



↓

SUPERWING COMMANDER

CLAW MARKS



CLAWMARKS

CLAWMARKS



ONBOARD MAGAZINE

TCS TIGER'S CLAW

VOLUME 1 No. 4

2654.110

NOW HEAR THIS:

WORDS FROM THE EDITOR

Space is a near-vacuum, as all good Academy graduates and most two-year-old children know. And, if you ask, "When I drop a pebble into space like I do into a pool of water, will it cause ripples?" you'll get some strange looks from everyone.

Nevertheless, someone dropped a pebble in space not too long ago, and we're still encountering the ripples.

Last month, two very good pilots (Lieutenant Larry Dibbles and Captain R.A. Skinner) went out on a routine mission and didn't come back. Here in Vega Sector, it happens all the time. You sit for a while; you look at your pal's empty bunk; you think about where he's gone and hope you won't soon follow his lead. Then, it's back to work.

Yes, it happens all the time. But it's been happening a *lot* lately — not just routine casualties, but casualties caused by sloppiness, over-eagerness and a variety of other fatal diseases. The ship's statistical resources show that avoidable casualties are up 5% over this time last year ... and are up 9% over expected optimum performance. So, we're seeing ripples.

Here's one ripple: Two pilots are gone and won't be back.

Another: This issue, we've asked one of the ship's most experienced pilots, Major James Taggart (a.k.a. Paladin on the flight-line), to talk about the Basics: Basic tactics, goals and maneuvers.

Even if you're sure you know the Basics, read what he has to say. Remember, Paladin is still going strong after twenty-plus years as a combat jockey. And, even if he doesn't wear his Ace of Aces ribbon, it's still there.

Another: You won't be seeing the *Hornet's Nest* from this point on. The strange and silly adventures of the TCS *Hornet's Nest* — a carrier that bore an unfortunate and unmistakable resemblance to the *Tiger's Claw* — were the product of an artist and pilot who went by the moniker of Tooner. We like to remember Tooner as having a deft wit and a diseased mind, but all we can do *is* remember him. He was also known as Lieutenant Larry Dibbles. R.I.P.

Also in this issue, we have the latest Vega Sector update from *Joan's Fighting Spacecraft*, including the most up-to-date data on the Kilrathi ships we're facing; an excerpt from Borger's new survey of Terran and Kilrathi weapons systems; and our usual assortment of news, facts, trivia and profiles. Enjoy them ... but think about them.

TABLE OF CONTENTS

COMM RELAY	2
TAGGART'S TACTICS.....	6
JOAN'S FIGHTING SPACECRAFT (VEGA SECTOR SUPPLEMENT)	17
TERRAN AND KILRATHI WEAPONS.....	28
COMRADE CLIPS.....	30
KNOW YOUR ENEMY	38
NEW ON THE FLIGHT DECK.....	43
UP AND COMING	43
A SHAVING OFF THE OLD BLOCK	44

PUBLISHER:

Col. Christopher Roberts

EDITOR-IN-CHIEF:

Maj. Warren Spector

EDITORS:

*Cpt. Aaron Allston
2nd Lt. Tuesday Frase*

PRODUCTION MNGR:

Cpt. Mike Harrison

ClawMarks is the onboard magazine of the TCS Tiger's Claw. It is produced monthly (Terran calendar) in hard copy and E-File editions. E-File Editions are free to all crewmen aboard the Tiger's Claw: hard copy subscriptions available by special arrangement.

The E-File edition of this issue is available from the ship's library as >>Periodicals>>Armed Forces>>ClawMarks>>4/2654.

©1990-1994 ORIGIN Systems, Inc. Wing Commander, Origin and We Create Worlds are registered trademark of ORIGIN Systems, Inc. Electronic Arts is a registered trademark of Electronic Arts.

CLAWMARKS



COMM RELAY

NEWS FROM EARTH (SOL III)

(New York, North American States, Terran News Services) — On 2654.080, representatives of the Committee for Interaction with Alien Intelligences announced contact with a new alien race.

CIAI spokesman Iola Jonson issued the following statement: "The CIAI regularly launches unmanned probes to uncharted jump-spheres; these probes contain our most sophisticated translation and interpretation equipment. Eight days ago, Probe Number H227 reappeared in a Terran jump-point carrying data and artifacts from a species we are currently referring to as the Double Helix.

"From the information we have so far been able to interpret from H227's records, the Double Helix are a sentient race possessing space travel, and we are not ruling out the possibility they possess FTL drive technology. Physically, they appear to be carbon-based anthropoids who communicate through scents and pheromones. Their name is derived from the double-helix shape of their spacecraft."

World Science Federation officials believe this to be the most significant contact with an alien species since the discovery of the Kilrathi and hope that contact will remain friendly.

TCSO SHOW SCHEDULED

(*Tiger's Claw*, TCAFCN) — There's good news for servicemen aboard the TCS *Tiger's Claw* — The TCSO (Terran Confederation Service Organization) will send an entertainment unit to the much-decorated carrier as early as next month.

The TCSO troupe includes dancers (normal and zero-g), singers, comedians and the Confederation's best cyberlink illusionists.

Vidstar Saranya Carr, exotic heroine of the popular *Luna Jones*, *JumpScout* serial, is accompanying the TCSO troupe to the *Tiger's Claw*. Carr, 25, stated, "You bet your life I'm happy to be working with the TCSO. I mean, you see Luna Jones blowing Kilrathi fuzzies out of space every week, but Saranya Carr can't tell a nav computer from a dialogue transceiver. Since I can't help our fighting forces directly, I'm proud to be able to entertain and build morale. Besides," she adds, "I'm not completely unselfish. Perhaps I can persuade *someone* to give me a ride in one of those new *Rapiers* ... "

ROOKIE TURNED ACE

This past week, the *Tiger's Claw* was fortunate enough to add another ace to its Confederation ranks. Second Lieutenant Todd "Maniac" Marshall knocked down his fifth Kilrathi in an engagement near Kurasawa System, where he and his wing-leader, Captain Jeannette "Angel" Devereaux, were escorting a cargo ship.

While passing through an asteroid belt, the two pilots encountered a wave of five *Dralthi* fighters. Devereaux downed the first with a volley of mass driver cannon, while Maniac broke formation and nailed the second enemy fighter with a heat-seeking missile. The Kilrathi, amazingly enough, began to retreat when Maniac radioed that he was chasing them down. He managed to destroy one more ship, reaching ace status three missions after graduating from the Academy.

"No way I was going to pass up *that* opportunity," exclaimed Maniac upon his return. "There they were, sitting ducks just waiting to face the best pilot on the *Tiger's Claw*. I knew ol' Devereaux could take care of the *Bonnie Heather*, so I hit my afterburners and took care of *them*. I guess they got what they deserved!" added Marshall.

Devereaux refused to comment on Marshall's success, calling his chase "a ridiculous misuse of Confederation firepower."

ALL ABOARD, AUSTINITES

Don't be alarmed if you notice a couple of uniformed strangers amidst the *Tiger's Claw* crew. For the next two weeks, we're entertaining two important visitors from the TCS *Austin*, our sister carrier assigned to a first-response patrol in Enigma sector. Lieutenants Zach "Jazz" Colson and Etienne "Doomsday" Montclair arrived late last week to meet with our Tactical Plotting group and discuss air defense procedures.

Rumor has it that the Confederation is laying out a defense plan for an anticipated attack on McAuliffe, a teaching and research colony housed in an orbital space station and a ground-based research facility. The vast libraries on McAuliffe are under top security, and Terran Intelligence suspects that the Kilrathi will try to gain access to its Terran Knowledge Bank (TKB) within the next few weeks.

Although details of the upcoming objectives remain classified, I took the liberty of interviewing the two men between their meetings with Colonel Halcyon. Here's a short profile of each:

NAME: ZACH COLSON
CALLSIGN: JAZZ
RANK: LIEUTENANT
AGE: 32
ORIGIN: KANSAS CITY,
NORTH AMERICA

"I know I'm talented and well-trained, just like most of our Confederation pilots," Colson says as he mindfully strokes one of the ribbons decorating his uniform. "But it's poise that determines who survives in combat every time. You can't just launch, find the furballs and rush right in ... you have to visualize your attack and follow through without a hitch.

"That's where my training gives me an edge. Back on the *Austin*, I've implemented a visualography machine — it uses visualization techniques and holographic goggles to test and improve your combat reflex skills. I wouldn't say it's the train sim of the future, but it's made a heck of a difference in my flying.

"I put the visualography machine to the test a couple of weeks ago as a mission warmup tool — I'd been practicing for about an hour when the defense siren sounded. Five minutes later, I was loose and blasting furballs with ease. My wingman had a hard time keeping up with me. You better believe this contraption's got my vote!"

LIEUTENANT ZACH COLSON, *JAZZ*

DOOM AND GLOOM



NAME: ETIENNE MONTCLAIR

CALLSIGN: DOOMSDAY

RANK: LIEUTENANT

AGE: 34

ORIGIN: HAWK BAY,
NEW ZEALAND

Lieutenant Montclair calls himself a “devil’s advocate” because he always tries to view things from the worst-case scenario. “That way,” he says, “I’m never disappointed. And if I’m wrong about something, it turns out better than I expected.” Always anticipating disastrous results, he accurately bears the callsign *Doomsday*.

“I grew up with pride and prejudice — literally speaking, not *literaturely*,” explains Montclair. “My training in the history of Maori warriors taught me not to expect much from the world and the people around me. Instead, I’ve learned to take pride in my flying and trust my own instincts.

“The reason I fly with Jazz isn’t that big of a secret. Admiral Tolwyn feels he’s doing me some kind of favor by pairing me with such an upbeat showoff,” sighs Doomsday. “I like Jazz — he’s a good pilot and all — but I’d still rather fly patrol missions in a safe sector somewhere. I’m never going to see forty if these Kilrathi keep jumping our nav points.”

According to Doomsday, this war’s going to drag on forever. Of course, he says the Confederation will pull through, but not before thousands of Terrans sacrifice their lives and colonies to the Kilrathi. Despite his brand of pessimism, Montclair has racked up an impressive count of 187 successful missions and 135 kills, lifetime.

LIEUTENANT ETIENNE MONTCLAIR, *DOOMSDAY*

TAGGART'S TACTICS

HOW TO ACCOMPLISH YOUR OBJECTIVE AND (BEST OF ALL) COME BACK HOME

Here's a simple question from a simple test. Every fighter-jock answered hundreds of these at the Academy.

Hypothetical Situation: You and your wingleader, flying *Scimitars*, are on a strike mission against a *Ralari*-class destroyer. En route, you see two damaged *Jalthi*-class heavy fighters, the survivors of an engagement that must have just ended.

Both craft are in dire straits: one is tumbling helplessly, all stabilization hardware destroyed. The other is limping away, its thrusters blasting intermittently, its maneuverability obviously impaired. One target lies a few seconds to port of your flight path, the other a few seconds to starboard. Your wingleader doesn't go after either of these easy marks — he presses on directly toward the strike objective. What do you do?

- A. Hold formation, ignoring these targets.
- B. Roll out for a couple of seconds to destroy the completely helpless fighter.
- C. Roll out for a very brief engagement with the seriously damaged fighter.
- D. Go after both damaged enemies.
- E. None of the above.

If you answered (E), do the corps a favor — resign your commission and stay away from civilian piloting jobs. Indecision kills faster and more reliably than making the wrong decision.

If you answered (B), (C) or (D), everyone who's ever put on an acceleration suit knows how you feel. But, you know it's not "by the book." As boring as that may sound, you've left your wingleader unguarded for a few critical seconds.

If you answered (A), you deserve congratulations ... but perhaps not many. It's easy to pick the right, by-the-book answer when filling out a test in the placid atmosphere of your own quarters or a testing hall. It's quite another in the cockpit during an actual mission. In the field, the temptation to mark up a couple of safe kills — especially if you're only one or two short of your Ace classification — will often overcome your Academy-drilled impulses.

Of course, this is only a hypothetical situation. Unfortunately, it was real for Captain R.A. "Mule-Skinner" Skinner and Lieutenant Larry "Tooner" Dibbles.

THE TRUTH FROM THE BLACK BOX

A month ago, Captain Skinner and Lieutenant Dibbles went out as part of a strike team assigned to destroy the *Ralari*-class destroyer *Rathtak*. They launched from the *Tiger's Claw* at 2300 hours. At 2321 hours, the carrier bridge caught static-laced transmissions from Skinner to Dibbles, ordering him back into position. These were the last messages from either man. Ever.

Follow-up crews were eventually able to recover the remains of Skinner's flight recorder and reconstruct what happened from its record of radar images.

The real scenario unfolded exactly like our hypothetical situation above. Mule-Skinner ordered his partner back into position. Either presuming that Tooner would immediately turn back, or just unwilling to delay his mission because of a flaky wingman, Skinner pressed on toward the objective. Tooner did not immediately turn back, probably planning one last strafing run before rejoining his wingleader. Unfortunately, the painful truth was that neither *Jalathi*-class fighter was damaged.

When Lieutenant Dibbles came within a reasonable assault distance of his target, it abruptly rolled out in controlled flight and engaged him. Simultaneously, the "dead" Kilrathi fighter powered up, and moved into position behind Captain Skinner.

To Lieutenant Dibbles' credit, he was able to hold off his opponent for a while. But while he was dogfighting with one Kilrathi, the other was destroying his wingleader. Skinner's flight recorder blacks out with the radar showing Dibbles still in desperate combat with his opponent.

Even without the benefit of Dibbles' unrecovered flight recorder, it doesn't take much creativity to reconstruct what happened next. The second *Jalathi* moved in to engage Dibbles. Between the two of them, they easily shot Dibbles down.

"Sometimes you've got to throw the book away." I hear this form pilots both young and old ... and sometimes, maybe, it's true. But in this case? No. Dibbles didn't have to throw the book away. He wanted a kill, another bright spot on his personal record. To obtain it, he endangered his wingleader and mission objective. What were the results of this decision? We lost two pilots with several years' worth of combat experience.

Colonel Halcyon had to write the appropriate letters of condolence. The remaining elements of the strike mission damaged, but did not finish off, the destroyer objective. While it is not conclusive that the presence of two additional *Scimitars* would have resulted in *Rathtak's* destruction, it was at least a possibility. Last of all, this error cost the *Tiger's Claw* a great morale-booster: Dibbles was the writer and artist behind *Hornet's Nest*, the wonderful comic strip that has appeared in every issue of *Claw Marks* for the last two years.

The "book" you're trained to go by was written for a reason. It's a good book, one worth following. It's worth reviewing now.

BASIC TACTICS: A REVIEW

Let's go over the basic, Academy-standard tactics you're supposed to follow in the field.

Individual Objectives. Here's the simplest thing in the world to remember — if you're willing. The wingleader's objective is to accomplish the mission. The wingman's objective is to protect the wingleader at all costs. If he is eliminated, it becomes the wingman's duty to accomplish the mission objectives.

There's not much room for variation. Occasionally, a seasoned wingleader may decide to trade roles with his trainee wingman, or he might send his wingman to protect a buddy who's being swarmed while he goes after another enemy plane. But in all cases, nobody is solo. If the two trade roles, we still have a wingleader and a wingman. If the two split up to help friends under siege, the two are acting as temporary wingmen to temporary wingleaders. The buddy system is still intact. We live by that system. Without it, we die.

Mission Objectives. Objectives vary with types of missions. On the *Tiger's Claw*, 98% of our flight missions fall into five categories:

Defend. You are assigned to guard a stationary position — a capital ship, base or jump point. Orbit that position at a distance of 2,500 meters. Do *not* break to engage incoming enemies until they move within 5,000 meters of the position you're protecting. That's 5,000 meters from their target — not from you.

Escort. You are assigned to guard larger ships on rendezvous assignments. Fly parallel to the ship you're escorting at a maximum distance of 2,500 meters and keep your eyes open. In the face of oncoming hostiles, don't break and engage too soon. The best time to break formation is when the hostiles have approached within 5,000 meters of the ship you're protecting.

Intercept. You are assigned to seek out and engage enemy vessels in a particular area — an anticipated Kilrathi jump point, or a halfway point between oncoming enemies and the ship you are protecting. No particular tactics are called for, except the standard tactics for keeping yourself and your wingmate alive.

Patrol. You are assigned to a flight pattern through unsecured territory. If an enemy force is detected, you can either engage it or head back into base. This is where a lot of novice (and some experienced) pilots make lethal errors. Nobody likes to back down. No one wants to talk to your widow or widower, either. Consider the situation carefully before engaging the enemy.

Strike. You are assigned to destroy an enemy target, usually a capital ship. Obviously, the idea is to get in quick, launch missiles, blow the target up and escape quickly. Unfortunately, the enemy usually decides to defend any target worth destroying. This is where the wingleader/wingman relationship becomes

especially critical. The wingleader must get his missiles placed, and the wingman must keep him or her alive to do so, even at the cost of his personal objectives. He or she must take out oncoming fighters and only drop missiles if a clear opportunity arises that doesn't endanger the wingleader.

FIRST CONTACT

When you first encounter a flight of enemy fighters, they will almost always be flying in formation. Once initial contact has been made, they will break formation into pairs at roughly four-second intervals. Generally, you should likewise break formation to match and engage them. All of this leads to the question of what to do once you've engaged the Kilrathi. The book has something to say about that, as we discuss immediately below.

STANDARD MANEUVERS

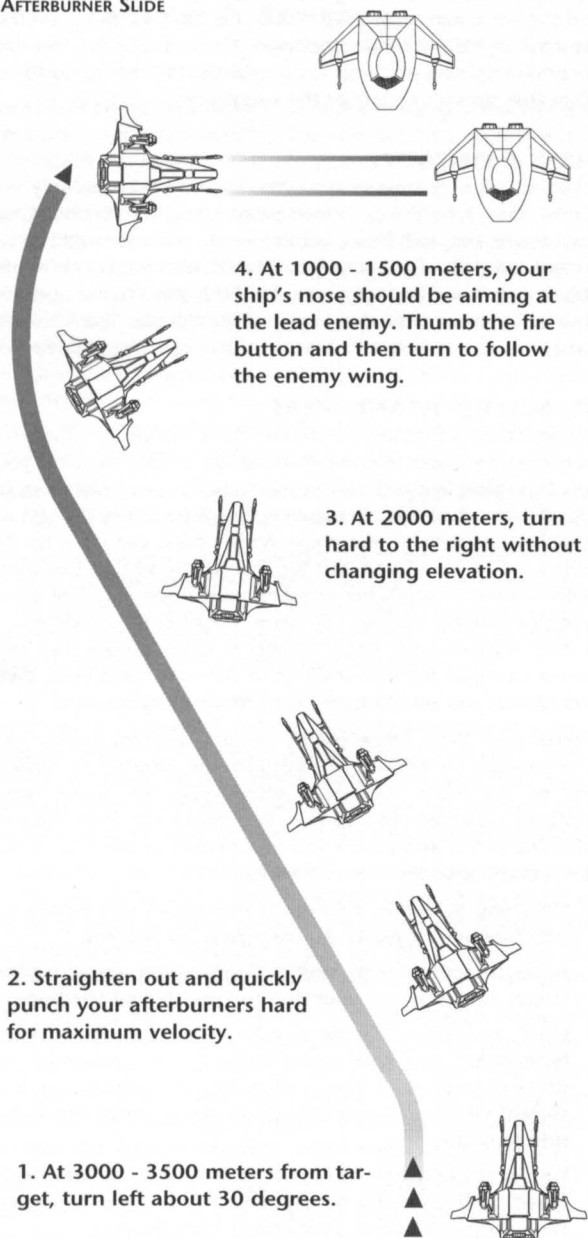
Twenty years of fighting the Kilrathi have shown us some basic maneuvering tactics that improve the rate of survival. Until your personal flying instincts give you a tactic for every situation, go with the "by the book" maneuvers. You'll have a better chance of making it home in one piece. All the book can do is tip the odds a bit in your favor, but the record shows that this slight improvement is worth the embarrassment you may feel about doing something the way you were taught at the Academy.

You learned your basic moves in flight school, but let's review a couple here. In addition to standard turns, rolls, dives and climbs, you should learn these tactical maneuvers:

Afterburner Slide. Since enemy tracking systems can't anticipate changes in velocity or direction, the Afterburner Slide is one of the most successful moves you can make when approaching an enemy head-on. It removes you from the enemy's line of fire and places you in a perfect position for a side attack on your target. Here's how you do it:

- Once you fly within 3,000 to 3,500 meters of a hostile target, bear left (or right) approximately 30 degrees.
- As soon as the enemy craft is barely visible on your view-screen, straighten out your ship and punch your afterburners.
- Once you reach maximum velocity, let up on the afterburners and turn hard to the right (or left). Make sure you don't change the pitch of your ship — maintaining your current elevation is essential if you plan to open fire from a side position.
- Your ship's nose should now be pointed right at the enemy. Open continuous fire on the target ship as you slide past. Then, turn and pursue your enemy from the rear.

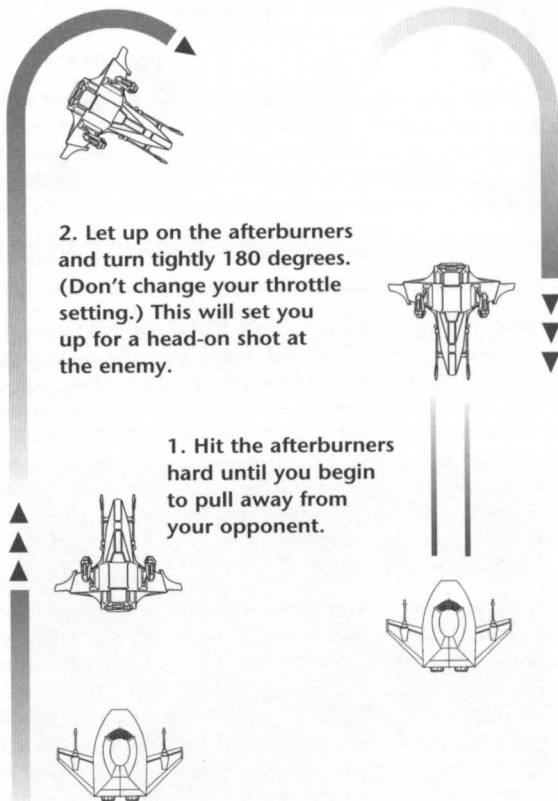
AFTERBURNER SLIDE



Burnout. Sometimes your opponent can maneuver just as well as you can and stay on your tail. In this case, you might try an alternate attack to evade your enemy — the Burnout. You can use this attack to put distance between your ship and your opponent's:

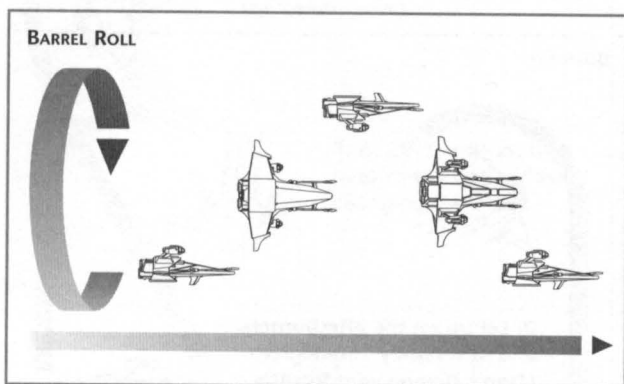
- Hit the afterburners full force until you reach maximum speed and begin to pull away from your opponent.
- Now, let up on the afterburners and perform a tight 180-degree turn. (Don't change your throttle setting.) This maneuver will position you for a head-on shot at the enemy.
- It won't take long for your enemy to reach you once you reverse direction. When the target moves within your cone of fire, open up with your cannon or lasers.

BURNOUT



Barrel Roll. If you're making an attack head-on or directly from the rear, you may find the Barrel Roll a useful move for evading enemy lasers. While closing in on your target, you perform a corkscrew-like roll:

- When your target appears in the viewscreen, fly straight toward it until you're within firing range (approximately 2,000 to 3,000 meters).
- Make a sharp bank left or right while pulling up the ship's nose slightly. This will cause your ship to maintain a constant rotation about the roll axis.
- Keep the ship banked and pitched until you have completed a 360-degree roll. At this point, you can continue the roll or level out.



Cutthroat. If you're fighting a single, highly maneuverable ship, you may want to try a Cutthroat move. Basically, all you do is cut your throttle to zero and lock onto a target. Then, you can spin and tear into the enemy while he's trying to line up for a shot. If you're willing and able to take a few hits, hold your fire until your target begins an attack run — he'll be more concerned with shooting you than evading your shots. If he catches you with a shot or two, use short afterburner bursts to randomly change your position.

Hard Brake. One tactic you can use when you're being trailed by an opponent is a Hard Brake. Executing this move is relatively simple: reduce your forward velocity as quickly as you can. If you brake sooner, harder and better than your pursuer, he will overshoot you and enter your cone of fire.

This is especially effective if you're facing a *Krant* or *Gratha*. Just cut your speed, lock onto the target and use your afterburners to maneuver into a rear attack on the enemy. These two Kilrathi ships have a hard time dealing with this tactic — apparently, they can't cut their speed fast enough to stay behind you.

COMMON STRATEGIES

With that review of maneuvers fresh in our minds, let's review strategies for specific situations. Yes, aggressive tactics will let you rack up the kills, but quick thinking will keep you alive so that you *can* rack up the kills.

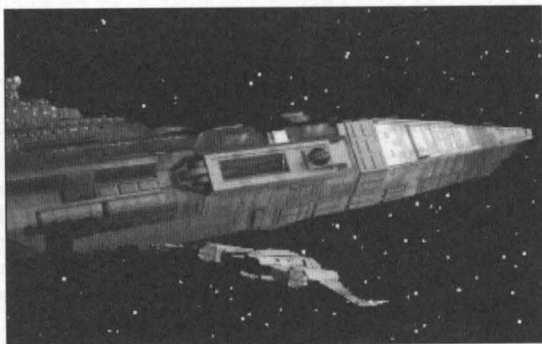
You're being tailed by an enemy. Here's the situation: You have an enemy to your rear and you're in his sights. What now?

If you have a critical target in your sights and you know that your pursuer's guns are not going to crack your shell with one hit, then it's permissible (barely) for you to take that hit, drop your load and then come around to deal with your attacker. In any case, don't do this unless you're within 2,500 meters of your target.

If you don't have that critical target in your sights, or you don't know that you can take a direct hit, then evade. Evading involves a pretty complicated series of decisions you have to learn to make by reflex. If your pursuer has better maneuverability than you but you have superior acceleration, try a Burnout or a Hard Brake and prepare to be very accurate with your ship's weapons.

You're fighting a more maneuverable opponent. Many times, you'll find yourself facing quick, agile Kilrathi ships, such as *Salthi* or *Dralthi*. In this case, accelerate to maximum throttle speed and apply head-on Afterburner Slides until you've eliminated all but one of the fighters. Then, resort to a Cutthroat and attack your enemy as he lines up for a shot.

If your pursuer has better maneuverability *and* better acceleration (a *Salthi*, for example), then you have a problem. If you want to make it a slugging match, try a Burnout. If you're already hurt, try any sort of evasive maneuver you can — hard turns and rolls in a succession of different directions. Last of all, pray, because you're going to need some divine intervention.



You're battling a large group of fighters. Sometimes, you may find that you're fighting a Kilrathi ship one-on-one in the middle of a crowd. When combat occurs within a large group of fighters, past experience has shown us that separating enemy ships is an effective way to take on a single fighter at a time. In such situations, you can implement one of two divisive techniques:

Eclipse. As its name implies, this move involves using an enemy capital ship to “eclipse” you and a single Kilrathi ship from a group of enemy fighters. By using the capital ship as a shield, you can concentrate on battling one opponent at a time. (Do not, however, use the Eclipse with friendly capital ships; they have enough to contend with during an attack.)

Divide and Conquer. In open space, it won't always be possible to use an Eclipse. If you're flying with a wingman, try a Divide and Conquer. Lock onto a target, and then order your wingman to attack your target. By locking onto a different target on the *other* side of the fighter group, you can split the offensive by leading your target away from the pack. Taunt your enemy and punch the throttle so that you're headed away from the battlefield. Once you move 5,000 to 7,000 meters away, you can take him into one-on-one combat.

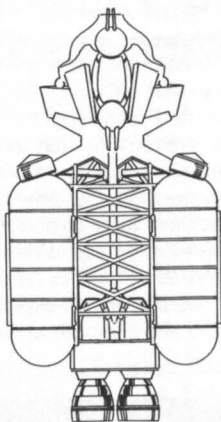
Techs studying a recently captured *Krant* ship discovered that the Kilrathi radio range is very limited, so your target won't be able to radio for help at this distance. If you're flying with an aggressive, capable pilot (such as Iceman), you may convince the Kilrathi that you've deserted the battle and your wingman. After you finish off your first victim, you'll have the element of surprise in your favor when you sneak back into the battlefront.

You're attacking a capital ship. Many of your missions involve finding and destroying Kilrathi capital ships. Two different approaches are accepted in this combat situation:

If you want your wingman to attack the capital ship, afterburn past the first wave of defending fighters. Then, lock onto the capital vessel and order your wingman to attack your target. Immediately lock onto a fighter and attack it. By shifting back and forth between fighter targets and taunting their pilots, you can lead them away from the capital ship and from your wingman. Your job is to keep the fighters busy while your wingman fires his missiles.

If you prefer to attack the capital ship, help your wingman eliminate the defending fighters. Then, approach the capital vessel from the rear at a distance of 4,000 meters. Begin firing your missiles once you move within 2,000 meters. Then, barrage the ship with your forward guns. At 1,000 meters, break hard to one side, turn 180 degrees and punch the afterburners. This will allow you to evade enemy fire, recharge your blasters and circle around for another approach.

ATTACKING A CAPITAL SHIP



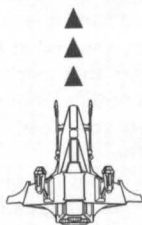
5. Hit
Afterburners

4. 1000 meters
turn left or right

5. Hit
Afterburners

3. Gun barrage from 1500
to 1000 meters

2. Launch missiles before
2000 meters



1. Begin approach beyond 4000 meters

You're cruising through an asteroid field or mined area. Maneuvering through a field of hurtling asteroids or mines isn't an easy task by any means, especially if enemy fighters lurk nearby. But, you can make the passage a little easier if you fly at speeds between 280 and 300 kps and follow this tip:

Position your ship so that the navigational crosshair appears in the far left section of the screen. Hold this position for approximately three seconds, then shift so that the crosshair moves to the far right. Continue alternating and holding your position until you pass through the field. If enemy ships lurk within the asteroids, you can fight them there or pull them out of the field.

You can apply the previous tactic to mine fields as well. But, keep in mind that mines don't have to hit you to damage your ship. If you get close enough, they'll explode. Constant minor shifts in direction should keep you out of harm's way.



LAST NOTES

There's no sure way, no sure tactic, to keep you alive on a combat mission. You may be good, but so are the Kilrathi. Someone's got to win, and someone will probably die.

The book of flight regs, sneered at by up-and-coming aces, is nothing more than a tool that teaches you how to slant the odds in your favor. It says nothing more than this: "Protect your wingman and he'll protect you. Learn these tactics and they'll improve your chances." That's all.

And remember — You're not the only one who wants your chances to be improved. Your wingman does. Your commander does. Your family does. Ultimately, the entire Terran Confederation does. Because if we fail, our people and planets will end up "protected" by pilots who proved themselves better than us, fliers who showed they could beat us — the warriors of the Empire of Kilrah.

JOAN'S FIGHTING SPACECRAFT

VEGA SECTOR SUPPLEMENT FOR 2654.092

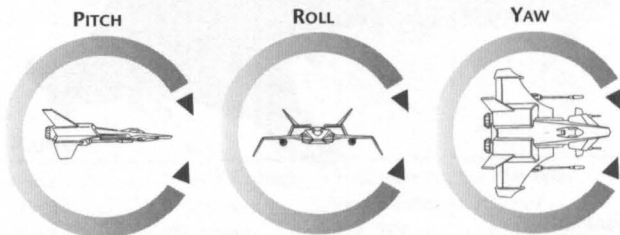
This is the latest update for Joan's fighting spacecraft, specifically revised for Terran personnel in the Vega Sector. This supplement contains the latest specifications on both Terran and Kilrathi spacecraft, particularly the types of craft most commonly encountered in this sector.

All servicemen are urged to familiarize themselves with these specifications. Computer files of this material are available in the ship's library, under >>REFERENCE>>TECHNICAL>>HARDWARE>>JOANS>>. Here's a quick guide for those of you unfamiliar with the Joan's system of evaluation:

Maximum Velocity/Cruise Velocity. These are the settings to which a ship's speed governor is set. The ship's computer automatically sets velocity relative to (a) the flagship, (b) an escorted vessel, (c) a nearby planetary body, (d) a Confederation beacon or (e) a value derived from radar positions of all visible ships. The velocity is expressed in kilometers per second (kps).

Acceleration. This shows Joan's evaluation of the ship's acceleration rate, described as Bad, Poor, Average, Good or Excellent.

Maximum Pitch, Roll and Yaw. These characteristics are expressed in degrees per second (dps). Here's a brief review on maneuvering vectors:



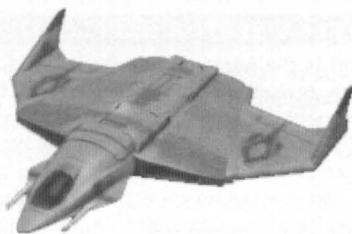
Pitch. Ability of a ship to change direction up or down.

Roll. Ability of a ship to rotate along an imaginary axis extending through the nose and tail.

Yaw. Ability of a ship to turn to the right or left without changing its vertical orientation. It is generally more efficient to turn using both pitch and roll to than to turn purely through yaw.

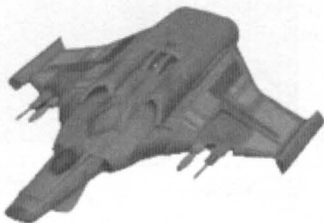
Ship's Armor. Joan's evaluation of a ship's defensive armor is expressed in centimeters thickness of Durasteel. Fore and Aft Shield values are given in values equivalent to centimeters thickness of Durasteel. The higher the number, the more effective the armor.

CONFEDERATION SHIPS



HORNET

<i>Class</i>	Light Fighter	<i>Cruise Velocity</i>	300 kp
<i>Length</i>	20 meters	<i>Acceleration</i>	Good
<i>Mass</i>	12.5 tonnes	<i>Max. YPR</i>	8/9/8 dps
<i>Max. Velocity</i>	420 kps		
<i>Weapons</i>	Laser Cannon (2)		
	Dumb-Fire Missile (4)		
	Heat-Seeking Missile (2)		
<i>Armor</i>	Fore and Aft Shields ...	3 cm equivalent each	
	Front and Rear	3 cm each	
	Right and Left	3 cm each	



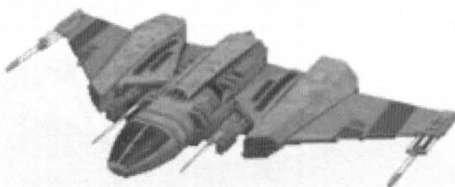
RAPIER

Class.....	Medium Fighter	Cruise Velocity	250 kp
Length	24 meters	Acceleration	Excellent
Mass	13.5 tonnes	Max. YPR.....	10 dps
Max. Velocity.....	450 kps		
Weapons.....	Laser Cannon (2)		
	Neutron Guns (2)		
	Dumb-Fire Missiles (4)		
	Friend-or-Foe Missiles (4)		
	Image-Recognition Missile (2)		
Armor.....	Fore and Aft Shields ...	7 cm equivalent each	
	Front and Rear.....	5/4 cm	
	Right and Left	3 cm each	



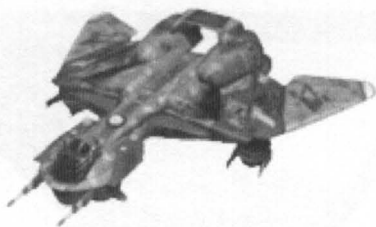
SCIMITAR

<i>Class</i>	Medium Fighter	<i>Cruise Velocity</i>	150 kps
<i>Length</i>	25 meters	<i>Acceleration</i>	Good
<i>Mass</i>	16 tonnes	<i>Max. YPR</i>	6/6/7 dps
<i>Max. Velocity</i>	360 kps		
<i>Weapons</i>	Mass Driver Cannon (2) Dumb-Fire Missiles (4) Heat-Seeking Missiles (6)		
<i>Armor</i>	Fore and Aft Shields ...4 cm equivalent each Front and Rear.....6 cm each Right and Left.....5 cm each		



RAPTOR

<i>Class</i>	Heavy Fighter	<i>Cruise Velocity</i>	250 kps
<i>Length</i>	36 meters	<i>Acceleration</i>	Good
<i>Mass</i>	20 tonnes	<i>Max. YPR</i>	6/5/6 dps
<i>Max. Velocity</i>	400 kps		
<i>Weapons</i>	Mass Driver Cannon (2) Neutron Guns (2) Heat-Seeking Missiles (4) Image-Recognition Missiles (4) Friend-or-Foe Missile (2) Porcupine Mine (1)		
<i>Armor</i>	Fore and Aft Shields ...7 cm equivalent each Front and Rear.....8 cm each Right and Left.....6 cm each		



VENTURE

Class	Corvette	Cruise Velocity	150 kps
Length.....	80 meters	Acceleration	Poor
Mass	1,000 tonnes	Max.YPR.....	3 dps
Max. Velocity	200 kps		
Weapons	Laser Cannon (2)		
	Friend-or-Foe Missile (1)		
	Heat-Seeking Missiles (2)		
Armor.....	Fore and Aft Shields ...	10 cm equivalent each	
	Front and Rear	9/8 cm each	
	Right and Left	8 cm each	



DRAYMAN

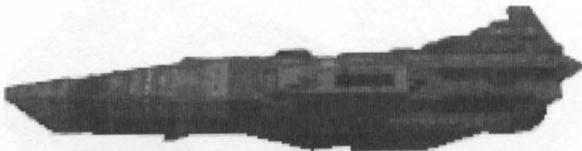
Class	Transport*	Cruise Velocity	100 kps
Length.....	96 meters	Acceleration	Poor
Mass	2,000 tonnes	Max. YPR.....	2 dps
Max. Velocity	150 kps		
Weapons	Turreted Laser (1)		
Armor.....	Fore and Aft Shields ...	9 cm equivalent each	
	Front and Rear.....	8 cm each	
	Right and Left.....	6 cm each	

** (configurable as either Freighter or Tanker)*



EXETER

<i>Class</i>	Destroyer	<i>Cruise Velocity</i>	100 kps
<i>Length</i>	360 meters	<i>Acceleration</i>	Poor
<i>Mass</i>	8,000 tonnes	<i>Max. YPR</i>	2 dps
<i>Max. Velocity</i>	150 kps		
<i>Weapons</i>	Image-Recognition Missile (1)		
	Turreted Lasers (4)		
<i>Armor</i>	Fore and Aft Shields ...25 cm equivalent each		
	Front and Rear22/20 cm each		
	Right and Left20 cm each		



TIGER'S CLAW

<i>Class</i>	Bengal Strike Carrier		
<i>Length</i>	700 meters	<i>Acceleration</i>	Poor
<i>Mass</i>	80,000 tonnes	<i>Max. YPR</i>	1 dps
<i>Max. Velocity</i>	130 kps	<i>Fighter Complement</i> ...	104
<i>Weapons</i>	Turreted Lasers (8)		
<i>Armor</i>	Fore and Aft Shields ...21 cm equivalent each		
	Front and Rear24/20 cm each		
	Right and Left25 cm each		

KILRATHI SHIPS



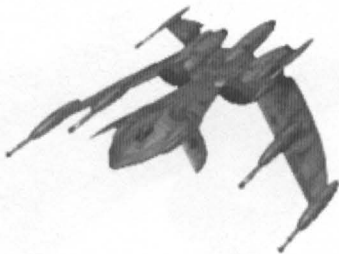
SALTHI

<i>Class</i>	Light Fighter	<i>Cruise Velocity</i>	300 kps
<i>Length</i>	24 meters	<i>Acceleration</i>	Excellent
<i>Mass</i>	12 tonnes	<i>Max. YPR</i>	14/12/12 dps
<i>Max. Velocity</i>	480 kps		
<i>Weapons</i>	Laser Cannon (2)		
	Dumb-Fire Missile (1)		
<i>Armor</i>	Fore and Aft Shields ...3.5 cm equivalent each		
	Front and Rear		
	3/2 cm each		
	Right and Left		
	1.5 cm each		



DRALTHI

<i>Class</i>	Medium Fighter	<i>Cruise Velocity</i>	230 kps
<i>Length</i>	28 meters	<i>Acceleration</i>	Good
<i>Mass</i>	14 tonnes	<i>Max. YPR</i>	10/14/10 dps
<i>Max. Velocity</i>	400 kps		
<i>Weapons</i>	Laser Cannon (2)		
	Porcupine Mines (3)		
	Heat-Seeking Missiles (4)		
<i>Armor</i>	Fore and Aft Shields ...5 cm equivalent each		
	Front and Rear		
	4.5/3.5 cm each		
	Right and Left		
	3 cm each		



KRANT

<i>Class</i>	Medium Fighter	<i>Cruise Velocity</i>	200 kps
<i>Length</i>	32 meters	<i>Acceleration</i>	Good
<i>Mass</i>	16.6 tonnes	<i>Max. YPR</i>	7/10/7 dps
<i>Max. Velocity</i>	360 kps		
<i>Weapons</i>	Laser Cannon (2)		
	Friend-or-Foe Missile (1)		
	Heat-Seeking Missiles (3)		
<i>Armor</i>	Fore and Aft Shields ...8 cm equivalent each		
	Front and Rear		
	9/10 cm each		
	Right and Left		
	8 cm each		



GRATHA

<i>Class</i>	Heavy Fighter	<i>Cruise Velocity</i>	200 kps
<i>Length</i>	36 meters	<i>Acceleration</i>	Average
<i>Mass</i>	18 tonnes	<i>Max. YPR</i>	6 dps
<i>Max. Velocity</i>	320 kps		
<i>Weapons</i>	Laser Cannon (2)		
	Mass Driver Cannon (2)		
	Image-Recognition Missile (1)		
	Heat-Seeking Missiles (3)		
	Porcupine Mines (2)		
<i>Armor</i>	Fore Shield		
	11 cm equivalent		
	Aft Shield		
	10 cm equivalent		
	Front and Rear		
	15/14 cm each		
	Right and Left		
	10 cm each		



JALTHI

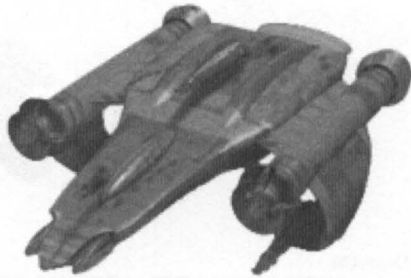
Class	Heavy Fighter	Cruise Velocity	200 kps
Length.....	32 meters	Acceleration.....	Average
Mass	22 tonnes	Max. YPR.....	5 dps
Max. Velocity	280 kps		
Weapons	Neutron Guns (3)		
	Laser Cannon (3)		
	Friend-or-Foe Missiles (2)		
	Heat-Seeking Missile (1)		
Armor.....	Fore and Aft Shields ...	16 cm equivalent each	
	Front and Rear.....	20/10 cm each	
	Right and Left.....	17 cm each	



DORKIR

Class	Transport*	Cruise Velocity	100 kps
Length.....	104 meters	Acceleration.....	Bad
Mass	2000 tonnes	Max. YPR.....	2 dps
Max. Velocity	150 kps		
Weapons	Turreted Laser (1)		
	Porcupine Mines (3)		
Armor.....	Fore and Aft Shields ...	17/10 cm equivalent each	
	Front and Rear	9/6 cm each	
	Right and Left	9 cm each	

*(configurable as either Freighter or Tanker)



25

RALARI

Class	Destroyer	Cruise Velocity	100 kps
Length.....	344 meters	Acceleration	Poor
Mass	18,000 tonnes	Max. YPR.....	2 dps
Max. Velocity	150 kps		
Weapons	Turreted Lasers (6)		
	Porcupine Mine (1)		
Armor.....	Fore and Aft Shields ...20/12 cm equivalent each		
	Front and Rear.....20/9 cm each		
	Right and Left.....18 cm each		



FRALTHI

Class	Cruiser*	Cruise Velocity	120 kps
Length.....	500 meters	Acceleration	Poor
Mass	20,000 tonnes	Max. YPR.....	2 dps
Max. Velocity	180 kps	Fighter Complement.....	20**
Weapons	Turreted Lasers (6)		
Armor.....	Fore and Aft Shield27/17 cm equivalent each		
	Front and Rear.....28/14 cm each		
	Right and Left.....26 cm each		

* (configurable as Cruiser or Light Carrier)

** (if configured as a Light Carrier)



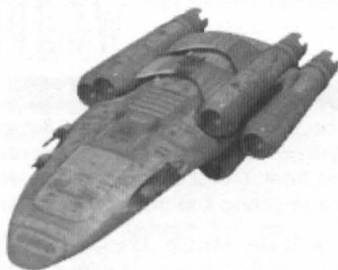
Class	Transport	Cruise Velocity	100 kps
Length.....	68 meters	Acceleration	Poor
Mass	58 tonnes	Max. YPR.....	2 dps
Max. Velocity	150 kps		
Weapons	Turreted Lasers (1)		
	Porcupine Mines (3)		
Armor.....	Fore and Aft Shields ...	7 cm equivalent each	
	Front and Rear	8 cm each	
	Right and Left.....	6 cm each	



Class	Dreadnought	Cruise Velocity	150 kps
Length.....	103 meters	Acceleration.....	Poor
Mass	1,720 tonnes	Max. YPR.....	1 dps
Max. Velocity	200 kps	Fighter Complement.....	20**
Weapons.....	Turreted Lasers (6)		
	Image-Recognition Missiles (2)		
Armor.....	Fore and Aft Shield.....27 cm equivalent each		
	Front and Rear.....28/14 cm each		
	Right and Left.....26 cm each		
Other	Unidentified Power Source (according to recent Terran sightings)		

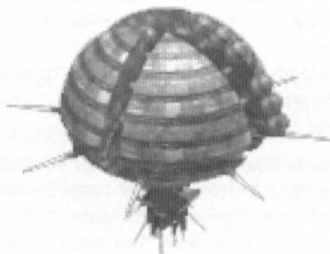
* (configurable as Cruiser or Light Carrier)

** (if configured as a Light Carrier)



SNAKEIR

<i>Class</i>	Carrier	<i>Cruise Velocity</i>	100 kps
<i>Length</i>	600 meters	<i>Acceleration</i>	Poor
<i>Mass</i>	15,000 tonnes	<i>Max. YPR</i>	1 dps
<i>Max. Velocity</i>	150 kps		
<i>Weapons</i>	Image-Recognition Missiles (2)		
	Turreted Lasers (6)		
<i>Armor</i>	Fore and Aft Shields ...37 cm equivalent each		
	Front and Rear		
	28/24 cm each		
	Right and Left		
	36 cm each		



SUPPLY DEPOT

<i>Class</i>	Star Post	<i>Cruise Velocity</i>	0 kps
<i>Length</i>	500 meters	<i>Acceleration</i>	n/a
<i>Mass</i>	20,000 tonnes	<i>Max. YPR</i>	0 dps
<i>Max. Velocity</i>	0 kps		
<i>Weapons</i>	Friend-or-Foe Missiles (4)		
	Turreted Lasers (4)		
<i>Armor</i>	Fore and Aft Shields ...18 cm equivalent each		
	Front and Rear		
	18 cm each		
	Right and Left		
	18 cm each		

OF THE TERRAN AND KILRATHI FLEETS

Length.....2.2 meters	Effective Range ..8,000 meters
Payload.....Illudium PEW 36	Max. Range.....12,000 meters
Strength9,500 ESK	Max. YPR.....10 dps
Blast Radius50 meters	

Porcupine Mine. This deadly device has limited homing capabilities and built-in proximity sensors — detonation doesn't require contact. If there's a Kilrathi on your tail, just open your rear doors and drop a Porcupine in his path. He'll be off your tail in no time, or he'll be dead. If you ever see one of these mines hurtling your way, punch the throttle and steer clear.

Blast Radius20 meters

Velocity20 mps

Laser Cannon. Lasers don't do a lot of damage. Still, nearly all pilots have at least one story in which the long range of the laser allowed them to get first strike on a foe. Despite their low damage potential, lasers are reliable, versatile and effective. In fact, they probably account for more enemy kills than any other weapon.

Blast Radius50 meters

Max. Range.....4,800 mrrs*

Neutron Gun. Neutron guns do heavy damage, but only at close range. No other projectile weapon provides an equivalent level of destructive capability. The down side is that neutron guns heat up rapidly and eat up power at an alarming rate. Also the neutron gun's lack of range had led many foolhardy or underskilled pilots into close-quarter combat for which they were ill-prepared. Some of these pilots never made it home.

Blast Radius50 meters

Max. Range.....2,500 mrrs*

Mass Driver Cannon. This basic fighter weapon has medium range and damage potential and is reliable and accurate. Heat buildup and power drain are minimal. Though lasers and neutron guns are more effective in certain situations, no pilot ever went wrong activating a mass driver. And remember — this is the only gun whose damage potential remains constant within a range of 3,000 meters.

Blast Radius50 meters

Max. Range.....3,000 mrrs*

Turreted Laser. Terran and Kilrathi destroyers, cruisers, carriers and bases are equipped with heavy, turreted lasers linked to advanced targeting systems. Only the most maneuverable ships have any chance of surviving concentrated fire from these formidable weapons.

Blast Radius50 meters

Max. Range.....4,800 mrrs*

**(meters relative to range and speed)*

COMRADE CLIPS

Even though we all work and live together 24 hours a day, we don't always take the time to get to know everyone on board. Well, now's your chance! All dedicated readers of Claw Marks look forward to our monthly pilot profiles, colorful interviews that reveal the backgrounds and personalities of our fellow comrades. This time around, our computers randomly picked eight pilots from the carrier's database. After an interview with each of them, here's what we learned:

LOOSE CANNON ON DECK



Captain Ian St. John, *Hunter* to the space crews, is one of the best pilots in the service and has racked up 64 kills in the years he has been stationed on the *Tiger's Claw*. He's known as a seat-of-the-pants flier, and Kilrathi opponents tend to be baffled by his spontaneous flying style.

The friendly 27-year-old from Brisbane, Australia, is sometimes accused of excessive independence and a casual attitude toward regulations. "Maybe so," he explains, "but I'd never

"Notice I say 'push to the limit' an' not 'break.' Maybe there's not much difference, but it's usually the difference 'tween dusting a furball an' sucking vacuum!"

leave my wingleader flying solo. But, all the [expletive deleted] things we're given — ships, weapons training an' standing regs — are there for us to push to the limit, an' maybe a little further, if we're going to get the job done. Notice I say 'push to the limit' an' not 'break.' Maybe to some there's not much difference, but it's usually *the* difference 'tween dusting a furball an' sucking vacuum!"

CAPTAIN IAN ST. JOHN, *HUNTER*

THE UNSTOPPABLE FORCE



First Lieutenant Tanaka Mariko goes by the tag of *Spirit* — a rough translation of *Kami*, as she is called by the Japanese pilot instructors responsible for her initial training. In the cockpit, *Spirit* is known for her deceptive, defensive piloting, her ability to sense and avoid incoming fire and her habit of creeping

“...there is nothing to keep a modern pilot, Japanese or not, from trying to adhere to the best elements of the warrior codes of the past.”

in as close as possible to a target before cutting loose with her ship's weaponry.

A native of Sapporo on the Japanese island of Hokkaido, Tanaka is a third-generation

military pilot. Her father, Major Tanaka Shun (affectionately remembered as *Go-Devil*), died 20 years ago in the brutal McAuliffe Ambush of '34.

The 24-year-old ace explains, “I did not join the armed forces for revenge. I have no fantasies of personally gunning down the pilot who killed my father. It is a matter of tradition and duty. “The tradition is my family's, and the duty is to the Earth. I am often asked if I think of myself as a modern *samurai*. The answer is no. I am a military pilot, not a feudal retainer. But there is nothing to keep a modern pilot, Japanese or not, from trying to adhere to the best elements of the warrior codes of the past — the code of the samurai, the code of the knight-errant, any code of honor and service.”

“I did not join the armed forces for revenge. ... It is a matter of tradition and duty.”

LIEUTENANT TANAKA MARIKO, *SPIRIT*

LEADER BY EXAMPLE



Major Chen Kien is known as *Bossman* to the space-crews, but that wasn't always the case. "When I was young — er, younger — they called me *Ripper*, my

"When I started burying young pilots who had been killed for behaving like me, I decided to give them an example that would not get them blown out of space."

old friends still do. I was a lot like Hunter, pushing everything to the limit. But I might have been a little too good, or at least lucky, at it. Replacement crews coming in, bright young second looies, took my lead... and

got themselves shot to hell. When I started burying young pilots who had been killed for behaving like me, I decided to give them an example that would not get them blown out of space. It is sort of a vicious cycle: You try to act as an example, and young pilots start coming to you for advice. That is when they started calling me *Bossman*. I do not regret all of these changes ... but there are some times that I miss the old days."

The 39-year-old native of Kaohsiung, Taiwan, has a degree in aeronautical engineering from the Confederation Net university system. He is married to ergonomics engineer Chen Mingxing and, last March, became the father of a baby girl. He named her Alexis in memory of his mother, who died a year ago from bone cancer.

"I do not regret all of these changes... but there are some times that I miss the old days."

MAJOR CHEN KIEN, *BOSSMAN*

ACE OF ACES



Major Michael Casey, *Iceman* to most of the crews, has racked up more confirmed kills while serving on the *Tiger's Claw* than any other pilot in the carrier's history. In the cockpit, he is known for his calm under fire, letter-perfect flying technique and deadly aim with ships' weapons — a combination that spells disaster for Kilrathi opponents.

"You must learn to listen for Iceman. On the comm unit, in a large engagement, everyone is either shouting or at least very excited; Iceman is whispering. You have to strain your ears to hear him." — Angel

In fact, according to the flight recorder records, he once downed three Salthi fighters single-handed with lasers as his only weapon.

Despite his stern presence in battle, *Iceman* is surprisingly softspoken. Angel, frequently a wingman for *Iceman*, describes flying with him:

"I will tell you: he talks ten times as much in the cockpit as he ever talks on the carrier." — Angel

"You must learn to listen for *Iceman*. On the comm unit, in a large engagement, everyone is either shouting or at least very excited; *Iceman* is *whispering*. You have to strain your ears to hear him. It's always a terse little statement like 'Moving in,' 'Rolling right,' 'Target in sight,' 'Objective accomplished,' 'Head for home.' And I will tell you: he talks ten times as much in the cockpit as he ever talks on the carrier."

"I cannot stand rebels or hot-doggers, or any of these so-called intuitive know-it-alls."

"But every class that comes out of the Academy is stuffed full of these talented fliers

"They shut up fast when they start seeing their classmates eat missiles. It is at that point that they join the human race and begin to help win this war."

The 28-year-old Devereaux is a native of Brussels, Belgium. She is widely known for her marksmanship and rate of ship survival — she's never had to eject. Her accomplishments with her ship's weapons dot the performance records of the *Tiger's Claw*.

34

NEW KID ON THE BLOCK



Fresh up from the Academy is Second Lieutenant Todd Marshall, better known as *Maniac* by his graduating class. Marshall, 23, tries hard to live up to his moniker.

"Plodding along with your joystick in one hand and a copy of the naval regs in the other is not going to impress the Kilrathi."

"Plodding along with your joystick in one hand and a copy of the naval regs in the other is not going to impress the Kilrathi," he says. "They know our regs. They know the Book, they know how we do things. If we're going to put them on the ropes, we have to adapt our rules, tactics and

flying styles. We have to outfly them, outfight them ... we've got to *want* it more. And I want it.

"I'm a Proxie — my home-world is Leto, Proxima Centauri IV. When the colonization started, anyone with any brains or skills high-tailed it off Earth, and most of them ended up on Leto. That's why

"If we're going to put them on the ropes, we have to adapt our rules, tactics and flying styles. We have to outfly them, outfight them ... we've got to want it more. And I want it."

Proxies always kick homeborn Terrans around in the ratings." Despite his creative interpretation of colonial history and comparative Naval Academy standings, Marshall was one of the highest-rated Academy graduates of the '54 class and promises to be a worthy addition to the *Tiger's Claw* pilot roster.

SECOND LIEUTENANT
TODD MARSHALL, *MANIAC*

ALWAYS PROFESSIONAL



"The laddies coming out of th' Academy t'ink that I was born old," chuckles Major James Taggart, who is known as *Paladin* to the spacecrews. "Bu' when I took me commission — not ta long after we *discovered* the Empire of Kilrah — I was j'st a kid charged up on stories of knight-errantry, on *The Death of Art'ur* and *The Song of Roland*. S' when we ran into the Kilrathi, I knew I was going ta grab a lance, 'op into a cockpit, an' change the course of history. An' naturally," he jokes, "I did!"

Taggart, 45, is a native of Ares, the self-sufficient space station built in permanent orbit around the planet Venus; his parents were terraforming engineers from Wick, Scotland.

Though an effective wing-leader, Taggart is especially appreciated for his wingman skills. He has a reputation for protectiveness when flying wing. On an average of three times per year, pranksters get to his spacecraft, scrape "*Paladin*" from his cockpit and replace it with "*Mother Hen*."

"I was j'st a kid charged up on stories of knight-errantry, ... when we ran into the Kilrathi, I knew I was going ta grab a lance, 'op into a cockpit, an' change the course of history."

"Appreciate it while ya' can," he grins. "Combat flyin' is a young man's game, and I'm 'aving trouble convincin' the medics t'at I'm still 25. I'll be flyin' a desk before too long... if I can find one wi' afterburners and smart missiles."

MAJOR JAMES TAGGART, *PALADIN*

RELIABILITY UNDER FIRE



Captain Joseph Khumalo, known to the crews as *Knight*, admits that his piloting accomplishments don't dot the record books. "I'm not a cockpit genius like Hunter or a marksman like Angel. I'm an ordinary man, a pilot. It's my job."

"I just fired as fast as I could and got lucky. I was an ace coming out of that pack."

Yet wingleaders tend to breathe a sigh of relief when they draw Khumalo as wingman. Knight has a reputation of utter reliability in combat. "I got my nickname in the Enyo engagement. The Kilrathi were swarming like flies. I was a second looie assigned as wingman to Captain Maria Alvarez, call-

sign *La Doña*. We were hugging the deck of this transport and strafing it, did a tight turn going from its back to its belly, and ran right through a swarm of fighters headed the other way. Any defensive maneuvering in those close quarters would've cut me off from *La Doña*, so I just fired as fast as I could and got lucky. I was an ace coming out of that pack and had picked off a couple of fighters going after my wingleader. *La Doña* put on her thickest accent and cooed, 'Ooh, eet's my White Knight,' and the name stuck.

"I'm not a knight. I'm just a soldier. Not all of us can be geniuses ... but I'm going to do the best I can with what I can."

"But honestly, I don't feel that way. I'm not a knight. I'm just a soldier. Not all of us can be geniuses ... but I'm going to do the *best* I can with *what* I can." Khumalo, 36, hails from Kroonstad, South Africa.

CAPTAIN JOSEPH KHUMALO, *KNIGHT*

KNOW YOUR ENEMY

As we all know, the Tiger's Claw lost two top pilots to the Kilrathi last month. To help prepare you for combat against some of their better known aces, Commander Halcyon has procured confidential files from the Terran Intelligence Council. For the first time ever, inside information about top Kilrathi pilots is available to military personnel. So, read about your enemy, memorize his weaknesses and use them to your advantage. Computer files containing additional detailed information are archived in the ship's library, under

>>REFERENCE>>TECHNICAL>>KILRATHI>>PILOTS>>.

****WARNING! THIS INFORMATION HAS BEEN CLEARED FOR MILITARY USE ONLY. DO NOT RELEASE THESE FILES TO UNAUTHORIZED PARTIES.****

FILE #83542: SALTHI FIGHTER

BHURAK "STARKILLER" NAR CAXKI

Best known among the Kilrathi aces is Bhurak, dubbed "Starkiller." He is regarded as the best living pilot among the Kilrathi in this sector and flies a *Salithi* light fighter.

Strengths. Bhurak's an excellent pilot and shot. He has optimal reflexes and no serious weaknesses can be detected in his flying style.

Weaknesses. Psych profiles indicate that Bhurak is probably addicted to speed, thrills and sport. Though a courageous pilot, he is not without a survival instinct. A sufficient number of opponents or a sudden turn in fortune can convince him to retreat.

Tactics. Bhurak likes to dogfight. He prefers a maneuverable foe and standard dogfight tactics. He almost always uses his ship's laser cannon, reserving his dumb-fire missile for stationary targets.

Recommendation. If possible, put several pilots on him at once; deny him a fair fight or anything he would consider fun. He might become disgruntled and choose another target or route. If you're forced into single combat with him, don't try to outfly him. You might do best by going stationary, spinning to keep him in your sights and trading licks. He doesn't appear to enjoy that and may choose a new objective.

FILE #16982: KRANT FIGHTER**KHAJJA "MACHINE" NAR JA'TARGK**

Khajja the Fang is not-so-affectionately called "Machine" by Terran intelligence. He is the most efficient, mission-oriented pilot the Kilrathi have. He pilots a *Krant* medium fighter.

Strengths. Khajja's greatest asset is his clear thinking. He never panics or falters and appears to have utter confidence in his wingmen. He is not vulnerable to taunts, goads or insults.

Weaknesses. Khajja's faith in his wingmen may be misplaced. Analysis indicates that some Kilrathi pilots may be afraid of him. He will single-mindedly ignore incoming ships in order to concentrate on a strike objective, meaning that he might ignore *you*.

Tactics. Khajja prefers straight-in, straight-out strafing approaches. He uses his laser cannon for most encounters, saves his heat-seekers for mission objectives or particularly troublesome enemies, and saves his friend-or-foe missile for emergencies.

Recommendation. If he's approaching a mission objective, you might get a free shot by eluding his wingmen. If he's moving in on you, use classic dogfight tactics. Try to outfly and outshoot him, or lead him toward unengaged friendlies. He doesn't like bad odds.

CAT BYTES - HISTORY OF THE TERRAN/KILRATHI CONFLICT

On 2629.105 (March 15, 2629 Terran time) the exploration ship *Iason* encounters a spacecraft of unknown origin. *Iason* commander Jedora Andropolos beams the standard wide-band non-verbal greeting designed by the Committee for Interaction with Alien Intelligences. Captain Andropolos keeps *Iason* motionless for twenty-two minutes standard while the alien vessel waits. Finally, the alien vessel opens up with all guns, utterly destroying *Iason* and all hands.

On 2634.186, war is formally declared by the Terran Confederation on the Empire of Kilrah for countless acts of piracy and unwarranted assault.

On 2634.228, Confederation cryptographer Ches M. Penney partially decodes the current Kilrathi cipher. The intercepted message refers to a punitive strike being launched against the Confederation, starting with the colony on McAuliffe and the space station *Alexandria* in orbit around it. Confederation High command launches a counteroffensive twice the size of the anticipated enemy fleet; it is to reach McAuliffe first and ambush the attackers.

DAKHATH "DEATHSTROKE" NAR SIHKAG

Strengths. Dakhath appears to be utterly without fear. He never retreats from an engagement until every enemy within 1,000 clicks is destroyed and will not abandon a wounded enemy until that enemy is destroyed. This courage and lack of self-preservation instincts make him particularly dangerous. So does his apparent affection for inflicting pain.

Weaknesses. Dakhath lives only to kill and will not retreat or change targets until his first target is dead. If at all possible, use his single-mindedness against him ... if only by leading him away from a strategically important target so that he can concentrate on *you*.

Tactics. Dakhath launches his missiles at maximum range (he appears to like explosions), then closes for the kill on one target. He will cling to that target until he destroys it, then choose another, as methodical as a clock circuit.

Recommendation. It might be possible to lead him into a friendly ship's path of fire, and it is equally possible that he won't notice new pursuit on him until it's too late. (*Important note:* If your ship takes a lot of damage and looks shaky, do not eject if you're in Dakhath's vicinity. One of his hobbies is target practice against ejected pilots.)

FILE #67198: JALTHI FIGHTER**BAKHTOSH "REDCLAW" NAR KIRANKA**

Bakhtosh "Redclaw" is a rash on the comm units; he is best known for extremely sarcastic gloating during combat engagements. It appears that he belongs to an aristocratic Kilrathi family and has been trained in the politics of superiority from birth. He flies a *Jalthi* heavy fighter.

Strengths. Bakhtosh is the best Kilrathi shot in Vega Sector, bar none. His accuracy with ship's guns is becoming legendary even among Terran pilots, which is another strength. Some Terrans feel intimidated when confronting the legendary Bakhtosh, and consequently, their flying suffers. Additionally, he is a master of the crowning insult, the patronizing remark and the racial slur. He often goads Terran fighters into making tactical errors.

Weaknesses. Bakhtosh's piloting is nothing special. Like one legendary figure of Terran combat aviation, the Red Baron, he is an excellent marksman but a mediocre flier. Additionally, his insults and better-than-thou attitude are *not* poses; he believes himself to be superior to most Kilrathi, as well as all humans.

Tactics. Bakhtosh prefers to fire from a distance. He will move within the maximum effective range for his weapons and chew his target to pieces. The extra distance allows him a little time to cope with the maneuvers of superior fliers. If forced to close with a foe, he will launch one of his missiles.

Recommendation. Close in, firing continuously, then try to outfly him in standard fashion. Do *not* be daunted by his substantial reputation.

CAT BYTES - HISTORY OF THE TERRAN/KILRATHI CONFLICT

On 2634.235, the Kilrathi fleet arrives at McAuliffe. It is four times the predicted size; the incomplete translation of the intercepted message had underestimated the size of the Kilrathi offensive. So begins the McAuliffe Ambush engagement. In several days of bloody combat, the Terran fleet is all but obliterated, leaving a still-sizeable force of functional Kilrathi spacecraft.

CAT BYTES - HISTORY OF THE TERRAN/KILRATHI CONFLICT

On 2639.033, Kilrathi occupation forces land on the human-occupied world Enyo, hold a quarter of a million humans hostage under orbital guns and await Terran reprisals. This triggers the Enyo Engagement, a tactical situation made difficult by the presence of so many hostages.

Phase One of the Enyo Engagement involves bringing in an attack force against the Kilrathi fleet at Enyo. The attack force consists principally of *Raptor*-class heavy fighters reconfigured to carry extra Porcupine Space Mines and practically no missiles. The force is small enough that Kilrathi forces at Enyo are certain of victory.

Phase One forces drop their mines in one region of space near Enyo and engage the enemy. Kilrathi ships maneuver to get out of the mined region and turn their attention to destroying the invaders.

By the time the Kilrathi navigators realize that the mined region corresponds to Enyo's principal jump point, it is too late: Phase Two has begun. A single radio signal detonates all the specially modified Porcupines mines, and moments later the remainder of the Terran fleet appears at that jump point, in the middle of the engagement.

The Terran fleet makes its first strike against the gunships threatening the human colonies. The enemy ships are destroyed, with minimal loss of life among the colonists. Then the two fleets settle in for a pounding match.

The Enyo Engagement ends with the Kilrathi in retreat. Losses have been nearly identical between the two fleets, but the Kilrathi have been forced to abandon a strategic position.

5 Years Ago

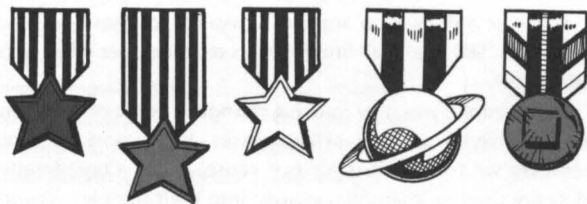
Terran ground forces launching an attack on a fortified Kilrathi colonial position are routed by unexpected Kilrathi fighter-craft support. The Terrans quickly reform and turn back toward Terran space, their lightly armed transports pursued by Kilrathi warships. TCS *Tiger's Claw* is detached from its previous station and sent to the Terran fleet's path.

Tiger's Claw fights a delaying action, subsequently called Custer's Carnival, to allow the Terran fleet time to reach Confederation-controlled space. Though swarmed and badly damaged by Kilrathi fighters, the carrier occupies the attention of the Kilrathi forces until the Terran fleet reaches safety.

NEW ON THE FLIGHT DECK

MEDAL RECOGNITION FOR NEW RECRUITS

Can you recognize, on sight, all the medals awarded by the Terran Confederation Navy? Don't be caught speechless when a senior officer tells you to identify all the "chicken guts" he's wearing. Instead, learn the medals and ranks shown below.



Bronze Star. Awarded for exceptional bravery under fire.

Gold Star. Awarded for exceptional bravery against hopeless odds.

Silver Star. Awarded for exceptional bravery against overwhelming opposition. When a recipient wins an additional Silver Star, an extra bar is affixed to the top of the ribbon area.

Terran Confederation Medal of Honor. Also nicknamed the "Pewter Planet," this is the highest medal awarded to military personnel.

Golden Sun. Awarded for surviving the destruction of one's ship. The Golden Sun is awarded only once. The subsequent loss of ships gets you only the requisite, especially intensive, debriefing sessions and performance evaluations.

UP AND COMING

TIGER'S CLAW PROMOTIONS

To Lieutenant: S.E. "Broadway" Sarasin

To Captain: Fatima "Cymbals" Haroud

TIGER'S CLAW AWARDS

Ace: Second Lieutenant Todd "Maniac" Marshall

Bronze Star: Captain Jeannette "Angel" Devereaux

15-Mission Ribbon: First Lieutenant Tanaka "Spirit" Mariko

▼▼▼▼▼▼▼▼▼▼

ORIGINAL IBM PC GAME CREDITS

<i>Producers</i>	Chris Roberts, Warren Spector
<i>Lead Programmer</i>	Chris Roberts
<i>Programmers</i>	Steve Beeman, Ken Demarest III, Paul Isaac, Herman Miller, Steve Muchow
<i>Dogfight Choreography</i>	Steve Beeman, Erin Roberts
<i>3-D Space System</i>	Chris Roberts
<i>ORIGIN Graphic System</i>	John Miles, Chris Roberts
<i>ORIGIN Sound System</i>	Herman Miller
<i>Art</i>	Keith Berdak, Daniel Bourbonnais, Glen Johnson, Denis Loubet, John Watson
<i>Writers</i>	Philip Brogden, Steve Cantrell, Jeff George
<i>Music</i>	Dave Govett, George A. Sanger
<i>Sound Effects</i>	Marc Schaeffen
<i>Quality Assurance</i>	Philip Brogden, Steve Cantrell, Greg Paul Malone II, Erin Roberts, Mike Romero, Marc Schaeffen, Jeff Shelton, Scott Shelton, Brian Tompkins, John Watson

ATTENTION ALL HANDS

THE 3DO COMPANY SHALL NOT BE LIABLE TO THE END USER FOR ANY LOSS OF DATA, LOST PROFITS, COST OF SUBSTITUTE GOODS OR OTHER CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE, OR OTHER DAMAGES OF ANY KIND ARISING OUT OF THE USE OF OR INABILITY TO USE THE SOFTWARE.

THE 3DO COMPANY MAKES NO WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, REGARDING THE SOFTWARE, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY EQUIVALENT WARRANTIES UNDER THE LAWS OF ANY JURISDICTION.

DO NOT USE A FRONT OR REAR PROJECTION TELEVISION WITH THIS PRODUCT. YOUR PROJECTION TELEVISION SCREEN MAY BE PERMANENTLY DAMAGED IF STATIONARY SCENES OR PATTERNS ARE PLAYED ON YOUR PROJECTION TELEVISION. SIMILAR DAMAGE MAY OCCUR IF YOU PLACE THIS PRODUCT ON HOLD OR PAUSE. IF YOU USE YOUR PROJECTION TELEVISION WITH THIS PRODUCT, NEITHER THE 3DO COMPANY, ELECTRONIC ARTS NOR ORIGIN SYSTEMS WILL BE LIABLE FOR ANY RESULTING DAMAGE. THIS SITUATION IS NOT CAUSED BY A DEFECT IN THIS PRODUCT OR THE 3DO SYSTEM; OTHER FIXED OR REPETITIVE IMAGES MAY CAUSE SIMILAR DAMAGE TO A PROJECTION TELEVISION. PLEASE CONTACT YOUR TV MANUFACTURER FOR FURTHER INFORMATION.

THE EXECUTION OF SOFTWARE WITH THE 3DO SYSTEM INVOLVES THE USE OF PATENT RIGHTS, GRANTED OR APPLIED FOR, IN CERTAIN COUNTRIES. A PURCHASER OF THE 3DO SYSTEM IS LICENSED TO USE SUCH PATENT RIGHTS WITH SOFTWARE LICENSED BY THE 3DO COMPANY. NO LICENSE, IMPLIED OR OTHERWISE, IS GRANTED FOR THE EXECUTION OF OTHER SOFTWARE.

ORIGIN SYSTEMS, INC. LIMITED 90 DAY WARRANTY.

ORIGIN warrants to the original purchaser of this computer software product that the recording medium on which the software programs are recorded will be free from defects in material and workmanship for 90 days from the date of purchase.

If the recording medium is found defective within 90 days of original purchase, ORIGIN agrees to replace, free of charge, any such product upon receipt at its Factory Service Center of the produce, postage paid, with proof of date of purchase. This warranty is limited to the recording medium containing the software program originally provided by ORIGIN. This warranty shall not be applicable and shall be void if the defect has arisen through abuse, mistreatment or neglect. Any implied warranties applicable to this product are limited to the 90-day period described above. If failure of the software product, in the judgment of ORIGIN, resulted from accident, abuse, mistreatment or neglect, or if the recording medium should fail after the original 90-day warranty period has expired, you may return the software program to ORIGIN, at the address noted below, with a check or money order for \$5.00 (U.S. currency), which includes postage and handling, and ORIGIN will mail a replacement to you. To receive a replacement, you should enclose the defective medium (including the original product label) in protective packaging accompanied by: (1) a \$5.00 check (2) a brief statement describing the defect and (3) your return address. Canada and Foreign Orders Note: Only U.S. money orders are accepted.

Except as set forth above, this warranty is in lieu of all other warranties, whether oral or written, express or implied, including any warrant of merchantability or fitness for a particular purpose, and no other representation of claims of any nature shall be binding on or obligate ORIGIN. In no event will ORIGIN be liable for special, incidental or consequential damage resulting from possession, use or malfunction of this product, including damage to property and to the extent permitted by law, damages for personal injury, even if ORIGIN has been advised of the possibility for such damages. Some states do not allow limitations on how long an implied warranty lasts and/or the exclusion or limitation of incidental or consequential damages, so the above limitation and/or exclusion or limitation of liability may not apply to you. This warranty gives you specific legal rights. You may have other rights that vary from state to state.

 **ORIGIN**[®]
We create worlds.[®]

An Electronic Arts[®] Company

P.O. Box 161750 • Austin, TX 78716



3DO

©1994, ORIGIN Systems, Inc. Wing Commander, Origin and We Create Worlds are registered trademarks of ORIGIN Systems, Inc. Electronic Arts is a registered trademark of Electronic Arts. 3DO, the 3DO logos and Interactive Multiplayer are trademarks of The 3DO Company.