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# INTRODUCTORY DATA

Welcome aboard the Cobra Mk III trading and combat craft. The ship has been supplied to you by Faulcon deLacy Spaceways, by arrangement with the Galactic Co-operative of Worlds whose Space and Interstellar Pilot's Exams you have just successfully completed. The small flight manual supplied with the craft is designed to familiarise you with all aspects of space flight, combat and trading, and we hope that it will be of use to you.

You begin your career, your ship equipped with a single forward-firing pulse laser, 3 homing missiles, 7 light years of fuel, and the sum of 100 Credits (CR), ready to embark from a spaceport in the planet Lave.

The Cobra Mk III is the best of the medium-range, medium capacity fighter- traders, and is an ideal ship for new traders intent on building their fortunes, or new combateers who will constantly need to finance the cost of both armaments and non-combative equipment.

The ship is highly manoeuvrable, has a good C-holding factor during hyperspace transit, can hold sufficient Quirium H-fuel for a 7-light-year single jump and has full Auto Trading Systems Link for use at spaceports. Further, it is protected by Dual Zieman Energy Deflection Shields, powered by 3 energy banks and a facility to install a fourth one, and has a powerful, rapid-fire pulse laser mounted on the forward hull segment. Flight controls are elegant and simple, and ThruSpace GravDistort communications systems. Its life support functions are varied and flexible to ensure maximum comfort during trading or hunting operations.

Pilot licences are issued only at the planet Lave, and it is likely, therefore, that you are now docked at a spaceport in that particular world. Lave is a rich, agricultural dictatorship, but is a reasonably safe world at which to begin your endeavours. GalCop and the Lave Authorities allow practice docking and departure runs here, and you would be advised to take advantage of this facility.

#### INTERIOR OF A COBRA MK III

The Cobra is essentially a single-pilot trade-ship, but has been designed to support a second person, provided that person is of ordinary human or humanoid dimensions and physiology. The ship itself consists of five main areas:

THE CARGO HOLD fills the bulk of the mid-space area, and the cargo bay doors open downwards. The capacity in an unmodified Cobra is 20 1-tonne canisters. Extra cargo space may be acquired by extending the cargo bay, which does not affect manoeuvrability. Tonne canisters (TC) attach magnetically to the cargo arms within the bay, and 2 AutoShuttles occupy the central space.

THE BRIDGE has seats for pilot and co-pilot, a MedStim Centre, entrance to the escape pod, descend well to living quarters, communications console, special suit locker, RemLock supply case, a now compulsory AutoDock System and a hand-weapons locker. The main wall is occupied by the scanner screen, astrogation console and main systems monitors.

THE DRIVE SECTOR houses the directional thrusts, the System Space Kruger "lightfast" motors, and the Irrikon Thru-Space drives. Also here are the rear laser housings, the ECM capsule, the Zieman shield generators, and energy banks, and the Witch-Space fuel condensers (Quirium). There are both internal and external access panels. Radiation level is high.

THE LIVING AND HYGIENE SECTION is below the main bridge, and reached through a descending gravity well. Two bunks, food dispensing facilities, waste disposal (including high-tox copper exudate for Aonians), SynPleasure relaxapads and videos.

THE EQUIPMENT LEVEL runs throughout the ship, and houses all energy banks for lasers, plus the missile rests, with dispatch shafts to the lower hull. The communications centre is here, and the escape pod (with a separate entrance from the bridge) life support systems, cryogen tanks (two) and 40 cubic meters of FacsEnvironment for emergency use.

#### THE STATUS PAGE



Figure 1 A new commander's status is "clean", his rating "harmless"

The "Present System" refers to the planetary system which your ship is currently in; while the "Hyperspace system" refers to the system onto which the hyperspace is locked.

"Legal Status" refers to your Galactic Police record. If this is CLEAN you have nothing to worry about, but as an OFFENDER or, still worse, a FUGITIVE you are likely to be attacked by police ships. The "Rating" is a dispassionate assessment of your performance in combat so far.

Current cash and fuel are also displayed, along with a list of ship fittings. If involved in a mission, a summary will also appear at the bottom of this page.

The status page is always retrievable by pressing 2.

#### YOUR RATING AS A COMBATEER

To become an elite combateer requires great skill and great patience, because expert trading is essential before the necessary more powerful armaments and equipment available to the Cobra ship can be bought: beam lasers, more missiles, energy bombs, a docking computer, galactic hyper drive, etc.

As you sail through space between the stars, and as you trade, you will live with your combat rating. You will begin as HARMLESS. If you survive your first skirmish you may be reclassified as MOSTLY HARMLESS. But on the slow climb to a status level that reflects a growing talent for combat you will have to engage many different ships, in many different skirmishes, in the System Space of many different worlds. You will be classified as POOR, then AVERAGE, then ABOVE AVERAGE, then COMPETENT. Then you will become DANGEROUS, then LETHAL. An at last, a few will become ELITE.

Your kills are photographed and transmitted by TS ComDirect to the nearest GalCop Federal Law Centre. Your rating as a combateer will increase in direct proportion.

Fly your Cobra craft wisely and carefully. Remember: other pilots may be attempting to increase their own combat rating by attacking either innocent traders, or police Vipers (the ships of the GalCop Police Force). If you resort to such tactics (or if you adopt the fast-credit routine and trade in illegal goods) then your combat rating may rise, but your legal status: CLEAN -> OFFENDER -> FUGITIVE, will make you Public Enemy Number One with the Federation Crime Monitoring Authority and you will not be left alone.

KEY FUNCTION - STATUS

2 Status page accessed by pressing 2

# NAVIGATION AND FLYING

#### **NAVIGATION**

The Galactic Co-operative is only one - although the largest - of several planetary federations, and maintains trade and diplomatic links with over 2000 planets spread throughout 8 galaxies. The political profile of a planet is an important navigational consideration as many are in a state of anarchy and are unsafe to visit in poorly equipped ships. Important too is its economic profile, as will be discussed in the section about trading.

Navigational strategy depends of course upon your aims in life. If you think you have what it takes to become elite, you will need to chart your path through the galaxies with care and great precision. You will wish to equip your ship as fully and as early as possible. You will, therefore, need to study the trading section of this manual so that you can work out a profitable trading route in order to be able to afford the weaponry you will require. You will wish to lead; in general, the more risks you take (travelling to dangerous planets or trading in contraband goods), the faster you may equip your ship but the quicker you will be killed. You will discover that life in the 8 galaxies is a question of fine balance. Although it may seem, at first, that indiscriminate carnage is a soft option (kills improve your rating, after all), as your skills and experience of living in space mature, you will quickly discover that piracy is a short-lived career.

Success in this context is a mosaic of talents: combative, certainly, but thinking and decision-making talents too.

Here you are introduced to all the controls that will eventually be useful to you in developing a route through the 8 galaxies.

#### NAVIGATIONAL CONTROLS

Note: It is important that you do not press the 1 key for the moment.

GALACTIC CHART (5). This chart shows all registered worlds within the galaxy, and indicates your own coordinate position. The star cursor may be used to scan the shown worlds for potentially favourable trade sites.

Use **M**, **N**, **X** and **S** keys to move the small cross (right, left, down and up respectively) over to one of the dots, and hit **A** to select it. Then press **3**.

Notice the blue right arrow on the top right corner. This indicates the galaxy map continues off-screen in that direction. Whenever the map can be scrolled left, an arrow will appear on the top left. To scroll the map in either direction, move the cursor to the border.

The larger of the crosses on the chart shows where your ship is. You can search for a given system's position and distance by pressing **R** and entering its name.



Figure 2 There are 8 galaxies (of which this is one), and over 250 recognized planets in each galaxy. So massive a universe contains very little that is completely predictable, and offers infinite opportunities for adventure.

WORLDATA LINK (3). The Orbit Space Authority takes no responsibility for the accuracy of the information registered here, but the trader may gain some idea of the relative wisdom of trading with the world whose data is displayed. The information shown is distance, type of main life form, degree of agricultural or industrial development, with industrial and technological level displayed on a scale of 1-12. The government type, ranging from Corporate State to Anarchy, will be a strong indication of the danger of trading with the system.

Use 5 again to return to the chart and acquire information about some more planets.



Figure 3 Whether you choose to amass kills by bounty hunter, or take the less dangerous course of the traditional trader and defensive combateer, the political and economic infrastructure of planets should influence the route you take through the galaxy.

LOCAL NAVIGATION CHART (4). This is a high power chart of all planets in the immediate vicinity of your docking world. Since the Cobra ship has a maximum single H-jump range of 7 light years, the target world must be chosen carefully. The target cursor, used in conjunction with the Worldata link, will indicate dangerous or likely worlds for trade. Notice also that the **A** key will tell you how far away the system nearest the small cross is.



Figure 4 The Local (or short range) chart is the most common way to select your next hyperspace destination. The circle reflects the distance you can cover with your current fuel.

	KEY FUNCTION - NAVIGATION
5	Galactic chart
4	Local chart
A	Distance to system
R	Retrieve position of a system
3	Data on system
M,N,X,S	Cross-sight cursor for local and galactic systems

#### LEAVING THE PLANET

Old Coriolis space stations are no longer in use. Every ship now has to equip landing engines and a standard Auto Dock facility. Every world registered with the Galactic Co-operative has a designated spaceport considered "neutral" territory, controlled equally by GalCop and the Planetary Government. When your ship enters the planetary space, the spaceport immediately tracks it and the auto landing and docking procedure is started. Similarly, the system can launch your ship and move it safely out of the planet's orbit.

#### **BASIC MANOEUVRES**

The Cobra trade ship needs practice to fly well, though it is highly manoeuvrable, very fast, and a good combat vessel. It accelerates and decelerates rapidly using fingertip control:

Anticlockwise roll	Q
Clockwise roll	W
Left yaw	N
Right yaw	M
Pitch up	X

Pitch down	S
Increase speed	О
Decrease speed	L
Toggle front/rear view	V
Change compass target	SPACE

Notice the small dot moving around inside the large circle on the dials. This is your compass; the dot corresponds to the position of the target selected and whose type is indicated in the target identification text above. By default it is snapped to the planet, and pressing **SPACE** iterates through all the objects in the surroundings. Do not change the target for now. If the dot is hollow then the target is behind you. When the dot is filled and in the centre of the circle, you should be able to see the target directly in front of you. Notice the small light on the top-right of the panel. That is the mass detector. It serves several purposes, but will flash in magenta when entering the planet space and in yellow when the planet is nearby (indicating that a hyperspace jump cannot be accomplished). Watch out this indicator. If it becomes red, you are getting too far from the planet and its beacon signal can be erratic and, finally, lost with the risk of losing your orientation in empty space completely!

Practice moving around, getting far from the planet and using the compass to find it again. Also practice rotating the planet off the screen and using the compass to find it again.

You might see some Cobra Class ships. These are other traders like yourself, and will not harm you unless you shoot at them. If you do this they will either attack or, alternatively, run away. Should you use them for combat practice, do not expect the planet authorities to turn a blind eye to such unruly behaviour. Nothing will attack you while you are within the planets secure area - unless you make a nuisance of yourself.

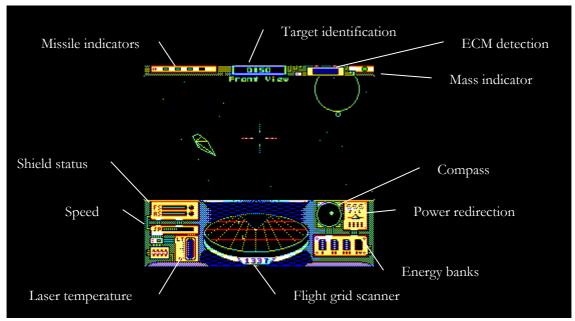


Figure 5 Console of the Cobra MK-3

#### CONSOLE READINGS

Upper controls, from left to right:

**Missile indicators**. These indicators show the status of the missiles and the targeting system. When lit they indicate that you have that missile equipped. If the indicators are green, missiles are unarmed. If yellow, they are armed and their targeting system is searching for a target. If red they are ready to be launched.

**Target identification**. This text indicator shows the type of ship currently targeted by the compass or the planet's name if it is targeted.

**ECM detection**. This indicator will illuminate whenever Electronic Counter Measures are detected in the ships surroundings.

Mass indicator. This indicator shows the presence of a big mass, generally planets, nearby the ship. When near the planet's space, this light flashes in magenta. If the planet is near enough as to prevent hyperspace jumps (according to GalCop new regulations), it will flash yellow. When hyperspacing is safe, it will turn green and may turn red if you get too far from the planet, as the spaceport's beacon may be lost.

Lower controls, from top to bottom and left to right:

Shield status. Indicates the level of charge of your fore (FS) and aft (AS) shields.

**Speed**. Forward velocity of your ship.

Laser temperature. Temperature of your weapon system. Such powerful laser weapons need active cooling, fed by the ships energy banks. If the temperature goes too high, firing will become inoperable.

**Flight grid scanner**. This sophisticated instrument displays a three- dimensional view of space in the immediate vicinity of your ship, seen from a point behind and above it. The precise position of any ship within its range can be pinpointed.

**Compass.** This instrument first picks up the planet as target. Pressing **SPACE** iterates through all the nearby objects. When the dot is hollow, the object is behind you; when filled and in the center of the compass circle; it should be visible through your front viewfinder.

**Power redirection**. Your ship is equipped with a power redirection system, which makes it possible to decide how the energy produced by the ships fusion engine is distributed to other components. Most of this energy is dedicated to feeding the Impulsors and recharge the energy banks. All this energy cannot be redirected. The rest can be used to recharge the shields, to cool the laser weapons or both, although in this case half of this energy is used for each system.

**Energy banks**. Your ship is equipped with three energy banks to feed all the systems and refilled in a timely manner by the ships fusion engines. There is a facility that permits the installation of a fourth bank. Keep an eye on these indicators, if you lose all your energy your ship will be destroyed.

### MAKING FOR YOUR TARGET WORLD

#### **Hyperspace and Related Controls**

Having launched you will be in low orbit above the planet Lave, moving at low velocity. Decrease your velocity to absolute minimum before coding the astrogation console for Hyperspace Jump.

During space flight only, pressing V toggles between the front and rear views of your ship.

Use 5 or 4 to display a chart (galactic or local, respectively), and move the smaller cross to choose a larger planet, press A to select it. Get back to the front view by pressing 1, be sure to be far enough

from the planet (the mass indicator should be green) then hit J. The Hyperjump motors will then engage.

On arrival in a new planetary system, after transit from hyperspace, you will find yourself at some distance from your target world. This conforms to GC Flight Law.

Even in the safest systems there can be unseen dangers, and you will be well advised to approach orbit space as quickly as possible. Increase forward velocity to maximum.

Soon your ships computer will pick up the beacon signals of the planet and will engage the compass to track it.

#### **Hyperdrive Across Galaxies**

The intergalactic hyperdrive is expensive and can be obtained only from planets at Tech level 10 or higher. It can only be used once, and will take you to a system in a whole new galaxy (i.e. a new 5 map). There are 8 such galaxies and making 8 jumps will return you to your starting galaxy. The Inter-Galactic Hyperdrive is engaged by pressing **H**.

Docking & hyperspace travel protocols, and Orbit Space Regulations, are numerous, and are available in the GC Orbit and System Space Code, published by Federation Planet Bureau.

K	EY FUNCTION - FLYING
1	Launch
J	Hyperspace jump
Н	Inter-galactic hyperdrive
Q	Anticlockwise roll
W	Clockwise roll
N	Left yaw
M	Right yaw
X	Pitch up
S	Pitch down
О	Increase speed
L	Decrease speed
V	Toggle between front & rear views
SPACE	Change compass target

# INTERIPLANETARY TRAVIEL

#### **IN-FLIGHT COMBAT**

#### COMBAT PROTOCOL

Not all ships in deep space, even small fighters, are pirates. Most ships will respond to hostile action with hostile action. If you attack a police ship or trade in contraband goods (see Trading), your legal status will be changed to OFFENDER, or even higher. If you destroy pirate ships, or Thargoid invaders, (or asteroids) you will receive a bounty payment. If your legal status is not clean or trade illegal goods, be sure that police ships (Viper class fighters) will attack you.

#### **MANEUVERING**

The Cobra trade ship is fast, and has a very tight turning circle (though less tight at full speed); it is an ideal combat ship against small packs of enemy vessels. It will outrun many attack craft by speed alone, but it will not outrun a missile. Spinning, fast slow, and duck-and-weave manoeuvres are very effective against the larger, less manoeuvrable ships when then attack. A sudden decrease in speed followed by a tight 180-degree turn and an increase in velocity will often give you a big advantage over pursuing enemy craft.



Figure 6 Be sure not to interfere with other creatures businesses. You might encounter ships solving their differences out there, or pirates or police attacking with their own agenda. You can always wander around and make profit by scavenging, but it is highly risky.

#### SIGNS OF DANGER

If the scanner shows an object in your vicinity, it could be dangerous.

Laser fire makes different sounds, depending on whether they fail to reach their target or they hit. When it is your ship which is hit, this sound is more metallic. DANGER.

An incoming missile will be detected, tracked, and a warning message flashed on the main screen.

Some star pilots are braver than others and pirate ships may break off and run in the face of stiff resistance. Some appear to know no fear - in particular Thargoid vessels, whose captains have had their fear glands surgically removed.

#### LIKELY ENEMIES

**Lone-wolf traders** - such as Cobra pilots - are constantly at risk from other Space faring types. An understanding of other loners, pack hunters, and bounty killers is essential.

Bounty Hunters. Unless you have achieved FUGITIVE status, and especially if you are highly ranked as a combateer as well as being a criminal, bounty hunters will not bother a ship as insignificant as a Cobra Mk 3. In fact, many bounty hunters favour Cobra trade-ships as they make an excellent disguise. But the real killers star-ride in the sleek, and highly efficient, Fer-de-Lance Lightspeeder, in which they live for months at a time. Bounty hunters can always be found outside Orbit Space, especially around worlds classified as "dangerous". They are invariably of combat rating: DEADLY or ELITE. Bounty hunters rarely identify themselves to passing ships, and if pestered too closely will usually kill.

**Pirate Vessels.** There are several ways of identifying a space-going ship as "pirate occupied", and this is essential since pirates and renegades will take any ship for their purpose, from a Worm to a massive Python. Pirates exist everywhere in the galaxy, but cluster mainly around unstable GalCop worlds; especially ones run on a feudal or anarchic system.

Small ships hovering very distant from a planet are pirates. Large ships accompanied by a mixture of small fighter types are pirates. Ships that refuse to acknowledge identification signals are pirates. Around worlds run by autocracies, or clans, pirates will very often have been paid to leave trade ships alone. Piracy is a huge, and complex, business, and any life-respecting trader will learn the telltale signs of pirate presence.

**Police.** In a Co-operative of Worlds as complex as the 2040 planets f the GalCop, the police can be as menacing as they can be helpful. The typical police vessel is a Viper GH Class Pulse Ship, which is very fast, and very manoeuvrable. They are on constant standby on every planet, or can be in space patrol, and will attack - a pirate, or a fugitive trader - within seconds. They do not make arrests but they **will** attack and destroy. There are different police departments serving different purposes - narcotics, space- drunkenness, psychotic shooting, piracy, slave trading, etc. - but all have small fleets of these very fast Viper patrol craft.

Thargoid Invasion Ships and Thargons. The Thargoids are humankind's deadliest enemy, and throughout the 8 galaxies there are at least 50 war zones between humanity and Thargoid. This highly technologically advanced insectoid race is also at war with 17 other space-going life forms.

All Thargoid combateers are ruthless in combat, and some may be comparable with elite-status human combat pilots.

Though most of the Thargoid Space Fleet is currently engaged by the Galactic Navy in Intergalactic Space, a few of the smaller battle ships make occasional destructor-raids into human space. These ships are extremely fast for their size and invariably have anti-missile (ECM) Systems.

Additionally, most Thargoid battle ships carry several small, remote- controlled "thargons", killer-craft each equipped with a single, but highly advanced, pulse-laser. The Galactic Navy are developing their own deep- space RemCraft, and pay a large bounty for any thargon craft that are brought to them.

(N.B. Bounty on Thargoid invasion craft destroyed is very high. Thargoid battle cruisers are believed to be able to "hover" in Witch-Space (hyperspace) and destroy through-coming craft).

#### OTHER SPACE TYPES

**Rock Hermits.** Pirates, aging bounty hunters, or planetary outcasts, who create living space out of asteroids. They usually choose large asteroids, and set up signal beacons to warn off miners. GalCop Law protects Rock Hermits, but since most of the asteroid is hollowed-out, there is little advantage to be gained by "mining" them anyway.

**Generation Ships**. Before the development of the WS Thru-Space drive, in all its various forms, interstellar travel occurred in large, self-sustaining environment ships - Generation Ships - most of which have now been logged and their progress monitored. There are more than seventy thousand of these immense vessels ploughing their way through the galaxy, some of them into their 30th generation. The penalty for interference with such a vessel is marooning.

**Space Dredgers**. These immense factory ships are to be found wherever there has been a war, or a Thargoid invasion, or a natural catastrophe. More than forty miles long, the dredgers are a life form to themselves. The Dredgers are huge cities in space, feeding off debris and ruination. Heavily armed, and with fleets of reconditioned fighter ships, they are to be avoided at all cost.

#### **COMBAT CONSOLE**

Shields (FS & AS). Defensive shields take power from two energy bank sources, fore and aft.

**Missile Indicators**. Missile status depicts the number of missiles on board and whether they are "targeted" (yellow) or "untargeted" (green) or "locked and ready to fire" (red).

Laser Temperature (LT). Laser temperature will rise during continuous firing of the ship's laser(s). As the central housing overheats, a laser will temporarily cut out rather than destroy the system.

**Flight Grid Scanner.** The 3-dimensional scanner operates in such a way that you can pinpoint a ship above and below yours, as well as to the front, behind or to the sides. The vertical bars show this clearly.

**Energy Banks (I, II, III, IV)**. Energy banks will rapidly drain if defensive shields are taking excessive fire. Using lasers or an ECM System will also drain their resources. When the last bank is tapped, an ENERGY LOW message will flash onto the screen. Eventually, in normal circumstances, the banks will be automatically replenished by the ships fusion engines.

**Power redirection**. Your ship is equipped with a power redirection system, which makes it possible to decide how the energy produced by the ships fusion engines is distributed to other components. Most of this energy is dedicated to feed the impulsors and recharge the energy banks. All this energy cannot be redirected. The rest can be used to recharge the shields, to cool the laser weapons or both, although in this case half of this energy is used for each system.

#### AGRESSIVE WEAPONRY

ITEM	TECH LEVEL	PRICE/CR
Fuel	always	varies
Missile	always	30
Large Cargo Bay	always	400
ECM System	2	600
Pulse Laser	3	400
Beam Laser	4	1000
Scoops	5	525
Escape Capsule	6	1000

Energy Bomb	7	900
Extra Energy Unit	8	1500
Galactic Hyperdrive	10	5000
Military Lasers	10	6000
Extra Speed Unit	10	3000
Extra Maneuverability Unit	10	4500

#### **LASERS**

Pulse lasers are housed only in the front of the ship. As we shall see, with sufficient cash you will also be able to upgrade to the more powerful beam lasers.

The Cobra astrogation console accommodates a single laser-fire key (A). If a laser overheats it will not fire (observe the laser temperature bar). Lasers are the principal armament of all space fighters.

Pulse lasers will be offered for sale at planets of Tech level 3 or above (see Trading). Beam Lasers will be offered at Tech level 4 or above. If a beam laser replaces a pulse laser the price of the pulse laser is refunded after the beam one has been fitted.

**Pulse Laser Specification:** Ingram Model 1919A4 Pulse Laser is recommended for all positional laser mountings, but is especially effective for rear shooting. Fires intermittent laser "rods" 610mm in length, with a cycle rate of 1500 RoPM. The barrel is of high grade Allutium fibre, lined with tempered QuQorian Silica. Power provided directly from inverse energy banks contained in main ship's drive. Each rod is capable of piercing 267mm of Flux-Locked metal.

**Beam Laser Specification:** Ingram Model M1928A2 is highly recommended for front shooting. Beam lasers fire continuous laser strands, up to 150 in parallel. Barrel is Allutium + lined with tensioned plastiglass, and as with the 1919A4 Pulse laser, power is provided by main drive link. Beam lasers are capable of slicing through 410mm FL metal.

Military lasers are the very height of sophistication. Costing fifteen times the price of a pulse laser and available only on planets at Tech level 10, it is an extremely effective piece of hardware.

**Military Laser Specification:** Range and penetration twice as effective as the Ingram Model M1928A2 beam laser. This is Lance & Ferman's entry into the laser market. Hitherto known for their highly effective and relatively cheap missile systems, in the military laser they have in effect created a whole new laser market. The LF90 is the current computer-aided model and comes with x4SUSAT sights.

#### MISSILES

Missiles are always available, whatever the nature of your destination world, though no more than four may be carried at any one time. They are extremely effective weapons and are carried by the larger star ships. Your ship's computer will warn you when one is fired at you with a message on-screen. Unless your ship is fitted with ECM (see below) you will have to outmanoeuvre the missile, which will home in on you relentlessly. If a missile hits you, it may well be fatal.

Before a missile can be fired it must be locked onto a target. When fired, it will home in on that target and destroy it, unless your enemy successfully takes on one of the precautions described above. The missile launch mechanism is very reliable and hardly ever jams. Missiles can be locked onto targets both in front and rear views.

The targeting sequence is engaged by hitting the T key. The squared missile status indicators on the astrogation console will then turn from green to yellow. When any possible target enters the cross-

hair region the missile will lock onto it, the missile status indicators turning red. A beep will sound to inform you of this.

The **F** key will then fire the missile. The **U** key (Unarm) will abort the sequence at any time before firing.

**Missile Specification:** Lance & Ferman Homing Missiles (4x4) are now recommended for all small class trade-combat ships, but can be fitted as part of a mixed design weapon rack. LF missiles have 2IL-135 guidance systems, and optional manual directional control overrides. Warhead packed with Terminal 9 explosive, and the 4x4 is invulnerable to all known counteraction, except ECM systems. Capable of Megazon Destruct Force 7. Prototype first used in 2987, during Ineran Wars.



Figure 7 You must be prepared to outwit your enemies. Speed of reaction will not in itself always be enough. A missile will, sometimes be a good way to keep your enemies at bay. In the picture, a missile which is about to hit an incoming Viper... maybe we are trading illegal goods?

#### **ENERGY BOMBS**

An energy bomb will be offered for sale at a planet of Tech level 7 or higher, and can be used only once. It is activated by the **B** key and will destroy all other ships, asteroids, and missiles in the vicinity.

**Energy Bomb Specification:** Medusa Pandora Self Homing Energy Bomb (available at Tech Level 7 worlds or higher) is a tactical weapon capable of Megazon Destruct Force 13. Has heat radius of 900 km. Developed by Klaus-Kline laboratories for multi- role combat using "launch-and-leave" techniques.

#### **DEFENSIVE MEASURES**

#### SHIELDS AND ENERGY BANKS

You ship comes equipped with fore and aft shields and energy banks. The shields protect your ship from aggressive fire, and will be recharged from the energy banks. Constant fire will harm the shields. Once a shield is depleted, enemy lasers and missiles striking that shield will take energy directly from the energy banks and may even destroy items of cargo or ship fittings. When all your energy banks are empty your ship will be destroyed. Using lasers, energy bombs, or an ECM system will also deplete your energy banks.

The ship's computer will keep you informed of any damage to your ship and will also warn you when energy levels are dangerously low.

An Extra Energy Unit may be fitted at planets of Tech level 8 or higher, and fits into the fourth bank.

**Defensive Shield Specification:** The shields consist of hi-tense flux webs of Zieman-charged subparticles. They are weakest where the laser and missile tubes pass through the ship's hull, and along the central ship bank where the two shields overlap, and cause a stress zone.

#### **ECM**

An ECM System (literally Electronic Counter Measures System) is offered for sale at Tech level 2, and may be used any number of times given sufficient energy replacement. When activated by the E key, ECM destroys all missiles in your vicinity - including any that you have fired. Some enemy ships, especially traders, will have this and may use it against your missiles. Your ship's computer displays an E on the console when it detects ECM broadcasts.

Anti-missile (ECM) System Specification: Radiant-Magnetic "wipe-out" using ion-saturation theory developed by Bell and Braben on riedquat 359. Electronic Counter Measures Systems use minute charged particles of InterSpac heavy Element dust, releasing their radiant energy and setting up expanding nuclear flux chains.

#### **ESCAPE CAPSULE**

An escape capsule can be fitted in place of your cabin at any world of Tech level 6 or higher. If **ESC** is then hit during combat the capsule will be jettisoned from the ship, be automatically tracked by the nearest world and will travel safely to the spaceport. Your cash will be preserved but all your cargo will be lost.

However, this item comes with a widely recognized insurance cover which will guarantee you a new Cobra Class ship, equipped in like manner. The contents of the cargo hold are exempt from this protection.

Since the unique IR signature of a ship's hull is used to file police records, abandoning your ship in this way will have the effect (unfortunately exploited as much by galactic brigands as trader victims) of clearing your police record.

You may see an escape capsule leaving an enemy ship. This will not harm you unless you crash into it. Pirates and other scum are said to scoop escape capsules to trade the passengers as slaves in the underground markets.

**Escape Capsule Specification:** Recommended model is the Xeesian FastJet LSC 7, which can support two human life forms for seven weeks, in moderate Suspended An. state.

#### **EXTRA SPEED UNIT**

An extra speed unit might be purchased in systems with Tech level 10 or higher. It will increase the maximum speed of your ship in something more than a 2%. This could prove very useful in outrunning enemies, as well as in outmanoeuvring missiles.

Extra Speed Unit Specification: Meerlian UltraEng PK 2, with unique energy converters which can take out the most of your fusion engines.

#### EXTRA MANOEUVRABILITY UNIT

This pack includes additional impulsors and a sophisticated control, which allow much quicker and tighter manoeuvres. This unit, which might be acquired in systems with Tech level 10 or higher, is very useful in dog fighting.

Extra Manoeuvrability Unit Specification: FrobozzCo ManE THX-1000, which include the new IM-370 impulsors and the patented SteerControl-Y7 technology.

# **NON-COMBATIVE EQUIPMENT**

#### **FUEL**

Fuel is always available. You can refill your tanks to full (7 light-year) capacity - no less is permitted.

#### **SCOOPS**

Scoops may be fitted to the hull at a planet of Tech level 5 or higher. They utilize powerful electromagnetic fields to guide miscellaneous space debris towards the ship's docking bay. Almost all pirate vessels are fitted with these so that they can blast their prey apart and sift among the wreckage, rather than attempt to dock with a hostile craft.

Once scoops are installed, you can scoop up an object (such as a cargo canister) by keeping it in the lower half of the screen view areas while flying right up to it.

**Scoops Specification:** Scoops have a standard design, and a standard fitment. They use powerful electromagnetic fields to guide small space debris into the ship's bay.

#### **CARGO BAY EXTENSION**

One cargo bay extension can be bought, increasing the hold space from 20 to 35 tonnes.

Cargo Bay Extension Specification: Standard model is the Mariner Freight Chamber.

#### INTERGALACTIC HYPERDRIVE

The intergalactic Hyperdrive is obtainable only from planets at Tech level 10 or higher, and can only be used once. The Inter-Galactic Hyperdrive is engaged by pressing **H**.

**IGH Specification:** although a number of manufacturers have supported a whole range of IGH motors, it is recommended you remain loyal to Xexor/Hikan who provide the standard hyperspace transit drives.

#### **OTHER EQUIPMENT**

There are rumours of ships equipped with exclusive technology not available through the usual market. Usually these come from obsolete naval technology, leaked by insiders in exchange of money, but sometimes it is developed in secret by pirate or bounty hunter organisations.

Some ships are said to produce their own fuel by extracting Quirium from mined asteroids, or to have cloaking devices so they are not visible in the radar.

# **EQUIPPING YOUR SHIP**

When docked to the spaceport, you can tell the technicians to install new equipment into your ship, provided you can pay for the service. Press 7 in your astrogation console to access the equipment list that is available at the planet, along with its price. Use **X** and **S** to move the selection down or up respectively and press **A** to order the equipment.



Figure 8 Equipping your ship wisely is one of the first objectives of every trader who wants to live a long, safe and profitable life.

KEY FUNCTION - COMBAT	
A	Fire laser
Т	Target missile
P	Power redirection
F	Fire missile
U	Unarm missile
Е	Operate ECM
В	Launch energy bomb
ESC	Launch escape capsule
7	Equipment acquisition
X,S	Select item
А	Purchase item

# INTERGALACTIC TRADING

The Cobra Mk III, designed primarily as a trading ship, combines combat efficiency and manoeuvrability with substantial cargo space (20 Tonne Canisters) and with scoop attachments for space debris, jettisoned cargo and space rock.

Most spaceports have made the process of trading very simple, in order to facilitate a fast turnover in goods and ships. Import and export tariffs - which are high on some worlds - are automatically added or deducted and this is reflected in the prices shown. The auto-trader system, employed by the Cobra, does not allow for more specific trading deals to be performed.

A selection of the more valuable alien items that are tradable is given in this manual, but the trader must deal with them in person.

Once docked you are linked directly with the CorCom Trade System. At your request you can obtain a list of basic trade items available for purchase.

Slaves are measured by the tonne in galactic trading. This may seem a little strange, but it includes the cryogenic suspension system necessary to keep them alive during space travel. The slave trade,

once almost eliminated by the Galactic government is now returning, despite the efforts of the Galactic Police Force to suppress it.

ITEM		AVERAGE PRICE/CR
Food	(Simple organic products, see below)	4.4 tonne
Textiles	(Unprocessed fabrics)	6.4 "
Radio actives	(Ores and by-products)	21.2 "
* Slaves	(Usually humanoid)	8.0 "
Liquor/Wines	(Exotic spirits from non terrestrial flora)	25.2 "
Luxuries	(Perfumes, Spices, Coffee)	91.2 "
* Narcotics	(Tobacco, Arcturan Megaweed)	114.8 "
Computers	(Intelligent machinery)	84.0 "
Machinery	(Factory and farm equipment)	56.4 "
Alloys	(Industrial Metals)	32.8 "
* Firearms	(Small-scale artillery, side arms, etc)	70.4 "
Furs	(Includes leathers, Millennium Wompom Pelts)	56.0 "
Minerals	(Unrefined rock containing trace elements)	8.0 kg
Gold		37.2 kg
Platinum		65.2 kg
Gem-stones	(Includes jewelry)	16.4 g
Alien Items	(Artifacts, Weapons, etc)	27.0 tonne

Pressing 6 activates a list of basic trade items at current market prices.

Shown on this list are the quantities of each item available (vertical bar to the right of the item), and the current market price per unit. Most CorCom Trade Systems deal exclusively under blanket categories, including Food, Machinery, Minerals and Gemstones.

The prices shown at the time of trading represent an offer to you and will be guaranteed while you are in Trading Mode.

#### **HOW TO TRADE**

#### **BUYING AND SELLING GOODS**

The process of buying and selling is simple. Press  $\bf 6$  in your astrogation console for the market list. It will show a list of goods available, your cargo inventory and the current price. Use  $\bf X$  and  $\bf S$  to highlight the item and  $\bf N$  or  $\bf M$  to buy or sell respectively. Each press buys/sells one unit of the selected good.

The market page is updated automatically, as well as your remaining cargo space and cash.



Figure 9 Trading goods is the main and more secure way to make your living.

#### ADVICE TO TRADERS

The Cobra trade ship can be fitted with different kinds of lasers, four missiles and one energy bomb. This should be sufficient to make trade possible within the System Space of even heavily pirated worlds. But it is strongly recommended that pilots achieve a combat of at least "Deadly" before any worlds designated "Anarchy" or "Feudal" are approached, especially if the cargo is high tech machinery or luxury goods.

To make money as a trader is no easy task. Unless you have backing capital you would be well advised to start with foodstuffs, textiles, minerals and luxuries.

Demand for goods varies widely and prices within planets fluctuate, but GalCop regulations prohibit planets from advertising their requirements or announcing their market prices beyond their own System Space. Any trader, therefore, approaches all transactions with a certain financial risk.

Trade depends upon demand, and selling prices depend upon the level of demand on the planet, and its available money. None of these factors can be assessed before docking.

Agricultural planets invariably have excess produce at reasonable purchase prices, and such food sells well at industrialised, middle- to high- technology worlds. Raw materials, and ores, will sell well to middle-tech worlds, which are usually able to refine them, and the refined product can fetch excellent prices at worlds of very high tech status.

The rules are complex, and anarchy and piracy has its effect on causing the rules to change.

In trading with a planet, consider its economic profile:

AGRICULTURAL WORLDS need specialist food and raw materials, but mostly basic machinery and spare parts. If they are rich, they need luxuries and high tech industrial machines. They produce food in quantity, raw materials and specialized "organic" items, like some textiles.

INDUSTRIAL WORLDS need agricultural produce; raw materials (for refining); resource exploitation machinery; (if rich) high tech goods. They produce basic items of need for civilized worlds: beds, seals and gaskets, power storage units, basic weapons, mass produced fertilizer, mass-produced medicines, etc.

Think about a planet's needs. Think what might make the society function. Don't trade expensive trivia to a hungry world.

If the profit isn't worth it, trade it somewhere else.

#### ALTERNATIVES TO TRADING

Since the Cobra craft is equipped as a fighter as well as a trader, with in-built capacity for strengthening its armaments, there are alternative life-styles to trading which may prove profitable, but which are excessively dangerous.

#### **BOUNTY HUNTING**

Galactic banks, which insure the larger trading convoys, will pay a large bounty for each pirate ship destroyed. A ship's computer will transmit photographic evidence of any kill to the GalCop Bank Federation Monitoring Authority. The IR signature of the destroyed ship is then tallied with all known pirate vessels, and the bounty hunter pilot credited accordingly.

Bounty hunters commonly have Cobra Class ships in order to masquerade as traders. They simply hyperspace into a system (anarchic and feudal worlds especially) and wait to be attacked, ensuring that they have sufficient hyperspace fuel (Quirium) for a quick escape.

#### **PIRACY**

Piracy is widespread throughout the 8 galaxies, and many pirates are not hardened criminals at all, but failed traders who have turned to this way of life in desperation. To survive as a pirate, looting freighter convoys and small ships, requires a high degree of combat experience, since not just Police Vipers will pursue them, but other pirate ships and Bounty Hunters, too, prey upon them. But the rewards are high. Provided the pirate ship is equipped with scoops, the jettisoned tonne-canisters of attacked cargo ships can be scooped up and traded.

#### ASTEROID MINING

There is money in rock, but to make the most of it a Cobra ship must be fitted with scoops. Using lasers or even missiles to blast very large asteroids into very small fragments and scooping them can rapidly swallow this tradable ore.

#### FREE SPACE CARGO

Trade ships are often destroyed (by natural catastrophe or enemy action) and their cargo left scattered. Using your scoops such "free bounty" can be collected. The contents of the canisters will not be known until they are taken aboard and examined, and may be worthless or worth a fortune. It their contents are illegal goods, they cannot be traded or sold without legal risk.

(NB: Pressurized cargo canisters are the Universal means of storing cargo for Interplanetary Space voyaging. Made of HiFlux Chromon-alloy, they hold one Gal Tonne of goods, under variable pressure and temperature conditions. Tales have been told of such barrels being discovered after over 500 years on barren moons, and such "Moon salvage" is a remarkable source of historical artefact material.)

#### ILLEGAL TRADING

It is surprising how many planetary systems will allow the purchasing of illegal trade items, notably firearms, narcotics (especially Arcturan Megaweed) and slaves. Slaves are supplied in cryosuspension in transporter pods, and often turn out to be old and sick specimens of vaguely humanoid life forms. Nonetheless, few systems will allow the selling of these items without taking recriminatory action.

KEY FUNCTION - TRADE	
6	Market
X,S	Select item
M	Buy goods
N	Sell goods

# EIHT BNICIACH CINA ĐNIVAR EIMAR

Becoming an Elite combateer is a lengthy process that can't be done in a single gaming session. It needs patience and persistence. You can, of course, save your current game status, and recover it later on, to continue your training and exploration of the universe. To access the load/save screen, press **0** in your console whenever you are docked in a planet.

You can select any of the eight slots to save your current game status. Use **X**, **S** to highlight a slot and **A** to select it. You will be prompted to either save or load the slot. When saving, you will also be asked to enter a (possibly new) Commander's name that will appear in the slot information along with the current planet and galaxy.

KEY	FUNCTION – LOAD/SAVE
0	Load/Save
X,S	Highlight slot
A	Selects highlighted slot



Figure 10 You have eight different slots to save your progress, or try different alternatives.

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# **CONSEQUENCES FOR TRADE**

To trade successfully, and profitably, will almost certainly require you to fly the Cobra trade ship into politically unstable planetary systems. Pirate and free-booter activity is high in many solar systems, and adequate ship defences are essential if the rewards of higher selling prices are to be reaped.

For the benefit of new traders, a brief political summary is given below, but reference should be made to Kroweki & Carr's Psychohistory and Economic Theory in the GalFederation, 2845. Planetary governments, or federations, determine the relative safety of their Solar Space. Ranked in decreasing order of safety, the 2040 officially registered worlds of the Galactic Federation can be classified as

- Corporate States
- Democracies
- Confederacies
- Communist States
- Dictatorships
- Multi-Governments
- Feudal Worlds
- Anarchies

#### CORPORATE STATES

Like ENGEMA and ZAATXE, these are well-ordered worlds, which have usually developed from settlers who practiced a free trade form of competition. Taxation is high on such worlds, but the living standards are high also. Corporate planets wish to protect their trade, so goods are expensive, but luxuries are welcomed. Import licences are often necessary.

Engema is an agricultural world, run as a single farming co-operative. Farmers receive a fixed payment for their crops, whether or not the harvest is good, and selling prices do not vary greatly. It is a dependable market, and customer relations are good. Luxuries, machinery and raw materials sell well here.

Zaatxe is an example of a rich, industrial state (Tech level 12). It produces luxury goods, elaborate and innovative machine systems, and specializes in Prototype design. Prices fluctuate depending upon the level of inter-state competition, but it is always a safe bet to buy recently developed machine items, which have not yet spread very far across the galaxy.

#### **DICTATORSHIPS**

Dictatorships such as the worlds Lave and Enzaer, are only moderately safe to trade with, but are well worth the risk (provided the trader is well defended and combat trained). Very often pirate attack will not occur because of an agreement between pirate fleets and the world itself. A proportion of all incoming trade is "allowed" to be stolen by pirates, who will then leave the world alone, and protect its shops from aliens or rogue traders. It is an uneasy liaison, which often breaks down.

Lave is an agricultural world, and Enzaer an industrial planet, but a similar principle operates on both surfaces. There are two trading standards, that of the People and that of the Aristocracy. Standards of living are artificially generated, a veneer of progress, and luxury goods, machinery and textiles sell well - usually. The great demand, however, is for basic commodities, especially foodstuffs, clothing and raw materials. These will sell well when the voice of the People has been raised in protest.

#### ANARCHY PLANETS

A trader can make his biggest profits here and reach his grave the quickest. Worlds like Onisou and Xeesenri have vast wreck-yards in far orbit, the dead places of ships that came to trade honestly, and fell prey to trickery.

These are lawless places, and have usually become so because the original settlers competed too hard when there was too little resource material. Those worlds which survived the holocaust did so because of uneasy and bloody alliances between clan families. Pirates and mercenaries were hired for protection and assassination purposes. Anarchic worlds will trade readily in narcotics, slaves, firearms and exotica, and the price will be good... if you get a price at all.

These worlds are almost always supplying invisible Masters, usually elite trader/combateers who have turned to crime as the most profitable way of life. Such form loose federations, and trade on the black market extensively throughout the galaxies.

These worlds pay highly for goods they cannot produce themselves, because they know that traders avoid them. Their own products need specialized, illegal outlets: weaponry, narcotics, eavesdropping devices... if it's covert, then anarchic worlds are producing it. Trade in these items and you will get rich quick, or dead quick, or at least become a "Fugitive".

#### **ALIEN RACES**

Of the 2040 officially registered planets in the GalCop, all but 45 support human colonies only, that is to say, human presence elsewhere is restricted to settlements in under-populated parts of the land surface.

Trading at such worlds depends, for its success, very much upon the extant state of co-operation between human and alien. Human control the main intergalactic spaceport, but the availability of items for trade, and their relative expense, can be affected by the controlling life forms.

Most alien life forms are either too primitive, or too glad of off-World trade, to interfere. Some, such as the Reptilian life form of Esanbe or the Amphibioids of Anbeen, can make a trader's life very difficult, by haggling at the point of a laser.

The available planetary information on all worlds will indicate the nature of the inhabiting life form.

BIRD-FORMS. Dealing in alien artefacts on such worlds often involves forming a close liaison with Flight Elders, or Nest Elders, and this is very much a job for the specialist. Bird-forms are, on the whole, a delight to trade with, and the highest form of honour (fairly universally) that an off worlder can receive is an invitation to "keep the eggs warm for a moment".

AMPHIBIOIDS are usually a lot sharper than their wet, sluggish appearance would suggest. They are usually keen to trade in narcotics, or exotic foodstuffs. Skin creams are always well received. Technologically they tend to be backward, but will pay high prices for such middle-range items as automated ponds, croak metres, spawn freezers and swamp purifiers.

FELINES are dangerous in the extreme. No matter what sort of political structures the world may have, feline aliens are pack orientated, and feudal, and very unpredictable. All traders are advised to wear body suits, to prevent secretions of sweat from triggering a feeding response among these hostile and enigmatic life forms.

To win the confidence of a feline alien is almost invariably to be invited to mate, so certain aloofness is recommended.

INSECTOIDS. The most dangerous insectoidal life form is the Thargoid, which is mentioned in the Combat section. Insectoidals are usually highly intelligent, often existing as a group mind. There is rarely any individuality among insectoids, and the trader must beware making deals in such a way. One life form builds earth cities up to four miles high, and over four million drones live in the middle levels. According to legend, any trader who voluntarily ascends the earth passageway from ground to upper surface of these immense mounds is honoured with the rare title Ascender of the Scent City. And then consumed alive. But trading with insectoids can be immensely profitable, as there are so many of them (to trade in wrist watches, for example, means two to four watches per individual in a clone-group of perhaps ten thousand).

In dealing with any alien life-form, for the purposes of trade, there are three cardinal rules:

- Learn the body language of the alien race.
- Cover up your body scent.
- Beware of Carapace concealed weapons.

# ACICNOWLIEDGMENTS

This game took more than two years to write, since the first tests with 3D wireframe graphics in the Oric and the adaptation of the lib3d/obj3d engines from Stephen L. Judd (<a href="www.ffd2.com/fridge/obj3d/index.html">www.ffd2.com/fridge/obj3d/index.html</a>). You can follow the development story in the Defence-Force forums:

#### www.defence-force.org/phpBB2/viewtopic.php?t=364

1337 is **not** a direct port of Elite for the Oric machines, it is *inspired* by Elite, sharing the ship shapes (due to my inability to design new ones, mainly) and universe (taken from the sources available at Ian Bell's page <a href="https://www.iancgbell.clara.net/elite/text/index.htm">www.iancgbell.clara.net/elite/text/index.htm</a>), and I hope that it also shares its atmosphere.

But gaming experience is different. In 1337 you can actually control your ship in the three dimensions (roll/pitch/yaw) and the usual secret missions have been replaced with a complete set of missions following a story (sort of). Also private combat has been included, as well as some other features which I hope make playing 1337 a nice new experience.

I looked at many Elite (or similar) implementations while developing this game, and converted or adapted several of their routines, mainly of Richard Quirk's Elite-AGB (not sure which version I looked at, but the latest is at <a href="http://code.google.com/p/ds-elite/wiki/EliteAGB">http://code.google.com/p/ds-elite/wiki/EliteAGB</a>).

You may notice that the game is not the fastest implementation of Elite. That is mainly due to the use of a double buffer. The Oric does not support hardware double buffering of any kind, so it must be done by software, which is not the fastest thing to do. I could have gone the usual way (seen in most implementations) and draw lines with Exclusive-OR, so drawing a line twice erases it; but this results in the horrible flickering experienced in many implementations. Anyway the game is very playable and speed is acceptable, so I decided to leave it as it is now.

The Elite Space Traders Flight Training Manual was originally written by Rob Holdstock for the 1984 Acornsoft publication of BBC Elite. Text for the Quickstart Guide extracted from the ZX Spectrum manual as well as from the Elite (computer game) entry in Wikipedia.

I also want to thank all the Oric community for their support, help and ideas, especially Dbug (Mickaël Pointier), Twilighte (Jonathan Bristow) and thrust26 (Thomas Jentzsch), who helped me in the development of this game. Thanks to Shaun Bebbington, Maxi and Symoon for their help in testing and spotting bugs. Also many thanks to Xeron for the wonderful new Oric emulator: Oricutron, and Fabrice Frances for his invaluable help supporting the Telestrat.

In a game as complex as this, there are surely bugs lurking around. If you find something strange just post in the Defence-Force forums or simply email me.

José María (Chema) Enguita - enguita@gmail.com September 2010

# PILOT'S LOG

Date:	Filename:		
Name:	Status Combat/Legal:		
Planets Traversed:			
Current Equipment:			
Purchases and Prices Paid:			
Item/Planet	Av.price	Price paid	Quantity ordered
Trading Profits:			
Kills:			
Credits:			
SPECIAL NOTES:			