) +2	120 (0) +2	
13	40 (10)	Gauss SMG	30 (3) +3	60 (2) +3	120 (1) +3	
4	10	Shotgun	20 (3) +2	40 (2) +2	60 (1) +2	
8	50	Laser Carbine	120 (5)	240 (5)	1000 (5)	
9	100	● Laser Rifle	600 (6)	1200 (6)	1800 (6)	
13	100	● Heavy Laser Rifle	600 (9)	1200 (9)	1800 (9)	
12	40 (10)	● Gauss Rifle	400 (6) +3	800 (4) +3	1200 (2) +3	
13	20 (4)	● Gauss Battle Rifle	800 (8) +2	1600 (6) +2	2400 (4) +2	
9	15 (3)	Accelerator Rifle	20 (2) +1	40 (3) +1	60 (1) +1	
8	5	Light Assault Gun				
		- HE	200 (3)	400 (3)	600 (3)	
		- DS	220 (6)	440 (4)	800 (2)	
		- flechette	50 (2) +2	100 (1) +2	150 (0) +2	
6	1	4 cm Grenade				
		- HE	150 (4) +2	300 (4) +2	450 (4) +2	
		- HEAP	150 (6) +2	300 (6) +2	450 (6) +2	
		- flechette	75 (2) +2	150 (2) +2	300 (2) +2	
8	3 (3)	● 4 cm RAM Grenade				
		- HE	200 (4) +2	400 (4) +2	600 (4) +2	
		- HEAP	200 (8) +2	400 (8) +2	600 (8) +2	
		- flechette	100 (2) +2	200 (1) +2	400 (0) +2	
6	100 (10)	Light Machine Gun	400 (3) +3	800 (2) +3	1200 (1) +3	
5	100 (10)	Medium Machine Gun	400 (3) +2	800 (2) +2	1200 (1) +2	
6	100 (10)	Heavy Machine Gun	600 (5) +3	1200 (4) +3	1800 (2) +3	
6	100 (10)	Autocannon				
		- KEAP	800 (6) +2	1600 (5) +2	2400 (4) +2	
8	200 (10)	● Autocannon				
		- HE	1000 (4) +3	2000 (4) +3	3000 (4) +3	
		- DS	1500 (8) +3	3000 (6) +3	4500 (4) +3	
12	40	● Plasma Gun	PGMP-12	200 (10)	400 (8)	800 (6)
13/14		● Plasma Gun	PGMP-13/14	300 (12)	600 (10)	1200 (8)
14/15		● Fusion Gun	FGMP-14/15	300 (14)	600 (12)	1200 (10)
10	1000 (100)	● VRF Gauss Gun		1000 (10) +6	2000 (8) +6	3000 (6) +6
6		Satchel Charge		(30)		

● Indicates vision enhanced. (see rule 23)

ARMOR TABLE

<i>TL</i>	<i>Description</i>	<i>Armor value</i>	<i>TL</i>	<i>Description</i>	<i>Armor value</i>
1	Jack	1	13	Battledress	8 (hardened)
7	Mesh	2	14	Battledress	10 (hardened)
7	Flak Jacket	3	10	Reflec	10 (laser only)
6	Cloth	4	9	Ablat	6 (laser only)
10	Combat Environment Suit	5	9	Vacc Suit	4
11	Combat Armor	6 (hardened)	12	Vacc Suit	5
12	Combat Armor	8 (hardened)	14	Vacc Suit	6

DAMAGE TABLE

<i>Die Roll</i>	<i>Personnel Effect</i>	<i>Personnel Effect (HE, HEAP and energy weapons)</i>	<i>Vehicle / robot effect</i>
3 or less	no effect	no effect	no effect
4	light wound	light wound	superficial
5	light wound	light wound	superficial
6	light wound	serious wound	superficial
7	light wound	serious wound	superficial
8	serious wound	serious wound	minor
9	serious wound	serious wound	minor
10	serious wound	dead (2)	minor
11	serious wound	dead (3)	minor
12	dead (2)	dead (4)	major (1)
(+ 1)	(+ 1/2)	(+ 1)	(+ 1/2)

()The numbers in parentheses refer to the advanced rules in part 2 of this document. They can be ignored in the basic rules.

Rules Modifications

The following rules variants append or supplement the corresponding rules in AHL. All rules which are not mentioned here remain unmodified.

11. FIRE COMBAT RESOLUTION

C. Determining Hits: Using these variant rules, determine the attack's penetration value at the given range and the target's armor value before conducting the to-hit roll. If the target's armor value exceeds the attack's penetration value, apply the difference as a negative DM to the attack roll. For attacks other than direct HE, HEAP and energy attacks hitting hardened armor, the negative DM is doubled. Hardened armor includes combat armor, battledress as well as vehicle and robot armor. Note that collateral damage does not count as a direct attack for the purposes of this rule.

Examples: A character wearing a combat environment suit is shot at with a carbine at effective range. The attack receives DM -3, the difference between the carbine's penetration (2) and the CES's armor value (5). Another character with a gauss rifle attacks a character in TL 13 battledress at effective range. The attack receives DM -4, double the difference between the gauss rifle's penetration (6) and the battledress' hardened armor value (8).

2.d. Cover: Characters can elect to voluntarily suffer the DM -2 for cover on any given attack if the target is not under cover. This must be declared before the roll is made. If the attack hits, the damage roll is modified as usual for targets under cover.

12. WOUNDS

A. Dice Roll Modifications: If the target's armor value exceeds the attack's penetration value, the net DM to the damage roll is always 0. In other words, there are no negative DMs to the damage roll.

D. HE and HEAP Wounds: Rather than increasing wounds by one level in seriousness, roll on the separate table presented above for such attacks. Also note that under these variant rules, energy weapons use the same damage procedure as HE & HEAP rounds.

15. EXPLOSIONS AND COLLATERAL DAMAGE

The standard rules remain in place with some exceptions. The variant rule for determining hits applies to the rolls for collateral damage. Also, for very large explosions such as those caused by vehicle-mounted plasma and fusion guns, aircraft bombs and other battlefield weapons, the inner half of their explosion radius is treated as adjacent squares (half penetration) and the outer half as two squares away (quarter penetration). Finally, all collateral damage from weapon attacks (i.e. not from exploding equipment) determines hits with DM + 2.

17. MELEE

Melee values are determined differently as in the standard AHL rules. When standard AHL counters are to be used or calculation of the modified melee value is not desirable, it is suggested to use the standard melee rules instead of these variant rules.

As shown in the table above, all melee attacks now have a range. A character can melee a target if it is within range and fulfills the usual conditions as laid out in the AHL rules. Melee weapons with a range of more than 1 square cannot attack targets in the same square.

B. Resolution of attacks: Throw 2d, add the attacker's melee value as a positive DM and subtract the defender's melee value as a negative DM. In addition, the same DMs for penetration and armor as for fire combat resolution apply. If the result is 8+, the melee attack hits. A character's melee value is reduced by 1 per light wound, similar to fire combat modifications.

Melee weapons with a long and extreme range value can be thrown up to the corresponding distances. Such attacks are conducted during the melee step. The defender's melee value is not applied as a negative DM for throwing attacks, but the usual DMs for penetration as well as DMs for cover or evasion are. Roll 10+ to hit at long range, 12+ at extreme range. A weapon can be used for throwing only once per game.

C. Results: The melee table is not used in these rules. Determine damage normally as for fire combat, using the standard DMs for penetration and armor.

21. ROBOTS

Damage results for robots (and in the advanced rules, vehicles) are shown on the table above. For standard robots, a superficial damage result is the equivalent of a light wound, a minor damage result that of a serious wound. A major damage result destroys the robot.

Standard maintenance robots as shown in AHL have melee values of +3 under these rules. Their melee attacks have a range of 2 and a penetration of 1. Their armor value is 6 (hardened). Standard warbots have melee values of +5 under these rules. Their melee attacks have a range of 2 and a penetration of 4. Their armor value is 10 (hardened) and they are armed with fusion guns.

Integrating with Traveller

The standard rules can be used for the most part. More options for integrating with Traveller's standard combat system, vehicle combat and other topics will be presented in parts 2 & 3 of these variant rules.

B. Melee values: For the variant rules above, melee values are calculated by adding up the character's skill level, modifiers for advantageous or insufficient strength, and the melee modifier from the weapons table above. Note that a separate melee value may need to be calculated for every weapon used by a character. Battledress users receive an additional +1 to melee value; they will usually also meet the requirements for advantageous strength due to the enhancement provided by battledress.

F. Robots: Robots are available in far greater variation than presented in the standard AHL rules. Armor and armament can be different, as determined by the design system in Book 8. Robots with tracks, hover skirts or wheels move as in the standard rules. Robots with arms and legs can traverse vertical distances (climb, jump, swing) like human characters. Gravitic robots can simply climb or descend up to 6 meters per action phase, regardless of the presence of ladders. Melee attack values depend on robot appendages. Very light arms have range 1, melee +3, penetration 1. Light arms have range 1, melee +3, penetration 2. Medium arms have range 2, melee +4, penetration 4. Heavy arms have range 2, melee +4, penetration 6. Add a relevant robot skill level to the melee value if present. Tentacles increase melee value by 1 and reduce penetration by 1.

If Book 8 is not available or not to be used, assign robots armor, armament and mobility characteristics as indicated by their description. Note that robot armor always counts as hardened. Treat them as warbots or maintenance bots for purposes of melee as indicated. For example, the Zhodani warbot from Alien Module 4 has a heavy laser rifle, hardened armor (4) and grav mobility.

AHL – Variant Rules Part 2

For use with the classic Traveller rule set. Part 2 of these rules aims to integrate the modified AHL combat procedures with the outdoor combat system of the Book 1 rules and incorporates some other aspects of the Traveller rules. A copy of AHL is required in order to make use of the following rules, as is Book 1 of the CT rules or an equivalent basic rule set. Ideally, Book 3, Book 4 and Book 8 of the classic Traveller rules should also be at hand.

Rules Additions

This section contains rules that add to or replace those in AHL. For convenience, these continue the numbering of rules in that game. Many rules presented here reference those found in classic Traveller Book 1 "Characters and Combat" or later equivalent editions of the CT rules. Where not mentioned otherwise, refer to those for clarity. Some reference is also made to rules from Book 4 "Mercenary".

In general, rules 1 through 10 of AHL (i.e. all rules concerning movement and action points) and rule 18 (morale) are not applicable when using the specific variant presented in Rules 27-29. When in doubt what rules to apply, recall that the essence of this particular variant is to combine the Book 1 & 4 combat system with the modified AHL combat resolution. Some additional modifications and additions have been incorporated, most importantly an initiative system and non-simultaneous combat resolution.

27. BASIC COMBAT

The initial encounter and surprise procedures in Book 1 can generally be used as presented in those rules, with two differences. One addition is that the higher throw, even when not exceeding the other side's by three or more, confers an initiative advantage for the regular combat procedure explained below. If the modified throw for both parties is the same, the smaller party has initiative. If both parties have the same modified throw and are the same size as well, randomly determine which party has initiative. The party with the initiative is termed the attacker and the other party the defender (regardless of aggressive intentions.)

The other difference is that surprise actions – as well as other actions – do not occur simultaneously. Instead, one character of the surprising party conducts their actions at a time until either all characters from the party have acted and another surprise round begins or surprise ends. In the latter case, a new combat round begins immediately, with the formerly surprising party possessing initiative.

Example: Three pouncers have surprised an idle party of four player characters and begin their surprise actions. One PC is savaged without a chance to react by one of the animals. However, the attack by the second pouncer leaves the attacked PC able to alert the rest of the party. Thus, after the second attack, the surprise ends and a regular combat round begins, with the pouncers as attackers.

COMBAT PROCEDURE

This is a modified version of the procedure in Book 1

1. Determine the facts of the encounter.
 - A. Which party has surprise?
 - B. Which party has initiative?
 - C. Initial encounter range?
 - D. Escape or avoidance?
2. Begin combat round.
 - A. Individual movement status.
 - 1) One defender unit moves.
 - 2) One attacker unit moves.
 - 3) Repeat from 1) until all units have resolved their movement status.
 - B. Fire combat.
 - 1) One attacker unit resolves fire combat.
 - 2) One defender unit resolves fire combat.
 - 3) Repeat from 1) until all units have resolved fire combat.
 - C. Melee combat.
 - 1.) Determine melee status.
 - 2.) Resolve melee combat by order of range.
 - D. Roll for morale as required by the standard rules.
 - E. Begin new combat round (2.)
3. When combat ends, follow the standard rules.

Note that the reverse defender/attacker order in the movement step is intentional.

MOVEMENT

The standard movement rules can be used without much modification. Optional rules for hex movement are explained below.

Evade: The DM for evading is always -2 regardless of range. It is assumed that some sort of obstruction, concealment etc. is available. In completely open, flat terrain, the DM is only -1. This parallels the standard AHL rules.

Close range: Characters within the same range band (or hex) are assumed to be within ~12.5 meters of each other. Closing to short range (prerequisite for melee) requires a point of movement, closing in to close range requires another point of movement, as usual.

Going prone: A character can go prone when not otherwise moving. This does not impede fire combat. A prone character is fired at with DM -1. However, a prone character cannot attack in melee and is attacked in melee at DM +2. Characters can get back on their feet during the movement step in addition to other movement, without impeding fire combat.

COMBAT RESOLUTION

The modified AHL combat rules are used for fire combat resolution. Divide all ranges by 20, rounding fractions down. A range of 0 means targets within the same range band or hex. The following weapons have an effective range of S at this scale, meaning short range within the same range band or hex: Body Pistol, Snub Pistol, Wheellock Pistol, Flintlock Pistol.

Throwing weapons are used in the fire combat step and use the corresponding procedures. All throwing weapons have a long range of 0 at this scale. Blades and daggers have an extreme range of 1, spears have an extreme range of 2. Throwing weapons have no effective range as such, but can be used for melee at short range as usual.

Movement and fire: A character who moves normally receives DM -1 to fire. A character who is running cannot fire in the same round. Melee attacks are still allowed normally and without a DM in both cases.

Damage and wounds: Note that under this system, wounds do not happen simultaneously at the end of the combat round, but immediately after an attack has been resolved. Damage and wounds are applied normally as per the AHL rules. After combat, damage can be converted back to Traveller characteristic damage. Apply 1D for each light wound but do not allow any characteristic to be reduced to less than 1 from light wounds alone. Apply 3D to a single characteristic for each serious wound but do not allow all characteristics to be reduced to 0 from a single serious wound and/or any number of light wounds.

Treat a "dead" result as two serious wounds for a total of 6D points of characteristic damage.

As an optional (rule, treat a "dead" result as a number of serious wounds given in parentheses on the damage table. For example, roll a "dead (3)" result as a total of 9D points. For modified results above 12 on the damage tables, the (+1) indicates another serious wound at 13, 14, 15 and so on. The (+1/2) means another serious wound at 14, 16, 18 and so on. Note that this will make the game considerably more deadly for characters. If this is not desired, the excess damage rules should only be used for robots, vehicles and animals.

Group hits: Automatic weapons, flechette rounds and shotguns can cause group hits regardless of range, with DM -3. The maximum number of additional targets is equal to the weapon's autofire bonus. Note that automatic fire does not grant additional to-hit rolls against a single target under these rules.

Melee attacks: Melee combat attacks use the modified AHL rules for resolution. The rules for endurance and weakened blows are used as normal. All weakened blows suffer DM -2 rather than the DM listed in Book 1 for each weapon.

Melee attacks can only be conducted at close or short range. During the melee step, the combatants attack in order of effective range. Between two combatants with the same effective range, the higher melee value can attack first as usual. Melee weapons with an effective range of 1 attack at DM -2 at short range. Melee weapons with an effective range of 2 attack at DM -2 at close range. Melee weapons with an effective range of 3 or more cannot attack at close range (but the wielder may switch to hands instead or use the weapon as an improvised club). Characters who conducted fire combat cannot conduct melee attacks in the same round (but can still defend themselves).

Darkness and night: The DM for total darkness is -10, the DM for partial darkness is -5.

Cover and concealment: The DM for partial cover is -2 (and cover has the same effect as in AHL), the DM for partial concealment is -1. Optionally, this can be modified depending on terrain type. See the additional options below for detail.

Zero gravity: All DMs from AHL and Book 1 are applicable for the control roll, as is the use of Zero-G Combat skill from Book 4.

Telescopic sights: Weapons are generally assumed to have sights that allow them to make full use of their listed range. In addition, advanced telescopic sights, which can be mounted on rifles and similar weapons as per the standard rules, provide DM +1 at long range and DM +2 at extreme range. These DMs are not cumulative with Autofire DMs – only use the higher of the two. In effect, this means that automatic weapons do not benefit from advanced telescopic sights.

28. ADVANCED COMBAT

The following rules expand upon or replace those found in Book 4. Rules for vehicle combat and heavy weapons will appear in Part 3 of these variant rules.

Rapid fire: This rule replaces Book 4's panic fire and multiple burst rules. Every firearm can use rapid fire to conduct multiple attacks in the same combat round. Each attack uses the standard amount of ammunition and receives a negative DM equal to the total number of attacks.

Use of a bipod with a rifle-type weapon fired from a prone or braced position reduces the negative DM by 1. Bipod-mounted light and medium machine guns fired in burst mode from a prone or braced position reduce the negative DM by 2. Tripod- or vehicle-mounted MGs, VRF Gauss guns or autocannons reduce the negative DM by 4.

Each attack can strike a different (or the same) primary target in a 60 degree arc of fire. Normal group hit rules apply for each attack. The maximum number of attacks per round is 10 single shots or bursts. A weapon may not combine bursts and single shots in one combat round. Otherwise, the number of attacks is limited by available ammunition. Book 4 rules for overheating still apply.

Hand grenades: A hand grenade can be thrown instead of conducting fire combat. There is a DM -1 for targets in the same range band or hex, DM -2 for targets one range band or hex away, and DM -4 for targets two range bands or hexes away. Scatter procedures are not used at this scale; missed rolls simply miss.

Battlefield electronics: Battle computers and map boxes each grant a DM +1 on the surprise roll.

Adjacency and collateral damage: In the case of enemy characters, adjacency is determined by closing range. Characters at close range are assumed to be in adjacent squares by AHL rules. Characters at short range are 2 squares apart. Friendly characters in the same range band or hex are at close range when giving or receiving medical attention, passing ammunition or sharing equipment. They are at short range when speaking directly without radio. Judgment by the referee is required to resolve other cases of possible adjacency.

29. ADDITIONAL MOVEMENT & TERRAIN OPTIONS

The additional rules in this section are not directly related to any rules from Book 1 or Book 4, but should be considered optional add-ons. Most of these rules are based on the concept of using a hex-based terrain map rather than range bands.

Hex movement: Instead of using range bands, hex maps with the same scale (25 meters per hex) can also be used. When using hexes, character facing becomes relevant in two ways. For one, the arc of fire for weapons becomes relevant (60 degrees for the purposes of rapid fire). Secondly, a running character can only change facing once per combat round. For that reason, the use of miniatures or markers to indicate an individual's facing is recommended.

Otherwise, characters can move across hexes as they would between range bands. For purposes of measuring distance, count hexes along the shortest possible route.

Terrain features: When using hex maps, it may be desirable to assign terrain features to hexes in order to simulate an outdoors environment. Different terrain types have effects on allowed movement, on evasion DMs and on possible concealment. In addition, vehicle movement is also affected by terrain. This will be covered in part 3 of these variant rules.

1.) No obstructions: Examples are beaches, flat ice surfaces, paved areas. There is no effect on movement, evading only provides DM -1, and concealment is not possible.

2.) Light obstructions: Examples are deserts, steppes, orchards. There is no effect on movement, evading provides DM -2, concealment is possible and partial concealment provides DM -1.

3.) Moderate obstructions: Examples are badlands, foothills, cultivated fields. Running more than 3 hexes is impossible, evading provides DM -2, concealment is possible and partial concealment provides DM -2.

4.) Heavy obstructions: Examples are swamps, forests, scrapyards. Running more than 2 hexes is impossible, evading provides DM -2, concealment is possible and partial concealment provides DM -3.

Advanced cover: Specially designed cover grants better protection than taking shelter behind an improvised one. Taking cover in a trench, foxhole or similar field work imposes DM -3 on attacking fire. Firing from an improvised bunker, a trench with sandbags and the like, imposes DM -4 and finally, using a dedicated bunker or vehicle firing port imposes DM -5 to incoming fire.

In all cases, apply only the DM for cover or the DM for partial concealment, whichever is worse for the attacker.

30. ADDITIONAL COMBAT OPTIONS

The additional rules in this section are not directly related to any rules from Book 1 or Book 4, but should be considered optional add-ons for players and referees who desire more variety and realism.

Point blank fire: Under this optional rule, all fire gets a DM +1 at short range, with the exception of weapons whose effective range is limited to short range. Those weapons get DM +1 at close range.

Covering fire: A character who has not moved can elect to use covering fire along a line of hexes, restricted by firing arc. This uses up at least 4 shots or bursts of ammunition. If less is available, covering fire is not possible. Once declared covering fire remains in effect for the entire movement step of the next round. All targets moving in or out of hexes along the covered line are fired at, at DM -4. Every target beyond the first imposes an additional cumulative DM -1 and uses another shot or burst of ammunition. These DMs are reduced as for rapid fire. Overheating and the maximum number of shots apply in the same manner as for rapid fire as well. Covering fire is the only way in which targets can be fired at during the movement step. Damage takes effect immediately when firing as usual.

Overpenetration: Using this optional rule, the maximum net penetration (that is, after subtracting armor) on the damage table is 4. This applies for all personal-scale weapons listed in AHL resp. the tables in part 1 of these variant rules with the exception of autocannons. It also applies to collateral damage from vehicle-scale weapons, which are covered in part 3 of these rules, but not to direct hits from those. Using this rule will limit the lethality of high-penetration weapons against unarmored targets.

Large and small targets: Large targets (e.g. ground cars, animals 1000 kg+) are fired at with DM +1. Very large targets (e.g. ATVs, animals 10,000 kg+) are fired at with DM +2. Small targets (e.g. animals 10 kg-) are fired at with DM -1. Very small targets (e.g. animals 1 kg-) are fired at with DM -2.

Brawling: In unarmed combat between characters, a light wound result becomes a stun, a serious wound becomes a light wound, and a result of death becomes a serious wound. If attackers do not intend to do serious damage in advance, a result of death becomes unconsciousness instead.

31. ANIMALS

The following rules are designed to adapt animals as from CT Book 3 and supplement 2 for the modified AHL combat system. To make full use of them, it is necessary to use the additional damage rules outlined above as well as the advanced melee rules.

Animal size: Small animals are treated as characters for the purposes of size and stacking. Animals of 200 kg or more take up 2 squares on the AHL scale. Very large animals may take up multiple squares. For a guideline, divide their mass by 100 kg and take the square root of the result to determine the number of squares they take up (minimum 2.) In general, however, such large creatures should only be used at the outdoor scale.

Animal movement and actions: In the context of the the AHL shipboard/indoor rules, animals have a number of AP per action phase equal to their Traveller Speed times 6. They can only use one type of action – movement – and spend AP for moving as if walking. They attack in melee, even if their weapons are classified as the equivalent of a ranged weapon. At the outdoor scale they move and attack as usual.

Animal hits and wounds: Animal attacks are not affected by light wounds. However, every time an animal receives is hit, roll 1D and add the number of light wounds it has received so far. If the result is equal to or higher than its flight number, the animal flees. (For pouncers, assume F8.)

Traveller animal hits are divided by 10. Round up for hits to incapacitation (the first number), round down for the additional hits to death. The calculated number indicates how many serious wounds (inflicted using the optional rule above) the animal needs to suffer in order to be incapacitated or killed, respectively. Note that a damage table result of “dead” thus does not necessarily kill a large animal outright.

Animal weapons and damage: Animals have a basic melee value equal to their speed, adding the modifiers from the weapons table. Animals of 1000 kg and more add +1, those of 10,000 kg and more add +2. Killers add another +1. Additional modifiers from the generation tables are also added. (If the referee wishes to toughen up specific animals, +1 or +2 can instead be added to individual species based on referee discretion.)

Penetration for animal weapons is reduced by 1 if their Traveller damage is below 3. Penetration is increased by 1 if Traveller damage is 10 or above, and for every 10 points (20, 30 and so on) beyond that. Use the effective range given for the relevant animal weapons. Range is increased by 1 for animals of 1000 kg or more and by 2 for animals 10,000 kg or more.

ANIMAL ARMOR TABLE

<i>Animal armor descriptions</i>	<i>Armor value</i>
None	0
None -1, jack +1	1
Reflec	1 (10 vs lasers)
Jack, mesh +1, jack -1	2
Mesh -1, jack -2	3
Cloth +1	4
Ablat	4 (6 vs lasers)
Cloth	5
Battle +4	6
Battle +1	7
Battle, battle -1	8

Animal attacks: Wild animals typically have no concept of tools and weapons and are thus liable to attack without regard to their own safety. A sentient defender's melee value does not apply as a negative DM against their attacks. Instead, the defender can choose: Try to evade for a flat defensive DM -2; or counterattack. The latter allows a standard melee blow against the attacking animal, with no defense DMs for either side. The attack with the higher range is resolved first; if ranges are the same, they resolve simultaneously.

Animal armor: Convert to AHL armor values according to the table. Animal armor does not count as hardened unless specifically ruled so by the referee.