

Issue 0201

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# BattleTechnology

The Magazine of Combat in the 31<sup>st</sup> Century



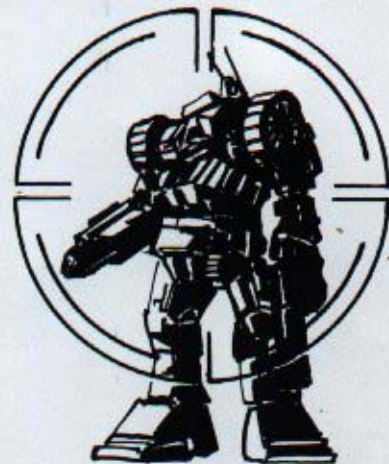
*William H. Keith Jr. 1987*



# BattleTechnology

The Magazine of Combat in the 31st Century

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# BattleTechnology

The Magazine of Combat in the 31<sup>st</sup> Century

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"The Fifth Kill" and "The Soldier's Life"  
by Thomas S. Gressman  
"Pleasure Planet" and "Salvage on Baxter IV"  
by Lee B. Barton  
"Gladiator" by Dale L. Kemper  
All other writing by William H. Keith, Jr.

#### About the Cover:

This issue's cover shows a critical moment in a recent AeroSpace fighter dogfight over the Steiner world of Wyatt. Lieutenant Kensie Shaneyfelt, of the 10<sup>th</sup> Sky Rangers Aerospace Division, maneuvers his *Corsair* to avoid an attacking *Slayer*, piloted by Major Dmitri Pawoloski, Marik 4<sup>th</sup> Division of the Defenders of Andarien. Details of this encounter may be found in *The Fifth Kill* on page 28 of this issue.

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The Soldier's Life  
words by Thomas S. Gressman  
to the tune of "Botany Bay"

facing 60



# OPENING SHOTS

## We want YOU for BattleTechnology... Again.

In last issue's editorial, I outlined the various columns and departments that are featured in BattleTechnology Magazine and stressed that, as a new magazine, we are actively soliciting contributions from *BattleTech* enthusiasts across the Inner Sphere.

BattleTechnology's departments and sub-departments constitute only one of three basic divisions in the magazine. The second part of this triad consists of the feature articles.

Every issue of BattleTechnology will have two or more feature articles which are presented to show some aspect of life and combat in the 31<sup>st</sup> Century. These can range from "I Was There"—type stories describing combat or other experiences (see: *Drop Into Hell: Combat Drop on Scheat V*, Issue 0101) to political articles (*What is Hanse Up To?*, Issue 0101; *Black Luthien*, Issue 0102) to travelogues and commentaries (*Pleasure Planet*, in this issue). The purpose of these articles is partly to inform, and partly to help create and elaborate on the flavor of the rich and interesting background of the *BattleTech* universe.

Writers who would like to submit feature articles to BattleTechnology are certainly encouraged to do so. Keep in mind, however, that all of our material must be approved by FASA before we can print it. Only histories, politics, worlds, and notions which can fit comfortably into the *BattleTech* universe—as revealed in the various FASA *BattleTech* games and modules—can be accepted. No *How the Evil Hanse Davion Alien BattleMechs Conquered the Universe* stories, please! If it doesn't fit in the familiar *BattleTech* universe, we can't take it, however... er... entertaining it may be! Writers are encouraged to consult the various House Books from FASA. As of this printing, two are available now, *House Steiner*, and *House Kurita*. Each is loaded with material which could generate endless scenarios, articles, and stories, and there are more House Books to come.

The third part of the BattleTechnology triad is the Simulator Section. This is the one part of the magazine where writers can—at least partly—step outside the *BattleTech* universe and write directly to *BattleTech* gamers. *BattleTech* and the various *BattleTech* products are presented as combat simulation systems (which they are) used to sharpen the skills of MechWarriors (which they do). Each issue will present one or more scenarios, written in exactly the same style and with the same layout as scenarios in the various *BattleTech* modules—*The Black Widow*, *The Gray Death Legion*, and others. Where possible, these will be linked to stories or articles in that issue of the magazine. In this issue, for example, the Simulator Section includes an *AeroTech* scenario which recreates the tactical situation described in the short story *Fifth Kill*, and a *BattleTech* scenario which recreates the action on the moon Gordo described in the BattleTips column. Writers are welcome to submit scenarios to go with their story and article submissions if they wish. Independent battle scenarios are welcome as well.

The Simulator Section is also where we present rules variants for *BattleTech*. These are designed to extend the realism of the game (such as the rules for combat at extended ranges in this and the last issues of the magazine), and to extend the scope of the game (as with the rules variant in this issue for combat in a vacuum environment).

Again, these rules must be approved by FASA as well as by BattleTechnology Magazine—and that means that they cannot rewrite *BattleTech* or its companion games. Again, new rules must fit comfortably into the current FASA universe. No laser-guided homing missiles with fusion warheads, thank you! Each set of new rules variants should be a logical extension of rules already published by FASA, and not constitute new rules which replace the old.

So, if you think you might like to share in the shaping of the 31<sup>st</sup> Century, get out your *BattleTech* rules, your word processor Mechs, and your neurohelmets, and put something together you think we and other *BattleTech* fans might like to see. Writers guidelines are now (finally!) becoming available. We'll be happy to send them to you in exchange for a stamped, self-addressed envelope.

We'll look forward to hearing from you!

William H. Keith Jr.

-3028-





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# BattleTechnology News Service

## Journalist's Death Questioned: Heart Attack or Murder?

**Dateline: New Avalon**—BattleTechnology correspondent Harrison Coulter has called for a formal investigation into the death of correspondent Tomio Ochiba, calling the officially stated cause of death (a heart attack) highly suspicious.

"Tommy Ochiba and I were friends for a long time," Coulter told the editorial staff of BattleTechnology. "He didn't smoke, drink, or take recreational drugs. He was a consummate martial artist and a top-flight grav-ball player. There's no way I can believe that this 'heart attack' is attributable to natural causes."

Coulter went on to say that it was Ochiba's interest in the martial arts which sparked his curiosity about the Nekekami in the first place.

"He'd read about the ninja of Old Earth's feudal Japan and figured that they must have survived in one form or another. That's why he asked for a transfer to the offices on Luthien. Where else would you expect to find the descendants of an ancient Japanese cult of spies and assassins, but in the Draconis Combine?"

Coulter concluded his statement by saying, "If we permit this kind of thing to go on, no correspondent will be safe. We must take immediate action to determine the real cause of Tommy Ochiba's death and bring those who murdered him to justice."

The staff of the BattleTechnology office on Luthien were unable to reach anyone in the Kurita government for comment on Coulter's statements.

## BattleForce Command College Graduates Honored

**Dateline: New Avalon**—New Avalon Institute honors top military science grads. Professor-General Sam Lewis of the New Avalon Institute of Science announced the graduation of his two prize students from the BattleForce Command College. The Graduation exercise, conducted under simulated battlefield conditions, was a classic clash of virtually equal forces over standard terrain which tested the fundamental theories of Urizen Kurita and the works of Alexander Kerensky.

Major Myers was awarded victory with his use of a Kerensky Wedge over Major Harding, who employed a nearly successful variation of Urizen Kurita's Block and Sweep technique.

The Federated Suns feel both proud and safe knowing that tacticians of Harding's and Myer's prowess safeguard our borders, expertly trained by instructors like Professor Lewis.



**Right:** Professor-General Sam Lewis (center) flanked by two graduates of the BattleForce Command College on New Avalon—Maj. Owen Harding (left) and Maj. Timothy Myers

## Kurita and Steiner forces settle for draw at GenCon

**Dateline: GenCon, Solaris**—After four arduous days of combat, the sole surviving MechWarriors joined battle in a conflict which would determine the final victor in FASA's BattleTech tournament. This tournament, held yearly at GenCon as part of the Solaris Games, pits the best MechWarriors of the Inner Sphere against one another in the ultimate test of skill, tactics, and courage.

The battle orders for the match were clear and simple. "Lt. Randazzo. You are ordered to take your lance into sector 9476. Eliminate all Kurita forces no later than 1600 hours."

Lt. Carnes had similar orders. "Secure area 9476 at all costs. Control must be established no later than 1600 hours. I don't want a single Steiner Mech left alive."

An operational nuclear power plant was the goal for both parties in this simulation.

Much to the consternation of both Kurita and Steiner forces, at 1603 hours the reactor core began to melt down, requiring both sides to flee the objective area. Lt. Chris Randazzo and Lt. Shawn Carnes were forced to break off combat and board their DropShips. The contest was declared a tie.



**Right:** Lt. Chris Randazzo (left) and Lt. Shawn Carnes—victorious lance commanders at FASA's BattleTech tournament at GenCon. Lieutenants Randazzo and Carnes tied for First Place.





# WHEEL

## A Star League Miracle on the Draconian Border

by William H. Keith, Jr.

### STELLAR DATA

Catalog #NSC D 4-983-873

**Star:** Valdis

**Type:** K0; **Mass:** .78 Sol; **Luminosity:** .40 Sol; **Radius:** .85 Sol

### SYSTEM DATA

**Planetary System:** 2 major bodies, 3 asteroid belts

### PLANETARY DATA

**Planet I:** NSC D 4-983-873-I; Valdis I

**Common Name:** Rock

**Mean Orbital Radius:** .45 a.u.

**Orbital Eccentricity:** .009

**Period:** 124 d 18 h 9.54 s

**Mass:** .571 Earth

**Equatorial Diameter:** 9694.56 km. (.76 Earth)

**Radius:** 4847.28 km

**Mean Planetary Density:** 7.1721 g/cm<sup>3</sup> (1.3 Earth)

**Mean Surface Gravity:** .988 G

**Escape Velocity:** 10.98 kps

**Rotational period:** 30 h 15 m 25.4 s

**Axial Inclination:** 1° 12' 4"

**Atmosphere:** Slight traces of inert gases: Neon, Argon, others.

**Temperature Range:** 150° C (equator, mid-afternoon) to -50° C (midnight)

**Mean Distance to JumpPoint:** 3.5 a.u.

**Planet II:** NSC D 4-983-873-II; Valdis II

**Common Name:** Giant, Hard Place

**Mean Orbital Radius:** 5.3 a.u.

**Orbital Eccentricity:** .019

**Period:** 13.8 years

**Mean Distance to JumpPoint:** 6.4 a.u.

### Other Bodies:

Asteroid Valdis 2392-11873-33 Prime

**Common name:** Rikerstrike

**Mean Orbital Radius:** 2.1 a.u.

**Orbital Eccentricity:** 0.24

**Period:** 3.45 year

**Mean Distance to JumpPoint:** 4.1 a.u.

### Principal Facilities

**Valdis I:** Subsurface mining, port, and local administrative center at **Port Red**. Titanium processing and storage facilities at Metals of the Earth **Station Red Alpha** and **Red Beta**.

**Rikerstrike (Largest asteroid of Mid-Belt):** Mining center, port facilities, stores depot, and miners' recreational facilities at **Joyport** and **Rikerstown**.

**Valdis II (orbital facility):** Gas mining operation, ice mines, water processing and hydrocarbon extraction plants at **Valdis II Orbital**.

**Zenith JumpPoint:** JumpPoint recharging station, trade center, recreational facilities, system administrative complex, corporate headquarters, ComStar Class B facility: **Wheel**

### PEOPLE:

**Population:** 2,400; **Ethnic Groups:** Diverse; **Languages:** League Anglic (80%), Japanese (60%); **Religions:** Buddhist: (15%), Neo-Buddhist (24%); Protestant Christian Sects (25%); Universal Catholic Church (16%); Church of Blake (15%); Suk Requiem Belief (5%)

### GOVERNMENT:

**Allegiance:** Fief of the Draconis Combine; **Government:** Representative council under Draconis Governor; **Head of Government:** Colonel Isoru Yamashita, Administrative Governor.

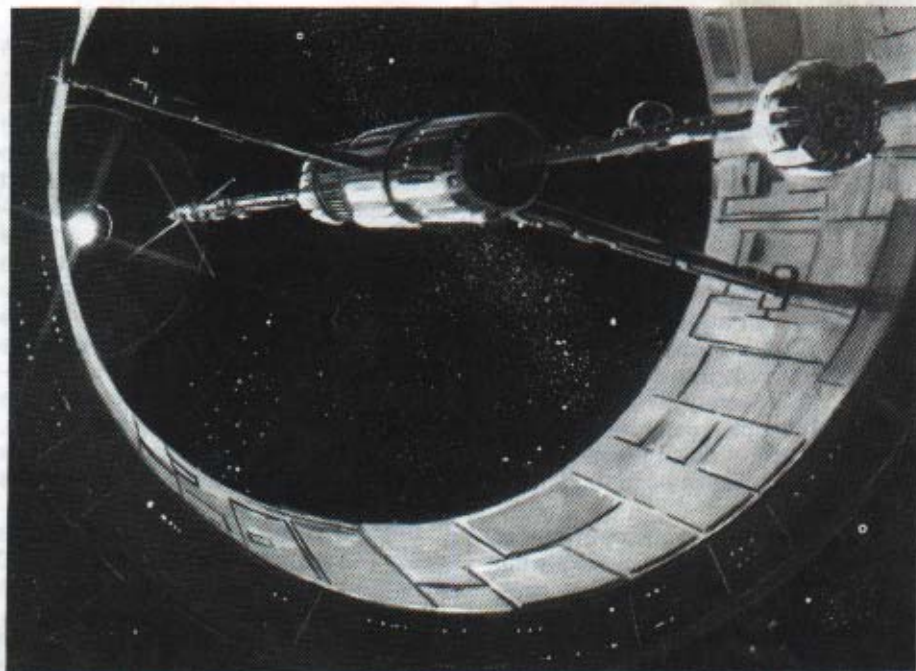
### ECONOMY:

**Natural Resources:** Ores: Especially: nickel, iron, chromium, iridium, titanium, various radioactives; **Processed/Manufactured Goods:** None; **Arable Land:** None; **Labor Force:** *Resource Extraction:* 89.99% *Service:* 9.2%, *Administration:* 1.8%

**Merchant Fleet:** *JumpShips:* None; *Freighters:* 4 (Highline Startransport), *Shuttles:* numerous; **System Jump Point:** *Distance:* 5.23E8 km (from Valdis), 6.13E8 km from Rikerstrike; *Travel Time (typical, from Wheel):* 3 - 4 days.

### ARMED FORCES:

**Aerospace Forces:** *Orbital Facilities:* 1 (Valdis II Orbital); *Deep Space Facilities:* 1 (Wheel); *JumpShips:* 0, *DropShips:* 6, *AeroSpace Fighters:* 12, *Heavy Warships:* 0. **Ground Forces:** Wheel Guard: Battalion-sized paramilitary militia. Various branches include Defense Militia, Mine Security, Police, and Belt Patrol. **Warrior Training Facilities:** None; **Hiring Data:** C/O/V



**Approach to Wheel:** Suspended at the JumpPoint over half a billion kilometers from the local sun, Wheel is the government and administration center for this important mining center. At far left in the distance is the station's solar sail. Living and work areas are located in Wheel's rim. DropShip docking facilities are located along the spine to the right.



## THE SYSTEM

The Valdis System lies in the Rasalhague Military District close to the Draconis Combine's border with the Lyran Commonwealth. Near neighbors include Hyperion, Skandia, the Steiner worlds of Suk II and Rastaban, and the bitterly contested Shaula System.

Early records concerning the Valdis System are fragmentary. It is believed that independent asteroid miners first began exploitation of the Valdis Belts prior to the 24<sup>th</sup> Century. Certainly, there was a permanently manned base on the large asteroid known locally as Rikerstrike by 2403, and a consortium of Terran-based deep-space exploration and development corporations had begun construction of a zenith point recharging station by 2450.

Today, the Valdis System continues to be an important mining center and is owned outright—at least on paper—by the well known mining corporation Metals of the Earth. Actual control is vested with the military, however, both because of the system's vulnerability to Lyran sneak raids and because of the strategic importance of the ores found there.

### PLANETOLOGY:

The Valdis System consists of two major bodies, plus multiple asteroid belts. The inner world, officially Valdis I but known locally simply as "Rock," is a barren, airless, waterless world where temperatures vary between  $+150^{\circ}\text{C}$ . in the afternoon to  $-50^{\circ}\text{C}$ . at night.

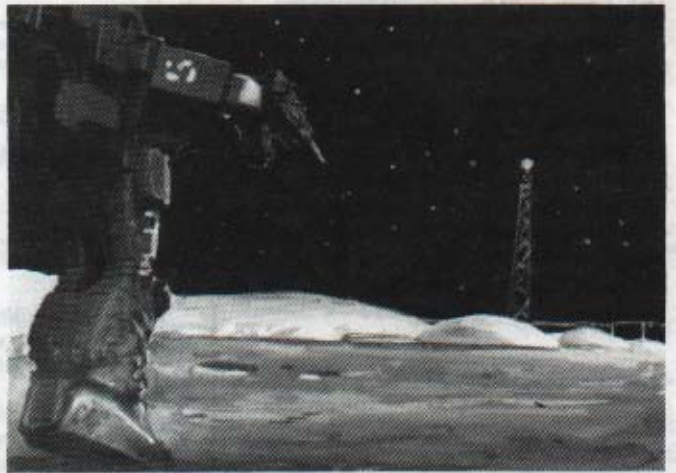
Valdis II, known locally as "Giant" or, humorously, "The Hard Place," is a superjovian gas giant with a diameter some five times that of Sol V (Jupiter). Valdis II is credited by planetologists with the current form of the Valdis System. Its massive gravitational field disrupted early planetary formation, a disruption which prevented the creation of man-habitable worlds but left the Valdis Belts instead.

The Valdis Belts are the source of most of the system's riches. Iron and nickle are the principal products, of course, but large quantities of chromium, cobalt, magnesium, gold, platinum, iridium, silver, tin, tungsten, and copper are also mined here. Rikerstrike, the largest of the Valdean Beltworlds, is located in the Mid-Belt and is still the site of the system's principal settlement outside of Wheel itself.

Valdis I—Rock—is the site of an important mining facility. Titanium and silicon are the principal resources taken here. Port Red is the base—largely underground—where the titanium is processed and refined

### Red Beta Mining Facilities on Rock

In the photo at right, a Kurita *Shadow Hawk* patrols the perimeter of the Metals of the Earth mining base known as Red Beta. The mine heads and ore storage areas have been the scenes of numerous raids and sharp Battle-Mech skirmishes. Some of the facility's bauxite storage domes can be seen in the distance.



by day under large solar mirrors, then stockpiled for shipment to Wheel.

Other important resource points in the system are Giant's moons, rings, and trojan points. Giant's moons and rings are the principal sources of water for the various human settlements and facilities, as well as the chief source of hydrogen for Wheel's station-keeping thrusters.

### WHEEL

The principal center of human activity in the Valdis System is, paradoxically, nowhere near the various worldlets and asteroids in the system's planetary plane but at the star's Zenith JumpPoint. Wheel began as a system recharge station, a permanent deep space facility at the system's JumpPoint, with fusion reactors and a large energy collection sail to recharge the Kearny-Fuchida drives of in-system JumpShips. Because of the inhospitality of the various worlds of the system, and because of the relative local abundance of raw materials, the Zenith station grew to become the principal habitation center for the system, providing homes, recreation, and services for the miners and corporate executives assigned there.

**Design:** Wheel takes its name from its design—a vast wheel with a diameter of 460 meters, rotating once every 1.97 minutes to provide artificial gravity in the wheel's rim. "Down" is "out," while "up" is in the direction of the wheel's hub no matter where on the rim you are. Centrifugal force generated by the wheel's rotation creates one standard gravity.

All of Wheel's living quarters and offices are located in the rim, as are most of the recreational facilities. Rim capsules provide the chief means of transport here. These are sealed, 25-seat passenger capsules riding tracks along the rim's edge. Like

monorails or tubetrains on or under planetary surfaces, these serve to carry Wheel's inhabitants at high speed from point to point along the rim.

Wheel's rim is connected to the hub by two spokes, each containing ladders and pods identical to the Rim capsules save that they cross Wheel by travelling the facility's diameter instead of its circumference. The spokes are attached to Wheel's Hub Spin Module which rotates independently of the rest of the hub. As in all such rotational facilities, weightless conditions prevail within the hub.

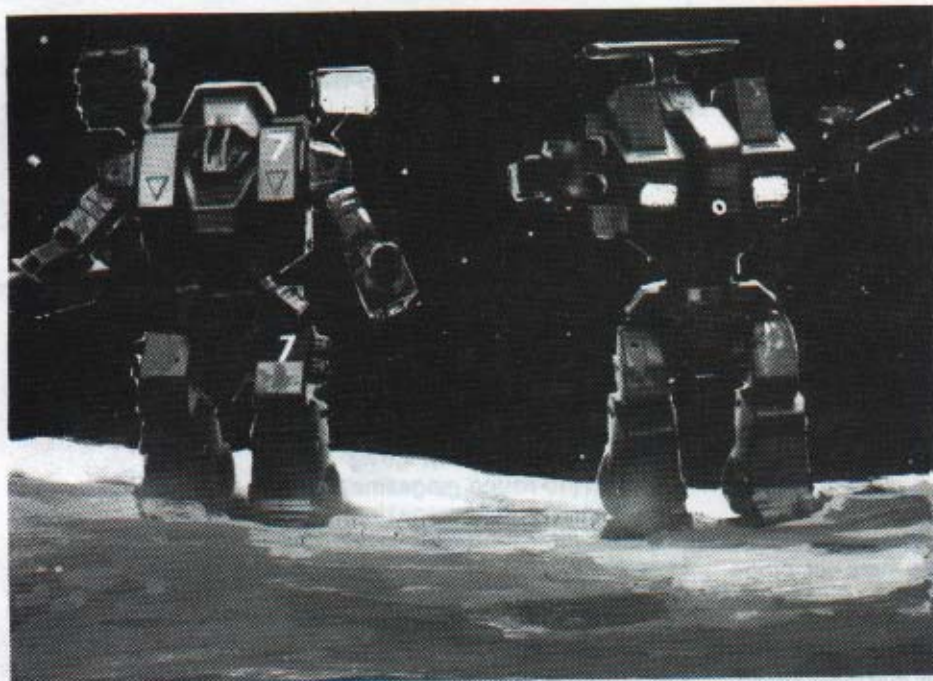
The docking bays include both true bays which open to admit shuttles, then close, allowing the bay to be pressurized and the crews to debark in atmosphere, and also a long docking spine to which DropShips can be locked. JumpShips can be moored to the docking spine, but because of their size and relatively fragile design, they generally are connected only by the power cables which feed power from the station generators to the ship's storage cells.

**Station Keepers:** Like all JumpPoint recharging stations, Wheel does not orbit the local sun but must rely on station-keeping thrusters to maintain its position in the system—in Wheel's case, 523 million kilometers "above" the north pole of Valdis.

Wheel's station keepers transform hydrogen into high-temperature plasma and expel it at relativistic speeds by way of a plasma linear accelerator (PLA) which forms the spine of the lower hub. The acceleration is very small—less than .01 G—but it is sufficient to counteract the gravitational attraction of the Valdean sun at a distance of over 3.5 a.u.

Aboard Wheel, the hub is in zero-G, or, more properly, micro-G. The facility's station-keeping thrust provides a small but measurable acceleration which mimics





**BattleMechs on Rock:** Combat in this airless, hostile environment presents raiders and defenders alike with unique problems.

gravity, with "down" in the direction of the energy sails and the Valdean sun, and "up" towards the station docking bays. In the rim, of course, the far greater effects of the centrifugally-generated artificial gravity overwhelm the effects of the station-keeping acceleration, which is not felt at all.

#### GENERAL NOTES:

The Valdis System has been fought over many times in past centuries, and it is likely that it will continue to be a center of struggle in the ongoing contest between House Kurita and House Steiner. Wheel was taken from Steiner some 75 years ago, and the system is still regarded by Commonwealth strategists as occupied territory.

While Steiner forces have repeatedly raided the Valdis system, however, they have been careful to stay well clear of Wheel itself. Wheel is quite literally irreplaceable, since many of the techniques employed in its construction have been lost during centuries of continual warfare. Major damage to the station-keeping thrusters, for example, or to the massive fusion drive which powers them, would result in disaster as the Wheel slowly—but inexorably—fell into the system's sun.

A second consideration is the presence of a ComStar class B hyperpulse generator on Wheel. Neither House Steiner or House Kurita would wish to instigate a battle which could result in the destruction of a ComStar facility—with the attendant threat of ComStar imposing punitive measures on the combatants.

As a result, Wheel itself has achieved something of a neutral status. Free traders and merchant ships have called freely at Wheel for many years. Under the shelter of a general unwritten and unspoken agreement, even Lyran Commonwealth nationals have visited Wheel and freely conducted their business there—usually trading agreements with Kurita merchant firms—although Steiner warships know better than to test this *de facto* neutrality. Because of this, Wheel has become a port similar to, if not as active as, the Lyran Port Moseby. Like Port Moseby, Wheel provides both an avenue for Kurita merchants who seek goods from beyond the borders of the Combine and an outlet for those of their own products which interest visiting Lyran traders. Local Kurita government representatives seek, with varying levels of success, to limit the exposure of Kurita nationals with "foreigners" to encounters with high-ranking officers and trade representatives.

Other targets in the Valdis System are fair game, however. Numerous raids have been staged against titanium storage yards on the surface of Valdis I by DropShips making high-G runs from the Valdean Nadir JumpPoint.

BattleMech operations on the surface of Valdis I are particularly difficult. Mech combat in low-G vacuum environments is markedly different from operations on more Earthlike worlds and is both extremely difficult and extremely dangerous (see: *BattleMech Combat in Vacuum* on page 51). Operations on Valdis I must be timed to

coincide with the approximately 4-hour-long periods at dawn and dusk when the surface is neither too hot nor too cold for 'Mech systems.

In August, 3027, a Lyran Commonwealth raiding force consisting of two *Union*-class DropShips broke out of JumpSpace at the Nadir JumpPoint and commenced a high-G run towards Valdis I. Brushing past local defenses, the DropShips grounded on a broad lava plain five kilometers east of Port Red approximately one hour past local sunrise. One company of mercenary BattleMechs—their identity has been withheld thus far for security reasons—disembarked and advanced on the facility.

They were met by four Kurita 'Mechs standing sentry-go at the facility. The defenders put up a spirited defense, so spirited, in fact, that the attack was delayed for almost two hours, as the rising sun became dangerously hot. Space-suited infantry elements were able to secure a small quantity of aluminum ingots and store it aboard one of the DropShips. With Kurita reinforcements approaching, the raiders re-embarked and escaped, leaving one of their number—his 'Mech damaged—behind as prisoner. It was suggested that the operation would have been completely successful if the attackers had had more time. However, the rising temperature on the planet's surface precluded further operations and forced their retreat.

One of the Steiner DropShips was badly damaged by local militia fighters during the run back to the Nadir Point.

Currently, rumors abound on Rastaban, Biota, and other Steiner worlds near Wheel, rumors of a forthcoming major Steiner offensive which will include Wheel in its sweep. Certainly, House Steiner intelligence services have been particularly interested lately in this valuable and guarded world on the frontier of Kurita space.

Perhaps the Commonwealth high command is planning a return to Wheel in the very near future. Only time will tell.

#### ABOUT WORLDBOOK

*Worldbook* is a *BattleTechnology* feature drawn from the computer files of *The Navigator's Guide to the Inner Sphere*, the 32-volume compendium of explored worlds published by ComStar Press Interstellar, Terra. Wheel was first printed in Volume 6, *Cis-Antares Sector*, and is used here by permission of the publisher.





## Assault Rifles

by the BattleTechnology Staff

Rifles have been the basic infantry arm since the 19<sup>th</sup> Century. If one includes the smoothbore muskets of previous centuries under the generic term "rifle," this weapon has been an important part of infantry arsenals for at least 1500 years. The word rifle, of course, was originally coined to describe a particular type of firearm, one with spiral grooves or "rifles" cut into the barrel lining to give the bullet a stabilizing spin, improving accuracy and range. Smoothbore weapons—whether the muskets of ancient days or the shotguns, needle guns, or the auto-stabilized gyrojet "rifles" of today—are not, properly speaking, true rifles. Nonetheless, the term has come to represent a broad class of weapon which has been the infantry's principal combat weapon since the middle of the Second Millennium.

In the mid-20<sup>th</sup> century, military rifles took a new and unexpected direction in their development, one which reflected the rapid pace of technological change and innovation in those days. The "assault rifle" came to represent the epitome of personal infantry combat weapons, a weapon capable of semi- or full-automatic fire, providing great accuracy over long ranges. The full-auto capability gave these rifles the advantages of submachine guns in providing fire suppression and covering fire; their size and the power of the rounds gave them accuracy, range, and superb penetration. Fire accuracy with full auto fire was much less than for single-shot fire, but greater than the accuracy possible with shorter, lighter SMGs. Further, the rounds were more powerful, travelled faster, and caused more damage than typical SMG pistol-caliber ammo.

These factors together combined to make the assault rifle the principal weapon of the infantryman throughout the Age of War. Even the personal, man-portable laser and particle weapons developed during the Star League era did not replace assault rifles in this capacity, for energy weapons proved to be bulky, heavy, much more expensive to manufacture, and less reliable under adverse conditions, and they required far more training and maintenance than did conventional assault rifles.

As manufacturing centers and industrial facilities continue to suffer the ravages of war, it seems likely that this assessment will be even more valid in the future. Assault rifles are, relatively speaking, easy to manufacture and to maintain, their ammunition is abundant and simple to produce.

The same cannot be said of laser pistols or man-portable particle guns.

This issue of BattleTechnology takes a close look at a few of the more well-known modern infantry assault rifles. Two of them, the '03 Gallo and the Thomas GPR are not, strictly speaking, assault rifles, but are included because they are frequently encountered on today's battlefields.



Federated Industries 7.5 mm Assault Rifle

### Federated Long Rifle

**Weapon Type:** Assault Rifle

**Manufacturer:** Federated Industries

**Operation:** Single Shot

**Weight (w/o magazine):** 4.0 kg

**Weight (10-round magazine):** .5 kg

**Weight (20-round magazine):** .8 kg

**Weight (30-round magazine):** 1 kg

**Length:** 102 cm

**Caliber:** 7.5 mm

**Type of Fire:** Selective: single shot, burst, or full-auto

**Rate of Fire:** 700 rpm

**Magazine:** 10-, 20-, or 30-round magazine

**Reload Time:** 10 seconds

**Effective Ranges**

**Full auto/single shot or burst:**

**Short:** 30/40 m

**Medium:** 70/90 m

**Long:** 140/165 m

**Weapon Reliability:** 94%

**Base Cost:** Cb 120

**Reload Cost:**

**(10-round magazine):** Cb 2

**(20-round magazine):** Cb 4

**(30-round magazine):** Cb 6

**Notes:** The Federated Long Rifle is a typical military-style assault rifle similar to designs common today throughout the Inner Sphere and among military forces wherever Man has waged war for over 1000 years. It is designed with ruggedness and reliability in mind, with a casing of high-impact plastic and stamped metal receiver group and action. It fires a high-velocity 7.5 mm round specifically designed to tumble as soon as it hits its target, dumping kinetic energy and causing maximum damage to the target.

Though originally designed and distributed within the Federated Suns, this FLR, or near copies, is manufactured on worlds within each of the Successor States. It is the standard-issue infantry rifle to most House Davion rifle-equipped infantry companies and has been sold in huge numbers to House Steiner and to various Periphery State kingdoms allied with the Federated Suns.

Though capable of full-auto or burst fire, conservation of ammunition generally dictates engaging the enemy with single shots. This weapon is highly accurate at ranges out to 165 meters. In the hands of a trained shooter, particularly with a scope or other optical sighting aids, it is accurate to much greater ranges and has, on numerous occasions, been pressed into service as a sniper weapon. It is most often criticised for its unfortunate tendency to jam—usually when mud or dirt gets caught in the extractor mechanism during operation under adverse conditions. Units using the FLR are taught to keep their weapons meticulously clean at all times.





**Federated Industries 12 mm Zeus Heavy Rifle**

### Zeus Heavy Rifle

**Weapon Type:** Heavy Assault Rifle  
**Manufacturer:** Federated Industries  
**Operation:** Single Shot  
**Weight (w/o magazine):** 6.0 kg  
**Weight (5-round magazine):** 2.0 kg  
**Weight (10-round magazine):** 2.6 kg  
**Weight (15-round magazine):** 3.0 kg  
**Length:** 110 cm  
**Caliber:** 12 mm  
**Type of Fire:** Selective: single shot or burst  
**Rate of Fire:** (cyclic) 400 rpm  
**Magazine:** 15-, 10-, or 15-round magazine  
**Reload Time:** 10 seconds  
**Effective Ranges**  
**Single shot or burst:**  
**Short:** 35 m  
**Medium:** 90 m  
**Long:** 140 m  
**Weapon Reliability:** 98%  
**Base Cost:** Cb 200  
**Reload Cost:**  
**(5-round magazine):** Cb 1  
**(10-round magazine):** Cb 2  
**(15-round magazine):** Cb 3

**Notes:** The Zeus Heavy Rifle is a military combat rifle patterned off of a civilian big game rifle, the Zeus-Hawkings Sporter. Its two primary claims to fame are its weight (8 kilograms with a 5-round magazine loaded) and its striking power.

Both the Zeus and the Zeus-Hawkings Sporter are chambered for the 12-mm Thunderbolt Magnum cartridge, the most powerful rifle cartridge ever developed. The soft, blunt-nosed design of the round is designed for stopping power and penetration rather than range, and the Zeus actually has a shorter range than some other rifles. However, the Zeus-Hawkings Sporter is the only commercial weapon ever credited with bringing down an Althastan megarium. Doubters in the weapon's stopping power are referred to xenobiological texts which describe this massive, heavily-armored, and dangerous denizen of the jungles of Althasta II. The military version has been recorded—on at least one occasion—to have penetrated the armored canopy of a *Shadow Hawk* at close range and killed the pilot. Though considered to be a fluke, the incident, which occurred on 27 August 3025 during a Davion raid on Berenson, has created an extraordinary reputation for this rifle.

The Zeus is heavily constructed. The stock is especially reinforced to withstand the recoil of the heavy magnum round. Though it is capable of firing four-round bursts, the need for conserving both ammo and the firer's shoulder generally limit the weapon to single shots only.

Manufactured by Federated Industries, the same arms company which produces the Federated Long Rifle, the Zeus is common throughout the Federated Suns and has been exported in large numbers to the Lyran Commonwealth. Many of the weapons have also found their way by various means to the other Successor State Houses as well. At least two rifle-armed infantry regiments (4<sup>th</sup> Arc-Royal Guards, "Dragon Slayers," and the 115<sup>th</sup> Arboreal Militia, "Mech Hunters") are known to use the Zeus as a standard-issue arm, though available information suggests that both units fill out shortages in this weapon with Federated Long Rifles.

The Zeus-Hawkings Sporter is identical to the military version but fires five rounds from an internal magazine rather than from a detachable box magazine, weighs only 5 kilograms, and is capable of semiautomatic, single-shot fire only.



**Gallo 10 mm Long Range Sniper's Rifle, '03**

### Gallo Model 3003

**Weapon Type:** Sniper Rifle  
**Manufacturer:** Dorymede Arms  
**Operation:** Single shot, bolt action  
**Weight:** 3.0 kg  
**Weight (5-rounds, internal magazine):** .2 kg  
**Length:** 112 cm  
**Caliber:** 10 mm  
**Type of Fire:** Single shot  
**Rate of Fire:** 15 rpm  
**Magazine:** 5-round internal magazine  
**Reload Time:** 10 seconds  
**Effective Ranges**  
**Short:** 50 m  
**Medium:** 100 m  
**Long:** 150 m  
**Weapon Reliability:** 99%  
**Base Cost:** Cb 110  
**Reload Cost:**  
**(5-round clip):** Cb 1

**Notes:** The Dorymede Gallo is something of a throwback in modern military rifles, using a simple (critics say primitive) hand-operated bolt action to eject a spent cartridge and feed a fresh round into the firing chamber. This system results in a painfully low rate of fire (about 15 rpm) and requires the firer to reacquire his target after each shot.

However, the '03 Gallo has acquired a superb reputation as a highly accurate and effective rifle, particularly in the hands of a trained marksman. The Exeter Marines, an elite commando infantry unit in service with House Davion, use the '03 exclusively as a sniper rifle, outfitted with Hanson Industry's Mark XXXII HiMag starlite scope. Sergeant Vic "Headshot" Hanson, of the Exeter Marines, is credited so far with 82 kills with an '03 Gallo, including General Hsien Zhou Li of the Liao High Command.



The 10 mm magnum cartridge is quite powerful and is capable of piercing most body armor even at extreme range. The rifle itself is extremely rugged, virtually fail-proof, easy to clean and maintain, and cheaper to produce than gas-operated semiautomatic combat rifles.

The Gallo is produced by Dorymede Arms on Exeter in the Federated Suns but is widely used by House Steiner and House Marik as well. The design, though rarely seen among military arms, is common as a civilian sporting rifle and has been encountered with increasing frequency in the hands of civilian irregulars, guerrillas, and planetary militias.



Kogyo-Reyerson-Toshiro Model XXIV

#### "KRT AR"

**Weapon Type:** Assault Rifle

**Manufacturer:** Kogyo Industries

**Operation:** Semi or full auto

**Weight (w/o magazine):** 3.5 kg

**Weight (15-round magazine):** .7 kg

**Weight (30-round magazine):** 1 kg

**Length:** 102 cm

**Caliber:** 7.5 mm

**Type of Fire:** Selective: single shot, burst, or full-auto

**Rate of Fire:** 800 rpm

**Magazine:** 15- or 30-round magazine

**Reload Time:** 10 seconds

#### Effective Ranges

**Full auto/single shot or burst:**

**Short:** 25/35 m

**Medium:** 50/75 m

**Long:** 120/150 m

**Weapon Reliability:** 98%

**Base Cost:** Cb 150

**Reload Cost:**

**(15-round magazine):** Cb 3

**(30-round magazine):** Cb 6

**Notes:** The KRT Assault Rifle is fairly typical of modern assault rifle designs. Simple to manufacture and operate, robust, able to withstand hard use and hostile environments, and cheap enough to be mass-produced in large numbers, the KRT-AR can be found in service throughout the Draconis Combine, the Capellan Confederation, and in the armories of dozens of Periphery client states, mercenary infantry groups, guerrilla units, and revolutionary fronts.

The KRT's modular design allows simple conversion to different versions, including a light machine gun (KR-LMG), a sniper's rifle (KRS), and a carbine (KRT-Short). It fires a 7.5 mm round of either an armor-piercing or a frangible design. The AP round can penetrate most standard body armor within effective range. The frangible round has little penetration value but fragments on impact, dumping

its kinetic energy within the target rapidly in order to cause maximum damage.

Kogyo Industries have sold manufacturing licenses for the KRT design throughout the inner sphere, and the rifle is manufactured in several variants which may be encountered almost anywhere. The popular ARK rifle is well-known throughout Marik space and is easily recognizable with its folding stock and integral folding bayonet. Even some Davion infantry units use one variant, the K-90 assault rifle, which they favor as being more reliable under adverse conditions than the sometimes-temperamental FLR.



Model AR90

#### Bereiter Arms Model AR90

**Weapon Type:** Assault Rifle

**Manufacturer:** Bereiter Arms

**Operation:** Gas operated, semi-or full automatic

**Weight (w/o magazine):** 3.5 kg

**Weight (20-round magazine):** .6 kg (Flechettes: .5 kg)

**Weight (50-round magazine):** 1 kg (Flechettes: .8 kg)

**Weight (100-round cassette):** 1.8 kg (Flechettes: 1.5 kg)

**Length:** 95 cm

**Caliber:** 10 mm

**Type of Fire:** Selective: single shot, burst, or full-auto

**Rate of Fire:** 730 rpm

**Magazine:** 20- or 50-round magazine; 100-round cassette

**Reload Time:** 10 seconds

#### Effective Ranges

**Full auto/single shot or burst/flechettes:**

**Short:** 25/40/20 m

**Medium:** 50/90/40 m

**Long:** 120/160/60 m

**Weapon Reliability:** 91%

**Base Cost:** Cb 225

**Reload Cost:**

**(20-round magazine):** Cb 4

**(50-round magazine):** Cb 10

**(100-round cassette):** Cb 20

**(Flechettes):** Base cost x 1.5

**Notes:** Bereiter Arms' assault rifle offers several innovations in assault rifle design but suffers from what one critic called an "unfortunate tendency to try to be too much of a good thing." The receiver group is designed to fire from either a box magazine or a 100-round, auto-feed cassette. The cassette, while an interesting idea, suffers from frequent feed jams, especially under adverse conditions, and is also difficult and time-consuming to reload.

The weapon can also take 10-mm cartridges loaded with 1 mm flechettes, slivers of metal some 3 cm long with tiny fins designed to



spray from the AR's barrel like shotgun pellets, but then stabilize and fly in a tight pattern to the target. Flechettes have limited range and low penetration values, but they are capable of doing tremendous damage to unarmored targets. Critics point out that most infantrymen on today's battlefields wear combat armor, and that flechettes are therefore relatively useless. Supporters of the round insist that there are numerous specialized functions in which flechettes are ideal, such as security, counter-insurgency, and crowd control.

The AR90's chief disadvantage is its complex design, which leaves it prone to jams and malfunction. It is particularly susceptible to dirty environments and has a somewhat exaggerated reputation for jamming whenever the firer forgets to wash his hands. The weapon features a built-in variable zoom telescopic sight, and modular units which convert it into a 112 cm sniper's rifle, a 70 cm submachine gun, or a 105 cm light machine gun. The Model AR90-C Short is a carbine version identical to the assault rifle, but with a somewhat shorter range.

and well-made firearms throughout the Inner Sphere. Their GPR, first released over two centuries ago in 2813, has had a hand in building and maintaining that reputation.

Though a relatively small caliber (5.5 cm), the round has an extremely high muzzle velocity which gives it excellent penetration and stopping power. Numerous local planetary militias, especially in Steiner space, are armed almost exclusively with the Thomas GPR. Military units which have acquired at least small numbers of GPRs for special purposes include the Tharkad Regulars, infantry and security elements of Marik's 443<sup>rd</sup> Commando, and the Saurimat (Quick Death) Fedayeen of Shaul Kala.

The GPR is reliable under adverse conditions and is easily disassembled and stored in an inconspicuous carrying case only 55 centimeters long. One interesting note about this weapon is that, while configured as a strictly semiautomatic or 4-round burst weapon, a simple modification requiring common tools and 5 minutes can convert the GPR to a fully selective, full-auto weapon. This conversion capability has made the weapon extremely popular on several planets where ownership of full-auto weapons is illegal for civilians.



Thomas Arms General Purpose Rifle

#### Thomas GPR

**Weapon Type:** General Purpose Rifle

**Manufacturer:** Thomas Arms, Ltd.

**Operation:** Single shot or burst

**Weight (w/o magazine):** 3.0 kg

**Weight (10-round magazine):** .5 kg

**Weight (20-round magazine):** .8 kg

**Weight (30-round magazine):** 1 kg

**Length:** 98 cm

**Caliber:** 5.5 mm

**Type of Fire:** Selective: single shot or burst

**Rate of Fire:** (cyclic) 500 rpm

**Magazine:** 10-, 20-, or 30-round magazine

**Reload Time:** 10 seconds

#### Effective Ranges

**Full auto/single shot or burst:**

**Short:** 30/40 m

**Medium:** 70/90 m

**Long:** 140/165 m

**Weapon Reliability:** 97%

**Base Cost:** Cb 180

#### Reload Cost:

**(10-round magazine):** Cb 2

**(20-round magazine):** Cb 4

**(30-round magazine):** Cb 6

**Notes:** Thomas Arms has produced a general purpose rifle which is popular with civilians as home-defense and militia weapons but which has been purchased by several government agencies as a limited-distribution military weapon as well. Thomas Arms, based on Donegal in the Lyran Commonwealth, has a reputation for reliable







## Decompression: Surprise on Ramsau's Moon

*With Decompression, BattleTechnology continues its series of personal narratives by veteran BattleMech warriors.*

*'Mech combat on airless worlds is a common occurrence—quite common, in fact, though news reporting generally passes over such engagements in favor of more dramatic or climactic battles on more important—and populated—worlds. The fact remains that there are thousands of airless worlds and worldlets throughout the Inner Sphere, barren, utterly inhospitable places important because of their location athwart some vital trade lane, or because of the resources of metals or hydrocarbons or ice which they harbor, or simply because someone has built a base or outpost there and someone else finds a moment's strategic importance in knocking that base down.*

*Decompression is a personal narrative by Lieutenant Vincent McCabe, Fire Lance Leader of Company B, First Battalion, of the Star Warriors mercenary BattleMech regiment, currently under contract to House Steiner. A recent participant in a raid on the airless moon of a Kurita-held planet in the Rasalhague District, he is in an excellent position to describe the tactics, hazards, and experiences of BattleMech forces engaged in such an environment.*

*This is Lt. McCabe's first contribution to BattleTechnology.*

### Decompression

We were maintaining radio silence, even though Gordo didn't have an ionosphere which might have bounced our signals over the horizon. If the Dracs had had even an inkling that we were where we were, it would be all up... and Void alone knew how many Kurita spacecraft and relay stations and DropShips might be on our line-of-sight, snooping for just such a party as ours.

It wasn't the radio which worried me, though, it was our color. Sure, sure, it's always tough to paint a 10- or 12-meter-tall BattleMech in any kind of a camouflage scheme that'll cut down on the thing's silhouette, no matter where you are... but we're talking *high visibility* here. All six 'Mechs in our strike group had been painted

bright, bright silver, and as we started our long, loping trot across one of Gordo's black, empty *maria*, I felt about as inconspicuous as a BattleMech at a social cocktail party.

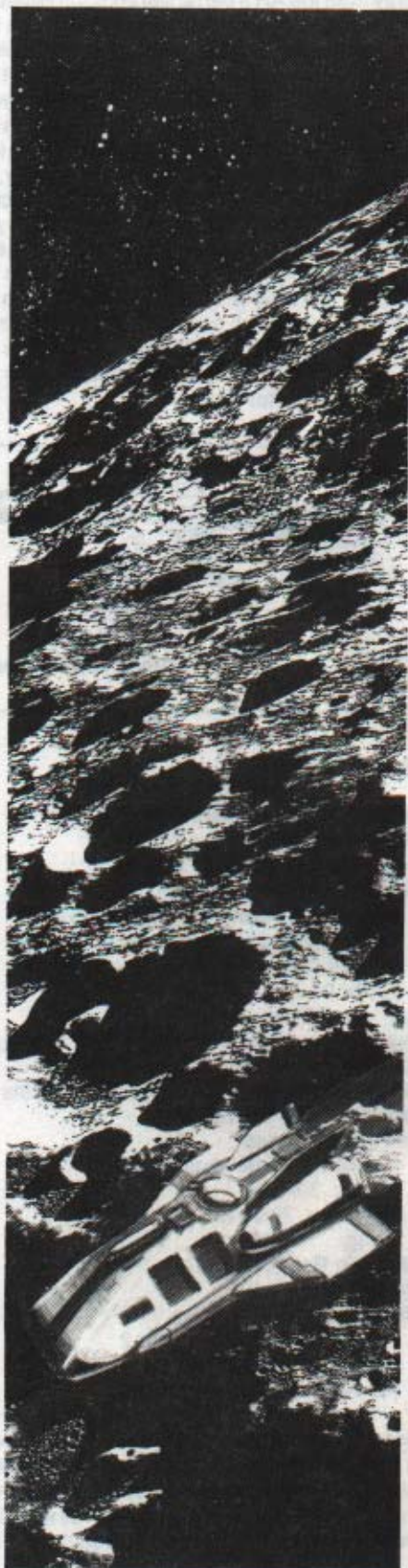
Or a big, fat beetle crawling across a dinner plate.

Our half-company strikeforce had been drawn from the two top companies of the Star Warriors. When the Steiner command needed an elite strikeforce to hit the Kurita C<sup>3</sup> hidden on Gordo, they went and hired the best. The Warriors are mercenaries, the best. We've been in 27 major actions and Void only knows how many skirmishes, holding actions, and the like. Mostly we'd been working for Hanse Davion, but Colonel Christie had taken a short-term contract from Katrina Steiner, and so late 3027 found us in the Ramsau System, a long, long way from help.

You've heard of Ramsau? The planet is Ramsau III, a pleasant enough place if you like large, cold deserts, ice across half the planet, and a day six times longer than it ought to be. There's a growing season there, but the crops aren't anything humans would care to eat... and Earth-type crops don't do well when the nights are 70 hours long. That means every bite to eat has to be shipped in... or else grown in huge, underground hydroponics facilities with artificial lighting.

So why did the Steiners want to hit such an uninviting place? Well, they didn't tell us all the details, of course, but it was easy enough to tell that the Steiners were figuring on making a move against Kurita, and that the move would be some time soon. The Lyran news media was full of patriotic fervor... bits on how they should take back what the Draco Combine had taken from them, how we all must pull together, and all that. Tensions had been up all along the border ever since a former Steiner planet called Verthandi tried to kick its Draco masters out, and the usual raids and counter-raids and saber-rattlings had been on the increase ever since.

So, with a big push coming, the word was out that mercenaries were needed, especially elite groups. The Steiner brass de-





decided that what was needed was a deep penetration raid, something to really shake the Dracs and make them start looking nervously over their shoulders all up and down the Kurita-Steiner frontier. Nervous troops can be rattled easily... and maybe the Kurita command would start trying to spread their people around in the hopes of covering everything. Spread them thin enough, and the Steiner push might have a chance of making real headway when it came.

As for the reason why they chose Ramsau in particular, well, look at it this way. Destroy the food production facilities on that one planet, and the Kurita command would have to make an unpalatable choice: tie up dozens of Jump- and DropShips ferrying in food and equipment to repair the hydroponics farms, or let the people starve and face the unrest *that* would cause on every Kurita planet from Dieron to Rasalhague. Whatever the propagandists say about the Drac bosses on Luthien, they weren't about to write off the population of a whole planet. A population of ten million was far too large to pack up and move on short notice, but if the Dracs scrambled, they might be able to organize a relief expedition—a fleet to ferry in enough emergency food to keep the people going while they repaired the hydro farms.

And man, would *that* ever put a crimp in the local Combine shipping! Every Jump-capable transport in a 50-light-year radius would have been pressed into service to carry enough food to keep several million people fed for maybe two or three months.

A neat plan. The hydroponics farms were clustered together in one area outside Ramsau's lone population center at Sauton. Our forces come down hard, take the

spaceport, hold the enemy defenses at bay, and send a team in to wade through the growing vats. Simple, except for one thing.

Steiner's intelligence sources reported that Ramsau's defenses were not coordinated from the surface of Ramsau, as you would expect. Every decent defense force needs a C<sup>3</sup>—that's milslang for Command, Control, Communications, and means, to the uninitiated, military headquarters. Usually, a unit's C<sup>3</sup> will be hidden someplace safe—in a cave, out in the woods, buried into a command bunker, or whatever. Davion likes to hide his underwater sometimes, if there's a convenient ocean nearby.

At Ramsau, things were different. Ramsau III has a single moon... a very large moon quite close to the planet. It's called Gordo, and it's an airless, cratered ball of rock and dust nearly 4,000 kilometers in diameter, less than 140,000 kilometers from Ramsau. At that distance, Gordo circles the planet in something like six days—a hair over 140 hours. The problem is, that large a satellite that close to its primary creates a tidal drag which has been acting like a brake on Ramsau's daily rotation for the past few billion years. Today, Ramsau has a day which is six standard days long. In other words, Ramsau's moon is always suspended over the same spot on the planet; the two are locked in a cosmic embrace, each facing its companion with the same faces eternally turned towards the other. Sauton is located close to the planet's equator. From there, Gordo is always—*always*—suspended in the sky directly overhead, never rising, never setting.

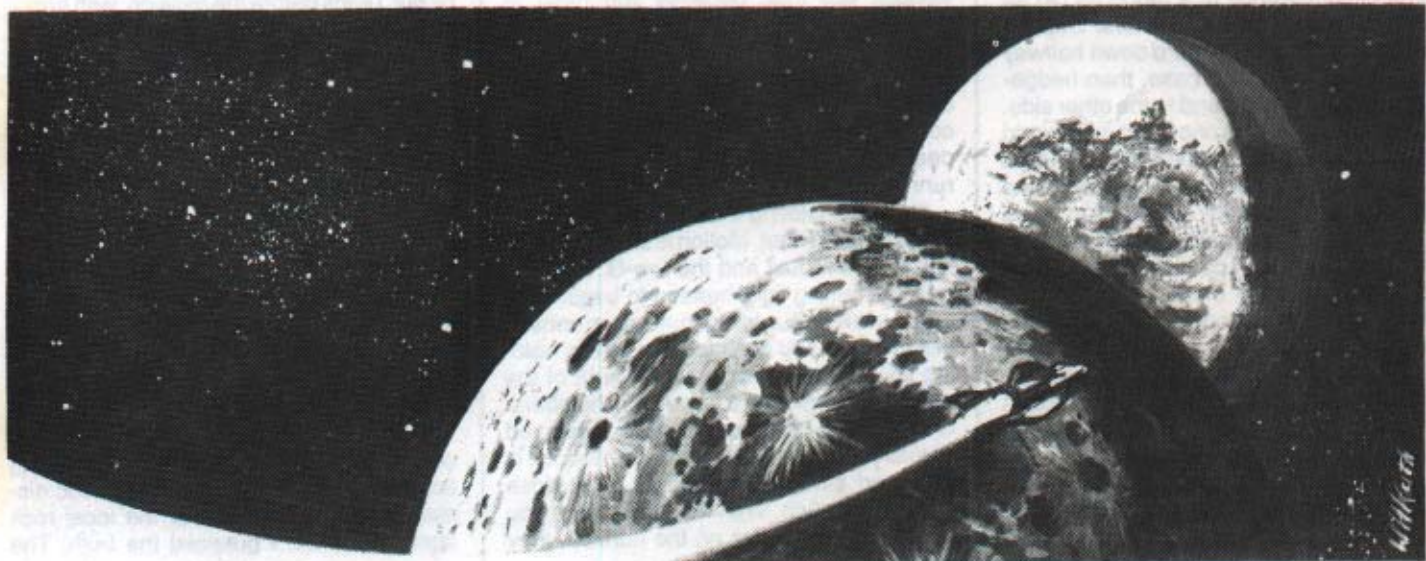
And the Kurita C<sup>3</sup> base was located on the Ramsau-facing side of Gordo, with the vast, mottled, white-on-blue globe of the planet always half-filling the sky directly overhead.

The set-up was ideal. From Gordo, the Kurita defense command could keep an eagle eye over everything going on on the surface of Ramsau anywhere on the same hemisphere as Sauton. Nothing could approach Sauton without the Dracs knowing about it. Cloud cover is a rarity in Ramsau's thin air... and Gordo was close enough that the moon's radar arrays could probably have picked up something as small as a BattleMech even at *that* distance. In any battle on Ramsau's surface, the Kurita defenders would have an overwhelming advantage with their C<sup>3</sup> people hanging there, directly overhead, watching and commenting on everything that was going on!

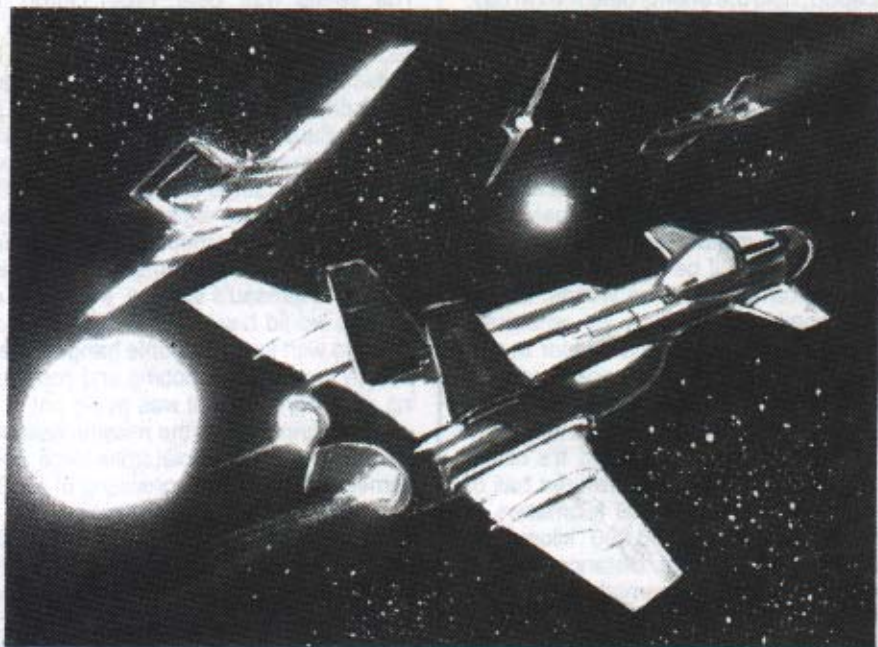
Which brings us to the mission assigned the Star Warrior's special strike force, code-named "Ranger" and consisting of six BattleMechs under the command of old "Crasher Chris" Christie himself. The idea was that Ramsau would get hit by a full-fledged planetary invasion—a full regiment coming in hot in an *Overlord* and six *Union*-class DropShips, with three wings of AeroSpace fighters for support and a half dozen *Leopards* to carry the armor and infantry.

A force like that smashing into Ramsau's inner system would be enough to make the Kuritists sit up and take notice! We expected a heavy AeroSpace defense, with a hard battle to win before our 'Mechs and troops could set down on Ramsau's surface.

The Kurita high command would be so tied up, in fact, that we figured they would never notice one small *Leopard*-class DropShip making its way in 'way, way off to the side, out of the main battle. That *Leopard* would be us, reconfigured to carry six light 'Mechs instead of its usual four 'Mechs plus two fighters.







Everything went by the numbers, one-two-three. We broke out of JumpSpace at Ramsau System's Nadir Point and realized we'd caught the Dracs napping. There was no guard mounted at the JumpPoints, no fighter patrols, no sign that we'd even been sighted until we picked up their fighters rising to meet us as we backed down on the final leg of our deceleration into orbit.

The battle was on, with fighters tangling, our *Lucifers* and *Chippewas* going after their *Slayers* and *Shilones*. With every electronic eye in the system fastened to that battle, our *Leopard's* pilot cut power and drive and let our ship drift blind into the shadow of Ramsau's moon.

The circumference of a moon as big as Gordo is over 12,500 kilometers. Captain Forrest brought our *Leopard* down halfway around from the Kurita base, then hedge-hopped all the way around to the other side.

Hedge-hopped? Wrong word on a world with no air, and a landscape which is all dust and rock, craters and low, gray mountains sand-blasted smooth by a few billion years of micrometeorite impacts. Better say crater-hopped instead. I don't think that *Leopard* hauled its belly much more than 10 meters above the moon's surface in that whole six-and-some thousand klick passage. I suppose Draco radar on Ramsau's surface could have spotted us if they'd been looking, but we figured they'd all be looking elsewhere—watching for when our Drop-Ships started their descent approach. Radar stations on Gordo could have seen us... but we stayed well below their horizon,

our approach blocked by the mass of Gordo itself.

The horizon on a small body like Gordo is close—real close. From 10 meters up, the horizon is only a bit under seven kilometers away. Captain Forrest crater-hopped us to within 15 kilometers of where Steiner Intelligence had said the Draco base was, then grounded us on the floor of a large, shallow, low-walled crater. The ramps came down, the restrainer clamps snapped free, and our six 'Mechs bounded out onto Gordo's surface.

Bounded is the word for it. Gordo pulls about a fifth of a G in surface gravity. It's dangerous to push your speed too far on a worldlet like that, because you have to remember that your BattleMech still masses just what it would in one standard G... even if it doesn't weigh as much. The distinction between *mass* and *weight* is confusing for people who haven't had to deal with it. Suffice to say that a BattleMech running full out in .2 G is *very* hard to stop!

It's eerie, piloting a BattleMech across a landscape like that. Motion is smooth, cushioned by the dust and the low-G. Hell, we were all feeling light-headed to begin with, and the low grav adds to that feeling considerably when you can't feel the straps holding you to your chair, or the weight of the neurohelmet resting across your shoulders! Out through the canopy and displayed across your console screens, the horizon is gray and silver against black, and close enough to touch. With no air between you and those mountains on the horizon, they

take on the look of cardboard cutouts, sharp-edged and harsh, and so flat you think someone's going to pull the props out from behind them and they'll fall over flat, ka-whump!

Only they wouldn't go ka-whump, of course. No air, no sound. You hear the creak of joints and fittings inside your 'Mech's head as it moves, and the usual rasp of your air supply, the low hum of heat pumps and circulators... but there's not another sound in the universe, and you can get to feeling very much alone.

Maybe it was the loneliness that got to me in the end. Feeling lonely when you're trying to sneak up on an unfriendly playmate is *not* a comforting thing! I wanted to haul my 'Mech over to the pools of black shadow which lay in the light-lee of every boulder, cliff, and mountain wall we passed... haul over and *hide* because I felt so damned conspicuous.

You see, everyone knows that probably the biggest problem a BattleMech faces in combat is heat... and in vacuum that problem is a lot worse. Don't believe the 'Mech drek you hear about the "icy cold of space." That guff is strictly for the space opera holovids... the ones with gorgeous girls wearing fishbowl helmets and not much else for space suits! Hey, you don't believe me? Well, how the hell do you think a vacuum bottle keeps things *hot*? There is no better insulation in the universe than a bit of hard vacuum, and that means that a spaceship... or a BattleMech on an airless moon... has to pay one hell of a lot of attention to getting rid of excess heat—both what it makes itself and what it soaks up from sunshine undiluted by a few miles of thick, comfortable atmosphere.

So our six 'Mechs had been worked over by our Techs before the mission, with armor pulled off in spots to accommodate bigger, heavier heat sinks and special radiator vents. If anyone had cared to look our way with an IR detector, he would have sworn he was being attacked by six giant, two-legged magnesium flares.

The other thing we could do was paint our 'Mechs silver. Every surface that would take it had been anodized with an aluminum-silver oxide that made us look like great, walking mirrors. The sunlight glared off our 'Mechs like laser fire. At one point as we loped along the surface, my curiosity was nudged by an unusual pale, wavering flicker of light I could see from time to time along the rocks and in the shadows we passed. I was about ready to believe I was seeing some sort of strange electromagnetic display, some phenomena of the local rock chemistry when I guessed the truth. The



sunlight reflections from our 'Mechs were splashing across the rocks as we moved like spotlight beams!

Anyone who has dreamed he's walking in stark naked on a high-society dinner party knows about how I felt. The *mare* we were crossing was broad and dark and utterly flat—nothing more than a scattering of big rocks and small craters and a Void-awful expanse of empty in every direction you looked.

A rock wall was visible ahead, crawling up above the horizon with every hundred meters we travelled. The Colonel pulled us up with an upraised metal arm when we were maybe two clicks from the wall and signaled us to disperse in complete silence. The approach formation had been worked out before we grounded, of course, in a half dozen sweat sessions poring over old ComStar maps and Intel reports. Colonel Christy's *Wolverine* was in the center, with my *Shadow Hawk* 90 meters to his right. Feodor Blanski's *Griffin* was on my right, while Kathy Drake's *Centurion* was on the Colonel's left. Our two light 'Mechs, O'Hanrahan's *Stinger* and Lawrence's *Commando* deployed out ahead and to either side, so that we were moving towards our objective in a crescent formation half a kilometer across, with the open side towards the enemy.

The maneuver was completed with absolute radio silence. The target was still below the horizon, just on the far side of that rock wall, but a Kurita fighter passing overhead might hear us and pass the word to the Draco C<sup>3</sup>. If what we were attempting was to

have any chance of success at all, we *had* to keep the advantage of surprise.

The Colonel signaled, and we started forward again. My mouth was as dry as the dust under my *Shadow Hawk's* feet looked. Ramsau was overhead, a blue-white crescent with Sauton's lights visible as a golden splotch in the middle of blackness. The rock wall was closer now, and I had the uncanny feeling that there were a few million pairs of eyes along that rim, watching us cross the empty plain.

I wanted a drink of water but didn't quite dare. Standard procedure for vacuum operations is to wear your pressure suit tight and sealed. It's uncomfortable... Void, is it uncomfortable! The usual garb inside a BattleMech cockpit besides your neural helmet and sensors is shorts or trunks, a coolant vest, and skin. Most 'Mechs have an air conditioning fitting that can be hooked up to your pressure suit through a valve coupling over your liver; even hooked up like that, sweat pools in your boots until you slosh when you move them, and the suit clings everywhere, sweaty and itchy, like a slimy second skin. You have to leave your helmet off inside the 'Mech, of course, since vacuum helmets aren't equipped with neurohelmet circuit rigs. But wearing the pressure suit, at least you have a chance, if you start losing air to hard vacuum, to disconnect from your neurohelmet, haul your pressure helmet out from its rack behind your seat, seal it over your head, and be able to breathe while you wonder if someone's going to start using your now-dead 'Mech for a stationary target.

All of this meant I couldn't get a drink of water. Those pressure suits are too close and tight to be equipped with a catheter, and I don't think I'd care to use the thing if my suit had one. As much as I wanted a sip of water from the emergency tank behind my left shoulder, I refrained, figuring it would be a good many hours yet before it would be convenient to unseal my suit for a purge of the ol' organic plumbing. I made do with a stick of chewing gum from my survival kit, and sat there, hands on the control sticks, eyes fastened to the cliff, my jaws working that gum like the cycle extractor on a 120 mm autocannon feed. The Combine people were out there, somewhere. I could feel it... and the dead silence around me was entirely *too* dead for my peace of mind.

The cliff, our immediate objective, was less than 20 meters tall in most places. It was broken and rugged, in places little more than a vast spill of boulders and gravel, but it was not steep. Once we'd scrambled to the top, we should be able to see our objective, a cluster of domes and dish antennas maybe a kilometer beyond the crest of the ridge.

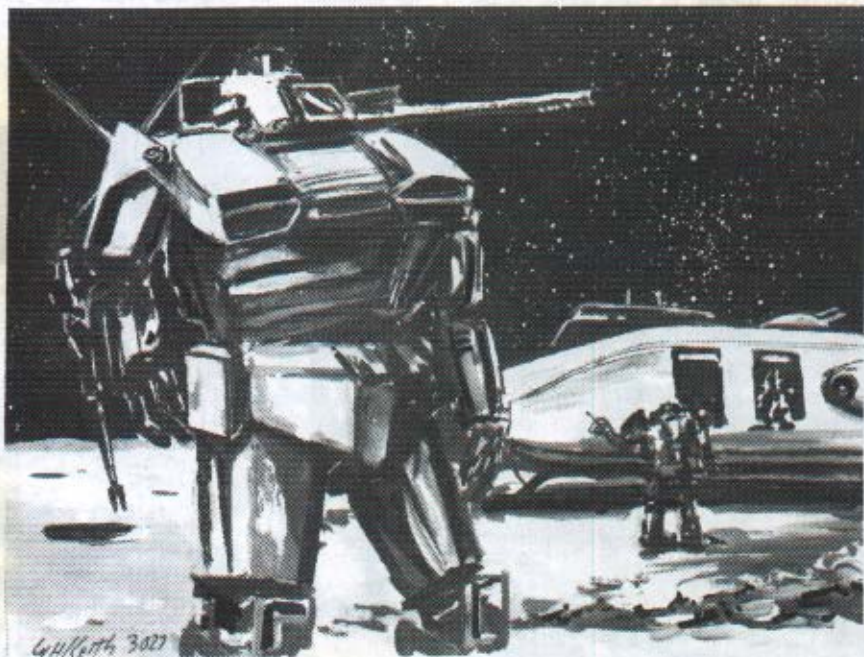
Our formation moved on, the ground rising now beneath our metal feet. The thin, soft layer of dust which blankets most of the *maria* gave way to gravel and loose rocks. We had to watch our footing, but our pace was not slowed. We were perhaps 300 meters from the crest of the ridge.

I almost didn't see it when it happened. A flare of light caught Melissa Lawrence's *Commando* at the far-right tip of our crescent, and it was only by chance that her machine was at the edge of my line of vision, 180 meters off. The second flare of light came an instant later, bracketing Blanski's *Griffin* in a triple blast that seemed all the more startling for the fact that the explosions were absolutely silent.

"Ranger One to all Rangers!" The Colonel was on the tac net. Radio silence hardly mattered *now*. "Plan Kilo... *execute!*"

We had a list of possible tactical evolutions, each identified by a code word so that Combine eavesdroppers wouldn't know what we were doing before we did it. Kilo was a simple refuse-the-right advance. Blanski and Lawrence would hold their position, while the rest of our line would swing forward and to the right like a huge gate.

White light shattered a rock ten meters to my front. The explosion was silent, but I heard a rattling *tictictic-tic* as fragments danced off my cockpit canopy. There must have been other explosions—and some hits on our people—because the tacnet was filled with a babble of voices. O'Hanrahan





was reporting fire from his front and a hit to his *Stinger's* left leg. Feodor Blanski was asking for help—heavy damage to his *Griffin's* right arm and torso. Colonel Christie was shouting for Kathy Drake to get her *Centurion* forward, when the magnetic surge from a PPC hit blasted the tac net with static.

And I couldn't even see where the fire was coming from!

Then my cockpit blanked out in a glare of white fire. There was noise this time, too, a gut-wrenching whoom that hammered at my ears as something hard and heavy smashed my *Shadow Hawk* square in its chest.

I triggered the autocannon off my shoulder, spraying rounds blindly towards the ridge crest in front of me. As my vision cleared in the after-dazzle of the bolt that had hit me, I could see geysering spouts of grey dust erupting along the crest where my AC shells were exploding.

There! My fire had flushed something... a *Dragon* by the squat, blunt-nosed shape of it. The *Draco* 60-tonner scuttled to my left and turned. I could see a ripple of fire across its snout as it cut loose with a volley of long-range missiles.

Then the geysers of smoke and dust were falling around me as I rolled my *Shadow Hawk* right. A missile struck my left arm, high up on the shoulder, and an instant later two more struck home on my 'Mech's left torso. I triggered my autocannon again, tracking the *Dragon* as it began backing down below the ridge crest, then brought up my right arm and flashed my Martell laser at him. Then the target was gone, but I caught a glimpse of tiny, glittering flecks of metal settling slowly against the black sky above the ridge. I'd hit him!

I urged my *Shadow Hawk* forward. My evasion to the right had put some distance between me and Colonel Christie. I could see the Colonel's *Wolverine* maybe 120 meters to my left and ahead, making its way through a tumble-down of house-sized boulders.

Then I spotted the bunker.

Void... what infernal luck had led the *Dracs* to plant a perimeter bunker there, *there*, of all places? Were they so sure an attack would come from that direction, across the flat and empty *mare*? Or had they so ringed and fortified their C<sup>3</sup> that we would have stumbled into one of the things no matter which way we'd come?

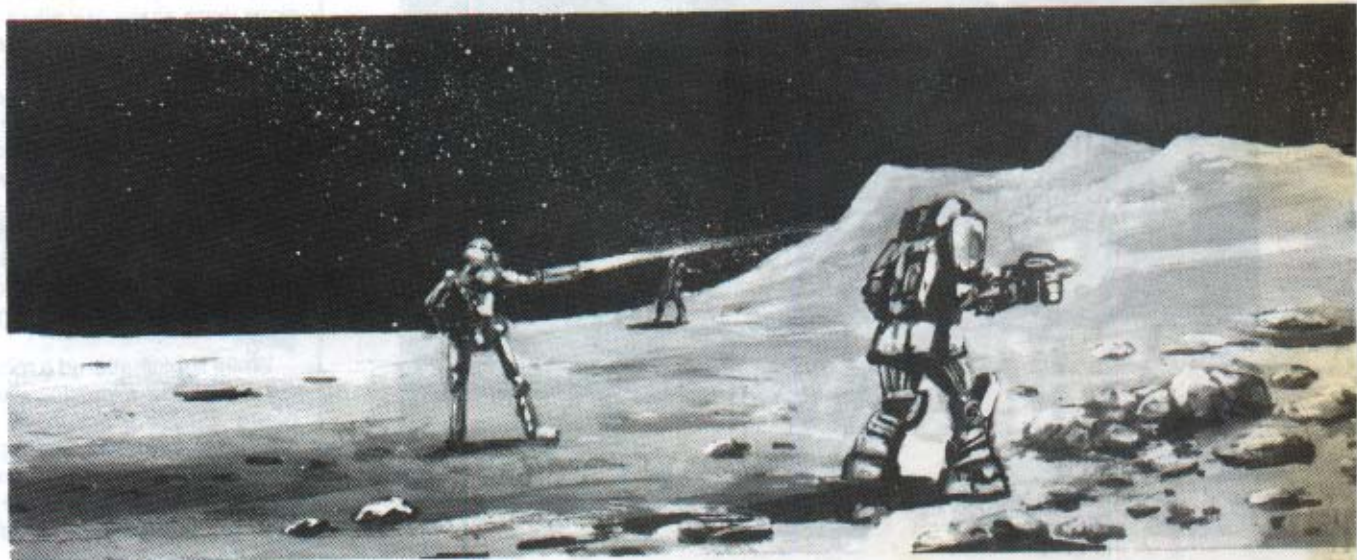
We'll never know... but I would give my *Hawk's* left arm and a year's supply of AC ammo to have a quiet word with the Steiner Intel bastards who located the Kurita C<sup>3</sup> post with such precision... and completely missed the fact that it was so well-guarded!

The bunker was hard to see—poured ferrocrete painted to look like the surrounding rocks. I saw the movement of a snub-nosed weapon but didn't recognize it for what it was until it lit up blue and fire blossomed off the Colonel's *Wolverine*. Colonel Christie was firing back, autocannon and missile fire smashing at the bunker only ninety meters from his position. Dust rose above the moon's surface in a blanketing cloud. Laser and PPC bolts were visible now as they carved through the dust, lightning made visible, arrows and great, stabbing spears of brilliant light lancing across that stark landscape.

"Rangers, all Rangers! This is Ranger One! I'm hit... bunker at triple zero, range one hundred, my position! Heavy laser and a PPC!" There was another burst of light and the hiss-snap of static.

I swung to my left, angling towards the Colonel and the *Draco* bunker. At 120 meters' range, I thought I could lay enough fire on that gun emplacement to give the Colonel a chance to back away. "Ranger One, Ranger Three!" I yelled into the tac net. "Covering coming down!" The targeting brackets on my cockpit HUD closed in on the heat source my computer said was the narrow fire slit of the hidden bunker. Autocannon fire smashed and flashed across rock and ferrocrete. The sound of the gun transmitted itself through the hull of my 'Mech as a dull "thumpthumpthump." Sunlight sparked off chips of rock spinning off into space as rapid-fire violence rained onto the emplacement. I added burst upon measured burst from my right arm's laser and loosed a pair of Holly SRMs from my head racks for good measure. For a moment the gun emplacement was obscured by dust and flying debris.

The explosion of a PPC burst against my front armor picked me up and flung me back with the force of a head-on collision. Heavy laser fire played off my 'Mech's torso, as a dozen red lights winked on across my cockpit display. I was slammed back against my seat by the force of the blast, then jerked violently forward as a second double blast smashed my 'Mech back another step, then slammed to the left as the machine lost its footing and tumbled over backwards. My restraining straps kept me in my seat, but the belts cut into my shoulders even through the material of my suit, and the thunder of my fall left my ears ringing. A big, flashing red light at the bottom of my HUD shrieked for attention. My *Shadow Hawk* was overheating, and my computer was threatening a shutdown.





My *Hawk* had picked up plenty of heat already in the trot across that barren *mare*. My extravagant display of firepower against the *Dragon* and then against the bunker had driven my heat load all the way to critical. Four solid hits from those heavy *Drac* weapons had been enough to force me into the shutdown range.

I slapped my hand down on the override. I couldn't let my *Hawk* quit on me now! My neurohelmet transmitted the sense of my 'Mech's position... flat on its back. Somehow I rolled the machine to the side and brought it to its knees. I could see the gun emplacement straight ahead, both ugly barrels drawing down on me. The fire-blackened throats of those weapons looked like cavernous mouths, gaping death at me...

Polarization of my canopy and my neurohelmet visor saved my eyes when that heavy laser fired again, but the bolt washed across my canopy with a burst that blacked out my vision for a moment. I fired back, blindly, cutting loose everything I had. Words painted themselves across my HUD, warning again of shutdown. Again I slapped the override... and felt sick horror as I saw the override refused! My *Hawk* was cycling down its power plant, shutting itself off!

Then there was another shock as my *Shadow Hawk* collided with something big and heavy, and the cockpit swung wildly to the right.

I'm still not sure how much time passed after that. I know I swam up out of a warm and groggy muzziness, know I first became aware as I tasted salt and felt the wet drip of blood from my nose and cheek underneath my neurohelmet. For a moment I couldn't hear a thing, so loud was the ringing in my ears.

Then other sounds penetrated my dull awareness... a rasping, whistling hiss, and the keening whoop-whoop-whoop of my cockpit's depressurization alarm.

Panic dragged at my breath, clutched at my guts. My cockpit had been breached, my air was spilling out into space. Instinctively I grabbed for my pressure helmet with one hand, while the other began fumbling with the release catch for my neurohelmet.

Movement made me pause.

The Kurita *Dragon* was scarcely 30 meters away, moving from right to left across my line of sight. I could see the bunker in the distance beyond, a gaping crater now where the firing slit had been before. Had I hit the bunker as it had fired its last volley at me... or had one of my comrades finished it a moment later? There was no way of knowing... but it was clear that the emplacement's destruction had saved my life. My 'Mech had tumbled back into a sitting position, its back up against a large boulder. If the emplacement had kept firing, it would have hammered my *Shadow Hawk* to pieces in much less time than it would have taken the air leak to kill me!

Another Kurita 'Mech appeared... a 35-ton *Panther*. Both 'Mechs were picking their way down the slope past the blasted emplacement, and both were ignoring me.

Well, why not? My *Hawk* must have been down and motionless for some time now, and the ruin the emplacement's weapons had dealt to my front torso armor must look like a fatal hit.

Hell, it might still be a fatal hit! My instrumentation showed severe damage in a dozen places, my left arm actuators completely dead, my power plant shut down by the computer in firm denial of my last override attempt. And the alarm kept up its

shriek of death and doom, mingled with the thinning hiss of escaping air.

Already it was difficult to breathe. I redoubled my attempt to free the neurohelmet. There was nothing for it now but to pull on my pressure helmet before it was too late. The 'Mech's on-board survival pack would keep me alive for another few hours, anyway. I would surrender to the Kurita salvage crews when they came for my 'Mech.

Maybe I would live... ransomed back to the Warriors.

Or maybe I would die of suffocation before anyone came to get me.

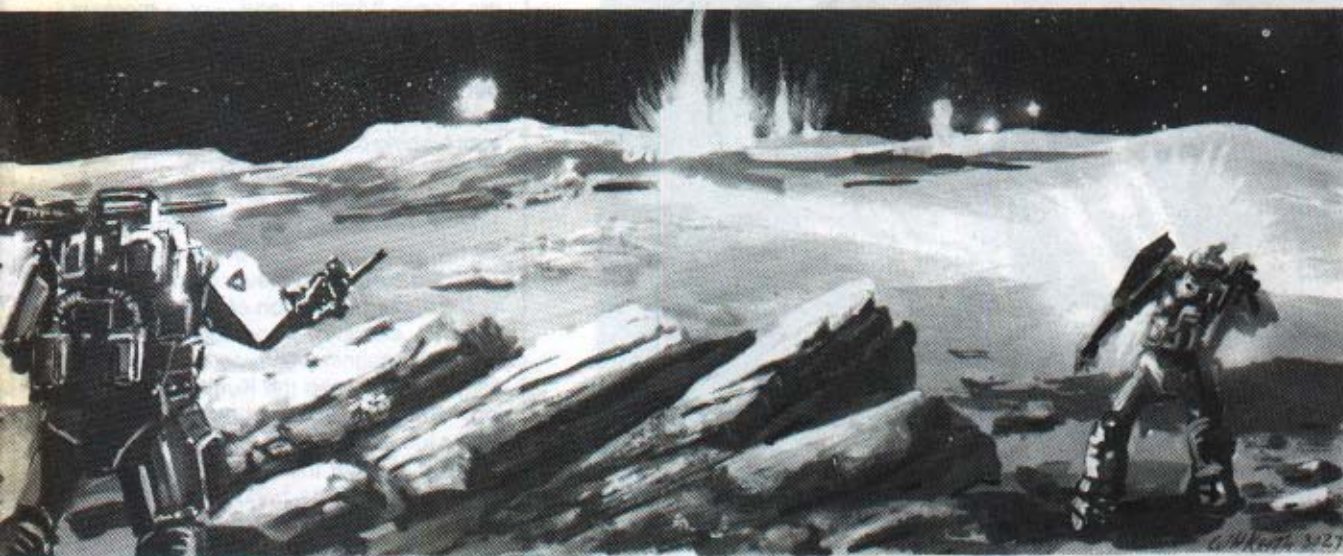
I paused again, listening to the whistle of air. This wasn't right... not like this, not now. Those two enemy 'Mechs were so close I could almost touch them. To give up without struggling, without fighting back...

If I pulled off my neurohelmet and replaced it with my pressure gear, that would be it, so far as my *Shadow Hawk* was concerned. There would be no way to power the 'Mech up, no way to move or fight it. I could blow the head escape hatch and crawl out, or could sit in the dark, airless cockpit, but either way, my *Shadow Hawk* would be a useless, 55-ton pile of dead metal.

But if I left my neurohelmet on, I'd be dead in another few minutes from loss of air. I couldn't see where the cockpit leak was, but it was funneling my air out into space at an appalling rate. The air tasted mighty thin already. I couldn't tell if it was thin air or panic that was making me gasp, making my chest heave and fight against the restraining straps, but either way I didn't have long to live unless I acted fast.

Idea!

There was a waste receptacle on the left side of my seat, a little pouch for cramming





incidental bits of garbage. I fished through the pouch now, and brought out the scraps of paper from the stick of chewing gum I'd opened earlier. With trembling, fumbling fingers, I tore the scraps of paper and tinfoil into tiny pieces, then flicked them from the palm of my hand into the air.

They spun and whirled in front of my helmet visor, then began moving on eddying currents of air, fluttering and spiraling towards my right. There! Like an arrow, they lined up on a hole in my cabin's pressure wall, smaller than my little finger and almost hidden by the twisted bundles of wiring and conduit piping which decorated the interior walls of my 'Mech's head. I could have searched for an hour and not found it, but the rush of air through that hole was blasting those scraps of paper into the wall and out into space.

It was frightening how close I'd come to death from that tiny hole. A fragment—possibly a piece of my own armor exploding out from one of the emplacement's hits on me—had blasted through my head armor like a high-velocity armor piercing shell. The fragment could easily have penetrated my own head as well.

As it was, the solution was easy. I opened my neurohelmet visor, reached into my mouth, and extracted the blood-soggy wad of chewing gum which was still resting there, between my teeth and my cheek. I shoved wiring bundles aside and pressed the gum against the hole. I felt a moment's

alarm as the soft blob began to disappear into the hole, but then it caught and held, as I worked to smear it out across the puckered metal surface around the breach.

It was working! The alarm cut itself off as the pressure loss stopped. The metal was icy cold, and the gum was becoming brittle even as I worked with it. Space may not be cold, but things left in shadow on the surface of an airless moon can become quite cold. My *Shadow Hawk* had fallen back into the black pool of shadow cast by the boulder I was leaning against. I realized as I worked that during the time I had been out of it, the heat from my *Shadow Hawk* must have bled out into the frigid, shadowed boulder in a process as efficient as any heat sink. I tested my notion a moment later when I refastened the neurohelmet and closed my hands on the *Shadow Hawk's* controls.

Power throbbed, and the *Hawk* came to life again. My console displays lit up with a disconcerting number of red lights outnumbering the green, but my power and weapons systems were intact. Intact!

I could still fight.

I cast a glance at my make-shift patch job and prayed that it would hold. A hole like that meant the metal around it was weakened. Another jolt, even the movement of my BattleMech, could open the hole or jar loose the chewing gum plug, and I would begin bleeding atmosphere again.

I looked up, searching for the Kurita 'Mechs. There they were, haloed in light

from a laser's blast. Colonel Christie's *Wolverine* was there, down and badly damaged, but still fighting as the two Kurita 'Mechs moved in close. Their backs were towards me.

I didn't bother bringing my *Hawk* to its feet. I opened fire with autocannon and laser together, targeting on the *Dragon* a hundred meters in front of me. Explosions flashed and danced across the *Dragon's* back, a solid, clean hit! I checked my display, noted my head SRMs were dead, cursed and fired my two main weapons again. The autocannon chewed into gaps and craters already opened up by my first volley. The laser hit wiring and plumbing exposed to raw space, and an explosion of vapor and fragments erupted outwards in a glittering, silent cascade.

The *Dragon* tried to turn, but its feet twisted and it went down on its knees, just as a third autocannon burst chopped into its back. The *Panther* had turned already and was firing wildly at me with its right arm PPC, but the bolt went wide and arced lightning across a boulder to my right.

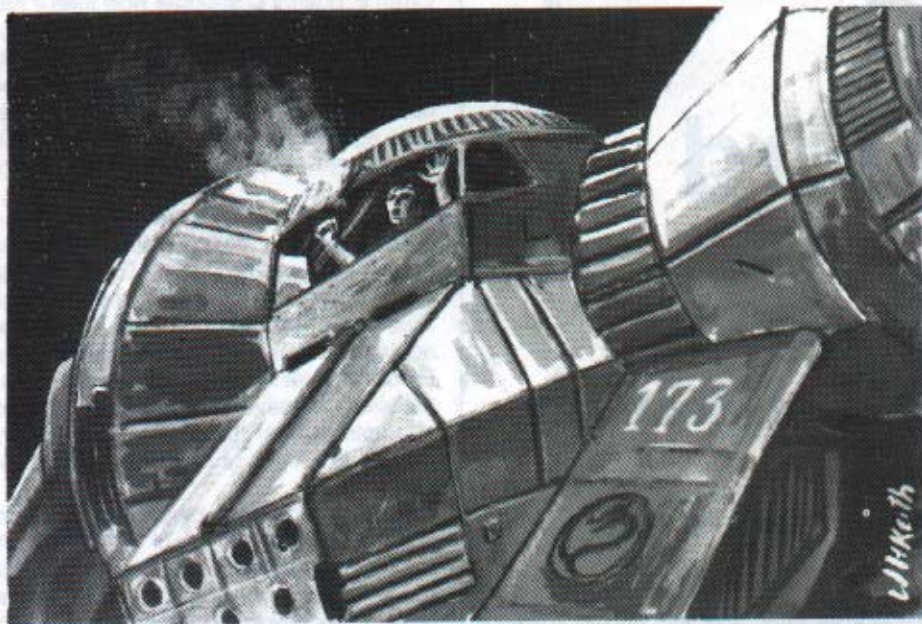
The *Dragon* down, I shifted targets. Autocannon and laser firing together, I walked fire across the *Panther's* torso and arm. Fragments rained in slow motion across Gordo's dusty surface. The *Panther* staggered as though clubbed from behind. Autocannon fire caught it from a different direction, spinning it around in a silent dance of destruction. The Colonel had caught the *Panther* in his sights, and our crossfire had the hapless 'Mech balanced between two ragged streams of fire, a puppet suspended on twin strings of death.

The *Dragon* was on its feet again. I switched from the *Panther* to the *Dragon* and hit it with another laser bolt. A cloud of sparkling, silvery motes was growing about the heavy 'Mech's head. For a moment I thought its pilot was deploying an anti-laser aerosol, a silvery fog to scatter laser beams, but then I realized that what I was seeing was ice crystals, freezing out of the air which was rushing out of the *Dragon's* cockpit into space.

The *Dragon* froze in mid-turn, the big autocannon which was its right arm pointed in my direction... but the expected and dreaded burst of fire never came. Instead, I could make out motion of some sort in the 'Mech's canopy. I boosted my console screen's magnification, zooming in on the target. I could see the Kurita 'Mech's canopy clearly now. The transparency was dark, too dark for me to see inside, but I could make out the long, wildly thrashing shapes of two arms, hands twisted into fists, pounding against the canopy from the in-







side. Once, for an instance, I glimpsed a face against the transparency, mouth gaping in unheard screams, eyes starting from their sockets...

The cloud of ice crystals around the shattered head grew. The thrashing grew slower, then stopped entirely.

I had my *Shadow Hawk* standing by then. I'd had an idea of trying to help... but there was no time to do anything. Didn't the *Dragon's* pilot have a helmet? Had it been damaged? Or had he simply panicked and tried to claw his way through solid armored transplas when his air started blasting into space? I felt a thin, cold flutter across my heart. *That could have been me...*

My radio was out, but Colonel Christie gestured his intent clearly enough as I helped his battered *Wolverine* to its feet.

Retreat.

I remember being furious at the time, feeling tempted to ignore the order and push on to the objective... but training and discipline and common sense took over in time. I realized later that retreat was by then the only option open to us. The Kurita forces had been waiting for us. The gun emplacement would have spotted us while we were still five clicks out across the *mare*, giving the Combine forces time to move into position. We'd lost Feodor, his *Griffin* savaged by crossfire from the *Dragon* and the emplacement... and O'Hanrahan was wounded, his *Stinger* badly shot up by a scrap he'd had with a pair of Kurita light 'Mechs. We had to leave Feodor in the wreckage of his *Griffin* and double-time back across the *mare*. We'd destroyed two

enemy 'Mechs and damaged two others, as well as knocked out the gun emplacement... but our surprise had been lost. How many 'Mechs remained up there above that rock wall? How many more emplacements? Even if we'd managed to destroy every Kurita 'Mech on Gordo already, how long would it be before Kurita DropShips summoned by the C<sup>3</sup> the moment we'd been sighted showed up with a company or two of reinforcements? Or a squadron of *Slayers* or *Shilones*? We spent that whole, long run back across the *mare* with that horrible prickle between your shoulder blades that has you convinced an enemy fighter is going to come winging down out of your six at any moment, lasers and missile launchers blazing. No, the mission had been blown the instant that gun emplacement fired at us. We were lucky the five of us made it back to Captain Forrest's *Leopard*, lucky we were able to lift without being attacked by Kurita fighters.

And by the time we were in space again, we'd had the word for a general retreat. The Combine's defenses over Ramsau were just too strong. To press the attack down to the surface with space controlled by enemy fighters—and watched by the Gordo C<sup>3</sup> post—would have been to invite utter and complete disaster.

I learned a thing or two, though. I learned something about the thin edge of chance in battle, where Intel's failure and the location of one gun emplacement made the difference between victory and defeat. I learned something about my own mortality when I saw that *Dragon* pilot die... while my better

than 4-million Cb *Shadow Hawk*—and my own life—were saved by a wad of chewing gum.

But maybe the lesson that drove itself home the hardest was a reevaluation of us, and of war. Man's constant warfare takes on cosmic proportions, sometimes. This war has gone on year after year for centuries, shows no sign of ever ending, has ravaged thousands of worlds, turned men into either animals or corpses by the billions... Void around us, it's brought us to the point where we can casually contemplate a raid designed to threaten ten million people with starvation and think of it as a stroke of strategic brilliance!

And yet the Universe remains the coldest, deadliest, most implacable enemy of all.

I remember the sight of those thrashing arms against the cockpit transparency of the dying *Dragon* still, late nights, when I awake from a nightmare streaming sweat. What was it that changed me? A moment before, I had been trying to kill a nameless, faceless man or woman who had been trying to kill me first. An instant later, I was watching that person die... and dragging my 'Mech to its feet to help. Maybe then I realized that my enemy wasn't that helpless, dying pilot, but the universe that was strangling him with the implacable ruthlessness of physics.

Facing men like myself in BattleMechs is one thing. Facing the cold and dark and unrelenting universe is something quite different. Never have I felt so *vulnerable* as when I sat there, encased within the mightiest war machine ever devised by Man, listening to my approaching death.

Or when I realized that a piece of chewing gum was all that stood between life and a horrible, gasping extinction.

The universe, it seems, is not impressed by Man's prowess in war or by his ability to build incredible weapons of destruction.

Chewing gum? Perhaps, in the long run, Man's one advantage of the universe is—not his inventions—but his inventiveness.

*Editor's Note: 'MechWarriors interested in simulating BattleTech combat in vacuum environments are directed to Optional Rules Variant 0103-B—BattleMech Combat In Vacuum—found on page 51 of this issue of BattleTechnology. Future issues of BattleTechnology will extend the range of environments possible for BattleTech encounters, including worlds with extreme temperatures and worlds with poisonous or corrosive atmospheres.*



# Tharkad On Guard

## Wars and Rumors of Wars Do Little to Slow Lyran Economy

by BattleTechnology Special Correspondent Karl Dalradier

Tharkad is a winter world.

The ice caps of this spectacularly beautiful planet extend from north and south to within 30° of the equator, and the rugged mountain ranges between the ice fields are glacier-locked and snow-covered throughout the entire long, Tharkadian year. The planet's aurorae, excited to spectacular displays by the far-reaching radiation belts of the system's superjovian sixth planet, can be bright enough at night to read by. Tharkad City, the capital lying practically in the shadow of the five grim towers of the Asgard HQ fortress on Mount Wotan, seems at first glance a chill and barbaric place out of some ancient Norse saga, where men and women alike wear heavy furs against the cold and favor jewelry bearing the remarkable gems which, together with extensive deposits of valuable radioactives, first brought Man to this world.

The Court of the Archon enhances this image of barbaric splendor, with be-jeweled and be-furred representatives and functionaries and favor-seekers gathering under the huge and ice-rimed vault of the Throne Room, before the Archon's jeweled throne—flanked and dwarfed by a pair of towering, black-armored *Griffins*.

Barbaric splendor or not, it is from that ice-glittering palace within the Triad of Tharkad City that Archon Katrina Steiner rules over the far-flung domains of the Lyran Commonwealth. And it is from that Triad—the three-sided complex of buildings which form the core of the House Steiner government—that Tharkad finds itself governor of an economic miracle which could well one day transform the Inner Sphere.

"Trade and industry are the pillars of our strength," said Colonel Frederick Steiner, Duke of Duran, at a recent interview. "The

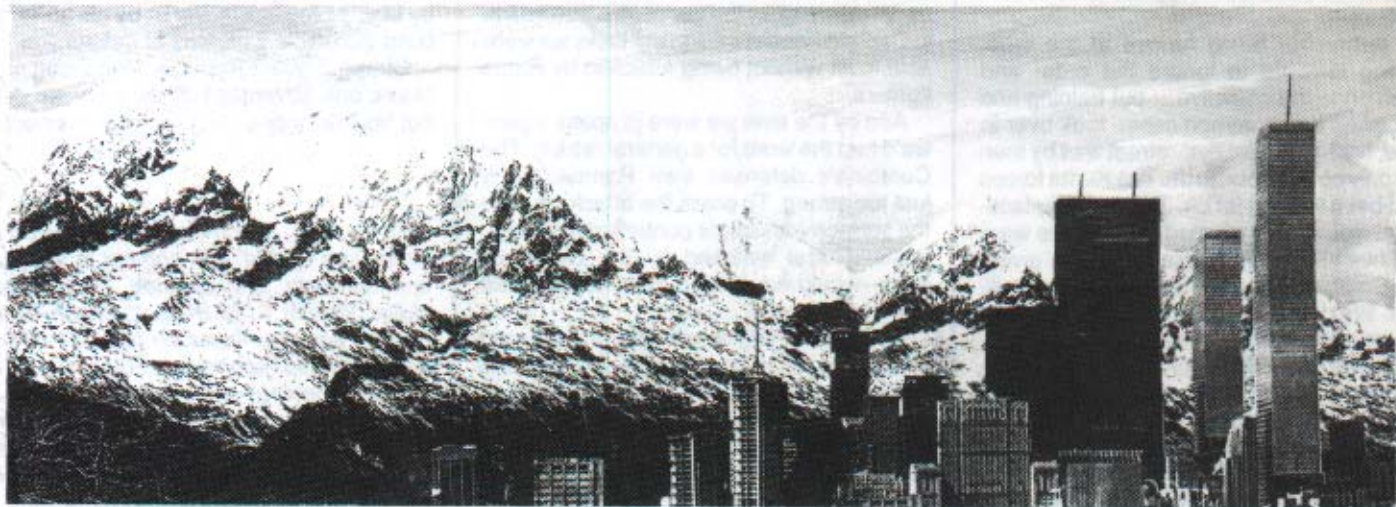
Lyran economy is stronger now than it has been at any time since the Star League era. Our military strength is the best that it's been for centuries, and we've been strengthened both militarily and economically by the recent agreements with Davion. All that is necessary now is a strong hand to govern it all."

"A strong hand to govern it all" could be a veiled reference to the rather notorious breach between the Duke of Duran and the Commonwealth's current Archon, Katrina Steiner. A sizable coalition of Steiner nobles and military officers actually support Frederick over his cousin Katrina, and it is believed that several recent assassination attempts against the Archon were organized by Frederick or by plotters within this faction.

Such factionalism belies the apparent strength and security of the Archon's throne, guarded by the traditional presence of the flanking pair of *Griffins*. Katrina has brought her government through a number of crises and seems poised now on the brink of a major success in diplomacy and leadership. The Commonwealth's recent alliance with House Davion could well mark the beginning of a final victory by the Commonwealth-Federated Suns forces over the combined might of Houses Kurita, Marik, and Liao.

If such a victory is in the offing, it will be in no small part due to the Commonwealth's economic strength. Various economic experts believe that, given peace and continued trade with House Davion, the powerful Commonwealth economy could come to dominate the Inner Sphere within a few decades.

Harko Sandervol, an independent Lyran trader operating out of Tharkad, put it this way. "The Commonwealth has the stuff to





trade—industrial products, weapons, 'Mechs, radioactives, luxury goods, food... you name it! The Federated Suns has the market, a market which could make us rich a hundred times over, all by itself! So long as the trade routes stay open, I don't see any problems for us at all!"

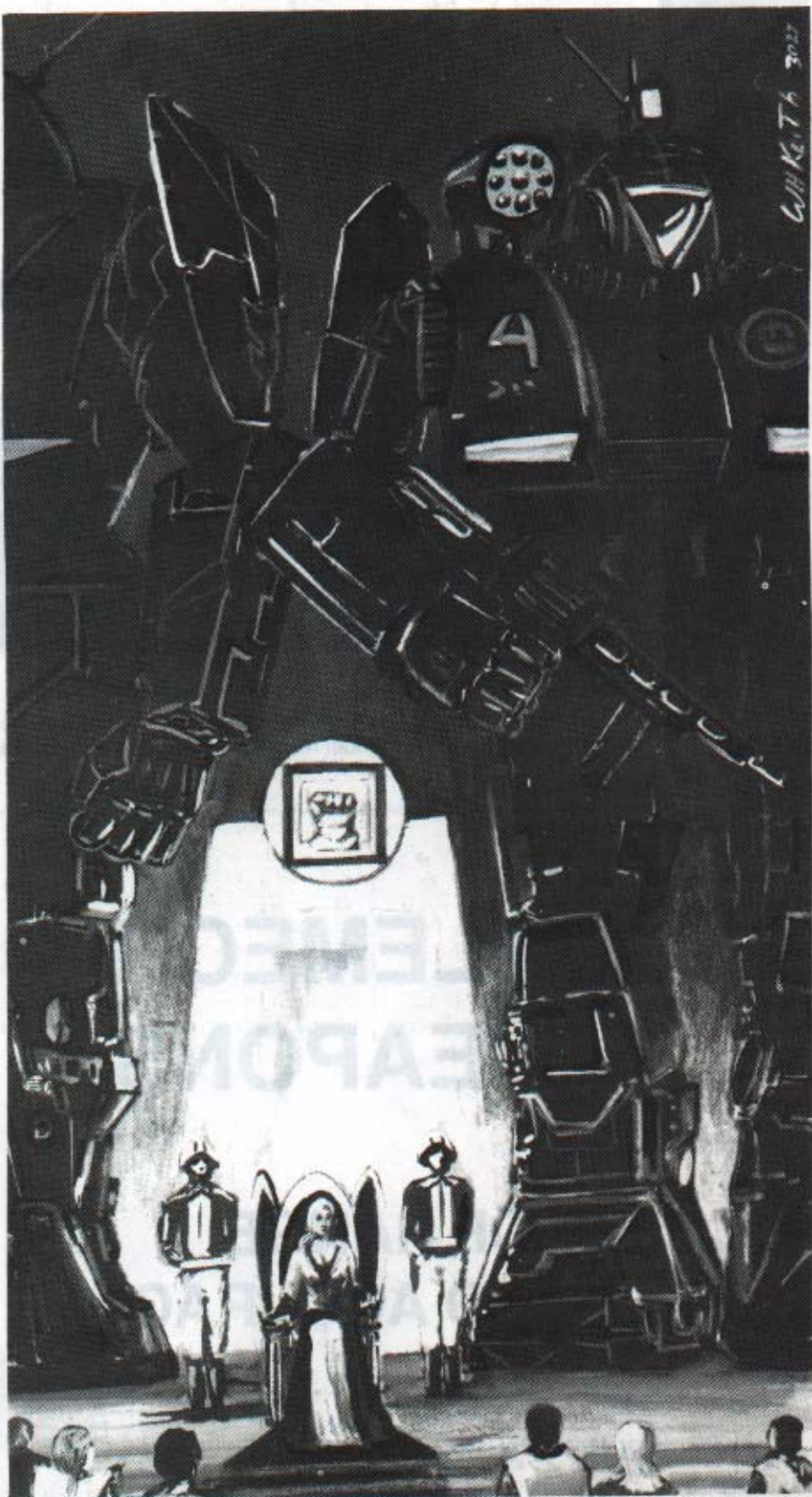
It is the trade routes, perhaps, which most concern the economists. An interruption of those routes by a major escalation in the on-going conflict with Kurita, Marik, and Liao could leave the Commonwealth with a surplus of luxury products, food, and machine parts... and a serious recession which could cripple Lyran economic and industrial growth. Such a recession, and the hardships it would bring, could well be the final element necessary for such elements as Frederick Steiner and his faction to depose Katrina and seize power for themselves.

Lyran officials are confident, however, that the trade lanes can be kept open. This view is obviously shared by the military. "We've stopped Marik and Kurita both, cold," General Felix Mario Radnor, commander-in-chief of the Lyran Defense Garrison on Wyatt said, during a recent visit to Tharkad for briefings and meetings with the Archon. "I can tell you that we stopped a major drive by Marik against Wyatt just less than three months ago... and so far as the Dragons go, we're on the offensive now! No more defense... no more giving up a system or two or three, dying by centimeters! If things heat up again, our alliance with Davion will prove to be more than our enemies can possibly face up to!"

"Tharkad on Guard!" read the banners spread above the icy streets of Tharkad City, on the occasion of a military parade in honor of Katrina Steiner's birthday, late this past October. The sentiment appears to be an honest one, one shared by every member of the capital world's population, from shopkeepers and vendors to the Archon herself. Chill Tharkad is the heart and soul of the Lyran Commonwealth, and trade her life's blood. The Steiner government appears determined to hold what the Commonwealth has won and to increase those winnings with the wealth of a powerful industrial economy, despite the threats and onslaughts of enemies both without and within.

So long as Tharkad maintains its guard, it seems that nothing can stop Tharkad's vision of a prosperous and unified Commonwealth...

A Commonwealth which could extend to embrace all Mankind.



**Right: Throne Room on Tharkad**

The Throne of the Archon in the Palace Throne Room is flanked by the traditional pair of black-armored Griffins.

**Left: In the shadow of Mt. Wotan**

Tharkad City is today the capital of the Lyran Commonwealth.





**Close Range:** Nearly all BattleMech combat takes place at ranges considerably less than the maximum ranges possible for the various 'Mech weapons.

# BATTLEMECH WEAPONS

## CRISIS OF RANGE AND ACCURACY

by Precentor Janos Abu Hassan

*If there is one thing BattleMech combat is noted for, it is the tendency of MechWarriors to get in close. Nearly all 'Mech combat takes place at ranges of less than half a kilometer... and more than half at ranges of 200 meters or less.*

*Several popular misconceptions have attached themselves to these figures. One of these is that the range of BattleMech weapons is sharply limited to a half kilometer or less. Another, related popular BattleMech myth is that 31<sup>st</sup> Century technology has collapsed to such an extent due to centuries of unremitting war that lasers, particle cannons, and the like manufactured with today's technology are incapable of hitting targets at ranges of more than a very few hundred meters.*

*Both notions are demonstrably and patently false. In this article, BattleTechnology takes a closer look at the major BattleMech weapons systems and how they work.*



## LASERS THE LIGHT FANTASTIC

The question of *BattleTech* weapons range has plagued MechWarriors and simulations specialists alike for centuries. It can be demonstrated that the commonly published ranges for most of the modern battlefield weapons systems are strikingly less than weapons systems in common use a thousand years ago or more. In the 20<sup>th</sup> Century, for instance, standard combat assault rifles carried by infantrymen had effective ranges of 400 to 500 meters, and a trained marksman could hit and kill targets at ranges of a kilometer or more. Lasers and particle cannons were not in common use as weapons systems until the 21<sup>st</sup> century, but mid- to late-20<sup>th</sup> century rockets and antitank missiles had ranges of anywhere from 500 meters for small, simple, shoulder-fired launchers to 2 to 4 kilometers or more for vehicle- or aircraft-mounted rocket pods, wire-guided missiles, and rocket artillery. Compare these figures with the oft-published range for today's 'Mech-launched, long-range missile of 630 meters!

The reasons for these discrepancies are varied. The most important is that the commonly-stated ranges should be accepted as "Effective Range," which is defined as that range at which a trained weapons operator can expect a roughly even chance of hitting his target. Certainly, there is no physical reason why laser beams, for instance, should vanish magically into thin air after travelling for a few tens or hundreds of meters! Consider: at one time during the late 20<sup>th</sup> century, lasers were considered as ideal theoretical candidates for communications across interstellar distances, and as propulsion systems for light sail-driven starships light years away!

This article lists common battlefield weapons systems with their effective ranges.

Lasers may be the most popular and common of all BattleMech weapons. Their single greatest advantage over other weapons systems is the fact that they are powered off of the 'Mech's power plant and, therefore, will never run out of ammunition. Too, they are not as heavy and do not build up as much heat when they fire as particle cannons.

Lasers are energy weapons capable of delivering large amounts of energy to the target through a monochromatic or "lased" beam of light. Most modern battlefield lasers are pulse lasers, meaning they release that energy in a short, intense burst.

Laser energy is measured in megajoules (millions of joules), with one joule equivalent to 1 watt of energy delivered in 1 second. BattleMech-mounted lasers characteristically have an output of between .8 and 5 megajoules of energy in a short, intense pulse lasting less than one one-hundredth of a second. By comparison, the explosion of 1 kilogram of TNT releases approximately 5 megajoules of energy.

Beam lasers exist which fire at much lower energy levels but can "play" the beam against the target for periods as long as several seconds. There are advantages and disadvantages to each system, of course. Beam lasers do not require as much power, last longer, and do not build up as much heat as pulse lasers, but the beam must be held against a single spot on an enemy target long enough for the beam to burn through the target's armor. In modern combat, against highly mobile 'Mechs, this luxury is rarely possible. Pulse lasers are more prone to breakdown and overheating

than beam lasers, and a common battlefield problem is the partial or total meltdown of the system's pulse chamber reflectors, cyclic coils, or cooling units. However, firing a pulse laser is much like firing a cannon. The weapon's destructive power hits the target in a small, violent package—all of it applied against a single small portion of the armor.

There is no theoretical limit to a laser's range. Under battlefield conditions, however, laser ranges are limited by smoke, dust, and anti-laser aerosols. So long as the target is not obscured by weather, smoke, or other adverse conditions, however, it is still possible to hit a target as far away as a planet's horizon. At such extreme ranges, the target's movement becomes the chief handicap in laser targeting. Beam attenuation—the tendency for the destructive beam to spread slightly and lose some of its power due to dust particles and the refractive qualities of the atmosphere—lessens the punch of a laser at extreme ranges as well.

Battlefield lasers are divided into three broad categories, based on their power output. These are:

**Small Lasers:** These range in power output from .8 to 1.5 megajoules. Because of the thickness of modern composite armor, the effective range of small lasers is limited to 90 meters. Because of their restricted effective range, they are the least common of 'Mech laser weapons and are found only as secondary or back-up armament for such 'Mechs as the *Warhammer* and the *UrbanMech*.

**Medium Lasers:** Medium lasers range in power from 1.5 megajoules to 3 megajoules and have an effective range of up to than 300 meters. More powerful and longer-ranged than small lasers but without the heating problems of large lasers, medium lasers are the most popular and common of BattleMech laser weaponry. Medium lasers are frequently the main weapon of light 'Mechs such as the *Locust* and *Stinger* and are found as secondary weapon systems in heavier 'Mechs such as the *Marauder* and *Archer*.

**Large Lasers:** The heaviest laser weaponry is mounted only on 'Mechs designed around the heavy and cumbersome cooling and power feed gear of these weapons. They range in power from 3 to 5 megajoules and nearly match PPCs in destructive potential—and in heat build-up for the firing 'Mech. Large lasers are mounted as primary weapons in 'Mechs such as the *Phoenix Hawk* and *Thunderbolt*. They have an effective range of nearly half a kilometer.



Lasers may be the most popular and common of all BattleMech weapons.





## PARTICLE PROJECTOR CANNON LIGHTNING MADE TO ORDER

This is a general weapons class which includes a variety of related weapons. All are powered from the Mech's on-board fusion plant and are classified as energy weapons. They cause damage by using magnetic fields to direct beams of high-energy charged particles—either electrons or protons—at the target. Damage is inflicted on the target by a combination of intense heat, kinetic energy, and electrical overload.

PPCs deliver on the order of 5 megajoules of energy in a short, intense bolt. The destructive force of the bolt is greatly increased by the purely kinetic energy inflicted by subatomic particles travelling at close to the speed of light, and by creating a massive electrical overload within the target. This last can cause additional damage by discharging as a bolt of lightning. Poorly shielded Mech electronics can be burned out and rendered useless by the secondary electrical discharge of a solid PPC hit.

The generally accepted effective range of BattleMech PPCs is about half a kilometer. As with lasers, however, there is no theoretical limit to a particle cannon's range, though the beam loses energy in atmosphere and attenuates rapidly. On the other hand, particle beams are unaffected by smoke, haze, or aerosols. In practice, particle cannons are limited to line-of-sight ranges, a range which is further restricted, like lasers, by the possibility of hitting a rapidly moving target at a range of several kilometers.

A particle cannon's biggest disadvantages are its mass—the magnetic coils, generators, and cooling units constitute well over half of the 7-ton weight of most

### Man-Made Lightning:

The PPC is one of the most devastating BattleMech weapons on the modern battlefield. Particle cannons such as the Donal PPCs mounted on the *Warhammer* (left) deliver as much as 5 megajoules of energy in a single destructive burst. BattleMechs must be heavily shielded against the effects of PPC discharges which can seriously damage unshielded electrical systems.

'Mech-mounted PPC systems—and the large amount of heat it generates with each shot. Particle cannons generate far more heat with each shot than any other BattleMech weapon, so much heat in fact that some 'Mechs with PPCs as primary weapons, such as the *Thunderbolt*, must seek pools of water to stand in in order to use their weapons with maximum effectiveness.

The PPC's weight creates an added disadvantage at extremely short ranges. The weapon is so heavy and bulky that it is difficult for the 'Mech to move the weapon quickly enough to align with rapidly-moving targets at ranges of less than about 90 meters. For this reason, accuracy with PPCs actually tends to *decrease* at a range of 90 meters or less.

## MISSILES UNGUIDED MESSENGERS OF DEATH

Missiles used in 'Mech warfare in the 31<sup>st</sup> century have come full circle from the weapons they once were centuries ago. They were employed in numerous wars prior to the 20<sup>th</sup> Century when they were little more than tubes filled with black powder launched in the general direction of an enemy in the hope that a hit might be scored. In the latter half of the 20<sup>th</sup> Century, missiles became extremely complex and sophisticated weapons. There were missiles which were, in effect, computer- or remote-piloted drones with ranges of thousands of kilometers; missiles which could be directed to their target by the target's infrared signature; missiles homing on the target's characteristic shape or silhouette; missiles guided by radar, by magnetic fields, by reflected laser beams directed by spotter teams or aircraft, or by impulses transmitted along a thread-thin wire from a human keeping the target in the launcher's sights.

By the mid-21<sup>st</sup> century, it was clear that such sophisticated missiles were far too expensive and complex for the grinding horror of the modern battlefield. Electronics would always break down, become contaminated by dust, mud, or blood, or be broken by clumsy or ill-trained technicians. Time after time, it was found that the failure of a tiny, half-C-bill circuit switch or capacitor had rendered a multi-million C-bill weapon useless. When the weapons *did* work, they faced a growing array of sophisticated counter-weapons, radio jamming, and electronic warfare measures.

Gradually, missiles became simpler, rather than more complex. By the time of the First Successor State War, missiles were once again little more than unguided rockets, cheap enough to be manufactured and fired in large batches in the hope of overwhelming the target's defenses, and simple enough that there was no way to jam or intercept them.

Modern battlefield missiles are of two general types—Long-Ranged Missiles (LRMs) and Short-Ranged Missiles (SRMs). The basic difference between the two lies in the fact that LRMs are indirect fire weapons, designed to be lobbed in an arc against their target, rather than being fired directly at them. For this reason, the accuracy of LRM fire is severely hampered at ranges much less than 180 meters.

The effective range of SRMs is generally listed as less than 300 meters, while LRMs can be lobbed accurately only a little more than twice that distance. In fact, both types of missiles can travel considerably farther than the stated range figures, but hitting something as small and as fast as a BattleMech becomes a significant problem at greater ranges. In fact, BattleMechs equipped with certain types of broad-scanning projectile-warning radar can detect flights of enemy missiles and warn Mech-Warrior pilots via neurohelmet link. At ranges of more than 600 meters, avoiding incoming missiles becomes almost automatic, though there is some danger of hits due to the scattering of the missile swarm.

Another principal difference in the two missile types is in the size and punch of their respective warheads. An SRM is designed to burn all of its fuel in a short, intense burst, propelling a larger warhead a shorter distance than the LRM, which uses a sustained burning of more fuel to boost a smaller warhead a longer distance. The larger warheads on SRMs—usually cyclamate CX-12 or high-velocity plastique rated at the destructive power of approximately .25 kilo of TNT, are twice as destructive as the smaller, lighter LRMs.



## AUTOCANNON MACHINE GUNS WITH A KICK

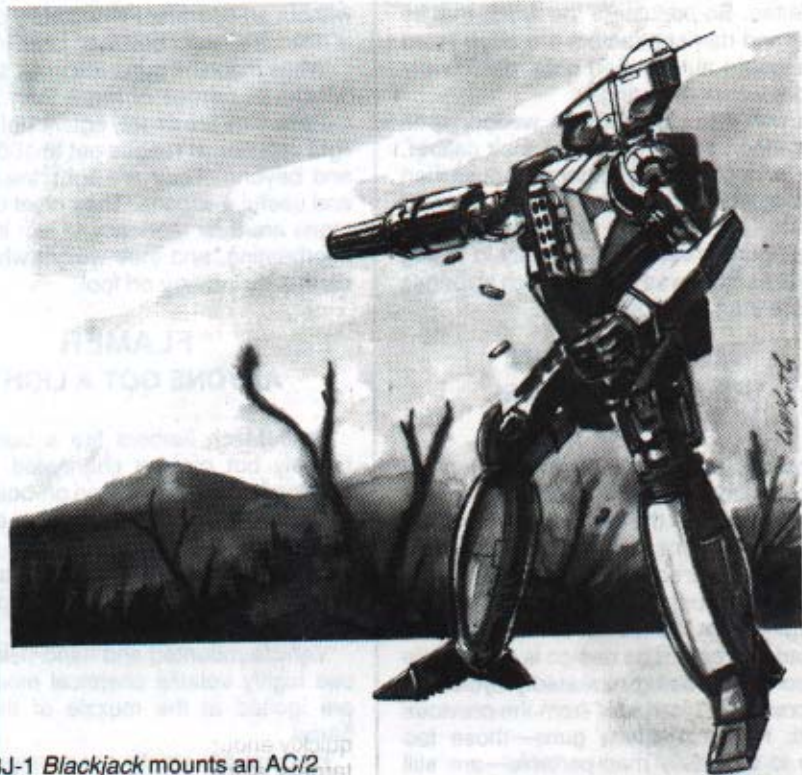
Autocannons are descended from the rapid-fire, explosive warhead rounds first developed for use against aircraft and armor during the mid-20<sup>th</sup> Century, which, in turn, were developed from the 19<sup>th</sup> century Gatling machine gun. Indeed, many high-tech, 20<sup>th</sup> and 21<sup>st</sup> century autocannon types were based directly on the rotating, multi-barrel designs developed in Gatling's original design.

BattleMech autocannon are rapid-fire weapons ranging from 40 to 120 mm, firing shells designed to cause the maximum damage to BattleMech composite armor. Shells are fed into the autocannon's firing chamber from a shell cassette, inaccurately labeled a "round." BattleMech AC ammunition inventories refer to the numbers of "rounds"—i.e., cassettes holding anywhere from 4 to 100 individual rounds, or shells—stored aboard. The number of shells in a cassette depends on the caliber of the shell and on the design of the cannon. Some weapons eject spent cassettes almost as fast as empty cartridge casings—but the cassette system allows fresh rounds to be smoothly and automatically chambered to a weapon which is often (e.g., the MAD-3R *Marauder*) not an integral part of the BattleMech's hull.

Autocannon effective range depends on the size of the weapon and on the caliber of the shell fired. Autocannons are classified by the number of cassette "rounds" which can be fired within 10-seconds, though this can be misleading since there are fewer shells in large-caliber cassette rounds than in smaller. Generally speaking, autocannons firing a large number of small shells from cassettes holding a large number of shells (the AC/2, for example) have a longer range but cause less damage than heavier shells fired in short bursts from cassettes holding only a few rounds (such as the heavy AC/20).

The characteristics of each autocannon type are listed below:

**AC/2:** The AC/2 is a relatively light weapon (about 6 tons) which causes relatively light damage for a weapon of its size. It has an extremely high rate of fire, with a sound which has been likened to a buzzsaw. The AC/2 has an effective range of over 700 meters but is prone to difficulties in targeting at ranges of less than 120 meters. The high rate of fire causes maintenance problems as well, necessitating frequent relinings of the barrel.



The BJ-1 *Blackjack* mounts an AC/2 in each arm as main weapons in its primary mission as a source of suppression fire against non-Mech forces.

**AC/5:** The AC/5 category actually takes in a broad range of gun calibers and rates of fire, all with weapons systems of about the same weight (8 tons) and range (effective range = 540 meters). Weapon types range from medium caliber, 60 mm shells fired at 8 to 10 rounds per second, to large calibers—notably the Whirlwind 120 mm autocannon mounted on the MAD-3R *Marauder*. The *Marauder's* AC/5 fires at a painfully low rate of speed—only 3 to 4 individual rounds per second, but each 120 mm shell packs a tremendous punch. Like the AC/2, most AC/5s lose some accuracy at close ranges.

**AC/10:** The AC/10, such as the Luxor-D series carried by the CN9-A *Centurion*, is another intermediate class which includes both medium and heavy calibers. The Luxor-D fires 70 mm shells at 10 rounds per second, while the larger KaliYama class 10 carried by the Kurita ON1-K *Orion* fires 90 mm shells at 5 rounds per second. The effective range is less than for an AC/5, but the larger number of shells fired with each cassette burst causes greater damage to the target.

**AC/20:** The monsters of the Autocannon weapon class, the AC/20, are generally carried only by assault 'Mechs. Each cassette round holds only four actual rounds, and these are cycled in extremely short, fast bursts which allow the cannon to run through 2 cassettes per second. The weapons are extremely heavy—as much as 14 tons—and their range is restricted by limits to the amount of propellant which can be packed into each shell cartridge. Maximum effective range for an AC/20 is only about 270 meters. However, those few, tightly-spaced, extremely heavy rounds cause terrible damage on impact, making them ideal weapons for such BattleMech monsters as the *Cyclops* and *Atlas*.

Space prohibits a detailed listing of all of the BattleMech autocannons by type, caliber, and rate of fire in this overview of weapons. As an overall weapons class, autocannons are highly regarded as an effective and efficient 'Mech weapon. AC/5s, in particular, combine long range with low heat build-up, and a solid punch balanced between the high-rate-of-fire/small-shells v.s. low-rate-of-fire/large-shells variables. These factors make the AC/5 one of



the more popular BattleMech weapons, particularly if storage space aboard a given 'Mech allows storage for a full 20 reload cassettes. So popular is the AC/5, that its range and damage factors are often listed as standard autocannon data, particularly in older weapons listings.

As with other BattleMech weapons, all autocannon shells, whatever their caliber, carry for considerably larger distances than those listed as "effective range" in most manuals. As with other weapons systems, these figures reflect the difficulty in hitting targets as mobile as a BattleMech at ranges of more than half a kilometer.

## MACHINE GUN THE ANCIENT KILLER OF THE BATTLEFIELD

The machine guns of the 31<sup>st</sup> Century are direct descendants of the heavy machine guns first used in the world wars of the 20<sup>th</sup> Century, weapons which changed forever the shape and scope of warfare by their wholesale slaughter of unarmored troops emerging from the shelter of their trenches and landing craft. The design is simple, the weapon's bolt being repeatedly cycled by gas pressure "blowback" from the previous round. Heavy machine guns—those too large to be easily man-portable—are still common as vehicle-mounted weapons, as point-defense and anti-aircraft positions in a fixed defense, as primary or secondary weapons in bunkers, hardpoints, and atop city walls, and, of course, as back-up and anti-infantry weapons on 'Mechs.

Machine guns are powerful enough to cause damage to BattleMech armor but only at extremely close range—generally under 100 meters. There have been cases of lucky hits by infantry-crewed MGs on hovercraft bringing down a BattleMech by penetrating the cockpit, and MechWarriors emerging from their 'Mechs in a combat zone always dread the possibility that an unseen enemy lurking nearby has a machine gun trained on their main hatch, waiting. Some light BattleMechs—the *Stinger* and the *Locust* are examples—have a pair of heavy machine guns as their sole, secondary armament, and there are numerous stories of these light 'Mechs engaging a heavier enemy with their MGs and winning.

Infantry or vehicle-mounted weapons are belt or magazine fed. Those mounted on BattleMechs are usually heavier than infantry-portable weapons, and are fed by autoloader cassettes similar to those developed for autocannons. Some 'Mechs, particularly those which have been many-times repaired and salvaged, mount machine

guns which are belt fed by autoloader systems similar to those used aboard aircraft. Unfortunately, these are prone to jams, and without an operator immediately present, it is difficult to clear belt feed jams in combat.

While machine guns are useless against 'Mechs at ranges of more than about 90 meters, they are deadly against infantry and light vehicles at ranges out to 1000 meters and beyond. They are light, inexpensive, and useful weapons. Their chief disadvantages are their tendency to jam in dirt and overheating, and their weight when being carried by infantry on foot.

## FLAMER ANYONE GOT A LIGHT?

BattleMech flamers fire a burst of extremely hot plasma channeled from the plasma in the 'Mech's own on-board fusion reactor. The amount of plasma is extremely small, but that portion is under such extremes of temperature and pressure that it expands like a cloud of flame, scorching or burning everything in its path.

Vehicle-mounted and hand-held flamers use highly volatile chemical mixes which are ignited at the muzzle of the flamer barrel.

Flamers are strictly short-ranged weapons descended from the flamethrowers of the mid-20<sup>th</sup> century. While rarely effective as a primary anti-Mech weapon, they are useful for adding to an enemy MechWarrior's heat build-up problems, and for setting wooded areas or buildings on fire, either to flush enemy infantry or to herd or block enemy 'Mechs. Several 'Mechs,

notable the FS9-H *Firestarter*, do incorporate flamers as primary weapons, though they are best deployed in support of—and supported by—other, more conventional BattleMechs.

## LIMITED RANGES AND THE COLLAPSE OF CIVILIZATION

The range figures listed for the 'Mech-mounted weapons in various publications, manuals, and journals have been frequently criticized by weapons experts on the one hand—and widely publicized on the other by anti-war activists, political groups, and scientific lobbies on the other. Weapons experts insist the range figures—usually a half kilometer or less, are far too short to accurately reflect 'Mech weapon capabilities. Various political and activist groups insist that they reflect the complete collapse of modern technology in the on-going Successor State wars, a clear warning that Man must cease his favorite pastime—war on a planetary scale—or watch his civilization collapse into a new and final Dark Age of barbarism and ignorance.

In fact, the ranges published in journals and manuals which have drawn such fire merely reflect the practical considerations of modern combat. These considerations can be summed up as follows:

- The modern battlefield is ECM intensive. Long-ranged guided or "smart" munitions are at a distinct handicap from various electronic jammers and ECM devices which are relatively commonplace.





• High-tech, long-ranged munitions are expensive, the technological know-how and industrial base required for their manufacture scarce. Cheap, easily-acquired and -stored, short-ranged munitions are more cost effective, as well as easier to come by.

• Modern BattleMech armor is extremely effective at dissipating the heat from lasers and particle weapons, as well as in distributing and absorbing the shock from explosive projectiles. A 'Mech's armor combined with its movement means that even the intense burst of energy from a pulse laser tends to be distributed over a large portion of the target 'Mech at greater than effective ranges, and damage at those ranges is, consequentially, reduced.

• A singular advantage possessed by BattleMechs over the conventional heavy armor of centuries ago is their mobility. The use of external sensors with scanner feeds directly to the pilot via the neurohelmet linkage, with the pilot able to respond quickly to any sensed threat, results in a machine which is capable of astonishingly quick movements, given its bulk. At longer ranges, it becomes increasingly difficult for a firer to hit a target which is able to sense an incoming missile in time to avoid it. In the case of beam weapons, the target 'Mech is not able to sense their approach, of course, but it is still much harder for the firing 'Mech to target and hit a rapidly moving 'Mech at extreme ranges.

Thus, achieving a target lock on a moving BattleMech at ranges of one or two or more kilometers, while possible, is difficult, especially in a battlefield environment clouded

by smoke, by rapidly moving BattleMechs, by incoming fire, and by electronic jamming. For this reason alone, modern 'Mech-to-'Mech combat rarely takes place at ranges of more than half a kilometer.

Still, the question raised by the anti-war lobbies demands a response. If they are correct—and they insist they are with a vehemence surprising in what is, after all, a pacifist movement—the coming collapse of technology could well doom man to endless barbarism at best, to utter extinction at worst.

Endless barbarism? Extinction? Their argument suggests that on every world inhabited by Man, most of the easily accessible ores and raw materials vital to modern technology—copper, iron, tungsten, nickel, cobalt, uranium, and petroleum are only a few—have already been tapped to the point that high technology is necessary to recover them. Already, the inhabitants of countless worlds live by scavenging the technological detritus of past battles rather than mining and processing new ore. If this goes on, the vast majority of such raw materials will become unrecoverable, spread thinly across the surface of each planet in countless tools, in the wiring of countless houses, in the engines of countless vehicles, instead of located in large and compact, recoverable bodies such as surface veins of ore.

If interstellar trade ceases on a wide scale, the argument runs, planet after planet will collapse into savagery as whole populations starve, as power plants break down, as transport becomes difficult or impossible. A primitive civilization reduced to such a state would have no easily-recoverable raw materials on which to rebuild or

grow. The surviving inhabitants of a thousand worlds might find themselves forever trapped because the resources on which technology depends are no longer available.

Well, perhaps the alarmists are correct. Such speculation, however, goes beyond the scope of this article.

But the 'Mech weapons range figures published by various sources *cannot* be used to support this contention. True, it is generally agreed that the overall level of technology among the Successor States has fallen since the days of the Star League. However, it is also generally accepted that weapons technology during the 31<sup>st</sup> Century is still at or above the levels common in the late-20<sup>th</sup>/early-21<sup>st</sup> Centuries on Earth. Indeed, many of the weapons still in use, during the 31<sup>st</sup> Century are *relics* of the Star League of three centuries and more ago, and represent the very peak of human weapons technology.

If there is a fault with modern technology, it seems to be not the level of technology itself, but rather the shortage of trained Technicians capable of understanding and repairing old equipment, and of introducing innovations for new. *People* is certainly one resource which is in no danger of being depleted, for all the savage bloodletting of modern war. Numerous groups are striving to overcome the handicaps imposed on technological development by the lack of skilled Techs.

In particular, ComStar, the technological disciples of the Blessed Blake, shows extraordinary promise in its program of preserving and advancing technological understanding. Indeed, it is quite possible that the ComStar adepts—whatever popular opinion may hold of their rituals and incantations—hold the golden key which will usher in a whole new age for Mankind. Peace and prosperity.

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*Editor's Note: Those of BattleTechnology's readers who are interested in BattleTech simulations may wish to check this issue's Simulator Section (page 44) where Rules Variant 0103-A describes how to extend the ranges for various weapons in BattleTech combat simulations.*





# The Fifth Kill

by Captain Kensie Shaneyfelt  
as told to Greggson DuVall

Warriors are a superstitious lot and aerospace fighter pilots are no exception. If anything, they're the most superstitious of all. Take me. My family is pure-blooded Irish—as far back as we can trace—2,000 years of southern Irish Celts, and when I climb into the cockpit of my *Corsair*, I take with me all the lore, the myth, magic, and belief in the power of other worlds that that heritage has laid upon me.

My grandmother used to tell me all kinds of folktales about the ancient Irish heroes. Even now, I can still remember most of them. The one that really stuck with me was about an ancestor of ours named Kensie. Grandma used to say that I was named for him. I guess that's why I remember that particular story so well. Kensie was a great warrior and hunter. Grandma said that he even served Cuchulainn for a while. The story says that he got killed fighting the chief of a rival clan, whose druid had turned him into a gigantic red eagle for the combat.

Though I always felt a bit of a chill in my Celtic soul at the thought that my long-ago namesake had been killed that way, I liked that story, liked the way it sang to my blood... until a couple of months ago.

I'd been assigned to the 10<sup>th</sup> Sky Rangers Aerospace Division right out of flight school. I was so proud to be serving with a combat unit. Everything was fine for the first 8 months of my tour. I'd even managed to shoot down 3 enemy fighters—2 Marik and 1 bandit. It looked like nothing could stop me. I was aiming to get my fifth kill and make ace before the year was out.

The fifth kill—ace—the dream of every fighter jock since Richthofen! The number five took on a whole new meaning for me, a kind of talisman drawing me on. Was five a lucky number for me... or unlucky? Would I make it to five... or die trying?

See? As superstitious as my ancestors, with their Druids and red eagles.

Just this past July it was that an officer from the Commonwealth's Military Intelligence section arrived on Wyatt with new intel reports about units we might be facing in the near future. Listed under the 4<sup>th</sup> Division of the Defenders of Andarien was a Major Dmitri Pawoloski, a onetime Kurita pilot who had defected to the Free Worlds League. The file had no detail on the specific type of ship he was currently flying, but it did mention one quirk of his.

He always painted his fighters to resemble a gigantic red eagle.

That's when it started. A couple of nights after that briefing, I began having nightmares... not every night at first, but then more and more frequently. They were always the same. My squadron was scrambling to engage invaders from the Free Worlds League. At first it was like any of a dozen previous dogfights, Lyran technology and training winning out over Marik's numbers. My buddies and I were burning Marik ships out of the sky, score after score, like we couldn't miss.

Then the Red Eagle came.

The bloody wings of that bird filled my dreams, outstretched, impossibly huge. Its





outthrust talons ripped apart one ship after another. Nothing seemed to touch it—lasers, missiles, autocannons—nothing could hurt it. That bird tore through the ships of my squadron, shredding them like they were made of cardboard. One by one, the eagle destroyed my friends until I was the only one left. Just before its talons closed over my ship, I heard a voice in my head say, "You'll never win your fifth kill... never! You are going to die... now!" Then the eagle's claws ripped my ship apart.

I always woke up at that point, soaked with sweat and with that voice ringing in my ears.

I shrugged off the first few dreams, laughing at the bizarre way my mind had linked my ancestor's encounter with a magical eagle and the double ace Marik pilot who just happened to like to paint his ship in the likeness of a giant red bird of prey. But by the time I'd had about a dozen of them, I stopped laughing.

We flew several combat missions against bandits shortly after that, and I couldn't shake the feeling of uneasy dread which gripped my stomach like a frozen lead glove every time I climbed into my cockpit. While I didn't exactly freeze or fall apart, I didn't act like a combat veteran either. With my hands shaking whenever we went into combat, I missed easy shots, slipped out of formation, overshot the landing strip. Finally I managed to get myself shot down by a pirate in a battered old *Sparrowhawk* because I forgot to watch my tail. Luckily I was in atmospheric flight at the time, and Aerospace Rescue found me. After a couple of days in the base sickbay, I went back on the line.

That's when the dreams started coming every night. It got so that I was afraid to go to sleep. I started drinking cup after cup of

coffee and popping anti-fatigue pills by the handful. But I couldn't hold out forever, and eventually I'd fall asleep.

And the dream would come again.

Flight Leader Entz pulled me off the line and sent me back to sickbay for a series of tests.

"You know, Kensie, I realize that getting flamed is a bad experience," Entz told me, as she gave me my orders. "I've been shot down twice, so I know. To be suddenly confronted with your own mortality in such a cold and impersonal way is really a shock. It's hard to deal with the fact that the universe will be able to go on without Marla Entz... or Kensie Shaneyfelt."

Entz put her hand on my shoulder and said, "Go get some rest, Irish. Let the guys over in medical do their jobs." She laughed. "But you better get your skinny butt back over mainside as soon as they get done with you. If I find out you're laying in bed harassing the nurses, I'll send you up in a kite, next mission. Got it?"

Well, they ran a whole battery of psychological and physiological tests, but they didn't come up with a bloody thing I didn't already know. I was exhausted, worn to a frazzle... and that damned dream refused to go away. Sure... I knew it was only a dream—I told the psych boys so—but it had gotten to the point where I couldn't shut my eyes without seeing that blood-red bird, without feeling the terror burning my soul.

After a couple of days, the flight surgeon came into my room. "Captain Shaneyfelt, I'm sorry, but due to the lack of improvement in your condition, I have no choice but to ground you."

"But..." I began to protest.

The flight surgeon cut me off with a wave of his hand. "No 'buts,' Captain. You've

been walking around like a zombie. When you do sleep, you wake up screaming. If I let you fly, you'd probably kill yourself. Do you think any of your buddies'd want to fly with you on their wing, in your condition? Until your condition improves, you are grounded."

Grounded. The only thing I'd ever wanted to do was fly. Now, because of a couple of bad dreams, I couldn't even do that.

How do you mingle mind-numbing depression over the loss of your greatest dream with the sheer, grating relief over not having to face your greatest fear? Grounded, I was safe... but my comrades were flying without me.

And the nightmares kept coming.

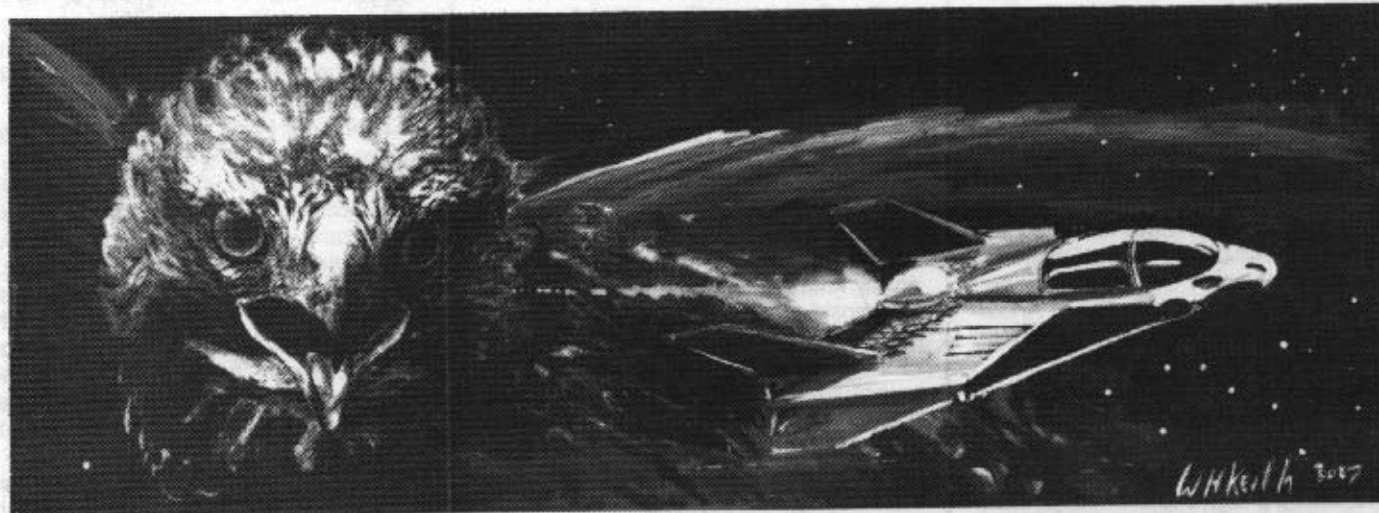
They discharged me from sickbay and sent me back mainside. Marla Entz put me to work in the radio shed, ostensibly to keep me working with the squadron. I think her real reason was to keep me away from the fighters. Eventually she had to pull me off that duty too, because the combination of lack of sleep and nightmares made it impossible for me to function.

For two weeks all I did was lie on my bunk, torturing myself over being grounded while my buddies were flying, happy to be alive, and guilty as hell about it. Images of the red eagle filled my mind even while I was awake. I was a nervous wreck. The higher-ups were beginning to talk about discharging me on grounds of mental instability.

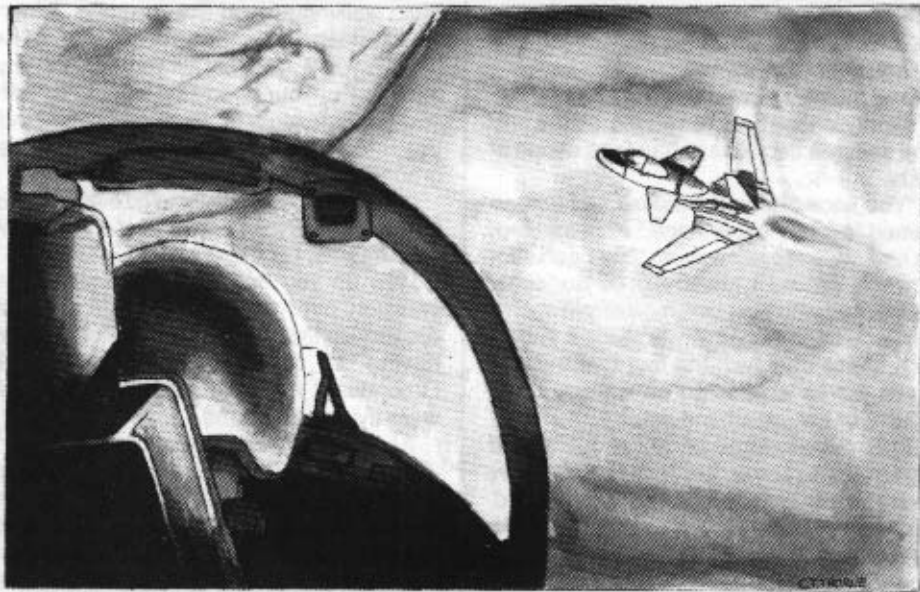
Then all hell broke loose.

On 25 September we got the word. "All squadrons scramble! Incoming fighters! Incoming DropShips! This is not a drill! Repeat... this is not a drill!"

The time was 1627 hours. The voice on the loudspeaker was still yelling about incoming fighters when I arrived at the cata-







pult station. By God, if they were going to keep me grounded, I was at least going to see my buddies off. As my onetime wingman Lucas Kurtz ran through his preflight check, I leapt up on the wing of his CRS-V12 Corsair.

"Take care, Luke," I shouted over the piercing whine of the huge Wangker engine. "You know I'm not going to be there to bail you out if you get in trouble."

"I know, Irish." He patted the lucky grofelder's ear he had glued up on his console and grinned. "Don't worry about me. I'll be OK."

"Lieutenant Shaneyfelt," Kurtz's tech yelled. "You'll have to get down now, sir, we're hooking up the 'cat.'"

"Luck, Luke!" I yelled at Kurtz as I jumped off the stubby wing. Even though he couldn't have heard me through his closed canopy, Kurtz smiled and gave me a thumbs-up sign.

When Kurtz and the rest of my squadron had gotten off the ground, I ran to the radio shed. I couldn't be up there with them, but I couldn't just go back to my quarters and wait, not knowing what was happening.

It was about 1645 when we got the message that my squadron had sighted the enemy. Flight Leader Entz identified the invaders as the 4<sup>th</sup> Division of the Defenders of Andarien. Even in the air-conditioned radio shed, I began to sweat. The 4<sup>th</sup> Andarien was the unit to which Major Dmitri Pawoloski was attached.

The Red Eagle had come to Wyatt. My hands shook and my heart pounded. My mind screamed at me—*He's here! He tracked you down, and now he's going to kill you!* I stood up and tore off the headphones.

*He's coming for you. The Red Eagle is here, and he's coming for you.* I burst through the door of the radio shed and ran. Blindly, neither knowing nor caring where I was running to. I just had to get away.

Somehow I ended up in the ready-room. The radio traffic from the dogfight above was blaring from the speakers there too. My squadron was in in the thick of the fighting, directly in the path of the incoming Drop-Ships. I could hear Entz, Kurtz, Haring, and the rest, all shouting at each other. Marik fighters were everywhere, pushing us back towards the planet by numbers alone.

The dream was there, in my mind, with all its terror and vividness. I sat huddled in a corner of the ready-room fighting the images that crowded me, threatening to rip my sanity away from me. Concentrate! Concentrate! I could hear my squadron mates as if they were in the room with me.

"Blue Three! Blue Three! Get these guys off my tail!"

"Roger that, Five! Hold it! Blue One, roll left!"

"Blue Three, Blue One! Rolling left! Nail this guy, will you?"

"Hold tight, One! Your bogey's in my sights... painted like a big red bird of some kind... damn! Missed!"

My blood chilled, my stomach twisted in an icy knot. *He was there... Major Dmitri Pawoloski, the Red Eagle!*

I knew what would happen to my squadron. They would all die while I cowered here, safe on the ground. Safe. Safe from the Red Eagle. Safe from everything. Everything except my nightmare, my own mind.

Move! Move! Don't think! One last flight suit hung from the ready-room rack—mine.

Don't think! Move! Moments crawled. Fear threatened to paralyze me, made my hands shake so hard I could scarcely close the pressure seals at my wrists and collar. How I crossed that 40-meter space between ready-room and hangars I will never, never know.

Dieter Jurgens, my Tech, was there.

"What the hell do you think you're doing, Irish?" he shouted. "You're grounded. Look at you! You're in no condition to fly!"

"Fire her up, D. J." My voice croaked like an asthmatic Tharkadian tree frog. Swallowing hard to force down the lump in my throat, I repeated the order. "Fire her up. The Red Eagle is up there. I've got to go!"

He looked at me like I was crazy. Maybe I was.

"No, Irish, you'll kill yourself!"

"Dammit Jurgens! Fire up the damned engines!" My voice cracked. "Do it, Corporal!"

"Kensie...", he began, but I grabbed his elbow and spun him around towards the hangar bay housing my ship.

She was there, cool, gleaming and silent... and ready to grab blue.

"Kensie, I can't let you..." He stopped himself. Maybe he saw murder in my eyes. Maybe he just knew there would be no stopping me. "They're on frequency three-double oh-niner," he said. He shook his head. "Luck, Irish."

Adrenaline surged through my system as I pulled the handle which dropped the pilot's boarding ladder. Climbing into my cockpit, I could hear Jurgens detaching the power leads and safety lines from the ship. The roar of the Wangker engine igniting as D. J. fired the cycle converters was a shotgun blast even through the helmet baffles. The last thing I saw before I taxied out of that hangar bay was Dieter Jurgens standing against the wall of the bay. He rotated his finger around his temple, then shrugged and grinned and gave me the traditional thumbs up. *You're crazy, but good luck, he was saying.*

Damn right I was crazy. The Red Eagle was up there, waiting for me.

I shoved the thought aside. Ignoring repeated calls from the tower, I taxied onto the launch ramp and slammed the throttle wide open. Without the benefit of a catapult, I would need every gram of overthrust I had to get 50 tons of aerospace fighter off the ground. Finally, less than 20 meters from the end of the runway, my ship lifted. Switching on the HUD and transponder/receiver, I picked up a heading for the battle in space.

Five Gs of acceleration mashed me back in my seat as the sky turned dark blue and



the stars came out. Just what the hell was I doing, anyway? D. J. was right. I was going to die, just like the dream said.

But the alternative was running and hiding and leaving my buddies to die out in the thin, cold vacuum.

No!

Blue deepened to black as I cleared Wyatt's atmosphere. Ahead, I saw the flare and fade of explosions and engine-burns, as fighters wove and spiraled in a swirling dogfight. Determination and adrenaline had burned through the panic, but the underlying fear remained. I knew that blind, unreasoning terror still lay just below the surface. It wouldn't take much to bring it boiling to the top, where it would destroy all logic and training, sending me running again.

Only out here there was no place to run.

Soon I was in the middle of it. Most of the enemy fighters were Marik-built F-90 *Stingrays*, with a few Liao *Thrush* and Kurita *Sholagar* fighters thrown in for good measure. I spotted a pair of F-90's closing in on the tail of a *Corsair*. Kicking my ship into a right wingover, I pulled out above and behind them. I jiggled the controls a bit. My heads-up display signaled a hard weapon lock. Pressing the trigger, I sent paired bursts of energy into the Marik ship from my *Corsair's* large lasers. A stream of glittering ice crystals billowing from his shattered canopy told me that his armor had been breached. He was losing atmosphere. My combat sensors showed that his cockpit had been destroyed.

A kill! •

"Blue Leader here! Nice shooting, whoever that was." Marla Entz's voice sounded over the comlink. "I'll confirm that one." She must have looked at her transponder display screen then, because she began yelling. "Shaneyfelt, what the hell are you doing up here? By God, if I didn't need every ship right now, I'd flame you myself! You'd better hope that nothing happens to that ship, or you'll wish I *had* shot you down."

Another voice broke in. "Hey, Irish! Glad to have you back." Lucas Kurtz pulled his ship alongside mine. "That was number four, right? Let's go see if we can't get you your fifth kill!"

At that thought my fear became a living thing, crouching in the cockpit with me. With almost a physical effort, I shouldered it aside and growled into the comlink, "Right, Luke. Let's get 'em!"

Incoming Marik DropShips painted themselves across my display screens. Kurtz and I rolled starboard and vectored for them. My lasers cut loose a volley which cratered hull metal. All the pent-up horror and fear and guilt was burning through me

now in a red blood lust. It was several moments before I realized that the curdling banshee's scream I heard over my helmet speakers was my own.

We lanced through the formation, slowed, end-for-ended and accelerated back towards the planet.

"Blue Leader to Blue Five! Watch it! Red Eagle on your tail!"

The terror flooded back. My head jerked around. Blue Five was Kurtz's call sign...

There!

The ship had come out of nowhere, an SL-15 *Slayer* painted midnight black except for the image of a huge eagle, the color of blood, painted across fuselage and wings. It was him, the Red Eagle, my nightmare, visible now in carballoy and steel and so close astern I could nearly see Pawoloski's grin through his helmet.

Panic shrieked in my ears. I slammed the throttle wide open and hauled the stick back so hard I thought I'd torn it clear of its moorings. My pressure suit tightened around my legs and hips, preventing a high-G blackout as I twisted into a tight, tight half loop. Half way around I rolled the ship upright. As I came out of the Immelman turn, I noticed that Luke had split off from my tail when the SL-15 appeared, diving towards Wyatt rather than climbing with me.

In my after vid, I saw the *Slayer* coming up right behind me. My *Corsair* lurched as laser fire ripped across both wings, and I caught a glimpse of wreckage spinning off from my starboard side. A quick glance at my ship's status display showed that most of the armor on my right wing had been shot away by that laser blast. You don't need wings to maneuver in vacuum... but landing was going to be decidedly interesting.

If I lived to land.

I shoved my stick down and to the right and kicked in left thrust. The *Slayer* hung with me through the split-S, firing the whole time. I tried for a lock with my rear lasers, tried and failed as another hit savaged my starboard wing. Another hit! More damage was revealed on my SSD: fuselage armor damaged, engine hit. Even a *Corsair* can't take that kind of pounding for long.

Kurtz yelled over the comlink, "Hang on, boss, the cavalry is coming." Two CRS-V12's flashed past toward the Marik ship on my tail—his and Judy Haring's. I glanced at the after vid, expecting the bastard to break and turn, saw instead the *Slayer* lift its nose and fire.

A long burst from its autocannon blew through Kurtz's fuselage armor and chopped into his hull. Chunks of debris broke free in a tumbling cascade of wreckage. "Punch out, Luke!" I screamed into my mike. "Punch out, dammit!" Luke's fighter, what was left of it, was tumbling now. The *Slayer* hauled around and burned him with lasers and cannon fire.

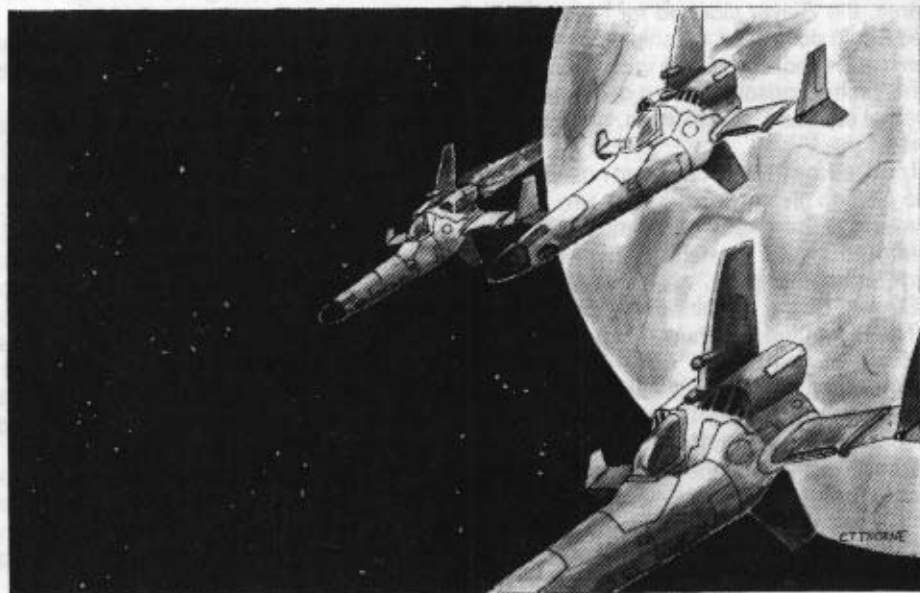
I was watching when his fuel tanks blew.

"No!" Kurtz had been my wingman ever since I'd joined the squadron. "No, you bastard! You bloody red bastard...!"

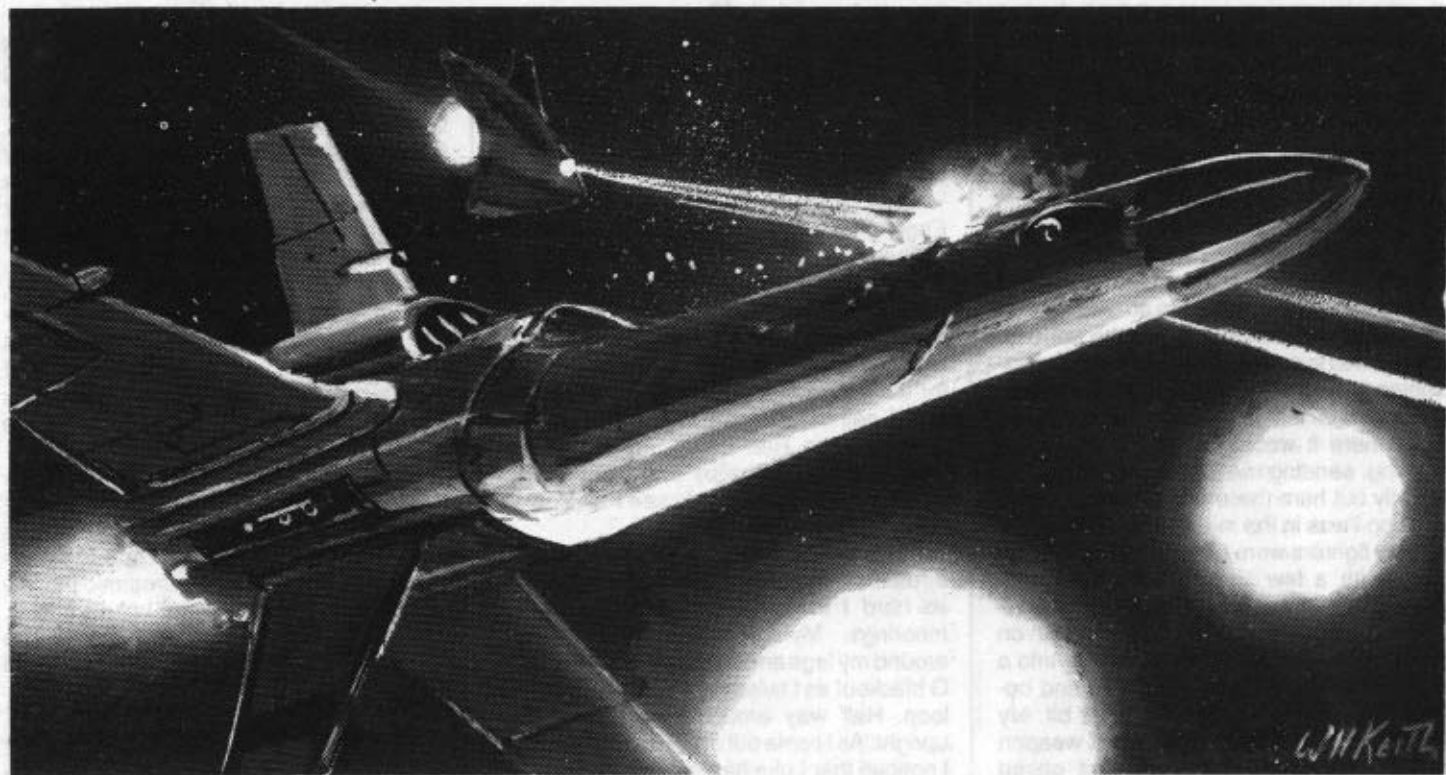
The Red Eagle skimmed atmosphere. I tried to line up on his tail, but he slipped away, as insubstantial as a dream.

Or a nightmare.

He was on Judy Haring's ship now, close behind her, laser fire searing into her wing and tail fins. I could hear her screaming as her fighter began falling to pieces around her, could hear her screaming as I tried for another shot and realized the Red Eagle was just out of range.







Looking wildly around, I saw that my entire squadron had been scattered by the enemy. I was all alone. In my HUD, I saw the blip that was the SL-15 turning to attack my ship again. Pawoloski must have been listening to our tac frequency earlier, for over the comlink came a voice, heavily accented, full of malice.

"So, you want your fifth kill. I'm sorry, my friend, that you must die before you achieve your goal."

Then, just like the eagle in my nightmares, the *Slayer* stooped for its kill. The Red Eagle dove past my ship, its autocannon blasting hole after hole in my ship. Red lights on my console warned of damage to internal structure, of fuel leaks, of pressure leaks...

I pushed the throttle open and nosed over into a steep dive towards Wyatt, raw terror gnawing at the edges of my mind. Off my starboard side, I saw the *Slayer* looping back for another pass.

Slayer? Or the red bird of my dream?

The nightmare was becoming merciless reality.

I knew that if I didn't pull out of my power dive, I'd burn up when I reentered Wyatt's atmosphere. I knew that I had to ease off on the throttle and pull the stick back. I just couldn't move. Death was staring me in the face, freezing bones and blood and mind with fear.

"Good-by, Lieutenant Shaneyfelt," Pawoloski's voice came again. "I am tired of playing with you, so now you die."

My ship's nose and the leading wing edges began to glow with the first signs of reentry heating. The ship shuddered as I hit atmosphere. A line of tracers streamed past my cockpit, the near miss revealing that the Marik pilot was suffering the same difficulties that I was.

A warning buzzer told me that my power plant was approaching shutdown temperature.

"Do something," my mind screamed at my immobile body. "Anything. Don't just sit there and die!"

I would die... like in the dream. Like in the story...

No! No! By the blood of Celtic ancestors... no! To die helpless... whimpering... no!

I jerked the throttle closed and pulled the stick back violently. My vision narrowed to a red-tinged pinpoint as the high-G forced the blood away from my brain. The *Corsair's* frame shrieked protest at the sudden turn. When my vision cleared, I was looking at the stars again... and at the Red Eagle twisting away just ahead.

Convulsively, my hand tightened on the firing grip. At less than 100 meters, the intense energy from all six lasers tore into the *Slayer's* armor. The Marik pilot hauled

his ship into a vertical climb, spinning wingtip over wingtip, but I hung with him, firing again and again and again.

My lasers ripped up the armor along his ship's fuselage and nose, and I saw a burst of light erupt from the *Slayer's* nose forward of the canopy. Wreckage spun into space as his autocannon blew apart, armor spilling away in molten fragments.

He turned, but I turned tighter, staying inside his arc. A bolt of laser fire from his rear gun melted another hole in the nose armor on my ship. The SL-15 whipped into a Shandell turn to the right and pulled out of the climb with a barrel roll. Praying that my ship would hold together, I went into a fast climbing turn, following the Red Eagle. Again the shutdown warning sounded, and again I slapped the override. Stay with him! Stay with him!

I unleashed another fusillade of laser bolts at the *Slayer's* exposed belly. He was slipping to the side, angling towards Wyatt's atmosphere. He was going to get away!

I gave my *Corsair* all the side vectoring thrust I thought she could take... and then some more. The Eagle was trying for a bounce off atmosphere, and I knew from the shriek of protesting hull struts and stress supports that my *Corsair* would never be able to follow him.

Instead, I shoved the throttle full forward, angling down, the *Slayer* filling my HUD



targeting brackets. It was my last chance. If I missed now, he would escape. Whether I hit him or not, I was plunging too steeply into the atmosphere to have a prayer of skipping off again. It was all or nothing, with a fiery, reentry Death clinging to my hull with bloody talons.

I was so close I could read the lettering on his tail fins, so close I could distinguish individual feathers in the painted design that blotted out the looming, cloud-decked mass of the planet ahead... FIRE!

The Marik ship exploded.

My *Corsair* plunged through the explosion as it unfolded in a flaming white flower of detonated fuel and ammunition. Fragments rattled across my hull and scored wings already torn by fire and explosion.

It was too much for my already-damaged fighter. Warning lights and tell-tales were coming on all over my SSD. My power was falling, my vector thrusters freezing as I jockeyed for control. Somehow I brought her nose up enough to drop into a long, ragged glide as atmosphere thundered around my cockpit and what was left of nose and wing armor glowed cherry-red with reentry. Then my power went dead completely, and I found myself trying to make a burned-out pile of junk glide.

I did. Barely.

My ground crew still can't figure out how I managed to reenter safely, let alone land

in one piece. My aft armor had been breached in three places. My right wing was nearly shot away. My engine shielding was almost completely destroyed, my power plant feed was half melted, and my undercarriage was bent. On top of all that, D.J. spent the next couple of days picking pieces of *Slayer* out of my *Corsair*'s hull.

It turned out I didn't miss much of the fighting after I grounded. Blue Squadron had been able to form up and hit the Drop-Ships again, throwing enough of a scare into them that they looped the planet and headed back for the JumpPoint and home without even bothering to try and land. So maybe we'll get to keep Wyatt for a little while longer.

Luke made it back. He'd ejected after all, and Aerospace Rescue picked him up from Wyatt orbit. When he gets out of sickbay, he'll be back on my wing again.

Yes, the grounding order was lifted. Marla Entz decided not to have me, in her words, "first shot, then court-martialed," which I thought was rather nice of the lady, all things considered. Intelligence confirmed the SL-15's pilot to be Major Pawoloski. My gun cameras confirmed my kills on the *Stingray* and Pawoloski's *Slayer*... my fifth kill.

And I never had another nightmare. The psych boys figured that since I faced my fears, the dreams won't come back.

Am I superstitious? Of course not! Just because my Celtic ancestor and namesake was killed by a giant red eagle... just because I almost followed him the same way... hey, why should *that* make me superstitious?

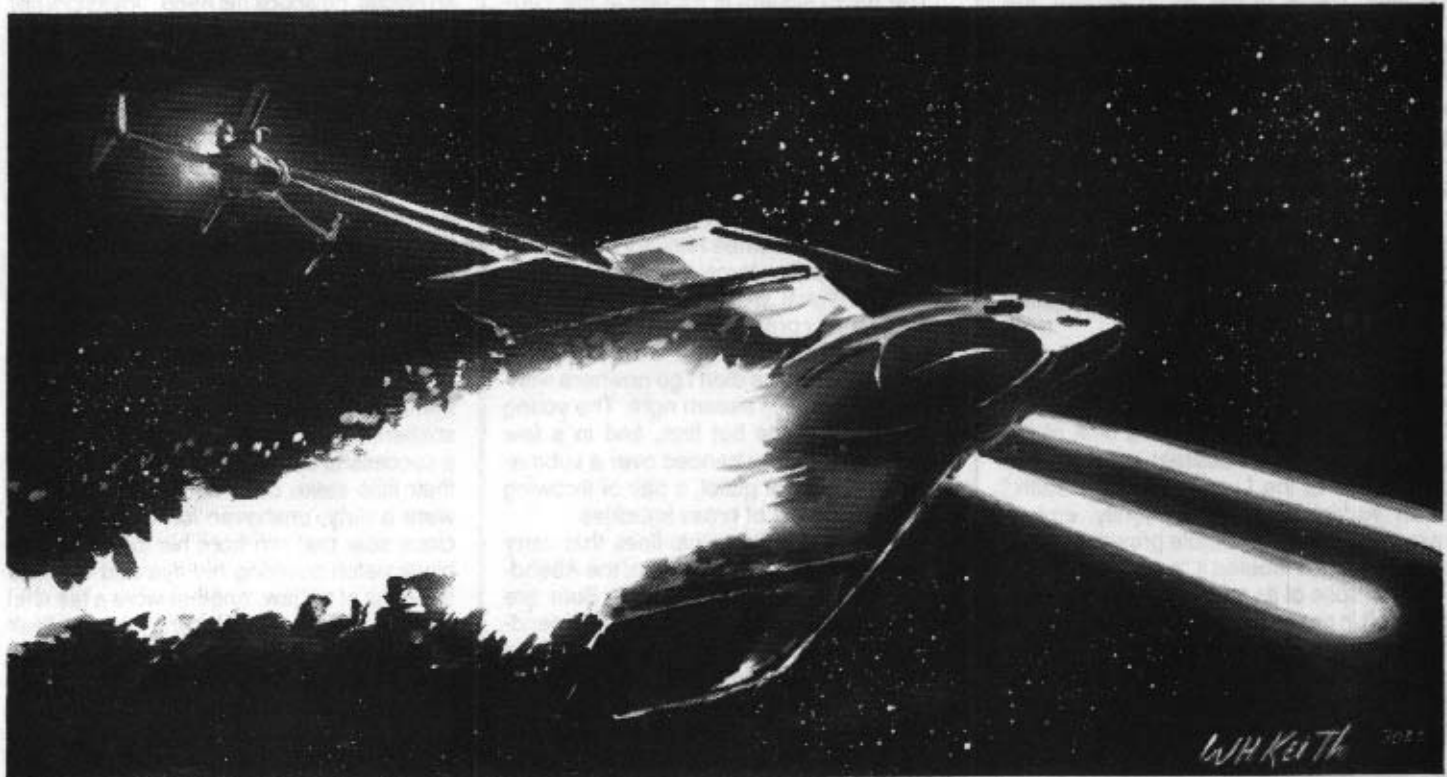
Oh, sure, I wear this twisted little chunk of metal on a chain around my neck, now, sure, but that's not superstition. It's one of the chunks of the *Slayer* that D. J. dug out of my fuselage, and I keep it to remember what fear will do to a man's soul if he lets fear ride him into the blue... and what's possible if he doesn't.

My squadron-mates, on the other hand, are something else. They seem to think that my dreams were some kind of warning, that I'm some kind of good luck charm.

Well, come to think of it, they could have a worse good-luck talisman than the Lyran Commonwealth's newest ace!

*Captain Kensie "Irish" Shaneyfelt is an aerospace pilot still serving with the Lyran Commonwealth's 10<sup>th</sup> Skye Rangers Aerospace Force. At the time of this writing, he had just scored his seventh kill, putting him well on his way to the title of double ace.*

*Greggson DuVall is a military historian and author. He is currently compiling data for a textbook on aerospace fighter tactics.*





# Pleasure Planet

by C. Randolph Fairfax

They call it the Playhouse of the Inner Sphere.

It is a world devoted to pleasure, a world that trades in luxury, sensuality, and indulgence, where everything is for sale and anything can be yours if you have the money.

This is Galaina (pronounced Ga-LINE-a), the ninth planet of the Alioth system, the Pleasure Planet of the Universe. Though part of the Lyran Commonwealth, Galaina is no slave to narrow prejudices, and freely welcomes the rich and pleasure-seeking of every state, planet, house, and kingdom. Here they gather to revel in luxury and indulge in sensuality, to feast in the restaurants, gamble fortunes in the casinos, dance for hours on starlit terraces and then retire to cool, scented rooms to taste the delights of beautiful, skilled, and compliant women.

All the Successor Houses have condemned Galaina. To Hanse Davion it is "a market town that turned into a brothel." Takashi Kurita has called it "a sink of depravity, the single clearest proof of the decadence of the Lyran Commonwealth." Even Katrina Steiner, evidently embarrassed by this disreputable presence in her domains, once labeled it "a parasite world."

Yet in spite of its reputation, Galaina has been left in peace, free to pursue its peculiar business as it has for centuries. It remains a paradox: a world of luxury in an age of poverty, of truce in an age of war, a world despised, yet tolerated.

For years I had heard about Galaina, but like most people I had never been there.

Recently, however, I was on Summer VI on a low-level mission, and when negotiations wound up sooner than expected leaving me with a free week, I grabbed the chance and took the next JumpShip for Alioth.

## Alioth Station

The Alioth system is located in the Federation of Skye, within easy reach of all the Successor States. We arrived at the Jump-Point and transferred to Alioth Station. After the usual formalities of immigration and passport control, we were herded into a reception area where a pleasant young woman displaying the green and gold emblem of the Galaina Friendship Committee (sort of a combined Ministry of Tourism and security police force) invited us to check all our personal weapons at the security desk. The only protest came from a scarred, looming, unshaven brute who explained that hell, ma'am, he didn't go nowhere without a piece, it didn't seem right. The young woman was polite but firm, and in a few minutes he dutifully handed over a submachine gun, a laser pistol, a pair of throwing knives, and a set of brass knuckles.

There are two DropShip lines that carry passengers from Alioth Station: the Abendstern Line and the Star Ferry. Both are owned and operated by the Galaina Friendship Committee, but they nevertheless keep up a brisk competition with posters and brochures extolling their luxury features, convenient schedules, and low rates.

One option the traveller does *not* have is to travel to the surface of Galaina by any

means other than one of the two official lines. No private DropShips or aerospace vehicles are allowed on the planet. It seemed like an obvious security precaution—the authorities wouldn't want a strange DropShip to land and disgorge a company of 'Mechs in downtown Galaina Ventura—but when I mentioned this later to an official, he shook his head. "Invasion, no, we're not worried about that. It's just that, well, some of these warrior boys, after all those years out there"—he waved his hand vaguely to indicate all the worlds within JumpShip reach where 'Mech companies might be stationed and battles taking place—"by the time they come here, they're a little, well, *rough*. We like to make them feel secure, relaxed, get in the mood to have a good time."

The soonest available flight was on the Star Ferry. My fellow passengers were a varied collection. The warrior I had seen surrendering his personal arsenal was there with four of his buddies, mercenary soldiers on furlough, flush with the profits of a successful campaign and ready to spend their little stake on a wild weekend. They were a dirty, unshaven lot. One had a vicious scar that ran from his forehead to a black patch covering his eye and down to the edge of his jaw. Another wore a tee shirt bearing the printed slogan "Rip out their lungs." They whispered among themselves and seemed a little in awe of their surroundings and the smiling attendants who brought them drinks and food and inquired about their comfort. There was a party of six talkative women in fashionable traveling



clothes who spent the flight playing cards. In the seats across from me were a slight, pale, expensively dressed young man and his stunningly beautiful female companion. They were attended by a retinue of personal servants who spent the flight scurrying back and forth on errands.

There was also a suspiciously inconspicuous traveler in a dull brown business suit. I thought I had seen him before—one of those low-level officials with innocuous-sounding titles who always seem to be "attached" to embassies. What would bring him to Galaina, I wondered. Perhaps the possibility that fashionable ladies and dissolute young aristocrats might inadvertently let slip a scrap or two of information picked up from their more conscientious husbands and fathers? Making a note to be careful of what I said, I thanked my lucky stars I had left my work papers with a colleague and was carrying nothing more incriminating than a toothbrush.

## The City

They say no one is truly prepared for his first sight of the city of Galaina Ventura. After stepping off the DropShip and retrieving my luggage, I made my way through the chaos of the terminal searching for transportation to my hotel. Already I was a target for a horde of peddlers who surrounded me, talking rapidly in shrill, coaxing voices, imploring me to buy jewelry, earrings, combs, gloves, shoes, pins, wallets. Others shoved business cards at me and expounded the merits of this or that hotel or taxi company.

In spite of the crowding I felt good. The air—the fabled air of Galaina—was clear, clean and pleasant, the .8 G gravity gave a spring to my step. In front of the terminal there were buses, taxis, pedicabs, luxury ground cars, hovercraft, all available at astronomical prices. I grabbed a pedicab and gave the driver the name of my hotel. Soon we were riding through the tree-shaded downtown streets, past architecture of every conceivable style of the past 1000 years, the snow-covered southern mountains forming a spectacular backdrop. My driver kept up a continuous stream of chatter over his shoulder. He knew a good hotel, much, much better than the one I was going to, they were just rip-off bastards there. He knew a good place to exchange my money, good rates, the best, couldn't do better. And did I want something nice? Music, exciting holoplay, massage, nice girl?

We rode down Alioth Boulevard, past a Consolidation-era tavern bearing the proud

sign, "McKenna slept here," past the imposing façade of the Kredit Galaina building, built in 2736, past the block-long New Earth Trading Company building, crowded with shoppers. In the gaps between the buildings I could catch glimpses of the transmitting tower of the ComStar "A" station. My driver said, "You want a tour, excellency? My friend, he's the best guide on the planet, he'll take you all around."

## Let Us Now Praise Famous Men

The city is full of these self-proclaimed guides, ready for a fee to show the old buildings and to wax eloquent on Galaina's glorious past. They will tell you that Galaina was one of the first planets to be settled during the early Exodus period, that it became known at the Gateway to the Galaxy, "a shining beacon to hopeful pioneers yearning to break free." Galaina, they say, was a major station on the early trade

routes, rapidly becoming a commercial center through which flowed the goods of a thousand worlds. From commercial success came military distinction: Galaina's soldiers and Mech regiments were known and feared throughout the Human Sphere. Ambassadors from far-flung worlds came to the courts of Galaina to pay tribute and beg for alliance and protection. There is the touching story of the legendary Lord Adolpho, Duke of Galaina, whom Ian Cameron begged to become Commander of the Star League Regular Army. With tears in his eyes the great Duke refused, for he knew it meant he might one day have to take up arms against his beloved Galaina. "I would rather be a Prince to my own people," he said, "than a General over strangers."

Pretty stories, but totally untrue. Although Galaina was indeed settled in the Exodus period, it remained for centuries only a small backwater. Largely devoid of mineral resources, it held no interest for the mining corporations. The trade routes ran nearby, but Galaina was not

even a minor port or storage depot. And although its soil was rich enough for the needs of its settlers, the mountainous terrain made large-scale agricultural exploitation unprofitable.

In fact, Galaina's chief appeal during the early years was precisely that it was *not* a major center. The traders and empire-builders labored and sweated on such notorious hell-holes as Car Caroli V and Mizar III, but when their work was done and they looked around for rest and relaxation, they slowly realized that poor, uninteresting Alioth IX was blessed with perhaps the most benign climate in the known universe.

Galaina learned to care for the traveller, to offer rest, relaxation, diversion, amusement. The banks and financial institutions that financed the exploration of space found it convenient to set up regional offices on the planet. Galaina grew rich on the twin service industries of banking and tourism. The banks financed the expansion of the hotels, resorts and casinos, and the tourists these attracted brought wealth to the banks.





Contrary to the fables of the tour guides, the great names of Galaina's history have been, not military or political figures, but financial ones. Adolpho of Galaina barely rates a footnote in standard histories of the Star League, but the Greenspoon Fiduciary and Trust (founded by B. B. Stonehammer in 2449) was the major force behind the fabulous growth of Ceres Metals and (until its failure in the crash of 2576) a source of credit and capital to all worlds of the Star League.

Today, Kredit Galaina and the House of Webber (both organizations are dominated by members of the Webber dynasty, the ruling house of Galaina) carry on the tradition. On the planet itself there are branches of these banks in every major hotel or casino. They freely accept all the house currencies, C-bills, even those perpetually depressed currencies that pass for legal tender in the Peripheral worlds, and always at rates of exchange that uncannily match their true value.

## The Best Things in Life are Free But...

The reach of Galaina's banks extends far beyond the planet's surface. Although their operations are shrouded in dense secrecy, the banks are known to be active behind the financial scenes throughout the Lyran Commonwealth. It has been noted by numerous economic experts that House Steiner possesses the most stable, secure, and vigorous economy of all of the Successor State Houses, and the banking institutions of Galaina are an important pillar in that stability. That the Galainan banking houses, through interest rates and through their numerous investments in Commonwealth industry, should profit by the growth of Steiner economy, is only natural. For a number of years now, the average inflation rate for House Steiner C-bills has been only about 3%, evidence of the solid and profitable hold Commonwealth banks have on the economy.

Galainan banks are known to hold controlling interest in a number of Lyran industries and important companies. Companies not controlled by the banks still depend on their loans for growth. Defiance Industries of Hesperus is a case in point. One of the Commonwealth's largest and best-known corporate entities, Defiance Industries produces numerous BattleMechs, armored vehicles (including the innovative Rommel/Patton tanks), and military weapons vital to the defense of the Commonwealth. Greydon Brewer, Duke of Hesperus II and

owner of Defiance Industries, completed the acquisition of Tolsand Factory on Furilo in 2992, an acquisition which made possible Defiance Industries' current phenomenal growth. The Tolsand buy-out was made possible by a substantial (if undisclosed) loan from a banking consortium which included both Kredit Galaina and the House of Webber.

With the recent alliance between Houses Steiner and Davion, the Galainan banks have found the opportunity to extend their power beyond the borders of the Lyran Commonwealth. Reciprocity agreements between various banking institutions within the Federated Suns mean that Federated Suns tourists within the Commonwealth can always find a ready source of money changing, loans, and credit wherever there is a Galainan bank branch.

One of the more visible results of the banks' activities is the city's profusion of hotels, ranging from crowded little warrens to palaces offering a standard of luxury to delight the most jaded epicurean. There is the Grand, with its cavernous lobby and crystal chandeliers, its marble floors and thick velvet curtains, its echoing corridors and obsequious, liveried staff; the Seven Suns, its tower thrusting high above the city, its glass-enclosed rooftop lounge a favorite night spot; the Excelsior with its seven restaurants and its personal casino.

## A Room at the Inn

At the Grand I was lucky enough to get a tour of the Imperial Suite while it was between occupants. I was taken around by the manager, a perfume-scented, self-important little man who informed me in reverent tones that the Imperial Suite was the preferred lodging for the highest nobility and the particular choice of Lord Rupert (the notorious younger son of Lord Anatol, the present Duke of Galaina). He pointed out the high ceilings with their elaborate plasterwork decoration, the exquisite furniture with its look of ancient Terran luxury. A closet stretched the length of one wall. If the visitor's wardrobe were insufficient to fill it, representatives of the city's famed couturiers would gladly come to the room to display the latest styles.

The bedroom was dominated by a huge, canopied, four-poster bed that was covered with silk sheets and a coverlet of white fur. The manager drew the hangings aside and directed my attention to the ceiling of the canopy: a pretty picture of blue sky, white, puffy clouds, and naked, whispering cherubs looking down on the sleeper. At the touch of a switch the cherubs receded,

revealing a mirror. "This is a great favorite with Lord Rupert," the manager whispered, giving me a roguish wink.

For the occasional unscheduled collation there was a small kitchenette with a full bar. If the visitor should wish it, he can be assigned a personal servant girl to bring his drink, take his coat, rub his shoulders and draw his bath.

The vast bathroom, with floors of marble and walls of porphyry and alabaster, is ingeniously designed to suit the visitor's every whim. He can step into the shower and be assaulted by sizzling needles of spray from jets hidden in the shower walls, or he can step down into a tub the size of a small lake and be caressed by rippling currents that turn hot and cold on command, finally rising from the water into a towel held by waiting hands.

I rather diffidently asked whether the personal servant girl assigned to the traveler also, ahem, assisted him in the bath. The little man looked shocked. Of course not, he replied indignantly. That was the duty of the bathing girls, who would join him in the tub and wash him, and then afterwards dry him, comb his hair, manicure his finger- and toenails, and massage the soles of his feet. I asked if there were male bathing servants, too, for women visitors. "Oh yes, for the women," he said, "or for any who wish it." He smiled urbanely. "We cater to all tastes."

You could easily spend a week in Galaina without ever leaving your hotel room, but there is always a subtle pressure to be up and on the go, to fill the 27 hours of the Galainan day with an endless pursuit of action. For most visitors, action means the casinos.

Galaina is said to have more casinos than streets. These range from exclusive private clubs like the Alcazar (patronized by Lord Anatol's mother, the Grand Duchess Gut-rune) to hot, smoky, crowded dives where the drinks are strong and the prudent visitor keeps one hand on his wallet. Most of these decorate their outside walls with gaudy phantasmagorias of lights. Just next to my hotel (which was *not* the Grand, by the way, or anything like it) there was a casino that all night long kept up a continually changing spectacle, the lights forming patterns of waterfalls, exploding volcanos and bursting fireworks.

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### Right: Everybody gambles in Galaina.

Gambling in all of its myriad forms is one of Galaina's principal industries.



## Luck Be a Lady

Everybody gambles in Galaina. There are gambling machines on every street corner, in every bar and greasy spoon, even in the restrooms. You can play the simulators, those games with their iridescent exploding displays and their insatiable appetite for coins that allow you to imagine yourself a MechWarrior blazing away at a menacing array of enemies. Feed it enough money and your heat sinks will never overload and your ammo never run out. One night I caught sight of the mercenary soldier I had seen at Alioth Station; he was perched

in a simulator blasting away while his friends cheered him on. "Shoot," he said, "never had so much fun in a firefight."

There are tables for three-world roulette with its whirling globe and elegant croupier. Bejeweled ladies sit at the green baize table moving chips and watching the computer display flash numbers in sequence. There are tables for card games—twin aces, cut out, double or run—as well as the older games—blackjack and three-five stud.

The serious male gamblers always head for the crap tables. This game, with roots in the Terran 20<sup>th</sup> century, has evolved from its innocent beginnings into the fastest, hot-

test, most pulse-pounding method yet devised for winning or losing a fortune in five minutes. It is hard to imagine what the ancients, who docilely waited for a turn to throw a pair of six-sided dice, would think of today's game with its continuous and simultaneous play, its 4-, 6-, 8-, 12-, 18- and 30-sided dice, its shifting, 3-dimensional surface, its tunnels, valleys and wells, its pyramiding bets and fantastic swings where a player can win 1000 C-bills one minute, then lose it and win it back the next.

Galainans, being inveterate gossip-mongers, love to tell tales of the casinos. There is the story of the mercenary soldier who, having carefully saved up slightly over 3000 C-bills, went straight from the DropShip port to the casino, still carrying his duffel, blew his whole stake in less than an hour, and had to spend the rest of the week hiding in a buddy's hotel room, cadging meals when he could. There is the story of the top entertainer who lost so much at the tables that he had to agree to an exclusive contract with the casino to square the debt. (I heard this tale three times, each time about a different entertainer. My informants all assured me the story was true. One of them claimed to have a brother-in-law who was working in the casino at the time "and saw the whole thing.")

The casinos continually search for new thrills, new variations on the ancient game of betting on chance. It is possible to gamble on the weather, on news events or the arrival times of JumpShips. The week of the Games on Solaris VII is a particularly intense period. HPG transmissions bring twice-daily updates on the fortunes of the contestants and—by extension—the fortunes of their followers on Galaina. For a solid week no one talks of anything but the Games. The sporting rooms at the casinos are packed with gamblers waiting for the next report. Rumors race through the crowd, betting is frantic and the stakes rise to dizzying heights.

In the heat of the action the gamblers forget about everything except the game. They forget what time of day it is, they lose track of their friends and companions, they forget to eat, and meanwhile hardly any of them is aware that they are continually being watched.

### Quis Custodiet Custodes Ipsos?

The Galaina Friendship Society maintains a system of continuous surveillance inside the casinos using mutually reinforcing groups of "protectors." An area protector





keeps his eye on two or three tables. Floor protectors watch the area protectors. Overhead, through video monitors and one-way ceiling mirrors, the grid protector group monitors the entire room. In addition, floating security teams cruise the room, small groups of fresh-faced smiling youths with discrete communications gear moving unobtrusively from table to table.

One reason for all this surveillance is simply the vast amount of wealth on display, the incredible quantities of chips changing hands every second, a constant temptation to cheating and thievery. The casino employees are all native Galainans, and therefore all adherents to the Church of the True Faith, a fact which more than anything gives them a sense of solidarity with each other and with their employers. Still, Church doctrine emphasizes the unavoidable fact of human frailty, and in a scene of so much temptation the authorities feel better giving everyone an additional motive for adhering to the path of righteousness. The employees seem to agree. One woman, a dealer at a three-five stud table, told me, "I like knowing I'm being watched over. It makes me feel like someone's looking out for me."

If you ask one of these protectors what their job is, the answer you'll probably get is "keeping the game running smoothly." One night I saw an example of what they meant. There was a disturbance at one of the crap tables, an argument between two overreager high rollers that quickly escalated into a shoving match. Within seconds the men were surrounded by GFC security agents. One of the fighters happened to have his face turned towards me. I saw his eyes cloud over, saw him slump into an agent's arms, saw the stun stick return to a holster. Quickly and expertly the men were hustled away from the table and out of the room, and the game continued without interruption. It all happened so fast that if I hadn't been right there I would have missed it.

Nothing is allowed to interrupt the daily round of amusement. All possible sources of discomfort are removed, even the awareness of the high price of these pleasures. If you have an account with a branch of a Galainan bank on your home world (and there are many of these branches operating under a variety of different names), you can arrange for your expenses to be charged directly to your account. Daily HPG transmissions link the branches together, so that the money you lose at the tables today will be deducted from your account tomorrow.

In this way it is possible to run up truly staggering bills. They tell a story about one young wastrel, the son of a powerful Duke (every time you hear the story, a different

Duke is named) who lost 10,000 C-bills (or 20,000 or 50,000) in a single night. His father eventually had to come to the planet himself and drag the prodigal home.

Such stories go a long way towards explaining Galaina's reputation as a den of robbers and thieves, a nest of parasites preying on the weak and gullible. To such charges Galainans have several replies. They point out that when a visitor loses a large sum, efforts are made to cushion the loss. The visitor who has been unlucky at the tables will find that his room and meal charges have been paid and that he has free transport back to the JumpPoint. Everyone wants him to carry away a good memory of his visit. And if all this doesn't fully compensate for his loss... well, after all, nobody *made* him gamble.

Galainans are quick to point out that gambling is not restricted to tourists. Local Galainans, they tell you over and over, are among the most faithful customers of the casinos. This is true up to a point. Although the canons of the Church of the True Faith officially frown on gambling, actual practice is quite lenient. In fact, recent theologians, citing the large subsidies the Church receives from the casino tax, have argued that gambling should be regarded as a form of tithing. In any case, the local parish priest will almost always grant dispensation to go to the casino, knowing that his parishioner, although he will probably lose, will not lose heavily, for Galainan law has long required that citizens, unlike rich offworlders, must pay cash for their chips. The local high roller may wind up the night with an empty pocket, but his bank account will still be whole.

Although gambling is expensive, sometimes spectacularly so, it is not the only costly pastime on the planet. *Everything* in Galaina costs money. And if the attractions of the casino pall, there are many other places that will be happy to relieve the visitor of his excess cash.

## Buyer Beware

When you leave your hotel, runners employed by the shops will crowd around you, and one of them is sure to drag you into one of the many crowded shops along Lord Adolpho Street where, talking all the while, he will load you up with shirts, scarves and neckerchiefs of vibrosilk and alethosatin and jackets of the softest Pendaric leather. Gently but firmly you are made to sit down, your boots are removed and replaced by "corgies," the open-mesh, curled-toed boots favored by the dandies, a bargain at only Cb 59 a pair.

The runners are ubiquitous and unrelenting and they have an uncanny nose for money. Once while I was trying to persuade one of them that no, I did *not* want to go into his shop and see his flawless Bayindir diamonds, I pointed at an imposing-looking aristocrat who was strolling past unmo- lested. Why didn't he go and bother *him*? "He's broke," was the immediate reply. I checked later and found out he was right. The prosperous appearance was all show. The man's home world, an agricultural planet, had been devastated by severe floods and a sudden plagues of pesticide-resistant locusts. He was in Galaina trying to negotiate a loan. All this, I gathered, had been known by the runners within minutes of his arrival.

It should not come as a surprise that this world, so given over to gambling and games of chance, supports a flourishing trade in fortune-telling. For a suitable fee you can receive encouraging words about your social and romantic prospects, impressionistic forecasts of political and military events, and tantalizingly incomplete data about winning numbers at the casino. The types of service you can buy range from a simple palm reading to elaborate, personalized fortunes for which you must provide not only the dates and times of events in your own and your parents' lives but also blood and urine samples, brain scans, and retina prints.

The best-known of these practitioners is a stately, bearded mountain of a man who goes by the name of Griba the Zork. From his baroque offices on Commonwealth Plaza he offers subscription services to scores of clients throughout the Inner Sphere. It is even rumored that Maximilian Liao has personally sought out his advice and the Liao sends a personal representative to him each month to collect reports.

## A Day in the Country...

If you want a break from shopping and gambling, you can rent a high-powered ground car and, after signing a complex insurance agreement whose welter of clauses boils down to "you break it, you bought it," you can race at terrifying speeds over the undulating, banked, dirt roads outside the city. In two hours you can be in Schildesee, the exquisite ice blue lake at the base of Mount Kreisberg. For centuries, parties of Galainan young people on holiday from work or school have come to this lake to picnic and swim nude in its clear, cold waters, while a mile away at the Schildesee Spa, the aged, infirm and hypochondriacal sit in the sun and take the



waters from a nearby mineral spring. If you like hiking, you can make the two-hour climb up Mount Kreisberg to Lookout Point where you have a splendid view of the lake and the lush, surrounding countryside.

### ...A Night on the Town

Evenings on Galaina are given over to feasting. Visitors flock to restaurants like the Purple Rain where you dine in an open air setting bordered by flowering Xacantha trees, cascading Skye roses, and pink and magenta netherlips. Candles flicker at the tables, while Galaina's two moons, Hans and Fritz, look down from the sky overhead. (The moons are named for two characters in an ancient Galainan legend, a pair of mythic warriors who, having offended their Duke, were condemned to hang in the skies for eternity and, in the poetic words of the legend, "twist slowly, slowly in the wind.") Purple-clad waiters and waitresses dart from table to table bearing course after course. To accompany the meal there are bottles of a superb Galaina wine, possibly the Gray David Merlot, a light, fruity, aromatic vintage from vineyards on the slopes of the southern hills. For dessert there are dishes of gualomelon, that exquisite fruit, available only on Galaina and impossible to export, which must be eaten within hours of being picked. After dinner, you lean back in your chair, sipping a Stellar Stinger and listening to the night finches, those marvelous birds imported from Terra in the first years of colonization who have adapted to this benevolent climate even more successfully than homo sapiens.

But now the night life beckons. You rise from the table and set off for "the strip," a

two-block stretch of lower Marienstrasse near the Van Mandelbrod statue of Venus, where over a dozen gaudy theaters crowd together offering the most spectacular stage shows in the inhabited universe. On any given night you can see the greatest stars of the entertainment world: Sunny Ho, Vincent Sihanouk, Marian Mkamba, Joan Ramanujan, or the fantastic animal acts of Cliff and Claf, or great holoplay stars like Shou-Pin Grant and Anastasio Karpov, or the extraordinary dance companies of Toshiro Tanaka and Lester Guitierrez. The theaters are always packed, yet there are no bad seats, for the dancers swirl around you, you can see the sweat glistening on their slim, athletic bodies, you feel swallowed up by the brilliant spectacle. The lights, the music, the gorgeous costumes, the continuously changing scene, all combine to astonish and dazzle your imagination. In one show a girl appears wearing a cape. As she slowly climbs a staircase, the cape unfolds behind her like a train revealing ever more fantastic and colorful designs, until the cape has spread out like a vast iridescent curtain in front of the stage. Suddenly the lighting shifts, the cape becomes transparent and through its patterns of colors you can see dancers bearing sparklers in their hands, advancing and leaping and filling the stage with flashing bursts of light. Later, the stage grows dark, a magenta glow appears, a girl is seen dancing, dressed only in her long, black, flowing hair that reaches below her waist, shrouding and revealing her like a filmy costume as she dances, while a soft voice is heard singing of love and the long sultry nights.

### Love, Love, Love

The songs and dances return again and again to the theme of love, for love is a major industry on Galaina. Brochures and handouts from the major houses of prostitution are available in hotels and restaurants (though not in the casinos, whose managers do not wish to encourage competing evening pastimes). You can choose your night's companion from holotapes and then make reservations from your hotel. All establishments are state-licensed; customers must take a preliminary blood test—since the plagues of the '80s, the authorities are understandably cautious about infection.

I half expected to discover local opposition to the widespread prostitution, but there is surprisingly little. The Church's position is somewhat ambivalent. Official doctrine condemns "harlotry" as a sin. On the other hand, one of the favorite myths of the Church is the tale of Dunyazade, the beautiful young maiden who sacrificed her virtue to the tyrant Sennacherib in order to save her people from extermination. The tyrant was so taken by her charms that he not only spared her people but gave them a place of honor among his subjects, while Dunyazade was made chief of all his concubines. Even today, then a young woman joins the profession, she calls it "making the sacrifice."

Over the years government regulations and enlightened public attitudes have greatly improved the status and condition of prostitutes, and today the profession is considered an honorable if somewhat exceptional calling. A woman may spend five or ten years in the profession, then retire, marry and become a staid pillar of the community. Her working years can be extremely lucrative. Although taxes, expenses, overhead, union dues, etc., may run as high as 40% of income, prices are so high that a woman at the top of her profession may gross as much as Cb 200,000 a year, enough to live very well indeed and still put by a considerable fortune for later life.

There is a certain amount of male prostitution as well, though not on the same scale. It is considered an acceptable sideline for struggling young holoplay actors and has been the source of much malicious gossip and "casting couch" stories.

Prostitutes have a deep and abiding resentment for those whom they call "dabblers and swallows." The former include certain thrill-seeking aristocratic ladies (some of whom, it is whispered, belong to the set surrounding Lady Elsa, Lord Anatol's madcap wife) who prowls the night

### How to Make a Stellar Stinger

You can get a Stellar Stinger in any bar on Galaina, but you can't get one anywhere else. The key ingredient is the Sideria orange (not a true orange but a sweet, citrusy fruit) which only grows on Galaina. Attempts have been made to ship it, but it doesn't travel well. Another ingredient is Zocco, a local root-based alcohol product, very neat, very dry, extremely potent.

I got this recipe from René, the bartender at the Excelsior.

Crush a catabala leaf in the bottom of a chilled glass. Then fill the glass with crushed ice. Take:

2 ounces of Zocco  
the juice from one Sideria orange  
a dash of triple sec

Combine. Pour over the crushed ice. Handle with care.



spots in search of sexual liaisons. "These chicks tell people they're professionals," one prostitute complained. "Most of the time they don't know the first thing about the business. They're just amateurs out looking for kicks. I mean, sex ought to be a straightforward business proposition, right? But this bunch, they don't give a damn about business or about the customers or anyone, they're just in it for themselves. So naturally the customers are disappointed and who ends up getting a bad name out of it? We do, that's who."

If prostitutes disapprove of the dabblers, they reserve their strongest condemnation for the swallows, female intelligence agents who seek sexual contact with targeted individuals in order to gain information. "Now that's just plain *wrong*," my informant exclaimed. "It's immoral, it's like a priest telling secrets from confession." This reaction seems less extreme when considered in the light of certain landmark decisions of the Galainan High Court which guarantee that private conversations between a prostitute and her client cannot be divulged in a court of law. As Chief Justice Schultheiss put it (*Westheimer v. Lolita*, 2933) "pillow talk is privileged."

The swallows often masquerade as native prostitutes, their superiors providing them with quite authentic-looking documentation. The casual encounter or "shipboard romance" approach is still occasionally used, although with many targets it is considered implausible and likely to provoke suspicion.

## Information, Please

The intelligence agencies have good reason to use such agents, for Galaina is a potential treasure trove of information. Here in one place are concentrated the wealthy and well-connected, the sons and wives of political and military leaders, the higher officials of the major powers, all of whom, in the pervasive atmosphere of hedonism, are likely to be less than completely on guard.

The agencies' efforts do not stop with the swallows. It is reported that agents of both the Draconis Combine and the Federated Suns have attempted to infiltrate Griba the Zork's fortune-telling operation. Their efforts so far have not met with success, but they will almost certainly continue, for the information the Zork possesses about his clients (which he reputedly stores in a high security vault that can withstand anything short of a thermonuclear blast) is a mouth-watering prize for any spy.

All the great powers play the espionage game. The planet's ComStar "A" station,

one of the largest in the entire network, has an unusually large complement of officials, most of whom are known to be ROM agents. Their efforts are devoted mostly to attempting to decipher the heavily-encrypted messages that stream in from the distant branches of Galaina's financial network. These messages contain a wealth of news, rumors and gossip from thousands of highly placed and well-bribed sources throughout the Inner Sphere, but ROM would be delighted to see just the financial data—the bank records of the most powerful Dukes, the major companies, the suppliers of the armies and mercenary units. To this end ROM agents are known to have made heroic efforts to corrupt bank officials and palace bureaucrats.



## Lord Anatol, Duke of Galaina

Lord Anatol is known to be uneasy about the amount of spying and skulduggery that goes on, but for now the official position is "no broken crockery": the various intelligence services are permitted to do pretty much what they like so long as it is all kept quiet and out of the public eye. This policy, an extension of the traditional attitude of "keeping the game running smoothly," has been generally respected by the great powers.

Five years ago, a high official of the Draconis Combine was assassinated while on a pleasure trip to Galaina. The assassin, a dispossessed MechWarrior, was himself shot a few moments later by an unknown hand. Takashi Kurita proclaimed that he would take "any steps necessary" to avenge the death. On Galaina, near panic ensued. Visitors, terrified by visions of another Kentares Massacre, struggled to

get off the planet, and on the black market, DropShip seats were running as high as Cb 1,000 apiece. Then, three days after the crisis began, the Galaina Friendship Committee suddenly announced that the case had been solved. Four men, one of them a lieutenant colonel attached to a hitherto unknown branch of the Free World League's diplomatic corps, were handed over to the Draconian authorities together with a mass of documentation. The evidence, which was broadcast widely to all worlds, unequivocally proved the men's guilt. Kurita grumbled but eventually declared himself satisfied. Janos Marik disavowed any knowledge of the plot, but for some time thereafter, relations between House Kurita and House Marik were decidedly chilly.

Galaina heaved a collective sigh of relief and returned to business as usual. Within a week the game was running as smoothly as ever. It was only much later that some of the facts began to leak out. Even now not all of the story is known, but in outline it seems to have gone like this:

For the three days following the assassination, the Palace was a center of furious activity. Galainan banking officials made use of all their intelligence contacts, and fantastic bribes were offered for information. "They were bribing everybody," one source told me privately, "even the Draconis people. Hell, for all anybody knew, the whole thing might have been something Kurita fixed up as an excuse to invade the Commonwealth." The efforts paid off, and within a day, the identity of the conspirators was known.

Details remain uncertain, but it is rumored that the bribes offered by the Galainan banking houses induced the defection of an extremely high-ranking Marik general, one privy to a Marik plot to incite an escalation of the war between Steiner and Kurita. The General disappeared, reportedly with a large enough fortune that he was able to retire into wealthy and hedonistic obscurity on some world unknown.

And documentation of the plot was made available for inspection by Draconis agents.

It was a convincing display of Galaina's economic influence but one that left the planet's leaders badly shaken. Since then, security has intensified, and it is not unknown for the Galaina Friendship Committee to keep certain offworlders under 24-hour surveillance and to haul in suspicious characters for extensive interrogation, sometimes keeping them in protective custody for weeks at a time. The hotel and casino owners are violently unhappy about this and claim that the new restrictions dis-



turb the tourists and spread the idea that Galaina is not safe. They have won some concessions, which in turn have infuriated the security forces who warn of the dire consequences of such weakmindedness.

## Who's In Charge Here?

Caught in the middle with the unenviable task of balancing these competing claims is Lord Anatol, Duke of Galaina. An amiable, soft-faced man in his late 50s, the Duke has a patient, long-suffering demeanor which shows that he is accustomed to being the middle of the storm. He is at the top of all the governing hierarchies on the planet: Chief of State, Temporal Leader of the Church of the True Faith, First Minister of the Galainan Assembly, and Chairman of the Board of both Kredit Galaina and the House of Webber. He rules with the help of his brother Lord Hugo Webber (managing director of Kredit Galaina) and his older son and heir apparent Lord Max, Margrave of Schilde, a corpulent young man of 33 with a round face and tiny moustache. A fourth member of the inner circle, theoretically subordinate to the others but in fact their equal in influence, is Graf Otto von Haupt, head of the Galaina Friendship Committee. This group meets regularly to hammer out policy for all of Galaina's political and financial affairs. Right now, Lord Max and Lord Hugo are at odds over how the planet should react to the alliance between House Steiner and House Davion. Lord Max is an enthusiastic supporter of the alliance and a frequent advocate of favorable loan terms and credits for the Federated Suns. Lord Hugo, on the other hand, has an intense mistrust of Hanse Davion and has at times become almost incoherent with fury at Lord Max's plans. The Duke favors strict neutrality, which makes him a target for both his brother and his son. Meanwhile, Graf Otto has been working on the Duke to approve some of his more controversial security measures, and a recent incident in which GFC agents accidentally detained the Minister of Trade and Communications for the Federated Suns for over 24 hours led to a furious shouting match in Council that nearly ended in blows.

As if this weren't enough, Lord Anatol also has his hands full with other members of his family. The scandalous behavior of his younger son, the notorious Lord Rupert, is a constant cause of dismay. The Duke has more than once had to hush up the youth's more outrageous escapades. Meanwhile, the Duke's mother, the Grand Duchess Guttrune, and his second wife, the beautiful and headstrong Lady Elsa, are not

on speaking terms. The Duchess, who considers herself the arbiter of good society on Galaina, has for years presided over rather stiff functions at her private club the Alcazar. Shortly after her marriage Lady Elsa rebelled, stopped attending the Alcazar and instead formed her own rival set which quickly developed a reputation for extremes of wildness. No personal scandal has ever touched Lady Elsa herself. On the contrary, she seems to be a loyal wife and stepmother with nothing to her discredit but a sharp tongue, a love of wit, and a hearty intolerance for bores. Still, the Grand Duchess frequently harangues her son for "not controlling that slut," and Lady Dorcas and Lady Roxanne, his sister- and daughter-in-law, continually shake their heads in pity over "poor Anatol." All this adds to the strain on the Duke as he attempts to chart a course for Galaina into the murky and perilous future.

## Tomorrow and Tomorrow and Tomorrow

I thought about the future of this pleasure planet as, my visit over, I rode the DropShip back to Alioth Station. All around me in the ship people were asleep, exhausted from days and nights spent in the frantic search for gratification. These, the rich and super-rich who had come to Galaina and were now returning to their home worlds, leaving some of their wealth behind them, were only the latest in a centuries-long stream of visitors whose extravagance has meant prosperity for this planet. On other worlds life is often an endless round of backbreaking toil, an attempt to scratch out a bare living from an ungenerous land. Meanwhile, Galaina neither toils nor spins but just grows rich on tips.

Can it go on like this? So far, the Commonwealth government seems to accept the planet as at worst a necessary evil. Their war machines and the countless subsidiary industries that feed, arm and provision them would shrivel and contract without the regular nourishment of capital investment that Galaina can provide. These benefits are supplemented by direct revenues, either in the form of taxes paid to Katrina Steiner or outright bribes to the other powers. As one official put it, "Nobody wants to kill the goose that lays the golden eggs."

It is not, however, out of the question for one of the houses to try to steal the gold for itself. A direct attack on the planet would probably be unproductive; the tourists

would vanish along with the wealth they bring. On the other hand, although no one likes to talk about it, there have been attempts to bore from within. House Kurita's agents are known to have established cells on the planet and to have attempted to stir up resentment against the royal family. To date, these efforts have been totally unsuccessful. The Webber dynasty has ruled Galaina for over 600 years, and although Galainans may laugh at their rulers and trade scurrilous stories about them, they feel a strong sense of identity with the royal family which is reinforced by ties of history, locality and religion. After all, they are all Galainans.

The night before I left I had a talk with an official of the Galaina Friendship Committee. When I asked him about the future he shrugged and said, "Why shouldn't we go on and on the same way? We've been in this business for a thousand years now. That ought to tell you something." But everything changes, I said. The universe is a dangerous place. "Sure, sure," he interrupted impatiently, "I could fall off Mount Kreisberg and break my neck. Your JumpShip could be hijacked by pirates. But life goes on, people are born, they live, they die. And let me tell you something else," he said, and he leaned towards me with the cynical, conspiratorial grin that is the mark of the true Galainan, "some things never change. Everybody, *everybody*, wants to have a good time."

### About the Author

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# Technical Readout

## GLD-3R Gladiator

### Overview:

In 2464, the Office of Military Procurement of the Star League sent out a request for bid proposals for a new type of 'Mech that would be specially designed for long-ranged support of advanced units. One of the 'Mech factories to bid on this lucrative contract was Merryweather Industries, a firm long forgotten within the Successor States of today. Merryweather's design and proposal survived the initial screening given to all manufacturers and funding was made available for a series of prototypes to be developed. Thus was born the GLD-3R Gladiator BattleMech, a type nearly forgotten in this age of rapid aging and loss of war materials.

The Gladiator design proved successful in its first field tests in 2468. There was great celebration within the Merryweather Home Office on Alula within the confines of what is now the Successor State of House Marik. This applause was premature, however. In early 2470 the Star League Military Procurement Office revoked the contract it had given to Merryweather for 1200 Gladiator 'Mechs, citing computer simulation reports which showed that, as designed, the 'Mech was not powerful enough to fulfill its intended role. Merryweather Industries nearly went into bankruptcy, having built nearly 160 of the 'Mechs and tooled up for at least 2,000 more. Private investors were sought and some House Lords, notably of the Lyran Commonwealth and the Draconis Combine, were convinced to purchase a portion of the overrun, with the permission of the Star League government. In this way, Merryweather was able to continue production to the 2,000 figure level. It then discontinued the Gladiator program and went into production of civilian type 'Mechs for the construction and mining industries. The long-range close-support role in 'Mech lances was eventually filled with the highly successful ARC-2R Archer design—a 'Mech fully 15 tons heavier than and with twice as much long-range missile weaponry as the Gladiator carried. Merryweather Industries was utterly destroyed during the total wars of the First Succession Conflict. The areas of its main factory complex on Alula are still dangerous to enter even to this day. It is now known how many Gladiator 'Mechs are still in existence, but a reasonable estimate would be between 100 and 150.

### Capabilities:

The Gladiator design appeared to be capably armed for the initial decades of the BattleMech era. Unfortunately, 'Mech design simply bypassed it before it could become fully

operational. Like the ancient naval vessels of Terra's early 20<sup>th</sup> Century, it became an obsolescent "Pre-Dreadnought" in the wake of a far more capable design.

As a lighter support 'Mech, however, the Gladiator has proven to be well qualified. The two DLC-10 shoulder-mounted long-range missile racks can deliver severe punishment to lighter 'Mechs in the field. For close-in defense, the Gladiator also possesses two arm-mounted Duodyne Mark II medium lasers. In today's 'Mech battlefield, this would indeed be a light armament for a 55-ton BattleMech.

The Gladiator does possess above average maneuverability for a medium 'Mech. With its maximum speed of 84.2 kph, it can keep up with most scouting forces in the field. Its GE-2200 Jump Jets allow a certain amount of altitude variation in its movement ability. Heat build-up is a controllable problem with the addition of two additional heat sinks within the structure of the vehicle.

The area where the Gladiator surpasses all other 'Mech types within her tonnage class is in protection. Currently, this 'Mech sports more armor than any other mass-produced 55-ton type. This armor advantage aids the Gladiator in any confrontation with opponents of her size or less but is little solace when the vehicle is attacked by a larger, more powerfully armed 'Mech.

There is little doubt that Gladiators will be almost entirely eliminated from the field of combat within the next fifty years or so. None have been produced for nearly 550 years and spare parts for them are nonexistent. In fact, it is a wonder that the type has survived so long and hasn't followed the way of such extinct 'Mech types as the Mackie and the Behemoth. More and more, Gladiators will turn up as additional pieces replacing the destroyed parts of other 'Mech types. Even today, nearly all Gladiators in operation are of a hybrid nature; none are left as they were built.

### Battle History:

In 2476, during the Battle of Beckvern Hill on the planet Nox, Gladiators under the command of the Archon of the Lyran Commonwealth, Michael Steiner, undertook to support a general Steiner advance on the slopes surrounding the House Kurita defensive positions. The initial attack was a success but trouble soon developed when Kurita heavy 'Mechs supported by Aero-Space fighters staged a counterattack on the Gladiator support line, sending them into total

confusion. The Steiner assault was repulsed with heavy losses. Michael Steiner was later killed in the same battle while leading an attack into the rear areas of the Kurita forces.

More recently, in 3007, during a minor raid by Davion forces on Graham IV in Marik-held space, a Gladiator-supported lance attacked a scouting force of the attackers with more success. While Marik light 'Mechs pinned down the recon 'Mechs of the Davion raiders, long-ranged Gladiators poured fire into the enemy position, forcing them to retreat with heavy losses. The Marik defenders suffered little damage.

### Variants:

There are probably as many variants of the Gladiator as there are Gladiators still in existence. Some of the more popular modifications, however, revolve around eliminating the GE-2200 Jump Jets and adding up to four more medium or light lasers in hip or shoulder mounts. This alleviates the understrength problems of the design to some extent, sacrificing some of the design's maneuverability.

Another design variant that is seen often replaces the DLC-10 long-range missile racks in their shoulder mounts with LRM-15's of various types. This increase in offensive power forces the reduction of armor protection to severe levels as well as eliminating any thought of jump jets, but it does permit the 'Mech to support assaulting units more effectively if it is itself in a well-defended position.

### Notable 'Mechs and MechWarriors

#### MechWarrior Micha Ranier

Currently employed with the mercenary regiment known as Barret's Fusiliers, Micha Ranier is part of the battalion recon lance. Atop the Gladiator "Rust Bucket Blues," he is responsible for the long range support of the recon lance if it ever gets into trouble, the logic being that most scout and recon lances will encounter other scout and recon lances and that the firepower of a Gladiator could prove decisive at that time. This seems to be proven out as Ranier has tallied up over a dozen kills and assists while with the Fusiliers.

#### MechWarrior Bill "The Junkman" Fallon

Pilot of the hybrid Gladiator "Bits and Pieces," Junkman Fallon is a member of the mercenary unit known as Mobile Fire. His 'Mech looks nothing like a Gladiator, with two different sized arms taken from a destroyed Wasp and a disabled Vindicator, and legs stripped from a battered Rifleman. Weapons and internal makeup are still essentially the original Gladiator, however. Junkman Fallon says that he has rebuilt his 'Mech at least five times to keep it running. His lance-mates claim it is more like ten.

by Dale L. Kemper



**Mass:** 55 tons  
**Chassis:** MW240  
**Power Plant:** CoreTek 275  
**Cruising Speed:** 58.1 kph  
**Maximum Speed:** 84.2 kph  
**Jump Jets:** GE-2200  
**Jump Capacity:** 120 m  
**Armor:** Kemplar 5000

**Armament:**  
 2 DLC-10 Long Range Missile 10-Racks  
 2 Duodyne Mark II Medium Lasers  
**Manufacturer:** Merryweather Industries  
**Communications System:** Fujika Multiband  
**Targeting and Tracking System:** General Systems AV-12

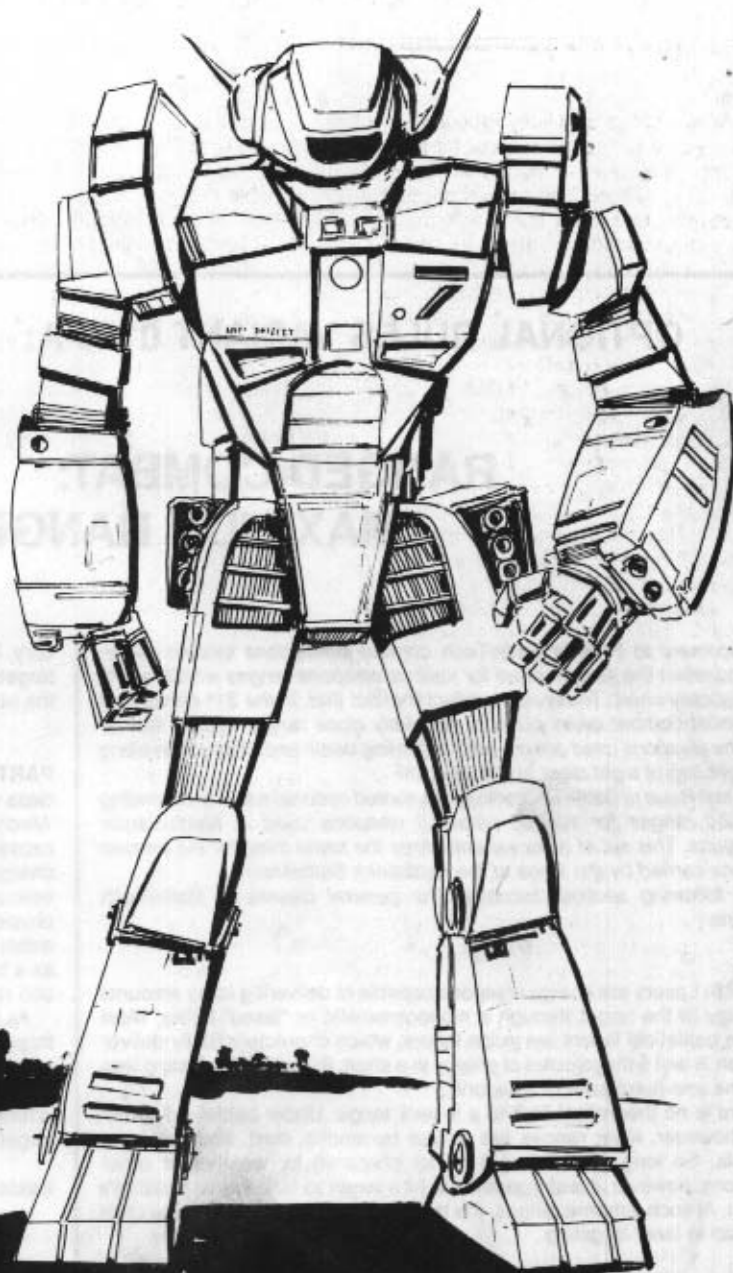
NOTE: Stats reflect GLD-3R Gladiator as designed. There is no 'Mech of this type that still retains all original equipment. All have been modified to some degree.

Type:	<b>GLD-3R Gladiator</b>	Tons	
Tonnage:	55 Tons		55
Internal Structure:			5.5
Engine:	CoreTek 275		15.5
Walking MPs:	5		
Running MPs:	8		
Jumping MPs:	4		
Heat Sinks:	12		2
Gyro:			3
Cockpit:			3
Armor Factor:	160		10

	Internal Structure	Armor Value
Head	3	9
Center Torso:	18	25/6
Rt./Lt. Torso:	13	24/6
Rt./Lt. Arm:	9	15
Rt./Lt. Leg:	13	15

**Weapons and Ammo:**

Type	Loc.	Critical	
LRM 10	RT	2	5
LRM 10	LT	2	5
Ammo (LRM) 12	RT	1	1
Ammo (LRM) 12	LT	1	1
Medium Laser	RA	1	1
Medium Laser	LA	1	1
Jump Jets	RT	2	1
Jump Jets	LT	2	1





# BATTLETECH SIMULATOR

## OPTIONAL RULES VARIANT 0103-A:

### RANGED COMBAT: MAXIMUM RANGE

Newcomers to FASA's BattleTech combat simulations system sometimes question the ranges listed for various weapons ranges which seem unrealistically short. These rules reflect the fact that, in the 31<sup>st</sup> century, at least, most combat takes place at relatively close range—close, that is, when the weapons used are capable of dealing death and destruction along a straight line of sight clear to the horizon!

The last issue of BattleTechnology presented optional rules for extending the listed ranges for various personal weapons used in MechWarrior simulations. This set of rules variants does the same thing for the heavier weapons carried by the kings of the battlefield: BattleMechs.

The following section discusses the general classes of BattleTech weapons.

**LASERS:** Lasers are energy weapons capable of delivering large amounts of energy to the target through a monochromatic or "lased" beam. Most modern battlefield lasers are pulse lasers, which characteristically deliver between .8 and 5 megajoules of energy in a short, intense pulse lasting less than one one-hundredth of a second.

There is no theoretical limit to a laser's range. Under battlefield conditions, however, laser ranges are limited by smoke, dust, and anti-laser aerosols. So long as the target is not obscured by weather or other conditions, however, it is still possible to hit a target as far away as a planet's horizon. At such extreme ranges, the target's movement becomes the chief handicap in laser targeting.

#### Basic Laser Ranges in *BattleTech*:

- Small Laser (.8—1.5 megajoule): 3 hexes = 90 meters
- Medium Laser (1.5- 3 megajoules): 9 hexes = 270 meters
- Large Laser (3—5 megajoules): 15 hexes = 450 meters

Obviously, these ranges impose limits on the actual ranges possible for laser weaponry. Throughout the history of engagements with laser weap-

ony, it has not been unusual for laser-armed infantry or armor to engage targets as far away as the horizon, a distance of—depending on the size of the planet—many kilometers.

**PARTICLE PROJECTOR CANNON (PPC):** This is a general weapons class which includes a variety of related weapons. All are powered from the 'Mech's on-board fusion plant and are classified as energy weapons. They cause damage by using magnetic fields to fire beams of high-energy charged particles—either electrons or protons—at the target. Damage is inflicted on the target by a combination of intense heat, kinetic energy (the physical force of the blow), and by creating a massive electrical overload within the target 'Mech which can cause additional damage by discharging as a bolt of lightning. Poorly shielded 'Mech electronics can be burned out and rendered useless by the electrical discharge of a good PPC hit.

As with the laser, there is no theoretical limit to a particle cannon's range, though the beam loses energy in atmosphere and attenuates rapidly. On the other hand, particle beams are unaffected by smoke, haze, or aerosols. In practice, particle cannons are limited to line-of-sight ranges, a range which is further restricted, as with lasers, by the difficulty of hitting a rapidly moving target at a range of several kilometers.

#### Basic PPC Range in *BattleTech*

- Particle Cannon: Maximum range: 18 hexes = 540 meters
- Minimum range: 3 hexes = 90 meters

Like lasers, PPCs in reality can be directed against targets at ranges considerably greater than half a kilometer. The minimum range listed reflects the fact that PPC weaponry is characteristically bulky and massive. Due to the effects of perspective, it is far more difficult to achieve a positive target lock with a heavy weapon when the target is close and moving quickly than when it is far away and moving quickly.



**MISSILES (SRMs, LRMs):** Missiles in *BattleTech* are designed to be manufactured cheaply, in very large numbers. The highly technical and sophisticated tracking and guidance systems of a thousand years ago were proven to be too susceptible to jamming, too prone to malfunction in adverse conditions, and far too expensive for general battlefield use. They are restricted in their range in *BattleTech* simulations principally because the missiles tend to scatter over ranges greater than a half kilometer or so. Beyond that range there is always the possibility that one missile out of a large cluster will hit the target, but the chance of a hit depends more on luck than on the firer's skill.

#### Basic Missile Ranges in *BattleTech*

Short-Ranged Missiles (SRM): 9 hexes = 270 meters  
Long-Ranged Missiles (LRM): 21 hexes = 630 meters  
Minimum range for LRMs: 6 hexes = 180 meters

LRMs are among the longest ranged weapons in *BattleTech*. The minimum range figure reflects the fact that LRMs are actually indirect fire weapons. That is, they are lobbed along an arc which brings them down on the enemy from above. Limitations in the sighting and acquisition equipment generally available to 'Mechs, as well as the practice of arming LRM warheads after they have travelled some distance from the launcher, limits their use in short-ranged encounters.

**AUTOCANNON:** Autocannons are descended from the rapid-fire, explosive warhead rounds first developed for use against aircraft and armor during the mid-20<sup>th</sup> Century. BattleMech autocannons are rapid-fire weapons ranging from 40 to 120 mm, firing shells designed to cause the maximum damage to BattleMech composite armor. Shells are fed into the autocannon's firing chamber from a shell cassette, inaccurately labeled a "round," usually holding about 100 individual shells. BattleMech AC ammunition inventories refer to the numbers of "rounds"—i.e., 100-shell cassettes—stored aboard.

#### Basic Autocannon Range in *BattleTech*

Autocannon: 18 hexes = 540 meters  
Minimum range: 3 hexes = 90 meters

Some *BattleTech* sources list separate ranges and damage factors for AC/2s, AC/5s, AC/10s, and AC/20s. The range figures given above are frequently presented as representative of the class.

Effective autocannon range is limited by the weapon's ability to track and hit moving targets at extreme ranges. The actual range of the shell, however, is considerably greater than half a kilometer.

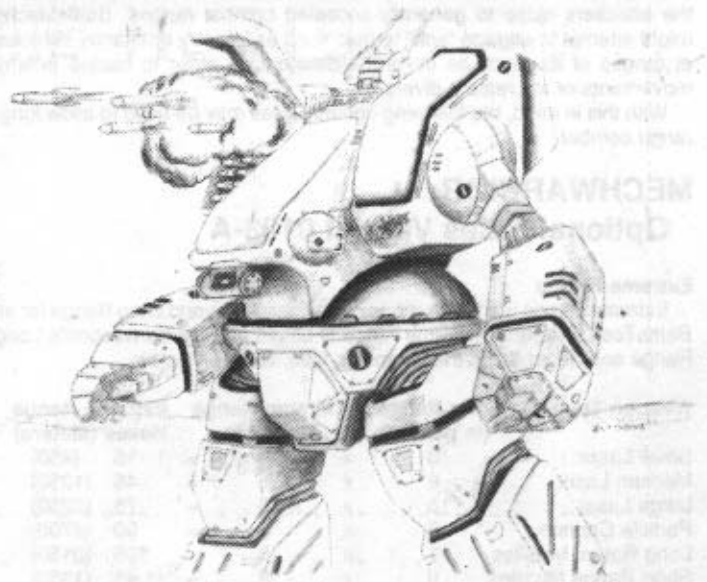
Autocannons also have a minimum range limit. Like particle cannons, autocannons tend to be massive and bulky, and it is difficult to shift them quickly and accurately to hold target on a rapidly-moving target at close range.

**MACHINE GUN:** The machine guns of the 31<sup>st</sup> Century are direct descendants of the heavy machine guns first used in the world wars of the 20<sup>th</sup> Century. Infantry or vehicle-mounted weapons are belt or magazine fed. Those mounted on BattleMechs are usually heavier than infantry-portable weapons and are fed by autoloading cassettes similar to those developed for autocannons. Some 'Mechs mount machine guns which are belt fed. These are prone to jams, and without an operator immediately present, it is difficult to clear belt feed jams in combat.

#### Basic Machine Gun Range in *BattleTech*

Machine Gun (MG): 3 hexes = 90 meters

The *BattleTech* simulator range for machine guns is obviously sharply limited over their actual combat range. Even in the 20<sup>th</sup> century, the effective range (defined as the range at which the operator could expect to score 50% hits against a man-sized target) for a heavy machine gun was in excess of 1200 meters.



**FLAMER:** There are two basic types of flammers. Vehicle-mounted and hand-held, personal flammers are descended from the flamethrowers of the mid-20<sup>th</sup> century, and work by igniting streams of highly flammable chemicals directed at the target. 'Mech-mounted flammers trap, channel, and direct a small portion of the super-heated plasma from the 'Mech's own fusion reactor in a deadly, killing cloud of hot gas.

Both weapon types are strictly short-ranged weapons with a range limited to less than 100 meters. Of the two, the fusion-powered flamer is far more efficient.

#### Basic Flamer Range in *BattleTech*

Flamer: 3 hexes = 90 meters

Flamer weapon ranges have not been limited in *BattleTech* simulations.

### A NOTE ON LIMITED RANGES IN BATTLETECH

There are various reasons that the ranges of most weapons have been limited in the various *BattleTech* simulator rules. The most basic reason is that *BattleTech* is, first and foremost, a simulation of 31<sup>st</sup> Century mechanized combat, and, for various reasons, modern 'Mech-to-'Mech combat rarely takes place at ranges of more than half a kilometer. (see: *BattleMech Weapons: Crisis of Range and Accuracy* on page 22).

Although the overall level of technology among the Successor States has fallen since the days of the Star League, it is generally accepted that weapons technology during the 31<sup>st</sup> Century is still at or above the levels common in the late-20<sup>th</sup>/early-21<sup>st</sup> Centuries on Earth. Indeed, many of the weapons still in use during the 31<sup>st</sup> Century are relics of the Star League of three centuries and more ago and represent the peak of human weapons technology.

Obviously, then, the ranges listed on the *BattleTech* Weapons Table do not give the maximum ranges possible for the various weapons. (If they did, a 31<sup>st</sup> long range missile could be out-ranged by a 20<sup>th</sup> century assault rifle!)

What the *BattleTech* combat tables do list are ranges typical for most combat. Even with the high-tech, long-ranged laser weaponry of the Star League era, 'Mechs rarely attempted to engage targets as large, as fast, as well-armed, or as maneuverable as other 'Mechs at ranges greater than a few hundred meters.

There are situations, however, when it becomes important to engage targets at greater-than-usual combat ranges. BattleMechs holding a line against enemy 'Mechs advancing across a broad, open valley might attempt to cause damage or shake the attackers' morale by opening fire long before



the attackers close to generally-accepted combat ranges. BattleMechs might attempt to engage "soft" targets such as infantry or infantry vehicles at ranges of as much as several kilometers, in order to harass enemy movements or to create a diversion.

With this in mind, the following optional rules may be used to allow long-range combat.

## MECHWARRIOR:

### Optional Rules Variant 0103-A

#### Extreme Range

Extreme Range is a fourth range classification beyond Long Range for all *BattleTech* weapons. Extreme range is based on a given weapon's Long Range and depends on the weapon's type, as given below.

Weapon Type	Long Range (in hexes)		Extreme Range Multiplier		Extreme Range Hexes (Meters)
Small Laser	3	x	5	=	15 (450)
Medium Laser	9	x	5	=	45 (1350)
Large Laser	15	x	5	=	75 (2250)
Particle Cannon	8	x	5	=	90 (2700)
Long Range Missiles	21	x	5	=	105 (3150)
Short Range Missiles	9	x	5	=	45 (1350)
Autocannon/2	24	x	5	=	120 (3600)
Autocannon/5	18	x	5	=	90 (2700)
Autocannon/10	15	x	5	=	75 (2250)
Autocannon/20	9	x	5	=	45 (1350)
Machine Gun	3	x	10	=	30 (900)
Flamer	3	x	1	=	3 (90)

#### Hitting at Extreme Range

The To-Hit target for extreme range is 12. All other Ranged Attack Modifiers are applied as usual.

*Example: A MechWarrior with a Gunnery Skill of 3 fires his 'Mech's PPC at an enemy 'Mech at a range of 1000 meters. The target is moving 2 hexes, and there are no other modifiers to the fire table such as cover or movement by the firing 'Mech. The To-Hit target will be 12-1 (for a Gunnery Skill of 3) = 11. The firing 'Mech will achieve a hit on a roll of 11 or 12.*

*If the target 'Mech was standing still, there would have been an additional modification of -4. The target 'Mech would have been hit on a roll of 7 or more.*

#### Maximum Range

Missiles, high-velocity shells, and laser beams always travel farther even than the Extreme Range listed for any given weapon. It is possible (if unlikely!) to hit a target at a distance greater than Extreme Range. At the referee's discretion, characters may be allowed to fire at targets which are at ranges greater than the weapon's Extreme Range.

This new range category, called Maximum Range, is determined by checking the table below.

#### Maximum Range Table

Weapon	Maximum Range
All Lasers	Horizon: Line-of-Sight
PPC	Horizon: Line-of-Sight
Autocannon	Extreme range x 1.5
Long-Range Missiles	-
Short-Range Missiles	-
Machine Gun	Extreme Range x 2
Flamer	-

Thus, lasers are theoretically capable of engaging targets clear to the horizon. A machine gun could fire at a target up to 1800 meters away with at least some chance of hitting it.

#### Hitting at Maximum Range

The base To-Hit number at distances out to a weapon's Maximum Range is 15. All other fire table modifiers are applied as usual.

Note that a MechWarrior would have to have a Gunnery Skill of 1 to have even a chance of hitting a BattleMech moving at 1 or 2 hexes per turn at maximum range. A MechWarrior with a Gunnery Skill of 5 would have the same chance of hitting a BattleMech which was standing still (15+1-4=12). It is extremely difficult to achieve a hit at these ranges, but it is possible.

#### MODIFIERS FOR TARGET SIZE

Targets selected for attack at Extreme or Maximum Range are not always BattleMechs. Larger targets (DropShips or buildings) generally stand still when attacked. Smaller targets (hovercraft, infantrymen) are much more difficult to hit. At Extreme or Maximum Range, fire against such targets is generally applied at a broad area and is referred to as **Area Effect Fire**.

At normal ranges, there is an automatic To-Hit modifier of -4 when firing at buildings. In addition, fire directed at buildings from an adjacent hex always hits.

When applying the optional rules variant for combat at Extreme or Maximum Range, use the following table to determine the To-Hit modifier for large targets.

Target	Range	Fire Modifier
Building	to 1000 m.	-4
	>1000 m.	-3
Very large building	to 1000 m.	-5
	>1000 m.	-4
Union-class DropShip	to 1000 m.	-4
	>1000 m.	-3
Overlord-class DropShip	to 1000 m.	-5
	>1000 m.	-4
30-meter hex	to 1000 m.	-3
	>1000 m.	-2

For purposes of comparison and calculation, a Union-class DropShip stands 60 meters tall, while an Overlord-class DropShip is 108 meters tall. "Building" above refers to the normal buildings encountered in *CityTech*, which may be as much as 3 levels (18 meters) tall, while a "Very large building" is any unusually large structure—a skyscraper or sprawling, spaceport terminal complex.

Area Effect Fire and the use of a 30-meter hex as a target are discussed below under **Area Effect Fire**.

#### AREA EFFECT FIRE

Infantry and infantry vehicles are too small for accurate targeting at Extreme or Maximum ranges. However, fire can be directed at such targets by firing at the general area in which they are located. In *BattleTech* and *CityTech*, this means the 30-meter wide hex in which the infantry unit is located.

Damage is applied to the unit in 5-point groups as usual for attacks against infantry. However, the following factors are applied to the damage suffered by the unit:

- Armored units (e.g., BattleMechs and tanks) in the open (i.e., not receiving modifications for cover) do not receive twice the amount of damage if they are at Extreme or Maximum range. Infantry caught in the open still has all damage it receives doubled.

- All units (armored or not) at Extreme Range have the damage points they suffer reduced to one half (fractions rounded up).

- All units (armored or not) at Maximum Range have the damage points they suffer reduced to one quarter (fractions rounded up).

- Units which are under cover other than in a building (e.g., in a woods hex) have the damage they receive reduced to one half (fractions rounded up).



Units inside a building have damage inflicted against the building passed on to them according to the Infantry/Building Damage Table in *CityTech* and the *BattleTech Manual Rules of War* (e.g., 3/4 damage in a Light Building, 1/2 damage in a Medium Building, etc.).

• All of these damage point reductions are made after and in addition to any reductions in the number of damage points due to range, smoke, or other factors. (see: Beam Attenuation, below).

*Example: A Rifleman fires a large laser at an infantry unit at a range of 800 meters. The shot is made with a base To-Hit number of 12, with a fire table modifier of -3, and will hit on a roll of 9 or more.*

*If the Rifleman pilot makes the roll, he must determine how many damage points were inflicted against the infantry. Extreme Range for a large laser is 2250 meters; 800 meters is less than 50% of Extreme Range, so 6 points of damage are delivered to the target (see: BEAM ATTENUATION, below).*

*The target is in the open, and it is infantry, so the amount of damage it suffers is doubled. Damage is reduced to one half, however, since the attack takes place at Extreme Range. The infantry unit suffers a total of 6 damage points. If the target had been a BattleMech, it would only have suffered 3 points of damage.*

*Example: The same Rifleman fires a heavy laser at a Heavy Building in which the pilot suspects enemy infantry is hiding. The building is at a range of 3000 meters. The building is at Maximum Range, but there is a modification to the fire table of -3 because of the target building's size. The MechWarrior (with a Gunnery Skill of 4) rolls a 12 and hits the target.*

*At Maximum Range, a large laser will deliver 2 points of damage to the target, which is inflicted against the building. According to the Infantry/Building Damage table, 1/4 of the damage inflicted against a Heavy building is passed on to troops inside it. The 2 points of damage is reduced to .5, which is rounded up to 1. The infantry unit inside the building suffers 1 point of damage, while the building suffers 2 points.*

#### APPLYING EXTREME AND MAXIMUM RANGES IN BATTLETECH

Various modifiers to the *BattleTech* Fire Table are listed on the back of the *BattleTech* game rules book, the back of the *CityTech* rules, in FASA's *BattleTech* Manual, and in other FASA products. All listed modifiers are applied to the To-Hit number in combat at Extreme or Maximum Ranges. The following notes to that table should be applied when the referee allows fire at targets at greater than Long Range. Most of these notes will apply at any range.

• Beam weapons have Maximum Ranges theoretically limited only by the distance of the horizon. The distance to the horizon depends on the viewer's altitude and on the size of the planet and can be calculated using a simple formula. This formula is given in the section of these rules entitled **Horizon: Line-of-Sight**, below.

• Both long- and short-ranged missiles have Maximum Ranges equal to their respective Extreme Ranges. In other words, there are no Maximum range figures or effects for either type of missile.

• The strength of laser and particle cannon fire falls off sharply with range due to attenuation of the beam. See the **Beam Attenuation Table** below.

• The number of missiles which hit a target is reduced at Extreme/Maximum Range. See **Missile Scatter**, below.

• The damage caused by Autocannon fire is reduced at extreme and maximum ranges. See **Autocannon Scatter**, below.

• The damage caused by machine gun fire also falls off with distance. Machine gun fire is *only* effective against BattleMechs within 3 hexes (90 meters) and causes no damage to Mechs at all at longer ranges. Machine gun fire against other BattleMechs is possible, therefore, only within the 3-hex range presented in the rules. Machine gun fire at soft (i.e., unarmored) targets at greater ranges is possible, however.

Further, when fired at other targets, machine gun hits at extreme or maximum range cause 1 point of damage, instead of the usual 2.

• Flamers are special weapons with extremely limited ranges. With an Extreme Range Multiplier of x1, Flamers have no Extreme or Maximum Range effects.

#### HORIZON: LINE-OF-SIGHT

Beam weapons (lasers and particle cannons) have their maximum ranges limited by line of sight out to the horizon. The distance of the horizon depends on the size of the planet and on the height of a viewer. This ranges from the distance from the ground to the viewer's eyes if he is standing in the open, to ten meters for the pilot of a BattleMech, to almost any desired altitude for an observer in a tall building or on a mountain top.

The formula for calculating the distance of the horizon is:

$$d = \sqrt{(r + h)^2 - r^2}$$

d = distance to the horizon  
r = radius of the planet  
h = height of viewer

Be sure to keep all units of measurement the same. Distance and radius can be changed from kilometers to meters by multiplying x 1000, with h being height in meters, or distance and radius can be written in kilometers with height expressed as a decimal fraction of a kilometer (e.g., a typical BattleMech is .01 kilometer tall).

On Earth (radius = 6378 kilometers), the horizon from a 10 meter tall BattleMech appears to be about 11.3 kilometers away, or nearly 7 miles. A man standing on an absolutely flat plain (or looking out across the water) sees the horizon 4.8 kilometers away, assuming his eyes are 1.8 meters off the ground. From the top of a 100-meter cliff, the horizon is over 35 kilometers away.

Other planets will, of course, have different radii. In nearly all cases, it can be assumed that a local world is close to Earth in size, and that the horizon appears to be about 11 kilometers away from the cockpit of a BattleMech.

Planets described in *BattleTechnology's* Worldbook column have their planetary radii listed under **Planetography**. Referees who wish to create logical figures for the radii of other planets than Earth can multiply Earth's radius by any desired decimal figure. For example, a planet 1.3 times as big as Earth would have a radius of 1.3 x 6378, or about 8294 kilometers. A planet only nine-tenths Earth's size would have a radius of .9 x 6378, or 5740 kilometers. This procedure can be used to determine the horizon's distance anytime the referee wants to calculate the information with precision.

The distance to the horizon should be determined if there is a question as to whether or not a BattleMech can see a target such as a city, a DropShip, or an enemy BattleMech force, at ranges of more than a few kilometers. The information can be applied both to attempts to sight the target and to attempts to fire at it with beam weapons.

**BLOCKING TERRAIN:** The calculations listed above for determining the distance of the horizon hold true only for absolutely flat terrain. Any hill or ridge crest, woods, or city skyline will block the line of sight between a viewer and the horizon and will create a new "horizon" much closer than the actual one. The referee may always arbitrarily dictate that intervening terrain blocks the horizon. In this case, the horizon will appear to be the crest of the ridge or hilltop, the tops of a city's buildings, or the highest point on whatever terrain feature is blocking the viewer's line of sight.

In certain cases, mountains or distant ridge crests actually extend the horizon's distance by rising into the viewer's line of sight from beyond the curvature of the planet. Except on very small bodies (asteroids or small moons) this will not drastically affect the calculations given above and can be ignored.

Another factor which can extend the distance to the horizon is the fact that air refracts (bends) light to a certain degree. Again, this effect can generally be ignored; it would be an important factor only on worlds with atmospheres denser than Earth's and is completely nonexistent on airless bodies.



It will be only rarely that MechWarriors will find themselves looking across a truly flat surface from a point with no elevation at all relative to the surrounding terrain (such as across the sea from the water's edge). In nearly every case, for simplicity, the horizon can be assumed to be between ten and twelve kilometers distant, whether the characters are in a 'Mech or not. The distance to the horizon from a high observation point such as the top of a cliff or tall building can be at least 2 or 3 times that value.

#### LINE OF SIGHT INTO SPACE

If the target is an air- or spacecraft or a very tall building it may be visible to an observer even though it is farther away than the horizon. Individual MechWarriors will rarely be concerned with this, however, since targeting incoming enemy aerospace fighters is generally the task of planetary defense batteries or anti-aircraft artillery.

The referee should be aware, however, that targets may be visible when they are more distant than the horizon. In the days of sailing vessels on Earth's oceans, sailors could often see the masts and sails of another ship before the ship itself was visible; the hull of the target vessel was below the horizon, while the masts extended above the horizon and into the viewers' line of sight. This principal may apply to tall buildings, grounded DropShips, mountains, or hilltops. It does not generally apply to objects as small as 'Mechs.

#### LIMITS TO VISIBILITY

A target cannot be fired at if it cannot be seen. This fact puts an additional limit on line-of-sight weapons such as lasers. Weather effects, obviously, will limit visibility. Rain, snow, haze, fog, darkness or battlefield smoke can all sharply restrict visibility and the distance at which a target can be seen.

Another factor is the size of the target. A BattleMech can be seen by an observer with good eyes at a range of 10 kilometers, but the same observer would not be able to see a lone man at that distance without a telescope or other optical aid.

It can generally be assumed that BattleMechs have radar, infrared vision, telescopic optics, and targeting computers which can allow the 'Mech to track and target 'Mechs, vehicles, and even individual soldiers even when it is impossible to see them at all without artificial means. For simplicity, however, the referee will usually want to limit attempts to hit distant targets to targets which can be seen and identified with the naked eye. Future *BattleTechnology* articles will deal with the special optics and tracking devices carried aboard BattleMechs.

#### BEAM ATTENUATION

Laser and particle beams spread out slightly over long distances, and the effects of atmosphere, smoke, clouds, and dust in the air will weaken them, limiting the amount of damage they can cause. The ability of a beam to carry long distances through atmosphere without weakening is largely a factor of the amount of energy in the beam. The following table may, at the referee's option, be used to lessen the effects of energy weapon beams at long distances.

#### Beam Attenuation Table

Weapon	Damage at percentage of Extreme Range			To Maximum Range
	to 50%	to 70%	to 100%	
Small Laser	2	1	1	1
Medium Laser	4	3	2	1
Large Laser	6	4	3	2
Particle Cannon	8	6	4	2

#### Effect on Damage Points For:

Light Rain:	-1
Heavy rain/Snow:	-2
Light dust/Haze/Heavy Snow:	-3
Heavy dust/Smoke:	-4
Heavy smoke:	-5

The range to the target is determined. The extreme range for the weapon being fired is determined, and that range is multiplied by .5 and by .7 in order to learn the values for 50% and 70% of Extreme Range.

Rolls are made against To-Hit target numbers for each shot made. The numbers in each column gives the amount of damage for each weapon to each indicated distance.

The second part of the table shows the reduction in damage points caused by various atmospheric conditions which might further affect the strength of an energy weapon's beam. A particle beam which inflicts 8 points of damage at a range of 1000 meters will inflict only 8-5=3 points of damage if the beam passes through heavy smoke.

At the players' discretion, these reductions in damage points may be applied to damage inflicted at Short, Medium, and Long Range as well.

Damage which is reduced to 0 or less does no damage to the target. Unless conditions are specifically stated in the rules for a given scenario, it is up to the referee to arbitrarily determine conditions, based on the situation and on the local terrain. A battlefield can be expected to be quite smoky after an hour or two of combat. Conditions in dry, dusty or sandy terrain might reduce the effectiveness of beam weapons if the combatant vehicles are moving rapidly, throwing up large clouds of dust.

All damage is allocated to the target in the usual way.

*Example: A Warhammer fires its PPCs at a target 'Mech at a range of 1500 meters. The maximum Long Range for a PPC is 18 hexes, or 540 meters, and the maximum Extreme range is 5 times this, or 2700 meters. Fifty percent of 2700 meters is 1350 meters, while 70 percent is 1890 meters. If the Warhammer hits the target, it will do the amount of damage listed in the column "to 70%", since 1500 meters is between 1350 meters and 1890 meters. Each PPC bolt which hits the target at that range will cause 6 points of damage. If the range to the target had been 2600 meters, each hit would inflict only 4 points of damage.*

*If the PPCs hit a target at any range greater than 2700 meters, each hit will inflict 2 points of damage. Heavy smoke would reduce the 6-point damage result to 1 point, and all other results to 0.*

#### MISSILE SCATTER

Missile salvos fired at Extreme Range tend to scatter slightly, causing fewer missiles in the salvo to hit their target than would be the case at closer ranges. For missiles salvos fired at Extreme Range *only*, the following Missile Hit Table is used instead of the usual Missile Hit Table.

#### MISSILE HIT TABLE: EXTREME RANGE

Die Roll	Number of Missiles Fired						
	2	4	5	6	10	15	20
2	1	1	1	1	2	2	3
3	1	1	1	1	2	2	3
4	1	1	1	2	2	2	3
5	1	1	1	2	2	2	5
6	1	1	2	2	2	3	5
7	1	1	2	2	3	3	5
8	1	1	2	2	3	3	5
9	1	1	2	2	3	3	5
10	1	1	2	3	3	5	8
11	1	2	3	3	3	5	8
12	1	2	3	3	5	8	10

Each missile which hits its target does the usual amount of damage, i.e., 1 point for each LRM, 2 points for each SRM.

#### AUTOCANNON SCATTER

Autocannons are categorized by the number of "rounds"—actually cassettes containing a number of individual rounds or shells—fired in one turn. Each cassette round is fired as a burst of as few as four or as many as 100 projectiles, depending on the caliber of the shells.

At Extreme and Maximum Ranges, these bursts tend to disperse somewhat, resulting in less damage at those ranges than at the "Effective Ranges" of Short, Medium, or Long Range.



The following table shows the number of damage points applied for each hit by an Autocannon at greater than effective range.

#### AUTOCANNON SCATTER

Weapon Type	Damage at Specified Range	
	Extreme	Maximum
AC/2	1	1
AC/5	3	2
AC/10	5	3
AC/20	10	8

The amount of damage caused by the AC/2 at Extreme or Maximum range is only slightly reduced at these ranges, because each burst contains a very large number of small-caliber shells. The AC/20 fires bursts of only 2 to 4 shells, but those shells are of much larger calibers. Each shell which hits still does significant damage.

All weapons still cause the same amount of heat build-up to the firing 'Mech, of course, no matter what the range.

#### MACHINE GUN SCATTER

Machine Gun fire at Extreme or Maximum Range causes 1 point of damage instead of 2. This is due partly to the fact that fewer individual bullets hit, and partly to the fact that each bullet is travelling more slowly at, say, 1000 meters than it was at the muzzle of the weapon.

Machine guns will cause no damage at all to BattleMechs at ranges greater than 3 hexes (90 meters).

#### NOTE:

Rules Variant 0103-A is entirely optional. It is recommended that referees use it sparingly, if only to reduce the number of combat calculations they must make during a typical *BattleTech* gaming session! In the vast majority of cases, 'Mech combat will take place at distances equivalent to Long Range or less. Note that it is quite difficult to hit targets at ranges greater than *BattleTech*'s Long Range—and that hits by beam weapons at these longer ranges tend to cause only slight damage.

This variant will increase the realism of certain special combat situations, however, by allowing characters to use their weapons at realistic ranges.

The use of Extreme and Maximum Ranges is especially useful in situations where the characters are attempting to slow or scatter enemy attacks across long, open distances, or to attack stationary targets from a long way off. From a kilometer or more away, 'Mechs may attempt to damage buildings, installations, grounded DropShips, or 'Mechs parked at an enemy base. A defensive line could begin recording damage against an advancing enemy while he was still several kilometers away.

#### APPLYING EXTREME AND MAXIMUM RANGE TO BATTLEFORCE

These rule variants can be easily folded into *BattleForce* situations. One hex in *BattleForce* equals 180 meters. Range calculations applied to *BattleForce* situations should be rounded down to the nearest whole number of hexes. Thus, an autocannon (Extreme Range of 2700 meters and a Maximum Range of 5400 meters) would have, in *BattleForce*, an Extreme Range of 15 hexes, and a Maximum Range of 30 hexes.

Obviously, the rules for combat at such ranges should be incorporated into *BattleForce* only under

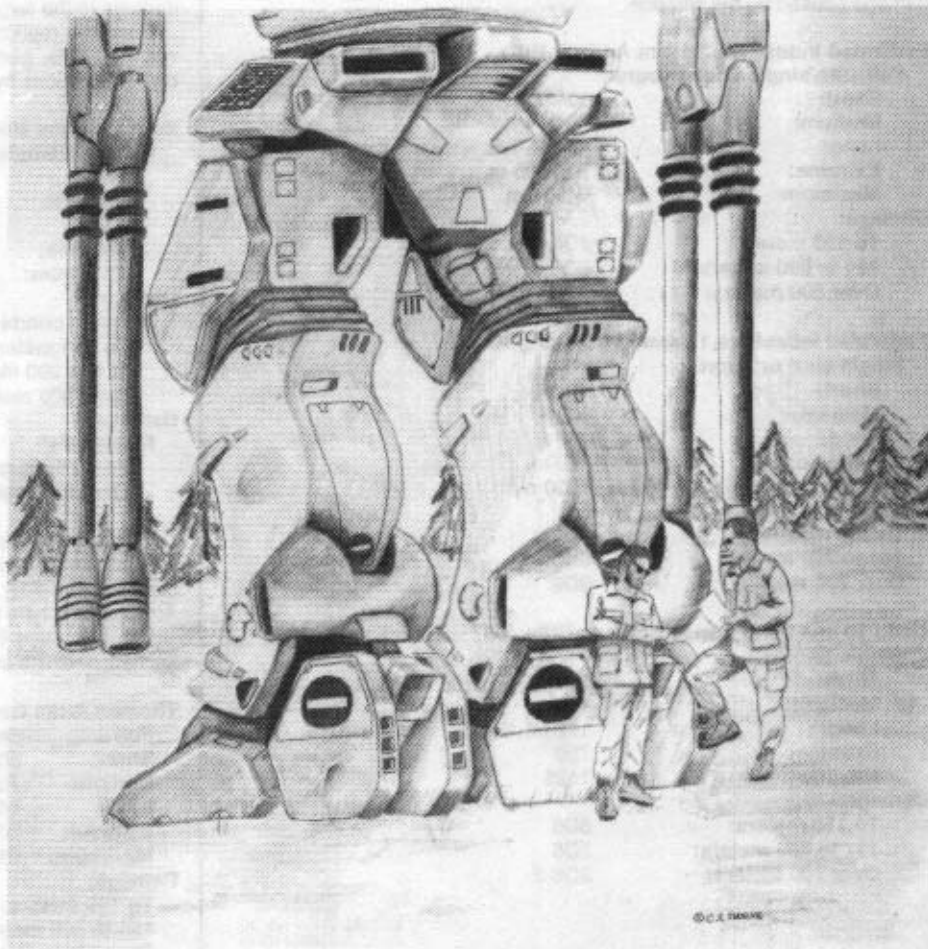
very special circumstances.

Damage inflicted on enemy 'Mechs at Extreme or Maximum Range will be slight, and worth recording only when the players are keeping track of the fate of individual machines within a *BattleForce* lance. This will be of interest when the players are incorporating a *BattleForce* battle into an on-going *MechWarrior* role-playing campaign, but it is not necessary in ordinary *BattleForce* play.

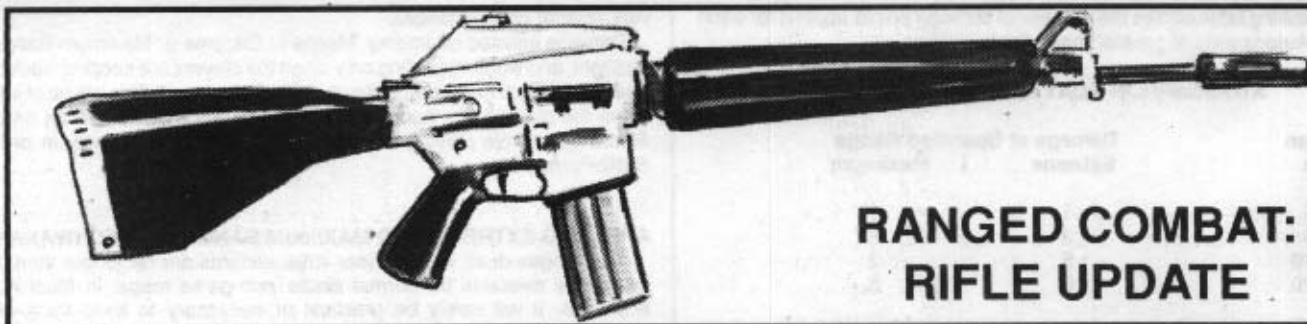
#### APPLYING EXTREME AND MAXIMUM RANGE TO MECHWARRIOR

The ranges dealt with in these rules variants are far longer than those commonly available on normal *BattleTech* game maps. In *MechWarrior* scenarios, it will rarely be practical or necessary to keep track of the movements of all potential targets within the new, extended radius of fire created by this rules variant. Where necessary (the characters are attempting to missile an enemy base from extreme range, for example, and must first sneak up in their 'Mechs on the encampment) the referee can designate a hex where the target is located on a *BattleTech* or *BattleForce* scale mapboard and allow the characters (and the target) to maneuver using the normal rules for *MechWarrior* movement until the characters decide they want to try a shot. At that point, the referee can determine range by counting hexes. Five *BattleForce* hexes, for example, is 5x180=900 meters—within Extreme Range for a BattleMech's PPC.

Usually, the referee can simply determine a given range arbitrarily: "Okay, you see ten enemy 'Mechs coming towards you across the valley. The range is about 2000 meters..."







## RANGED COMBAT: RIFLE UPDATE

Rules Variant 0102-A, presented in the last issue of BattleTechnology, gives rules allowing MechWarrior referees and players to extend the ranges of BattleTech sidearms to realistic distances. Variant 0102-A can be applied to the combat rifles listed in this issue. Extreme Range for rifles is determined by multiplying the Long Range figure by 5. Maximum Range is determined by multiplying the Extreme Range figure by 1.5.

Maximum range figures are not listed below for full-auto fire. This is because fully automatic fire is simply not effective for any weapon smaller than a light machine gun at ranges much greater than half a kilometer. When determining maximum range for a rifle being fired on full-auto, consider the weapon's extreme and maximum ranges to be identical.

The Bereiter AR90 is also designed to fire flechettes. As with auto-fire, a maximum range is not listed for flechette rounds, which tend to disperse and lose velocity quickly, like shotgun pellets. Maximum Range and Extreme Range are identical for flechette rounds.

Each rifle is listed below, together with full information on range and on damage caused by the weapon.

### Federated Industries 7.5 mm Assault Rifle

#### Full auto/single shot or burst:

Short:	30/40 m.
Medium:	70/90 m.
Long:	140/165 m.
Extreme:	700/825 m.
Maximum:	-/1237 m.

#### Damage:

To 140 meters:	2D6+2
151 to 800 meters:	2D6
Over 800 meters:	2D6 - 2

### Federated Industries 12 mm Zeus Heavy Rifle

#### Single shot or burst:

Short:	35 m.
Medium:	90 m.
Long:	140 m.
Extreme:	700 m.
Maximum:	1050 m.

#### Damage:

To 140 meters:	6D6
141 to 700 meters:	5D6
Over 700 meters:	3D6

### Gallo 10 mm Long Range Sniper's Rifle, '03

#### Single Shot:

Short:	50 m.
Medium:	100 m.
Long:	150 m.
Extreme:	750
Maximum:	1125

#### Damage:

To 150 meters:	3D6
151 to 700 meters:	2D6
Over 700 meters:	2D6-2

### Kogyo-Reyerson-Toshiro Model XXIV

#### Full auto/single shot or burst:

Short:	25/35 m.
Medium:	50/75 m.
Long:	120/150 m.
Extreme:	600/750 m.
Maximum:	-/1125 m.

#### Damage:

##### Armor piercing/frangible round\*

To 150 meters:	3D6/4D6
151 to 600 meters:	3D6 - 2/4D6
Over 600 meters:	2D6/3D6

\* Frangible rounds are designed to fragment on impact, dumping their energy rapidly in the target to cause maximum damage. For this reason, they do not have the penetration power of other rounds, but they cause more damage to the target when they hit.

Frangible rounds are treated the same as other rounds. However, flak vests or suits, personal body armor, and other protective equipment or clothing reduces by three quarters the damage inflicted by this round.

### Bereiter Arms Model AR90

#### Full auto/single shot or burst/flechettes:

Short:	25/40/20 m.
Medium:	50/90/40 m.
Long:	120/160/60 m.
Extreme:	600/800/300
Maximum:	-/1200/-

#### Damage:

##### Normal rounds

To 150 meters:	3D6
151 to 800 meters:	3D6-2
Over 800 meters:	2D6

#### Damage:

##### Flechettes\*

To 60 meters:	4D6
Over 60 meters:	3D6

\* Flechettes are small, steel slivers fired from a cartridge like shotgun pellets. Their range is sharply limited and they have poor armor penetration qualities, but they cause considerable damage to unprotected targets. Armor of any type will reduce their damage by three quarters.

The flechettes fired by the Bereiter are different from typical needler flechettes, which are generally made of plastic and cause less damage.

### Thomas Arms General Purpose Rifle

#### Full auto/single shot or burst:

Short:	30/40 m.
Medium:	70/90 m.
Long:	140/165 m.
Extreme:	700/825 m.
Maximum:	-/1237 m.

#### Damage:

To 150 meters:	3D6
151 to 800 meters:	3D6 - 2
Over 800 meters:	2D6



## OPTIONAL RULES VARIANT 0103-B

# BATTLEMECH COMBAT IN VACUUM

The Successor State Houses are locked in an on-going death struggle which demands that territory—above all, territory capable of supporting human life—be taken and held. Most BattleMech combat simulations are set on worlds where atmospheric and surface conditions are more or less similar to those of Terra. There are hundreds of worlds in the Inner Sphere where Man can live without complex or cumbersome artificial aids, worlds where he can walk freely in the open without space suit or respirator, oxygen mask or sealed armor.

And yet, for every Earthlike world there are hundreds more where man cannot live without special equipment. They range from planets like Sirius V where cities are sealed domes under frigid, poisonous atmospheres, to airless, cratered moons and utterly barren balls of rock and ice or molten lava. While Earthlike worlds are most often the focal points of struggle between the warring Successor State houses, all too frequently it is an utterly inhospitable planet which, by virtue of its location, or its raw materials, or its abandoned relics of lost Star League technology, becomes yet another battleground in Man's unending wars.

Optional Rules Variant 0103-B presents rules and guidelines which can be incorporated by *BattleTech* and *MechWarrior* referees and players. They can be applied to simulate movement and combat on airless, low-G worlds such as Earth's moon, Sol I (Mercury), and on the barren rocks which can be found in virtually every star system across the Galaxy. They should be used in conjunction with *BattleTech* scenarios such as *On the Shores of a Sea on Gordo* in this issue.

Future issues of BattleTechnology will deal with movement and combat on other types of worlds, including high-gravity planets, and worlds with poisonous or corrosive atmospheres.

These rules are divided into sections, each dealing with a different aspect of movement or combat on a typical, airless moon. Referees and players may elect to choose only those rules which apply to scenarios of their own devising.

### GRAVITY

Large moons—bodies such as Earth's moon—typically have diameters of two or three thousand kilometers or less, and masses which are only a fraction of that of Earth. Most solar systems have numerous small planetary bodies—such as Sol I and Sol IV—with diameters less than four or five thousand kilometers. Such worlds and wordlets have gravitational fields much weaker than those of Earth-sized worlds.

While people and objects may weigh less on such worlds, *mass* is not changed in a lower gravitational field. This means that a 50-ton *Centurion* will weigh only 10 tons on a planet or moon with a surface gravity of .2 G... but that *Centurion* will still have the mass, and the inertia, of a 50-ton BattleMech. It will take as much energy to get the machine moving or to stop it as it would in a standard 1-G gravity. Since the weight is so much less compared to the size of the power plant, it will be possible for the 'Mech to jump farther or run faster... *but its full, 50-ton mass must still be overcome when it is being turned or slowed.*

The following rules can be used to simulate low planetary surface gravities.

- The *weight* (not mass) of a BattleMech (or any other piece of equipment) on a low-gravity world can be determined by multiplying the world's surface gravity by the object's weight. A 60-ton 'Mech on a moon with a surface gravity of .12 Gs weighs 7.2 tons.

- BattleMechs may run faster than normal on low-G worlds. For every full .2 Gs under 1 G, a 'Mech may run 1 additional hex. Thus, a *PhoenixHawk* (normally with 9 Running MPs), could move 13 hexes in 1 turn on a world with a gravity of .12.

- Additional piloting Skill Rolls are necessary every time a 'Mech attempts to move faster than would normally be allowed, and if the 'Mech stops without first slowing to a walk for one full turn. An *extra* Piloting Skill Roll is also necessary if the 'Mech attempts to change facing while running. All Piloting Skill Rolls have a Skill Roll Modifier of +1 added for every 2 hexes over the 'Mech's normal top running speed. This is in addition to the usual Skill Roll Modifiers for running.

- BattleMechs may also jump further on low-G worlds. For every full .1 Gs under 1 G, a 'Mech may jump 1 additional hex. Thus, a *PhoenixHawk* with a normal 6 Jumping MPs could jump 14 hexes under .12 Gs. No additional Piloting Skill Roll is necessary for this maneuver.

- BattleMechs which fail these Piloting Skill Rolls fall and skid. The rules for skids are presented in FASA's *CityTech*, and in the *Rules of War BattleTech Manual*.

- Damage for collisions between 'Mechs is calculated using their full 1-G weight, not their weight on a low-G planet. This is because the damage caused by such impacts is related the 'Mechs' speed and to their mass, not to their weights.

- Falling 'Mechs, however, fall more slowly than they would in a 1-G environment and consequently do less damage to themselves and to others when they land. The number of damage points caused by a 'Mech falling and by collisions brought on through an attack by Death From Above are calculated using the 'Mech's weight in low G, rather than its usual weight. Fractions of damage points are rounded up.

### VACUUM

There is no air in space. Moons and worlds with surface gravities substantially less than Earth's (less than about .4 G) are unlikely to have more than a very thin atmosphere, if, indeed, they have any atmosphere at all.

The following guidelines may be applied to 'Mech combat in airless or nearly airless environments:

- BattleMechs may function more or less normally in vacuum, so long as they are fusion-powered. BattleMechs with internal combustion engines (ICEs) will not operate in vacuum.

This applies to other vehicles as well. Vehicles will work in vacuum if they are fusion-powered or run on batteries, chemical engines, or fuel cells. ICEs require atmosphere (and oxygen) to function.

Likewise, hovercraft will not work at all on an airless body, no matter how they are powered. Hovercraft depend on thrust provided by jets of air directed by fans in the vehicle's plenum chamber and will not operate in vacuum. Non-Mech vehicles must be wheeled or tracked.

- MechWarriors may choose to wear lightweight pressure suits inside their 'Mech cockpits. These are form-fitting, open only at wrists and neck, and come with gloves and a helmet which can be quickly sealed in place. A fitting at the warrior's waist allows the cockpit life support system to be connected directly to the suit, providing air and some cooling. These pressure suits are extremely uncomfortable, however, and are not worn as a general unless there is a danger of depressurization. They will support the pilot for as long as the BattleMech has power and he remains attached to the 'Mech's life support. Once the pilot disconnects from the 'Mech, he can survive for 4 hours off a small, rechargeable life support kit worn on his back or slung on his hip. The suits are intended solely to preserve the pilot's life in case of decompression; they have no armor value and are too lightweight to serve well as standard space suits.



• The BattleMech cannot be piloted while the pilot is wearing a pressure helmet. Removing the 'Mech's neurohelmet requires a successful roll against the character's Base Saving Target for his DEX. Once he begins removing the neurohelmet, the 'Mech cannot move or fire.

Donning the pressure helmet and gloves and sealing up his pressure suit requires a second roll against the character's Base Saving Roll Target for his DEX. One roll can be made for each turn the character attempts to remove or don a helmet.

There is a DM of -1 if the atmosphere is too thin to breathe during depressurization (See below.)

• BattleMechs which take hits to their heads or torsos may suffer damage which causes depressurization. Each turn in which a 'Mech suffers at least 1 point of armor damage to its head or 5 points of armor damage to its center torso (front or rear), it will suffer depressurization on a 2D6 roll of 9+. There is a DM of +1 to this roll for each additional 1 point of armor damage to the head, or 5 points of armor damage to the torso, which the 'Mech suffers in the same turn.

• Depressurization may be slow or fast. If depressurization occurs, the player should roll 2D6, with a -1 modifier for each point of head damage or 5 points of center torso damage (front or rear) the 'Mech has received so far. The result is the number of 10-second turns it will take for the cockpit to lose all of its air. If the result is 11 or more, roll 2D6 a second time. This new roll will be the number of minutes (rather than turns) the 'Mech will continue to hold pressure. If the result of the first roll is 2 or less, then explosive decompression occurs, and the cockpit loses all of its air almost at once (see below.)

Whether the result is in turns or minutes, divide this number by 3, rounding fractions up. This is the number of turns (or minutes) the cockpit atmosphere will remain breathable. Once the atmosphere is no longer breathable, there is a -1 DM to attempts by the pilot to remove his neurohelmet and don his pressure helmet.

*Example: A Shadow Hawk fighting on an airless moon receives 12 points of damage to its center torso. The pilot rolls 2D6, and adds 1 since more than 5 points of armor were damaged beyond the initial 5 points necessary to force the roll. The result is 9, so the Shadow Hawk begins losing atmosphere.*

*The pilot rolls again to find out how long it takes to completely depressurize. He rolls 2D6, then subtracts 2 for the amount of damage sustained by the 'Mech so far. The final result is 7. The cockpit will depressurize completely in 7 turns, or about 70 seconds. Had the result been 11 or more, he would have had to roll 2D6 again for the number of minutes before depressurization occurred.*

*Finally he divides 7 by 3 and rounds the fraction up. He has three turns, or thirty seconds, before he can no longer breathe his cabin air.*

• Once the air in the cabin is too thin to breathe, the MechWarrior will take 2D6 damage points against his HTK every turn until he manages to don his pressure helmet.

• Once the cabin has been completely depressurized, the MechWarrior will take 2D6 x 3 damage points against his HTK every turn until he manages to don his pressure helmet and gloves. The usual rolls must be made each turn to determine whether or not the pilot remains conscious. Obviously, if he becomes unconscious before he successfully dons his pressure helmet and gloves, he will die.

• If explosive depressurization occurs (a roll of 2 or less in the roll for the length of time in depressurization) the cabin loses all of its air at once. The pilot suffers an immediate 2D6 x 5 damage points against his HTK, then takes 2D6 x 3 damage points every turn thereafter until he can get his helmet and gloves on.

• The MechWarrior may attempt to repair the damage in order to keep the BattleMech operational. Finding the source of the leak and repairing it requires a roll against his Base Saving Roll target for his DEX. There is a DM of -1 to this roll for each lost point of head armor or each 5 lost points of center torso armor. While he is repairing the damage, his 'Mech cannot move or fight.

The roll may be attempted once each turn. If a roll is successful, the cockpit stops losing atmosphere, and the BattleMech may be operated normally. However, every time the BattleMech takes additional damage to its head or center torso, the pilot must roll 2D6 again. On a roll of 10 or higher, his jury-rigged repairs fail, and his cabin begins losing air again at the same rate as before, beginning at the point where the air loss had ceased previously. The pilot may elect to attempt repairing the damage again.

Repairs are impossible if explosive decompression occurs.

## HEAT

One of the greatest problems faced by BattleMechs is that of heat build-up during combat. It is much more difficult to get rid of heat in a vacuum than it is when surrounded by atmosphere, since vacuum is a perfect insulator. Heat sinks used by 'Mechs in atmosphere generally rely on air currents to carry heat away from the BattleMech, and normal 'Mech heat sinks must be modified for them to work in vacuum at all.

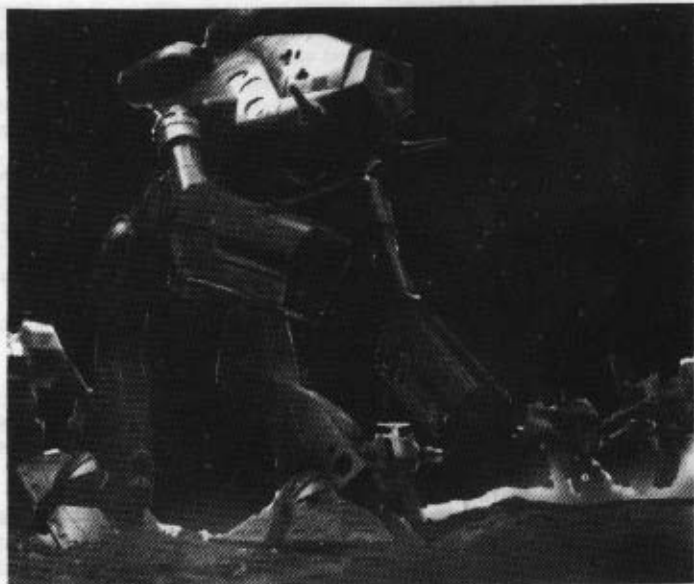
• BattleMechs which have not been painted silver (see below) in order to reflect sunlight efficiently will pick up 2 additional heat points every turn they are on level, open ground. They will pick up only 1 extra point of heat every turn they are on rough terrain—which assumes that they are in shadow at least half of the time.

BattleMechs which move into rough terrain may have their pilots specify that they are entering shadow in order to cool off. If there is ever doubt (such as when a BattleMech falls during combat), the matter can be settled by rolling 1D6: on odd results, the 'Mech is in sunlight and will pick up 2 points of heat per turn, while on even results, the 'Mech is in shadow and will pick up no extra heat at all.

• 'Mechs which run at greater than normal speed (due to the effects of lower gravity) gain one extra heat point. This is in addition to the normal heat build-up from running. 'Mechs which attempt to jump gain 2 extra points of heat in addition to other heat gains, no matter how far they jump.

• Though vacuum is an excellent insulator, rock is an excellent conductor of heat. 'Mechs can lose heat rapidly in shadowed areas on vacuum worlds, where waste heat can "soak off" into the cold rock.

'Mechs which enter shadow in rough terrain lose one extra heat point each turn they remain in shadow, so long as they do not move or fight. 'Mechs which lie down in shadowed areas (thereby exposing more of their surface to cold rock) can lose 3 heat points per turn. Heat losses due to shadow are in addition to other points lost through heat sinks.





## OTHER NOTES

• In a BattleTech or MechWarrior campaign, if it is known in advance that a BattleMech unit is going to be operating on a vacuum world, the unit's Techs should be given the opportunity to ready each 'Mech for vacuum operations. This process includes modifying the vehicle's heat sinks, changing lubricants and hydraulic fluids to substances which will keep working in vacuum, and painting the hull with a highly reflective silver paint.

This conversion requires 2D6 hours per 'Mech. If it is not performed, the 'Mech will have problems with heat build-up (see above). There is also a chance that the arms or legs will freeze up due to the failure of lubricants or hydraulic fluids in vacuum. Each hour that the 'Mech operates in vacuum, it will receive one internal hit in any arm or leg (rolled randomly). These hits can be repaired only by servicing the 'Mech (in a pressurized workbay or area) for one hour for each hit... and then by performing the maintenance described above.

• Recoil can cause unforeseen problems in low-gravity fields. While mass is unaffected by gravity, the lower weight of the firer can interfere with his ability to handle the recoil of a weapon he is firing. In BattleMechs, the 'Mech's changed handling characteristics can throw the pilot's aim and reactions off slightly.

In gravity fields less than .4 of Earth's, an additional DM of +1 is added to all attempts to fire weapons which cause significant recoil. Lasers cause no recoil at all, while the recoil from machine guns is too low to cause problems for the firer. Autocannons, PPCs, and missiles, however, cause a great deal of recoil, and the DM+1 should be applied to each attempt to hit with these weapons.

• MechWarriors using the rules for extending personal weapon range (0102-A) may find their accuracy with projectile weapons affected at Extreme or Maximum Range. This is because the sights for such weapons take into account the fall of the projectile in a 1-G gravity field. On worlds with surface gravities less than .4, attempts to hit targets at Extreme or Maximum Range with single shot fire have a DM of +1 added to each roll against a To Hit target.

This is not applied to laser weapons of any kind, or to auto-fire weapons using burst or full-auto fire. (Full-auto fire is not aimed in the conventional sense and is not subject to this restriction.)

This effect can be eliminated during MechWarrior campaigns by having the MechWarriors or their Techs re-sight aimed-fire projectile weapons to take the change of gravity into account. Thirty minutes spent with each weapon will allow the sights to be adjusted for the planet in question. However, the sights must be readjusted if the weapon is taken to another world, and yet another surface gravity.

• Those rules variants applying to heat on airless worlds assume that the moon or planet is within a star's ecosphere; that is, it receives approximately the same heat and light from its star as Earth does from Sol. Worlds closer to the system's sun (such as Mercury in Earth's system) will receive much more heat—and BattleMechs operating on their surface under the light of the local star will overheat and shut down very quickly. Worlds outside the local star's ecosphere will receive less heat and light than Earth does from the Sun, and BattleMechs may have problems from cold rather than heat.

The effects of a range of temperature on BattleMechs are too extensive to be dealt with here and will be the subject of a future BattleTechnology optional rules variant. Until those rules are published, players and referees must assume that combat is taking place in an area where local temperatures are between 0° C. and 30° C.—more or less within the range of average temperatures on Earth.

Earth's moon, after all, lies at the same mean distance from the Sun as does Earth, but the surface temperature ranges from -170° C. to above the boiling point of water, depending on whether it is day or night. On worlds such as Valdis I (described in this BattleTechnology issue's Worldbook) a narrow band near the world's terminator—the demarkation line between night and day—will have such temperatures, even though it is boiling hot on the dayside, and freezing cold on the nightside. Depending on the planet's rotation, BattleMechs may be able to operate for anywhere from less than an hour to many hours before the temperature rises or falls so much that the 'Mech becomes incapacitated.

• Chemical flamers require oxygen to produce a flame and will not work in vacuum. BattleMech-mounted fusion flamers will operate in vacuum. However, they cannot be used to set fires in target hexes.

These rules are designed to add the flavor of movement and combat in low-G, vacuum environments to *BattleTech* and *MechWarrior* simulations. Necessary details about the surface conditions of such worlds—surface gravity, atmosphere composition and pressure, and similar data, are provided in BattleTechnology's continuing Worldbook columns, and in other articles and features in this magazine.

These rules would serve well for combat on Fire, the moon of Brimstone described in the Worldbook for BattleTechnology, Issue 0101. They could also be applied to combat on Valdis I, described in this issue's Worldbook; or to combat on Gordo, the large moon described in this issue's BattleTips column.

As with all such rules variants, their use is optional and at the discretion of the players and the referee. They are intended to add realism to simulations set on alien worlds with conditions markedly different from conditions on Earth, but applying these rules should not be allowed to overly complicate play or detract from the excitement of a *BattleTech* game.

Individual referees and players alone can determine that balance of realism versus playability which they best enjoy.

## INCOMING!

In the next issue of BattleTechnology...

- The Conscience of a Would-Be King  
—An exclusive BattleTechnology interview with Hanse Davion, Prince of the Federated Suns!
- Max  
—He was 100 tons of trouble, and the key to a MechWarrior's revenge!
- Cavalry: Tactics, and Applications for a New Age  
—Colonel Morgan C. Graeme discusses the use of fast, light, and hard-hitting units in modern combat!
- Cavalry Raid on Harpster  
—A practical application of Colonel Graeme's theories!
- Sidearms: Laser Rifles  
—A careful look at these popular and hard-to-find weapons.
- Plus more feature articles; regular columns; news from the 31<sup>st</sup> Century; new rules, rules supplements, and variants for BattleTech combat...

**AND MUCH, MUCH MORE!  
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## ON THE SHORES OF A SEA ON GORDO

### Something Different

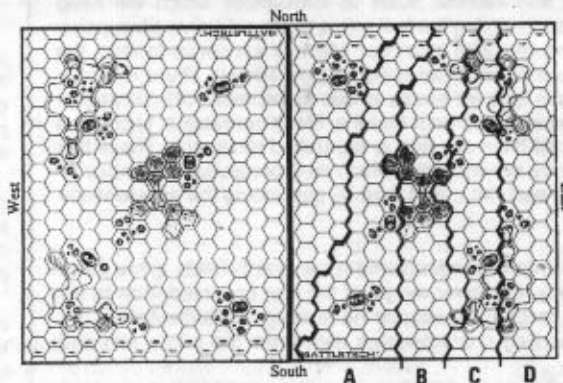
Duty at a base like Gordo Alpha is normally less than exciting. We were there to protect the headquarters facility for Ramsau, a straggling collection of pressure domes and dish antennae squatting atop a low, rugged plain along the shores of one of barren *mare*. If we wanted something to look at, we could always go to an observation tower or suit up and go outside. Ramsau was always there, big and swollen and blue, with the white swirl of clouds and the blinding glint of sun on icefields that wrapped themselves across half the planet. When Ramsau was full, the Gordian night was lit bright as day, but with soft, cool colors reflected from the planet. By day, Ramsau would be half full, or a slender crescent, or a halo-rimmed blackness eclipsing the sun, depending on where we were in the six-day "day."

But how long can you look at pretty colors in the sky before you start hating the drab gray sameness around you? We were on Gordo for a six-month tour. Six months of dull paperwork, dull watches, dull food, and the same, dull people, day upon colorless day.

So when the alert came in from our watchpost above the *mare* to the west of the base, we leapt for our 'Mechs with an eagerness that might seem strange to veterans who know the blood and death of BattleMech combat. No, we weren't eager to die.

We were just starved for something—anything—different in our routine!

Lieutenant Daryl Hanson,  
as told to Wayne Tse-Lin  
Senior correspondent  
of BattleTechnology's Tharkad office.  
October, 3027



### GAME SET-UP

Lay out the BattleTech maps as shown, or use a large sheet of blank hex grid paper. The terrain is different from that shown on the map, as described below.

All terrain on the west map is open and clear. It is *maria*-type terrain, completely flat and covered by a layer of soft dust several centimeters thick.

The east map is divided into zones, labelled "A," "B," "C," and "D." Area A is rough ground. In addition, the entire area is at Level 1. Area B is rough ground at Level 2. Area C is rough ground at level 3. Area D is at level 4 but is smooth and open ground.

### Defender

The Defender is elements of the Headquarters Platoon of the Ramsau Planetary Militia, reinforced by BattleMechs from Company C, 1st Battalion, of the Rasalhague Regulars. His forces include the following:

- Captain Dimitri Cherenkov: Veteran *Dragon*  
Piloting 5, Gunnery 4
- MechWarrior Vincent Warbley: Veteran *Panther*  
Piloting 5, Gunnery 5
- MechWarrior Katarina Wu: Veteran *Stinger*  
Piloting 5, Gunnery 6
- MechWarrior Sol Armistead: Veteran *Commando*  
Piloting 5, Gunnery 6

The defender also has one hidden gun emplacement, mounting a heavy laser paired with a PPC. The building has a Construction factor of 95. The weapons have an arc of fire limited to 120° and must be targeted together.

### Attacker

The attacker is a special strike force composed of elements of the Star Warrior mercenary regiment, from Companies A and B, 1st Battalion.

- Colonel Christopher Christie: Elite *Wolverine*  
Piloting 4, Gunnery 4
- Lieutenant Vincent McCabe: Elite *ShadowHawk*  
Piloting 5, Gunnery 4
- Lieutenant Melissa Lawrence: Elite *Commando*  
Piloting 5, Gunnery 4
- MechWarrior Feodor Blanski: Veteran *Griffin*  
Piloting 5, Gunnery 5
- MechWarrior Kathy Drake: Veteran *Centurion*  
Piloting 5, Gunnery 5
- MechWarrior Stan O'Hanrahan: Veteran *Stinger*

All BattleMechs begin the scenario in perfect condition. In addition, all 'Mechs have been serviced to permit them to function in a vacuum environment.



## Situation: 1535 hours, October 7, 3027 Ramsau III-A

The Defender notes his positions first. His BattleMechs may be placed on any hexes in zone D. So long as they are not adjacent to the edge of the slope (i.e., within one hex of zone C), they will be out of sight from lower levels and need not be placed on the board.

In addition, the defender secretly records the hex number where his gun emplacement is located. It can be on any hex in zones A, B, or C. It is well camouflaged and is not represented on the board by a counter until after it has fired.

The Attacker enters the board from the west side of the map, adopting any formation he desires. His forces are attempting to reach the top of the ridge slope represented by zones A, B, and C. Although they do not realize it until they are fired upon, their approach has already been noted by the Kurita defenders.

The Attacker may not fire until he is fired upon. He *must* proceed in a general easterly course (at any speed and in any formation he desires), with the goal of reaching zone D. Once fired upon, he may fire normally and move as he sees fit.

### Victory Conditions

Initially, the Attacker's Victory Conditions are to reach Zone D. If he can do so without being fired upon, he wins automatically. Once he is fired upon, however, his Victory Conditions immediately change to withdrawing from the battlefield.

The Attacker receives 10 Victory points for every 'Mech he manages to exit off the west edge of the map. He *loses* 5 points for every 'Mech he is forced to leave behind (destroyed, captured, or crippled).

The Defender wins 12 Victory Points for every enemy 'Mech destroyed or captured. He *loses* 5 points for every one of his own 'Mechs destroyed and 5 more points for every enemy 'Mech which escapes.

The player with the most Victory Points at the end of the battle is the winner.

### Tactical Notes

The Attacker may consider deploying one or several of his 'Mechs as a rear guard to buy time for the rest of the unit as it withdraws. (Pessimists may read "rear guard" as "suicide squad," but it is a legitimate tactical maneuver.) He must keep in mind, however, that he will have to escape with at least four of his 'Mechs to win, or else destroy two of the Defender's 'Mechs to have even a chance of winning. The Defender will win if he can destroy or cripple any three of the Attacker's 'Mechs, losing no more than one of his own in the process. Generally, the Attacker will have to carefully balance the urgency of his retreat with the need to engage and (if possible) destroy the Kurita 'Mechs in a fighting withdrawal.

The Defender will need to deploy with an eye to cutting off the Attacker's retreat, hold his fire until the Attacker is far from the west edge of the map, and use concentrated fire at long range to cripple as many of the Attackers as possible.

### Special Rules

The hidden gun emplacement has a CF of 95. The Defender may set it up in any hex of zones A, B, or C he wishes, but the arc of fire must be directed towards the west. The guns will be destroyed after the building takes 95 points of damage or when the guns receive a critical hit. A critical hit occurs if, on any turn when the building receives at least 15 points worth of damage, the Defender rolls 9+ on 2D6. This represents the possibility that the guns took a direct hit through the firing aperture or that the pressurized area housing the gun crew was breached by a lucky shot.

After 10 turns, there is a possibility that the Defender will receive reinforcements. On the tenth turn, the Defender rolls 2D6, and continues to roll once at the beginning of each turn thereafter. On the first turn that he rolls 10 or higher, he can expect reinforcements to arrive during the next turn. The Attacker must be informed that reinforcements are approaching and that they will arrive on the following turn. (This news is communicated to them by their own sensors.)

These reinforcements can consist of *either* (Defender's choice) 2 *Shilone* AeroSpace fighters or a number of additional Veteran BattleMechs and/or tracked vehicles totalling no more than 80 tons. These reinforcements arrive on the indicated turn from the east edge of the map.

The moon Gordo is a vacuum world. Optional Rules Variant 0103-B (on page 51 of this issue) can be used to increase the realism of this scenario.

### Battle of Gordo Outpost Alpha

Lyran plans to commence a major military push against House Kurita late in 3027 were to be initiated by a major raid in the Ramsau system, deep within the Solward wedge of the Rasalhague Military District. With the hydroponics facilities outside Sauton, Ramsau's principal population center, destroyed, it was hoped that the Combine's Jump-capable merchant and military shipping would be tied up transporting food until the hydroponics facilities could be made operational once more.

The presence of the Kurita Command, Control, and Communications center on Ramsau's large, close moon, however, made the operation difficult. The moon, Gordo, and the planet, Ramsau, kept the same faces towards each other as they rotated about one another with a six-day period. Gordo appeared always to be in the sky over Sauton, while Ramsau was always in the sky above the C<sup>3</sup> base, Gordo Alpha. For a major raid to succeed on Ramsau, an attack would have to be made against the Gordian base. If the base could be disrupted or destroyed, operations on the planet's surface could be carried out without being under constant observation by the Kurita high command.

For this purpose, a special strike force composed of six BattleMechs from the mercenary regiment known as the Star Warriors was assembled and deployed aboard a *Leopard*-class DropShip modified to carry six 'Mechs at the expense of its fighter racks. The strikeforce was set down on the surface several kilometers away from the enemy base and over the curve of the moon's horizon. The approach was made on foot, across one of Gordo's *maria*—a flat, dark, dusty plain devoid of cover. It was hoped that surprise and the confusion of a nearby aerospace battle would enable the strikeforce to make its approach without being discovered.

The plan was carried out flawlessly, at least in its initial stages. If the Lyran planners made any one error, it was in their unquestioning trust of the reports made by Lyran Intelligence.



## Kill Zone Over Wyatt

### Out of the Dark

I don't think I've ever been in a fight as tight as that one. We got the order to scramble, and we boosted, grabbing blue and clawing towards the black. The Marik raiders were coming in at high G, fast and hot, the best pilots the 4<sup>th</sup> Andarien had. We hit them head on, and their fighter wall dissolved into a swarm of spacecraft, dodging, diving, swirling.

We were already short, one of our pilots grounded by a medical, another by a fever. Fever? We were all a bit feverish, keyed tighter than I'd have ever thought possible, knowing that we were all that was standing between that swarm of raiders and the blue-white beauty of Wyatt.

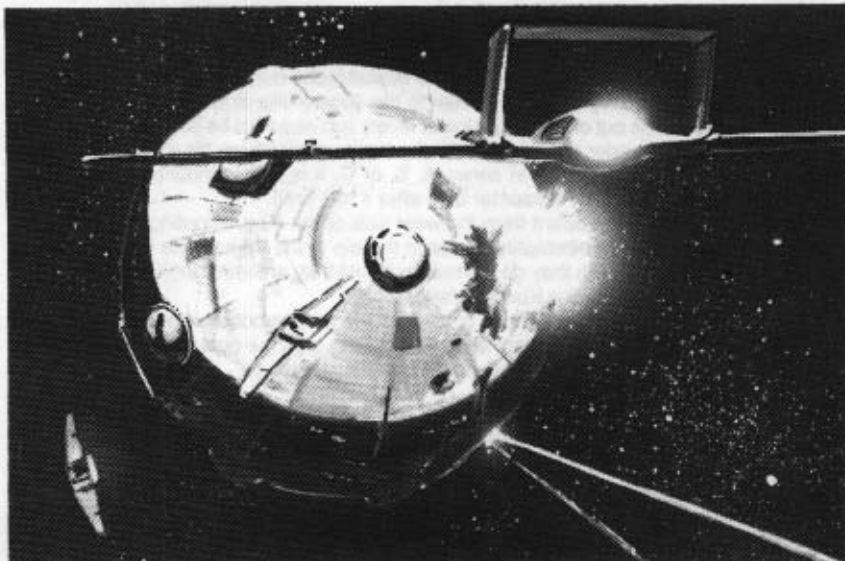
Like I said, the enemy fighter wall fell apart as we blasted through, piling on the Gs. Then we were mixing with them, hauling around on our vector thrusters and standing our ships on their tails to fall back into a new intercept course. It was just after that first pass that Randy started shouting blue murder over the tac frequency.

Hell, we didn't blame him. In a moment we could all see what he saw... four bloody great DropShips vectoring towards the planet.

And it was right about then that the Red Eagle came plummeting out of the dark at us.

That's when I knew we were going to fail...

from *On Wings of Steel Eagles*  
by Lieutenant Sharlene Gurtman  
Tharkad Press  
to be released in 3028



### GAME SET-UP

The *AeroTech* mapboard is used. The planet printed on the map represents the planet Wyatt. The moon and its gravitational effect hexes are ignored.

#### Attacker

The Attacker is a raiding force of House Marik fighters and DropShips, identified as elements of the 4<sup>th</sup> Division of the Defenders of Andarien. It includes the following:

- 1 *Slayer*
- 8 *Stingrays*
- 2 *Thrush*
- 2 *Sholagar*
- 4 *Union-class DropShips*

Use green Liao *Thrush* counters for the two *Sholagars* (the silhouettes are the same), and keep track of which is which by the numbers printed on the counters. This is so that the *Slayer* can be the only red counter on the board.

#### Defender

The Defender has elements of several squadrons of House Steiner fighters based on Wyatt. They include:

- 6 *Corsairs* (3rd Squadron, 10<sup>th</sup> Skye Rangers)
- 3 *Seydlitz* (2nd Squadron, 10<sup>th</sup> Skye rangers)
- 2 *Lucifers*
- 2 *Chippewas*

The Attacker may set up anywhere, so long as his nearest fighter is no closer than 20 hexes from the planet. The Defender begins on the planet. The Attacker has the initiative on the first turn. The Defender may begin launching his fighters as soon as the Attacker completes his first move.



## Situation: 1627 hours, 25 September, 3027 Wyatt

### Victory Conditions

The Attacker is attempting to land his DropShips on Wyatt. To do so, he must first eliminate the defending fighters. The Defender is attempting to turn back the Marik assault on Wyatt.

In order to determine victory, each side wins Victory Points according to the following schedule:

Marik forces land on Wyatt:	100 points per DropShip landed
Per fighter destroyed:	1 per ton
Damage to Marik DropShips:	1 per 5 points of damage 500 per DropShip destroyed

The side with the highest number of Victory Points when the combatants agree to cease fighting wins. The Commonwealth player may force the Marik forces to retreat by destroying 70% (fighters totaling 390 tons or more) of the attacking force. Once the Marik player has lost fighters totalling more than 390 tons, Janos Kleber, the Marik admiral directing the battle from one of the DropShips, will conclude that it is impossible to achieve aerospace superiority and will order the attacking force to withdraw.

Finally, the Marik player should designate one of his DropShips as the command ship, carrying Admiral Kleber, by writing the ship's number on a piece of paper but keeping the choice secret until the conclusion of the game. If the designated DropShip is destroyed, the Marik forces *must* withdraw, and the battle is lost for the Marik forces.

### Special Rules

These rules are entirely optional.

The Marik *Slayer* is piloted by Dmitri Pawoloski, a former Kurita AeroTech ace who has defected to the Free Worlds. His ship is painted red and black, in the pattern of a giant bird of prey. His ship's appearance and his notoriety give him a considerable psychological advantage. To reflect this advantage, all Steiner pilots who fire at Pawoloski's red *Slayer* add a DM of +2 to each shot they make at Close range, and a DM of +1 to each shot made at Medium range.

A second optional rule reflects the late arrival of Lieutenant Shaneyfelt to the battle. Shaneyfelt's *Corsair* must remain on the planet until Pawoloski's *Slayer* damages any one Steiner fighter. As soon as this occurs, Shaneyfelt's *Corsair* may launch.

### The Raid on Wyatt

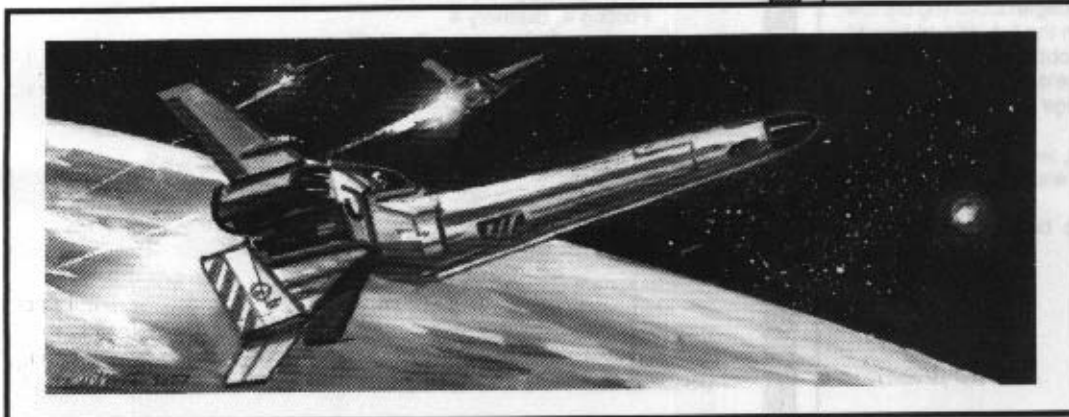
Admiral Janos Kleber was seeking to relieve Steiner pressure elsewhere against the Steiner-Marik frontier by launching a raid-in-force against the border world of Wyatt. Wyatt had, for some time, occupied a salient extending into Marik space and represented the focal point of several years of strategic maneuver between the two governments.

General Felix Mario Radnor, C-in-C of the Wyatt garrison, had augmented his defenses with elements of the 10<sup>th</sup> Skye Rangers, which included a squadron of new Davion CSR-V12 *Corsairs* which had recently been sold to House Steiner as part of a recent series of mutual defense and trade treaties.

The fighters at Radnor's disposal gave him a slight edge in tonnage over the incoming Marik fighters but left him at a disadvantage against the additional firepower carried by the Marik DropShips. The Marik admiral, for his part, sought to eliminate the defending fighters without risking his precious DropShips—even though fully committing the DropShips would be likely to win him a clear victory in space. Both sides were quite aware that even the conquest of the planet would scarcely be worth the loss to Kleber's forces of precious DropShips and the BattleMechs they carried.

The contest, then, became a classic screening action by the Marik fighters, and a series of lightning maneuver-and-strike thrusts at the DropShips by the defenders.

The presence of a particularly colorful and well-known ace among the Marik forces added a psychological edge to the attackers' side.





# Salvage on Baxter IV

## LUCKY FIND

"Pretty, huh?" I said.

"Beautiful," Inge agreed.

They were just two heaps of inert metal, a *Stalker* and a *Marauder* with Kurita markings lying still and lifeless on the rocky ground, but to us they looked like pure germanium.

Inge glanced up at the high ridge overlooking us. "They must've lost their footing up there."

"Got caught in a dust storm, maybe?"

It could happen anytime on this God-forsaken world. Between the quakes and the dust storms and the rockslides, it was hard enough just to keep your 'Mech standing upright on the ploughed-up terrain. But there were gullies and sheer drops everywhere. All you had to do was take one wrong step and the ground could cave in under your feet and send you and 50 tons of metal spinning end over end in a sickening, deadly cartwheel.

Lieutenant Zak lumbered up in his *Shadow Hawk*. "Careful. The pilots may still be alive."

But Inge had already picked her way over to the wrecks and was staring down at them. "Don't worry, they're not going to bother us." Over the intercom her voice sounded a little sick.

"Good luck all around." The Lieutenant sounded pleased.

They were going to be happy back at base. A pair of good salvage 'Mechs like these were a real find anytime, but right now they were a godsend.

The Kuritists had landed a month before, taking us by surprise, and we'd been slugging it out with them ever since. Our biggest problem was keeping 'Mechs operational. Even without the fighting, the climate of Baxter IV is hard on anything mechanical. By now, half our 'Mechs were out of commission, and a lot of good pilots were spending their days drinking coffee and playing cards.

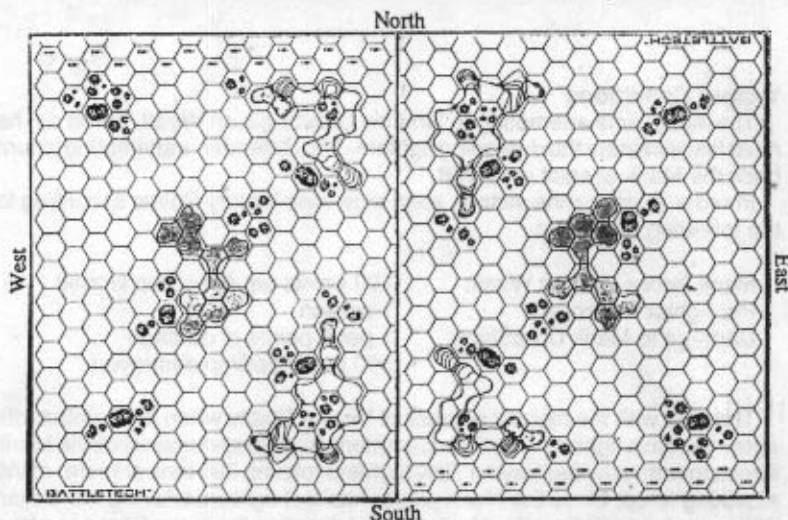
These two heaps of metal were going to make a big difference. Just using them for parts, our techs could put another company of 'Mechs into the field.

The Lieutenant ordered me to report back to base, while he and Inge began attaching the tow cables and nets. I got on the link, but all I could raise was Lieutenant Robb's patrol. I was just telling them about how we'd gone and solved the supply problem, when Inge's voice suddenly cut in.

"Look out, Lieutenant, we've got company."

I checked my screen and I suddenly felt cold all over.

This wasn't going to be as easy as we'd thought.



## GAME SET-UP

Lay out the two BattleTech maps in the configuration shown. The disabled *Stalker* occupies hex 1412 on the left-hand map, the disabled *Marauder* occupies hex 1513. The defender deploys first.

**Note:** With so many 'Mechs out of commission, all functioning 'Mechs are manned by expert pilots. All Defender pilots in this scenario have Piloting skill 4, Gunnery skill 2.

## Defender

### Scout Lance

Lieutenant Erwin Zak's *Shadow Hawk*  
Inge Schramme's *Phoenix Hawk*  
Dub Cooper's *Spider*

The defending forces deploy in any hexes adjacent to the disabled 'Mechs.

## Attacker

### Fire Lance

Lieutenant Kiyō Nakasone's *Crusader*  
Piloting 3, Gunnery 3  
Thucydides Green's *Wolverine*  
Piloting 4, Gunnery 4  
Alan Hanbury-Sparrow's *Panther*  
Piloting 4, Gunnery 5  
Yvan Bilodeau's *Javelin*  
Piloting 5, Gunnery 5

The attacking forces enter from the west edge of the left-hand map.

## Defender's Relief Force

### Scout Lance

Lieutenant Genghis Robb's *Griffin*  
Madeleine Javert's *Phoenix Hawk*  
Max Heine's *Stinger*

See "Special Rules" for the deployment of Lt. Robb's forces.



# THE GOLDEN Medusas™

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OR LOSE BUT  
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## Situation, 0942 hours, March 7, 3027 Baxter IV

### Victory Conditions

The overriding goal for both sides is to carry off the salvage 'Mechs or, failing that, to deny the salvage to the enemy. *All other considerations must be subordinated to this goal.* The Steiner forces attempt to carry off the disabled 'Mechs and exit by the east edge of the right-hand map. The Kurita forces head for the west edge of the left-hand map. The possible outcomes are summarized in the following table:

Win	Lose	Destroyed	Result
2	0	0	Decisive Win
1	0	1	Win
1	1	0	Draw
0	2	0	Decisive Loss
0	1	1	Loss
0	0	2	Draw

In other words, if a side carries off both 'Mechs, it scores a decisive win and the opponent suffers a decisive loss. If a side carries off one 'Mech and the other is destroyed, it scores a win, etc.

### Special Rules

#### 1. Carrying off the prize

The normal method for hauling salvage is to pull it with a large net or cable hung from a 'Mech's back. This requires the pilot to climb out of his 'Mech and deploy the net by hand, a lengthy process which is quite hazardous during battle. It is assumed that the Steiner crews have nearly completed hooking up the cables when the Kurita 'Mechs are sighted.

BattleMechs expend 2 MPs to pick up a net or cable in order to drag a prize. 'Mechs can drag up to their own weight and can join with other 'Mechs to cooperate in dragging off a prize equal to their combined weights. Players may drag prizes by placing the 'Mechs attempting the maneuver adjacent to the disabled 'Mech.

'Mechs need at least one hand free and without a disabled actuator in order to drag a prize. While dragging a prize, the 'Mech cannot use weapons mounted on the arm which it is using for that task. 'Mechs can drop their tow cables at any time.

'Mechs which are towing a disabled 'Mech are limited to a movement rate of one hex per turn. Movement is possible only through clear terrain.

#### 2. Destroying the Prize

If necessary, one side or the other may attempt to destroy the disabled 'Mechs in order to keep them from falling into enemy hands. Each disabled 'Mech has a hit capacity of 100 damage points and can be fired at as if it were an ordinary prone BattleMech. If it is not being dragged at the time it is being fired at, the -4 modifier for immobile targets would also apply. All hits against the disabled 'Mechs are recorded. When the total number of damage points reaches or exceeds 100, the damaged 'Mech is considered to have been fragmented by weapons fire and is destroyed.

#### 3. Rescue

After 6 turns, Lieutenant Robb sends another transmission which is monitored by both sides. He announces how far away he is and how long it will take him to arrive. The player rolls 1D6 + 3 to determine the number of turns before Lieutenant Robb's lance will appear on the east edge of the right-hand map.

The players face several unpleasant alternatives: whether to try to haul the salvage away under fire, taking whatever damage comes their way; or instead to stand and fight, hoping to weaken the opponent enough to make hauling the salvage a more feasible option; or finally, to destroy the prize, and deny it to the enemy. Throughout this scenario, the players must carefully consider the time factor and the likelihood of rescue.

### LOCATION: Groder Dune Sea region, Baxter IV

In early March, 3027, forces of the Draconis Combine's 4<sup>th</sup> Regiment of Proserpina Hussars launched a surprise assault on the inhospitable world of Baxter IV which was lightly garrisoned by the 10<sup>th</sup> Regiment of Skye Rangers. The Kurita forces evidently expected a quick victory, but the fierce resistance of the Steiner defenders combined with attrition due to the planet's hostile climate soon led to a stalemate.

Both sides were plagued with material problems. 'Mechs continually broke down, and often more than 50% of the available armor was in the repair bay. Patrols were instructed to be on the lookout for salvageable parts, and some of the bloodiest battles of the campaign were small-scale contests fought over the debris of a previous encounter.

The stand of Lieutenant Erwin Zak's lance against superior Combine forces shows the ruthless calculus of this kind of fighting. Outnumbered and outgunned by the attacking forces, unwilling to flee and leave the prize to the enemy, the Ranger lance could only hang on, trusting to luck and hoping for rescue from a relief force hurrying to their aid.

In such situations, both attacker and defender must take care not to damage the prize 'Mechs in the fighting, yet if defeat looms, either side must be willing to destroy the prize rather than yield it to the enemy. The spectacle of a battered and beaten force, all hope of victory or even survival gone, no longer trading blows with the enemy but turning its remaining firepower on the precious artifact whose preservation was the whole reason for the fight—this surely is one of the grimmest sights of contemporary warfare.





## MORE THAN WARRIORS

Throughout history, soldiers have adopted and adapted existing songs to their own purposes. This issue's More Than Warriors is an example, based on a folk song which dates back at least to the 19<sup>th</sup> Century on Earth. The original tune, "Botony Bay," was sung by Irish emigrants on their way to the hardships and promise of a new land called Australia. The version printed below, which dates at least as far back as the late 2700's, is of interest because it presents the confident—perhaps naïve—view of the brand new soldier. The seasoned veteran's comments about "the soldier's life" and "adventure along the glory road" are seldom printable.

### The Soldier's Life

The musical score is written on four staves in G major (one sharp) and common time. The melody is simple and folk-like. The lyrics are written below the notes.

Fare - Well to your bricks and mor-tar fare-Well to your dir-ty lies. Fare  
well to your gang-ers and gang planks, and to hell with your ov-er time, For the  
DropShip Rag-a-muff-in is lift-in' off to day, gonna leave this life my  
home and wife and draw Mech-War-rior's pay.

Chorus: *Farewell to your bricks and mortar, farewell to your dirty lies.  
Farewell to your gangers and gangplanks, and to hell with your overtime.  
For the dropship Ragamuffin is liftin' off today.  
Gonna leave this life, my home and wife, and draw MechWarrior's pay.*

I'd heard the tales of a soldier's life, of adventure and of gold.  
They've got a girl on every world, or so I have been told.  
Their best friend is their BattleMech, their fighting skill their fame  
I knew right then I'd go with them and make myself a name.

The sergeant he came down the line, he looked at us and swore  
That a sorrier bunch of 'Mech trainees, he'd never seen before.  
He said we'd never make it, that we might as well go home.  
Worked day and night, with all our might, by God we proved him wrong.

Got posted to a garrison along the Draconis line.  
We beat their regulars once or twice, their mercs a dozen times.  
Now what they say about soldiering, tis true as true can be—  
Every job's an adventure along the glory road, it's a soldier's life for me.



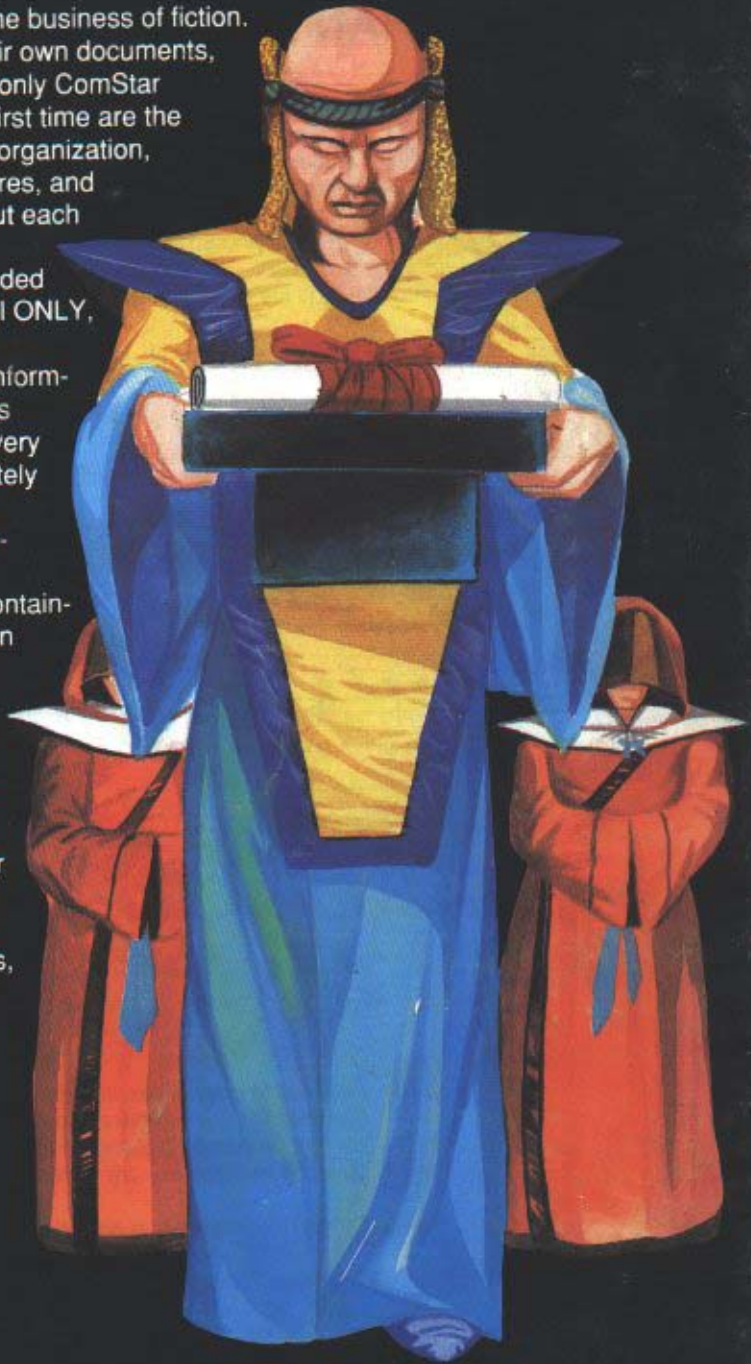
# THE FACTS

## ABOUT THE SUCCESSOR STATES



Colonel Steven Zaks, commander of the 12th Donegal Guards, is shown wearing the typical senior officer field uniform. Campaign bars adorn the front of flack jacket. Colonel Zaks' blue sash shows that he is graduated from the prestigious Nagelring Academy on Tharkad. As so few officers carry a riding crop, it indicates that this colonel is either young, vain, or both - a potentially disastrous combination.

ComStar is not in the business of fiction. They want facts. And in their own documents, they deal with the facts as only ComStar knows them. Here for the first time are the compiled histories, military organization, personalities, social structures, and thousands of FACTS about each of the five Successor houses. Originally intended for ComStar personnel ONLY, these works show the incredible amount of information that ComStar has managed to get on every House (but, unfortunately not how they got the information). From in-depth unit listings to personality profiles containing knowledge Known only to a few, these books are amazing in their depth. The first of these books covers **House Steiner**, and is already available. The next will cover **House Kurita** and be available soon. In the following months, Houses **Liao**, **Marik**, and **Davion** will be issued.



ANOTHER SCAN FROM  
*The Dragon Princess*

Pictured above are adepts of the Order of the Five Pillars. This semi-religious monastic order is devoted to preserving and enforcing the Combine's religion, ideology, and social codes which are contained in the work called the Dictum Honorium. The Order, also known as the Pillar of Ivory also controls the very important ivory trade in Kurita space. This power block is used to fund the inquisitorial mission of the Order.

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