

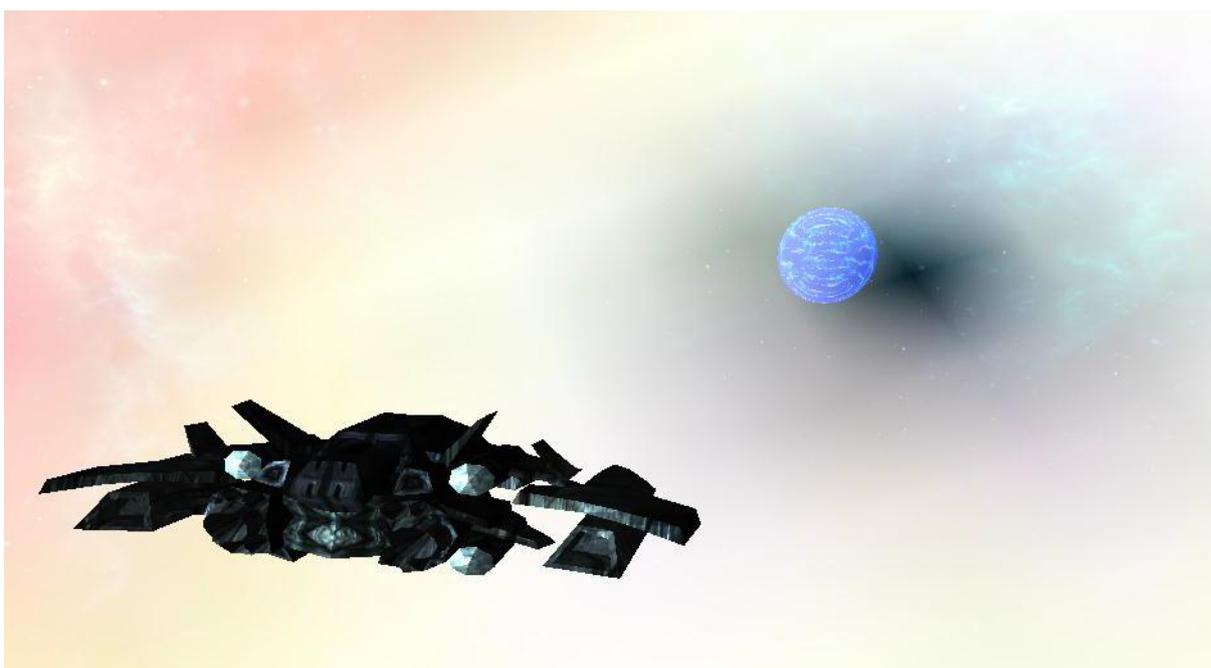
EVOCHRON MERCENARY: A BOOK OF HINTS AND TIPS

compiled by *DaveK* (callsign *Incoming*) from contributions on the forum -

FIFTH EDITION OCTOBER 2014



... it's amazing what you can find in an asteroid cave!



... approaching the wormhole at the centre of a blackhole

Preface to the 5th Edition

I do not claim ownership of most of info in this guide - it has been gleaned from the generous contributions of many, many players on the Forum threads and a little bit of my own hard earned knowledge.

Over the last couple of editions this Guide has grown and grown – This new Edition had 370 pages before being revised. The detailed contents section was losing its battle of making the information easily and clearly findable! A lot of the info was somewhat repetitive because I included several players versions of the same thin and opinions that in the fullness of times proved to be somewhat idiosyncratic. So I've distilled content to give the information and advice as clearly and concisely as I can. Authors are when presenting unique contributions such as tutorials

The information is grouped into what I think are sensible chunks - others might have chosen a different way of grouping them.

- There are two interactive Contents Tables to make using the guide as easy as possible – Ctrl-click to jump to the Guide page
- To avoid 'in your face spoilers' I've masked the info with a proprietary **Spoiler Text Protection System SToPP** © that has been developed 'in house'.

Don't forget the **Evochron Mercenary Guide** (The **Legends Guide** is also extremely useful, with more detail - though some is Legends specific a lot is applicable to **Mercenary** as well!) The **Training Sessions** are also worthwhile. The **IMG Quest** is a great way to learn and earn!

Finally the official and player produced **Tutorial Videos** are a must. They answer many of the questions that keep coming up in the Forum, but with moving pictures in colour and sound and everything! (even cool music in some!)

On the forum there is a thread created by **Viper** (and maintained by Incoming) called

>>> **NEW [EM] PLAYERS: Guides, Tutorials and Other Useful Information** <<<
<http://www.starwraith.com/forum/viewthread.php?tid=8676#pid127309>

which acts as a contents page of links for information that, despite the title, will be of enormous use to all pilots .



... ghost ship spotted in deep, deep space

Contents I - List of Main Section Headings

<i>Section 01: Fundamental stuff about gameplay and role play.....</i>	<i>15</i>
<i>Section 02: Training Videos</i>	<i>31</i>
<i>Section 03: The Shipyard</i>	<i>34</i>
<i>Section 04: Surviving Combat</i>	<i>37</i>
<i>Section 05: Flying</i>	<i>78</i>
<i>Section 06: Navigation</i>	<i>87</i>
<i>Section 07: The Station Hangar.....</i>	<i>146</i>
<i>Section 08: Rank</i>	<i>147</i>
<i>Section 09: Clans in MP</i>	<i>149</i>
<i>Section 10: Careers, Jobs & Making Money</i>	<i>153</i>
<i>Section11: Racing.....</i>	<i>156</i>
<i>Section 12: Explorer</i>	<i>158</i>
<i>Section13: Contracts</i>	<i>176</i>
<i>Section14: Mining</i>	<i>190</i>
<i>Section15: Trading</i>	<i>199</i>
<i>Section16: Ship Equipment</i>	<i>206</i>
<i>Section 17: Stations - Permanent, Build & Deployed</i>	<i>247</i>
<i>Section 18: Reputation</i>	<i>253</i>
<i>Section 19: Crew</i>	<i>264</i>
<i>Section 20: Quests.....</i>	<i>267</i>
<i>Section 21: Spoiler Making a fortune quickly Spoiler.....</i>	<i>289</i>
<i>Section22: Appendices</i>	<i>295</i>

Contents II - List of Main Section and Sub-section Headings

Section 01: Fundamental stuff about gameplay and role play	15
Intro - How do you want to play?	15
I can't read the Spoiler text - How do I Access it?	16
I'm new to the game - where should I start?.....	16
Problem Solving, Customising and Game Maintenance.....	17
What can I do when EM stops loading at a certain %, can include error messages about an image, sound, or object... ..	17
I have a problem running the game and the suggestions here and in the Forum haven't fixed it. What can I do?	20
How do I save my important files, like pilot saves?	20
How do I update the game?.....	21
Editing and deleting posts on the forum	21
Keys to consider remapping.....	21
Where can I get a diagram of the keyboard layout?	21
Does the game actually derive any benefit from a 64bit operating system or is the game a 32bit program which is just compatible with 64bit.?	21
Can I get rid of the HUD shadows in Third Person?	22
Can I change the in-game font?	22
Etiquette in Multiplayer	24
Blocking Contracts for other players - a no no!	24
What is the link between SP and MP?	24
Adding an Avatar.....	25
How do I chat to other pilots?	25
How do I exit the game in MP?.....	26
How do I add those cool Rank graphics to my signature?	26
Can I give \$\$\$ to other players (for services rendered or just to help out new players?)	26
Basics - The Evochron Universe	27
What units is speed and distance measured in?	27
Why are distances measured in decametres?	27
Are the rumours about uncharted systems true?	27
How can I find cities on a planet?	27
Help - I landed on a planet and got killed just sitting there (no attackers!)	28
Nebulae - the lowdown.....	28
Is there anything special about nebulae?	28
What's the difference between background nebulae and those in the NavMap?	28
What's a payment "cycle"?.....	28
Things to do in the game after you finish the quest storyline:.....	29

Section 02: Training Videos	31
Official EM Videos	31
Tutorial Video #1: Navigation	31
Tutorial Video #2: Shipyard.....	31
Tutorial Video #3: Inventory Management and Trading	31
Tutorial Video #4: Basic Contract Objectives.....	31
Tutorial Video #5: Combat	31
Tutorial Video #6: Deploying and Building.....	31
Tutorial Video #7: Mining Asteroids and Planets.....	31
Other Guides.....	31
Evochron Mercenary: Using Stealth in Spy Mission (HD)	31
Evochron Mercenary: Unknown Planet Discovery System.....	31
The following tutorials by Mecingo are available from SeeJay's website	32
Evochron Mercenary (Support Navy against Vonari).....	32
Evochron Mercenary (Contract - Protect Capital Ship).....	32
Evochron Mercenary (Mission - Protect Navy Ship From Vonari)	32
Evochron Mercenary (Contract - Scan Enemy Capital Ship)	32
Evochron Mercenary (Contract - Patrol).....	32
Evochron Mercenary (How To Fight 10 Hostiles (Modified))	32
Evochron Mercenary (Blackhole Jumping (How to do it))	32
Evochron Mercenary (Atmosphere Combat 101).....	32
A series of guides by RedFalcon.....	33
00 - An Introduction Introduction and Pilot Creation.....	33
01 - Flight Controls and Navigation Flight Controls, navigation and basic menus	33
02 - Our First Contract Courier & Race Contracts/Landing on Planets.....	33
03 - Space Janitor How to (not) clean a Solar Panel	33
04 - Shipbuilding and Mining Ship customization, mine asteroids.....	33
05 - Planet Economies and Guild Caches Planet Economies, trading and finding a cache.....	33
06 - Our First Combat Contract Basics of Dogfighting	33
07 - Escort Contracts Right / Wrong way to do Escort Contracts	33
08 - How to make Money Fast Using Hidden Planet in Pearl	33
09 - Crew Members Hire/manage Crew Members & exploring	33
10 - Advanced Combat Target enemy sub systems and strafing.....	33
11 - Spy and Capital Ship Destruction Spy and Capital Ship Destruction	33
12 - Ace Pilot Missions & Fleet Commands Kill an Ace & form a fleet. Fleet commands.....	33
13 - Military Frames and More Combat Military Frames and Rank.....	33
14 - How to Dogfight while Outnumbered Finish the last mission in the Warzone	33
15 - The Final Guild Contract The Final Guild Contract in the Pearl System.....	33

Section 03: The Shipyard	34
Opinion: Customize your ship!.....	35
How do you get military frames?.....	35
Where can I get better frames and military ships?	35
What about equipment when I swap frames?	36
What happens to my crew if I swap to a military frame?	36
What's the safest way not lose equipment when I swap a frame?	36
Things to consider when swapping ship frames	36
Section 04: Surviving Combat	37
Introduction	37
Combat Advice for Newbies I - General Advice (<i>All</i>).....	38
Why do I get attacked by random ships?.....	41
Ace Combat Strategies Explained	41
Taking down a Vonari Battleship - <i>A story with some good advice:</i>	45
Combat Advice for Newbies II - Equipment.....	48
Part I – Core Offensive and Defensive Equipment.....	48
Part II – Other Offensive and Defensive Equipment Options.	49
What's the difference between an Auto CM Launcher & an Antimissile System?.....	49
Part III - Weapons.....	50
What does a "Kinetic" weapon do?	50
Which cannon are best?	50
Summary: Setting up your ship for combat and getting started	51
Weapon Lab - design your own customised weapons	52
Raw Materials needed in the Weapon Lab.....	54
Using the Weapon Lab	55
Configuring A Weapon	62
Combat Advice for Newbies III – Tactics.....	63
Are Excalibur Missile Packs the "bees' knees"?	64
A discussion about the Excalibur between two pilots plus Vice's contribution!	65
How can I avoid being hit by missiles? (SCC)	65
How Can I Kill Cap Ships? (SCC).....	66
How do I get (or be) a turret gunner? (<i>All</i>)	68
I'm confused about the MDTs Aim Assist option - what does it do and not do? (<i>All</i>)	69
Combat Advice for Newbies IV - Developing Manoeuvring Skills (Inertia/IDS).....	70
Applying It To Combat:	71
I'm having difficulties with high-speed combat – help!.....	71
Combat Advice for Newbies V – Creating your own spaceforce – wingmen!	72
I'm finding it hard to hire a crew and fly my ship at the same time!	72
Are wingmen worth the effort? How can I use them?	72
Combat Advice for Newbies V: "Expansion" Tactical Advice from Vets!.....	73
Can I mimic Jean-Luc and perform the 'Picard Manoeuvre'	76

Section 05: Flying	78
What is an IDS multiplier? - How should I use it?	78
What do all the velocity gauges do?	78
Flying Safely I: Travelling safely through hostile systems	79
Flying Safely II: Jumping as close to a planet as possible (aka Atmosphere Skimming)	80
Flying Safely III: Avoiding Friendly Fire.....	81
How do I know when the throttle is halfway or whatever?	81
How can I slow down fast?	81
<i>Opinion</i> : How can I control the amount of sideways drifting when flying inertial?	81
Rapid Atmosphere Descents for Cover	82
Is it possible to not use fuel during planetary descent?	83
I 'landed' on water and it's like glue! How can I escape? (AKA 'Sticky Water')	83
Reverse Thrusters Can Use the Afterburner	83
Autopilot behaviour	83
What's the difference between using the jump drive (F2) and using the Autopilot (Alt-F)?	83
Flight Techniques	84
Flying In Formation	84
Jumping.....	84
How can I jump directly into a station? (or an asteroid cave or a carrier or a Blackhole or a Jump Gate or a Wormhole!).....	84
Can I jump directly to a planet?	85
How do I jump through a gate inside an asteroid cave?	85
WH & BH Jumping.....	85
How do I jump through a Blackhole?.....	85
Do I have to reinforce the front shield when I jump into a blackhole?	86
What happens in blackholes and wormholes?	86
 Section 06: Navigation	 87
Navigation I - Overview.....	87
What gadgets can I get that make navigation easier?.....	88
Navigation II - The NavMap	89
How can I quickly set a jump gates coordinates?	89
How can I quickly set a station's coordinates?	89
How can I move around and pan the NavMap?	89
When I zoom in I can't see what I've clicked on!	90
Tutorial: The Navigation Console.....	91
Part I. Navigating 3-Dimensional Space	91
Part II. Traveling Via Autopilot	103
Part III. Traveling Via Jumpgate.....	114
Part IV. Miscellaneous Buttons and Options	122
Where is that coordinate pointing to? (tables 1&2).....	143
Where is that coordinate pointing to? (tables 3&4).....	144
Navigation III - sectors appear empty when I zoom in	145

Section 07: The Station Hangar	146
Storing Items in a Hangar.....	146
Loading Items From Storage	146
Section 08: Rank.....	147
What points do I need for what rank?.....	147
What other things change when my rank increases?.....	147
How do I raise my Military Rank as quickly as possible?	148
Section 09: Clans in MP	149
How does Clan System Control work?	149
Levels of rules.....	149
Generally accepted knowledge:.....	150
Implications.....	151
Section 10: Careers, Jobs & Making Money.....	153
Answering Distress Calls	153
Selling fuel & doing SAR; Rescuing pilots.....	154
Piracy.....	154
Fraud	154
Tourist	154
Custom Weapons Dealer	155
Section11: Racing	156
General Comments	156
Summary of Tips from Vets:.....	157

Section 12: Explorer	158
Useful Utilities.....	158
EM_Tools.....	158
Evometrics.....	159
Evochron Mecenary HUD (EMH).....	160
TravelBuddy - used to monitor your route and fuel	160
MapLog	161
Exploration & Finding New systems	162
Method 1a – EM_Tools log file + trilateration.....	162
Method 1b – MapLog log file + trilateration.....	162
Method 2 – Starlight Gazing – Tutorial - find a star when you run across its border!	162
A tutorial for my starlight gazing technique at finding stars.	164
Trilateration I – instructions for the web based utility from SeeJay.....	166
Trilateration II - Marvin's Instructions for using Atollski's MapLog program	172
How do I get to the Sol System?	173
What's the best system to travel from to get to Sol?	173
Exploring Asteroid Caves.....	174
What are asteroid caves?.....	174
Where are there asteroid caves?.....	174
How do I explore an asteroid cave?.....	174
Section13: Contracts	176
Conducting Contracts Between Pilots.....	176
Trading With Other Pilots	177
Snippets of useful information!	177
Can I make everyone love me?	178
My contract is failed as soon as I jump to the nav point given.....	178
I get attacked as soon as I jump into a contract! - help!	179
Can I repair and reload during a contract?	179
How do I	180
. . . find the item I have to return to a station or inspect?.....	180
. . . make retrieval contracts efficient?	180
. . . make inspections efficient?.....	180
. . . clean solar panels.....	181
. . . do scanning/spying contracts?.....	181
. . . make scanning/spying contracts efficient?.....	182
. . . do escort/protect missions	183
. . . do combat missions.....	183
. . . destroy a capital ship.....	183
Where did my targets go? - kill target missions	186
A related issue is finding the capital ship is in Talison Conflict.....	186
What types of contracts are available where?	187
Trade Stations And Constructor Stations Contracts	187

Section14: Mining	190
Snippets.....	190
Basics of Mining (Asteroids and Planets).....	190
Locate and Acquire a Mining/Tractor Beam	190
Mining	190
Why does my mining beam disappear when I jettison unwanted cargo?.....	191
What are mining drones?	192
Constructor recipes - which raw materials make which goodies?	192
Tutorial: Esben's Tips for efficient mining	193
1. Introduction	193
2. The miner - his ship - his crew.....	194
3. The beginning.....	194
4. Waypoints and travelling.	195
5. Maxing cash flow	196
6. Getting a station license at Oasis in Pearl - the way to get rich (well, one of them).....	197
7. Conclusion	198
How do I actually use fleet mining?!.....	198
 Section15: Trading	 199
A reminder about reading spoiler text	199
Maximising profit - general (non-specific) advice.....	199
Basics of Inventory Management and Trading	199
Discussion: Which is Best - Mining or Trading?	201
Inventory (handling cargo and equipment)	202
Moving equipment around	202
How can I combine same type cargo?	203
Sometime I can't buy equipment! - What am I doing wrong?.....	203
Where can I get market information?	203
Why can't I sell my stuff in a some places?.....	204
When might I have to pay docking fees?.....	204
How can I improve the prices in a system?	204
How can I maximise profits trading in weapons?	204
How can I find containers?.....	204
How do I mount weapon from found container?.....	204
Could you all list the really great special different things that can be found in containers?	204
Collect containers from destroyed ships	205
In SP or MP do containers refill/respawn?	205

Section16: Ship Equipment	206
Designing ships, tradeoffs between components.....	206
What equipment is vital? (Everybody agrees on these!).....	206
Next down the list is the 'mount as needed' stuff 9in no particular order;	207
What advantage is there having bigger engines?	207
What are a ship's "Assembly Resources"?	207
Equipment clashes I - Shield Recharger and the installed (multiple use) Stealth Generator	207
Equipment Clash II - Is a Shield Recharger worth fitting?	208
How should I choose ship armour and shields for the most efficient balance?	208
What are stealth devices? What are they used for?	209
What do Shield Boosters do?	209
Is an Afterburner Booster Drive worth fitting?	209
Where can I get a . . . ? I – Equipment (spoiler!).....	210
Where can I get a . . . ? II – Commodities (spoiler!).....	211
Terrain Walkers – everything you need to know.....	212
External View of a TW	214
Operating a Terrain Walker	218
ANNA - your own ship's voice activated AI control system	219
Introduction:	219
How do I install ANNA?	220
Some Key Mappings that you need to make	224
Troubleshooting:.....	225
What commands does ANNA understand?	225
Available commands (over 200!) ANNA recognises	227
Section 17: Stations - Permanent, Build & Deployed	247
Snippets.....	247
General Points.....	247
What do I get in return for building a station?	248
Are player built and game coded Trade Stations the same?	248
Station License – What are they? What do they do? The low down.....	249
Station Fees - what might I have to pay?.....	249
Why can't I build a trade station – the sector is empty?	249
How do I Build a Trade Station?.....	250
Building a station when being attacked!	250
Blowing up a station whilst being attacked!.....	250
Building your own stations for improving economy I (spoiler).....	251
Building your own stations for improving economy II: not working? (spoiler)	251
How should I use a deployed refuel station?.....	251
How can I survive in a deployed refuel station long enough to fully refuel?	252

Section 18: Reputation	253
Vice (developer) on reputation in SP vs MP	253
Overview: How does the reputation system work?	255
Basics:.....	255
Improving your reputation in SP Part I - System Reputation.....	256
Improving your reputation in SP Part II - The Five Factions.....	257
Civilian Contracts (Some WZ contracts are slightly different)	257
Is reputation separate or linked between MP and SP?	258
Does killing Guild/Rebels affect general system reputation, or only raises it with the Navy and Energy factions?	259
Summary of effects of contracts on reputation	259
Table 1: Summary of effects of contracts on reputation described by contract	259
Table 2: Summary of effects of contracts on reputation described by reputation change.....	260
When will my reputation go up or down to the next level/band?	261
How can I monitor my reputation?.....	261
Why do Navy ships attack me in a friendly system? Faction Confusion!	262
 Section 19: Crew	 264
On board crew	264
What do crew members do?	264
Crew details (from the Legends Guide – still relevant).....	265
Hiring a fleet – How? Why?	266
 Section 20: Quests	 267
What Quests are available to do?.....	267
The 'Official' IMG Quest – both versions	267
Over the Hill	268
The Quest for Peace.....	268
H2GE.....	268
Snippets for the IMG Quest:	268
Tutorial: Starting The Mercenary Quest - Caution: Spoiler Alert.....	269
Writing a quest.....	276
Appending the Default Quest in Mercenary.....	277
 Section 21: <i>Spoiler</i> Making a fortune quickly <i>Spoiler</i>	 289
<i>A reminder about reading spoiler text.....</i>	289
First some general hints that won't spoil it for you (too much, anyway) . . .	289
If you want to find out more then read on . . .	290
Ideas for money making for newbies – spoilers but you have to work at it.....	290
<i>These are SPOILERS</i> but you have to think and do some work for your money!	291
<i>These are the REAL SPOILERS</i> . . . your final warning!	292
The biggest money making route:	292
The <i>REALLY REAL SPOILERS</i> - one for newbies - one for more experienced pilots.....	293
<i>Mega Spoilers:</i> Where are the trade places that are so good? Mega Spoilers.....	294

Section22: Appendices	295
Appendix 1: Ship Frames (Civilian - Alliance).....	295
Appendix 2: Ship Frames (Civilian - Federation).....	296
Appendix 3: Ship Frames (Military).....	298
Appendix 4: Ship Stats	300
Appendix 5: Engine data	302
Appendix 6: Wing data:.....	304
Appendix 7: Weapons Data	306
Particle Cannon.....	306
Particle Cannon (continued)	307
Beam Cannon.....	307
Missiles.....	308
Other Offensive Weapons.....	308
Offensive Boosters.....	309
Defensive Boosters	309
Other Defensive Equipment	309
Appendix 8: Charted System Coordinates (four versions).....	310

Appendix 9: System Descriptions (arranged into alphabetical order).....	312
Agate	312
Alpha Centauri	312
Aquila	313
Aries	313
Atlas	313
Capella.....	314
Cerulean.....	314
Cygnus	315
Deneb.....	315
Emerald	316
Fauston.....	316
Iota	317
lambda	317
Merak.....	318
Olympus Prime.....	318
Onyx	319
Orion	319
Pearl	320
Pices	320
Rigel.....	321
Rucker	321
Sapphire	322
Sierra	322
Sirius.....	323
Talisson	323
Thuban	324
Vega	324
Virgo.....	325
Vonarion.....	325

Section 01: Fundamental stuff about gameplay and role play

Intro - How do you want to play?

There are two questions to ask yourself. One, do you care about getting the best stuff quickly or will you take a harder route for immersion, role-play *etc* reasons? Two, do you care about actually finding stuff out for yourself or are you happy to have locations *etc* pointed out?

Want to do it the hard way and not read spoilers? Be careful about what you read on the forums. In the extreme, you shouldn't read anything on the forums as people have differing definitions of spoilers. Let pain be your friend, I applaud your masochistic tendencies and desire to figure it out yourself. While you're at it consider not *exiting & reloading* for better equipment/contracts. If you want to be really extreme then play 'dead is dead' (ie you die = start new game profile – from scratch). Or you might roll a dice and jettison a piece (or three) of equipment.

Want to do it the hard way but not adverse to spoilers? Read up in the forums skipping spoilers you don't want to know and make a decision about how you want to get rich and then follow that path. Kudos to you for imposing some discipline on yourself.

Want to do it the easy-ish way but don't want the game to be spoiled (too much)? Finish the IMG quest, do non-combat missions/trading/mining if you can't handle the next IMG quest with your current kit. The quest will lead you to areas where you can get better equipment. On MP you can get help with missions if you want it.

Want to do it the easy way and want to risk the game being spoiled? Read this guide! Check out other forum posts or get someone to send you a U2U of something profitable, you can make money really easily and get all the best equipment without touching the IMG quests. You might also want to ask yourself why you bought the game!!

And of course there are many shades in between those answers. For most new players, checking out more of the forum posts (including in the Legends forum) is a really good idea. Just remember to avert your eyes when someone mentions a spoiler you don't want to know about. In reality it's hard to ignore easy info you've seen, hard not to earn an average of 30 million credits per minutes during boring shuttle runs.

Most of the advice in this guide appears elsewhere in many forms and I sometimes think that time spent reading old posts is often better practice than actually playing when you grow into the harder objectives. But not nearly as much fun. Or as sociable.

. . . On to the Guide!

I can't read the Spoiler text - How do I Access it?

In a Guide like this one there are inevitably bits that tell you how to make lots of money very quickly or where to find rare equipment or find interesting things etc. For some players this is OK – they want to do other things than simulate being the 'wage slaves' they are in real life. For others it spoils it – they want to succeed the hard way, working things out for themselves, finding stuff themselves.

To avoid 'in your face spoilers' I've masked the info with a proprietary **Spoiler Text Protection System STOPP** ©has been developed 'in house'.

To avoid players even glimpsing spoilers by accident the text is masked by colouring it in 5% black, so it's virtually unreadable.

To read it is as easy as one, two, three. Do the following:

1. Select the text
2. Copy the text
3. Paste the text into a blank Word doc or a blank text editor file e.g. Notepad

The text will appear!

Hopefully players will feel confident using the Guide without fear of having their play spoiled!

I'm new to the game - where should I start?

As a rookie, Explore Sapphire . . . that system has a lot to do for a beginner pilot...if you want to try combat go to the Olympus system. Within Sapphire there are asteroids, an asteroid cave, a wreck, a blackhole, planets, moons, nebulae, constructors, a carrier, gates to other places within Sapphire (and back again) and gates to several other systems. You can practice major parts of the game in safety

Vice: Some of what you may read on this forum is from ambitious rookies who attempted to take on challenges in areas of space they were not ready for. ***A new player should not just dive in to Thuban, Sierra, or Pearl expecting to 'win'***. You will need to pace yourself and establish a skill set of tactics as you learn combat. Once you become more skilled, you'll be able to venture further out into much more challenging systems with much more capable enemies. ***But early on, I would recommend staying close to Sapphire and practice in the Olympus system for a while until you've got the basics down.*** That will let you practice with a limited number of hostiles using limited ship configurations, limited tactics, and limited weapons. Then work toward more challenging objectives and hostile forces.

There is a learning curve to this game and you often need to employ tactics on a multiple levels, rather than just always doing A when B happens. Combat does require practice, but the trade off is, by many accounts, improved depth to gameplay because of the range of options and needed tactics.

Save and self-destruct is the fastest way of reloading! Also has the added side-benefits of regenerating the contract. It is also really a cheat!

When you exit a jump you come out of the jump 2500 to 3000 units before your set navigation jump point depending on your ships frame. You will slow down to your throttle set speed, so a high throttle setting lets you get away from a hostile area as soon as possible

You **don't** have to destroy more hostiles than the contract requires. If the contract says four, you'll get a message saying you've completed the contract after the fourth kill. You can then walk away from however many are left over. The only exceptions are when you have to kill a named hostile (the gang leader) and his team - you have to kill the named leader. Also when doing an escort - you need to keep defending the capital ship until it jumps. There's a distance to go countdown on screen so you can keep track.

Problem Solving, Customising and Game Maintenance

What can I do when EM stops loading at a certain %, can include error messages about an image, sound, or object...

Game Closes During Loading, Often Displays 'File Error, Unable to load image/sound/object'

When the game displays an error message about not being able to load an image, sound, or object, it indicates that your system blocked the game from being able to load that media file into memory. This can mean your system either lacks sufficient memory or something else running on your computer has blocked the game from loading the file.

This can occur if your system lacks sufficient available physical memory for the game. To check the available physical memory on your system, click on Start > Run/Search > type in MSINFO32 and press enter. On the system summary screen, note the value next to 'Available physical memory'. If that value is near around **1.2 GB or less**, your system may not have enough memory resources to run the game reliably with full details. If it is close to that value, you can often get the game to work by reducing the 'Planet Detail' setting to 'High', 'Medium', or 'Low', which significantly lowers the memory required. Lowering other detail settings may also help. If changing the detail setting(s) doesn't work, you may need to stop any non-essential background tasks to free up more memory for the game.

If you have ruled out insufficient memory as being the cause, then the error is likely caused by another program running on your system at the same time that is interfering with the game's ability to load critical media files it needs into memory. Games can have unique requirements and dependencies that may conflict with other software. EVOCHRON Mercenary and ARVOCH Alliance are fairly memory hungry games. They generally need a higher level of free physical memory than many other games. While you can reduce the level of memory the game needs by changing various detail settings in the Options menu, you may find that your system has plenty of memory (perhaps 4 GB or more) and should be able to run the game at maximum detail. In such cases, external interference is often the cause.

Since a game generally requires a lot of your computer's resources, it often takes a game to bring a restriction problem on your system to the surface. You may not know your system's resources and/or performance is being restricted until you encounter a problem with a game that needs those resources and performance. Small programs and small games that require few system resources can often run fine, but games that require a lot of memory, CPU, GPU, and hard drive resources can run into problems on systems with restricted resources caused by background/residual programs running on the computer at the same time.

Some programs, particularly security related, can block/restrict certain portions of your system's memory from being available to other programs and games. This can result in a limitation caused by a running security program that may prevent a game or application from using even just a small portion of that memory, even though the system may have plenty of installed memory. So it isn't necessarily how much memory is used up or available, but whether enough consecutive memory is available.

Another possible interference problem is disk access. If a security program blocks or otherwise interferes with a game trying to access and load a media file, the result can be a crash or error message. A security program may decide to begin a scanning or updating process in the middle of when you are playing the game, so the problem can occur intermittently and at different points in the game.

Here are steps you can try to help troubleshoot and locate possible interference from other programs:

Adjust or Change Running Security Programs

- If your antivirus/antispyware software has a 'gaming mode', try that first. If the software has an exception list, add the game's install folder and save data folder (if different, default is c:\sw3dg\GameName) to the list. If the problem persists, you can try temporarily disabling one or more of its residual services. Some programs may still have interference issues left behind even when disabled, in which case, you may want to try uninstalling the program entirely (using something else in the meantime for protection as desired), then test the game. Not every antivirus/antispyware program is the same, some have far fewer interference problems with games than others. There are several free options available that have few or no reported issues with the games available here. Avast has generally been considered a good alternative (even while leaving its full protection mode on). Some gamers also use Microsoft Security Essentials.

Stop Unnecessary Background Programs and Services

- Click on Start > Run/Search > type in MSCONFIG and press enter > click on the Startup tab. You can uncheck any programs you want to test disabled to try and locate which one might be causing interference. After making changes, restart your computer. You can recheck them later to enable them as desired. If you discover a specific program that was causing the interference, please send an e-mail to the address at starwraith.com > contact with the file/service names so they can be kept on record for future reference.

Try Launching the Game as Administrator

- Right click on the game's desktop icon, then left click on the 'Run as administrator' option and test for changes.

Check for Possible Windows System File Damage

- This or similar problems may occur on systems that have residual damage from virus/malware infections or other system corruption/damage. You can perform a system file scan to check for missing or damaged system files. Click on Start > Run/Search > type in SFC /SCANNOW and press enter. The scan will generally take several minutes.

If the screen just flashes a bit and returns to the desktop, then the program didn't run and you'll either need to run it with an admin account or in safe mode.

If You Are Using an HP System, Check for the Cyberlink Media Service Program

- One apparent culprit of causing interference with a number of games is a program called Cyberlink Media Library Service (background task filename is CLMLSvc.exe). This program is apparently pre-installed on some HP computers and has been confirmed as being a cause for some error code related problems. Stopping this process has solved the problem as reported by several users so far.

Check for Defective Hardware

- Although somewhat rare, bad memory and/or hard drive can cause such problems. It can be consistent or intermittent. Microsoft offers a memory diagnosis tool here:

<http://oca.microsoft.com/en/windiag.asp>

If you suspect defective memory might be a factor, follow the instructions carefully to run the test, then replace any defective memory as needed. One or more of these steps will generally solve any loading error problems. But if you try all of these steps and the problem continues, you can follow the steps listed here:

<http://www.starwraith.com/evochronmercenary/faq.htm>

And I can review your system configuration for possible causes.

Testing Available System Memory

The program at the link below will test the available **consecutive** memory on your system. There are 4 tests you can run for different memory limits. Generally speaking, your system will need to pass test 1 to reliably run Evochron Mercenary or Arvoch Alliance. If your system passes the test, the program will display a 'Success!' message and prompt you to press the space bar to close the program. If your system fails the test, the program will just close on its own.

<http://www.starwraith.com/evochronmercenary/MemoryTest.zip>

Memory Address Space

On some systems with a certain set of background programs running, a crash may occur right at or near the end of the loading process and it may not be possible/feasible to disable the background programs that are using up the memory that the game needs. There is another available option that has worked around the problem, although it is not supported. Also, the option is generally limited to systems that have at least around 4 GB of memory or more installed. Here are the details.

When enough lower memory is used up, available addressing space gets pushed higher which can result in a game encountering a limit that results in an error message, freeze, or crash when no more consecutive memory is available. Even though the system may have plenty of memory capacity available, certain limits can be encountered when the base address level is moved higher. The preferred solution to the problem is lowering the base memory load until the game can access all of the memory it needs. But if that is not an option, you can use a utility called CFF Explorer to alter the memory limit for the game's executable. Again, this is not a supported option and may cause other problems (which is why the game is not configured this way by default). But if you want to try this option, you can download CFF Explorer from the author's website here:

<http://www.ntcore.com/exsuite.php>

Then follow these steps to apply the change:

1. Backup the original EvochronMercenary.exe or ArvochAlliance.exe file located in the install folder.
2. Open CFF Explorer, then open the EvochronMercenary.exe or ArvochAlliance.exe file.
3. Go to the "File Header" section (under NT Headers) and click the "Click here" on the characteristics row.
4. Check the "App can handle >2gb address space" box, then click OK
5. Save the altered version as EvochronMercenary.exe or ArvochAlliance.exe.

I have a problem running the game and the suggestions here and in the Forum haven't fixed it. What can I do?

Vice is a wizard at solving problems and replying to you quickly!

- If you haven't been able to find a solution to a particular problem, you can complete the following steps to forward your system specifications/details in an e-mail so further assistance may be possible
- Click on Start, Run, then type in **MSINFO32** and press <enter>
- Click on the File option at the top and click on Save
- Save the NFO file, ZIP it to compress the size of the file, then attach it to an e-mail and send it to **sw3dgames@gmail.com** with a subject line: **Technical-Support** and include a detailed description of the problem

How do I save my important files, like pilot saves?

(Forum Thread by **Vice**) <http://www.starwraith.com/forum/viewthread.php?tid=3433>

The thread also includes reasons why the files are set up as they are, how to move the main game folder, and how to keep the game and your data files in different locations

Save data, settings etc

For all current SW3DG games, save data and settings are saved in this location by default:

C:\sw3dg\GameName

This is also the folder you can install the game to by default, usually the same drive that you have Windows itself saved on (typically C:). You can specify a different folder during installation for the core game files (binary, certain static data files, instructions, etc), however, files that the game needs to save data to are kept in the folder listed above. This is done for several important reasons:

This setup works with Windows XP, Vista, 7 and 8 so it's easy to transfer the files from one OS to the other and from one computer to the other.

Pilot profiles are saved with the filenames PILOTX.SW where X is a number ranging from 0 to 99. Each number corresponds to the slot for the profile, starting with 0 at the top. These are the most important files to back up. They are small and can even be kept on a floppy disk. It's a good idea to back up these files periodically so you can restore your progress in the future, if needed. Note that Pilot Profile 1 is named PILOT0.SW

Settings are saved using the filenames SW.CFG, KEYMAPX.SW (where X is a number), and STICKT.SW. These files are not critical for backing up, but can be useful in case you want to save your key/button and joystick axis control profiles along with video, audio, detail, and other control settings. If these aren't backed up, the game will simply rebuild them the first time you launch a new installation of the game and you can remap your controls and change settings as desired. If you install the game on a new system, it's a good idea to let the game rebuild the SW.CFG file anyway to accommodate differences the new system may have compared to the old one. The game will build that file based on what it detects on the system and will attempt to optimize settings based on the configuration it detects.

How do I update the game?

Download the latest full version of the game and run the installer. An update is the full game but it will **not** over write your player info or effect most mods if you have any. It is however a very good idea to back up your Pilot profiles in case of a hard drive crash or human error!

Editing and deleting posts on the forum

Press the Edit button and you can edit your post! This included editing the automatic list of when you edited the post before (this can save embarrassment sometimes). You can also delete one of your own posts by clicking Edit and then ticking the "delete this post" box.

Keys to consider remapping

- To use the IDS multiplier you must map them - by default they aren't mapped
- F2 - activates jump drive by default - remap it if you find yourself jumping instead of opening the NavMap (F1) or Inventory (F3) screens
- Left-Shift - if you find you're firing missiles at the person in the station you are wanting to chat to!

Where can I get a diagram of the keyboard layout?

There is a graphic file of the keyboard layout in the main game folder

Does the game actually derive any benefit from a 64bit operating system or is the game a 32bit program which is just compatible with 64bit.?

Vice: There can be memory accessibility benefits by running the game on a 64-bit OS vs a 32-bit OS (lower risk of low memory conditions on systems running other programs in the background since a 64-bit OS can access more memory over 4 GB). But in terms of performance, you won't likely notice any difference. If it were compiled for native 64-bit, you'd likely even see a performance **decrease**. Compiling a game to run in native 64-bit doesn't always equate to a performance improvement. The opposite can actually be true, resulting in worse performance on 64-bit vs 32-bit. But running a game/program compiled for 32-bit on a 64-bit OS generally won't see the same kind of performance reduction. Here are some details on this from Microsoft (taken from: <http://msdn.microsoft.com/en-us/library/ee418798%28VS.85%29.aspx>):

Performance Implications of Running a 64-bit Operating System

Because processors with AMD64 and Intel 64 architecture can execute 32-bit instructions natively, they can run 32-bit applications at full speed, even on a 64-bit OS. There is a modest cost for converting parameters between 32-bit and 64-bit when calling operating system functions, but this cost is generally negligible. **This means that you should see no slowdown when running 32-bit applications on a 64-bit OS.**

When you compile applications as 64-bit, the calculations get more complicated. A 64-bit program uses 64-bit pointers, and its instructions are slightly larger, so the memory requirement is slightly increased. **This can cause a slight drop in performance.**

So running this game on either a 32-bit or a 64-bit OS will allow it to run at full speed since it is not compiled to run in a 64-bit mode, which would force it to have to manage larger address space/pointers. But again, there can be some memory benefits by running it on a 64-bit OS.

Can I get rid of the HUD shadows in Third Person?



Vice: Yes, simply move them out of view in the gauges.txt file. Details are in the customizing kit, but in short, you'll want to modify lines 19-27. Just moving the vertical values to off-screen will work.

Can I change the in-game font?

To use a different font with the game, create a text file with the name setfont.txt in the same folder as the EXE and use these options for each line:

Font Name

Font Size

Font Bold (0 = off, 1 = on)

Font Type (character set, 1 = default)

Font Position Offset X (below 0 moves to the left, above 0 moves to the right)

Font Position Offset Y (below 0 moves up, above 0 moves down)

Font Size (display/HUD text)

The custom font options are used for two different modes.

The first mode is for chat, message, console, and menu text. The position offset options will not impact this mode, so you can adjust them without effecting how the text is rendered. Button and menu graphics can be modified to accommodate different sizes and placements for the text as needed.

The second mode is for the cockpit displays and parts of the HUD. This text can be adjusted to align with various 3D object positions using the offset options above.

You can also import a custom font into the game using the adjustable options above with an installed font, or you can also replace the 'evochronfont.ttf' file in the game's install folder and the game will apply the default scaling and appearance parameters.

If you want to use a special character set and the font you are using supports it, you can change the value in line 4 to select a different character set. The character set you select must be compatible with the font you are using, or it won't apply. The available character sets are (these are supported in the development platform used to create the game, not all options may be available or compatible):

1 = Default
2 = Symbol
77 = Mac
128 = Japanese
129 = Korean
130 = Johab
134 = Simplified Chinese
136 = Traditional Chinese
161 = Greek
162 = Turkish
163 = Vietnamese
177 = Hebrew
178 = Arabic
186 = Baltic
204 = Russian
222 = Thai
238 = Eastern Europe
255 = OEM

The first 4 lines in the setfont.txt file effect the global font settings. The last 3 lines effect only the text when it is rendered to some cockpit and HUD displays. You can use the last 3 lines to change the way the font looks for the unique scaling and positioning attributes of those cockpit and HUD displays. This lets you reposition these characters and change their size separate from the other settings applied to the text used elsewhere in the game.

Here's an example of what the setfont.txt file looks like:

```
Agency FB
38
1
1
0
0
27
```

The specified font in the file must be installed on your system for it to work.

Etiquette in Multiplayer

Source: SeeJay's Evochron Basics Schools - <http://www.junholt.se/evoschool/index.htm>

These are not official rules. The various servers, hosted for free by various players, have different "levels" of rules - usually the minimum needed to let everyone enjoy playing. Young people play the game so most servers won't allow bad language (though some hosted for adults are much more tolerant.)

This is what the community considers common sense and honourable behaviour.

fighting

Before engaging anyone in combat (PvP), ask if he/she wants to fight.

There are a few pilots/clans that do attack without any warning once to "welcome" new pilots.

They normally just do this once, then they fight at your side as well if you want them to. Do not fear, most pilots out there will rush in and fight at your side against them anyway.

clans

Attacking another clans systems when they are offline is considered dishonest behaviour by most pilots, but it does happen.

Attacking is done by doing contracts with a different tag (e.g. doing contracts as [XX] in Clan [HB}'s system and/or destroying their stations. Also building you own clan's stations there.

new pilots/emergencies

Most pilots will offer their help in any way they can out there. Listen to the "oldies"!

If a pilot runs out of fuel, it's honourable to fly out to him/her with some fuel so that he/she can get back "home", or build a station nearby and help him/her dock with it.

Blocking Contracts for other players - a no no!

If you accept a contract then no-one else is able to accept a different contract in that sector until you have finished. ***So please don't accept a contract and then go for a coffee break!***

What is the link between SP and MP?

Source: SeeJay's Evochron Basics Schools - <http://www.junholt.se/evoschool/index.htm>

All that you do in SP carries over to MP and what you do in MP carries over to MP regarding any progress that you make. Only two things don't carry over:

Reputation: The main reason for the separate reputation structure between SP and MP in Evochron is to allow players to perform activities in MP that do not impact their earned individual SP reputations while still allowing them to keep everything else they've earned to use in both SP and MP. For more details see the paragraph : Vice (developer) on reputation in SP vs MP

Any object you build/construct. What you build in SP stays there and what you build in MP stays there. Those items are saved on the server side for MP.

Adding an Avatar

contributed by **Marvin**

How to add one of these...



... to your name (the above is just an example!):

1. Get a free account with somebody like Photobucket.

*Added by **DennyMala**: You can host your pictures in many other spaces.... just like Windows Live space, the Sky Drive, your ISP space - no need to register with a host for pictures just for some bytes .If you choose a different store location use it instead of the Photobucket location in the steps below.*

2. Place a copy of your avatar in your Photobucket account "Album"

3. Copy the Photobucket link to the avatar in your Album. If you're using Photobucket, just go to your Album, find the avatar, left-click to select "Direct Link," then right-click and Copy the readout in the window ... like this:



4. Log on to this forum and go to your User Control Panel.

5. Select the "Edit Profile" option.

6. In the window next to "Avatar URL:" paste the link you copied from your (Photobucket) Album.

7. Click on the "Edit Profile" button at the bottom to save your avatar.

8. Go to "My Home" and check that your avatar shows up under "Avatar & Member Status."

How do I chat to other pilots?

It's a big galaxy and, therefore, other pilots could be busy elsewhere. If they don't chat, the only way you'd know you're not alone is if you use the tilde key (~) to display a list of players currently on line. To actually chat, press the <Enter> key and type your message then hit <Enter> again. Some servers/players us TeamSpeak

How do I exit the game in MP?

Some players were using the escape key to exit the game and respawn during combat to avoid being destroyed - this is patently and exploit! In the Expansion there is a delay when you press the escape Key

1. Press [Esc] the 4 second countdown will start
2. After 4 Seconds you will go into the EXIT screen
3. To Cancel Countdown: Press [Esc] again

If there is any weapons fire in the area you will be warned and not get the countdown. Either jump to somewhere else (hard if you are trying to escape in a fight because you are damaged) or press [F7] and you will enter the 'eject and destruct' 10 second countdown. You will then enter the 'accept fail and exit or restart' screen

How do I add those cool Rank graphics to my signature?

go to around 2/3 of the way down the first page of this thread:

<http://www.starwraith.com/forum/viewthread.php?tid=7864>

Viper has created a graphic for every rank;



- copy the photobucket location underneath the relevant image
- go to your User Control Panel
- click on Edit Profile (at the top)
- go down to "Your Signature"
- type [img]
- then paste the url for the photobucket location
- then type [/img]

This should wrap the URL in the commands to make it an image! - and it should appear in all your posts, past present and future

Can I give \$\$\$ to other players (for services rendered or just to help out new players?)

Maarschalk

The most you can transfer at a time is 99,999,992 credits from pilot to pilot!

The transfer from pilot to pilot is a bit tricky though! You have to target each other and be in targeting range and both open your trade console then the one transferring the credits has to click on his credits and enter the amount to transfer then hit "Enter" and the amount will go in the box under "Items to offer" and then click on submit on the screen!

Now the Person receiving the transfer will see the amount appear in the Box under "Items Being offered". All he has to do now is click on submit to transfer it to the credits box!

Basics - The Evochron Universe

What units is speed and distance measured in?

Source Vice:

- Speed is 'mps', (meters per second)
- Distance is measured in Dm (decametres; 1 decametre = 10 metres)

Therefore a container 1000 coordinate units out ahead of you would take about 10 seconds to reach at 1000 mps (=1 kilometre per second). The calculation is as follows;

- 1 Coordinate unit = 1 Decametre = 10 Meters
 - 1000 Coordinate unit x 10 = 10000 meters = 10 kilometres
 - Time = Distance/Speed = 10000/1000 = 10 seconds
-
- 1 sector = 200,000 coordinate units = 2,000,000 meters = 2,000 Kilometres!
 - 1 Decametre = 10 Meters. So 1 Kilometre = 100 Decametres!

Why are distances measured in decametres?

Mostly just to help keep coordinate entry a little more manageable so players don't have to try and keep track of too many zeros when plotting nav/jump points, tens of thousands being a little easier to manage than hundreds of thousands.

Source Marvin: I prefer to work in sectors and sub-sectors. 1 sector = 10 subsectors

At a speed of 1000 mps, you travel 100 subsectors per second.

This ratio holds at any speed.

- 100 subsectors per second equals 6000 subsectors per minute.
- 6000 subsectors per minute equals 360,000 subsectors per hour.
- 360,000 subsectors per hour equals 1.8 sectors per hour.

Ergo, if your speed indicator reads 1000, you are travelling 1.8 sectors per hour.

- To find your speed in 'sectors per hour', multiply what's displayed on your indicator by **0.0018**
- To calculate subsectors per minute, multiply what's displayed on the indicator by 6.

For example, you run out of fuel and are drifting at 1800. At that rate, you will drift 10,800 subsectors per minute, or 3.24 sectors per hour.

Are the rumours about uncharted systems true?

Yes! - there are a couple of hundred "uncharted" systems to find and explore, plus several major uncharted systems from earlier Evochron History (RiftSpace, Vonari, WolfZone, Andromeda Galaxy, Lost Rucker)

How can I find cities on a planet?

Source Vice: The bracketed plus symbol (**[+]**) is the primary trade city of the planet. Other plus symbols (**+**) indicate smaller cities.

Help - I landed on a planet and got killed just sitting there (no attackers!)

There are some planets, usually in an uncharted system, that deplete your shields even just sitting there after you landed - I just managed to land and enter the city station before the shields went. I was OK whilst I was in the city "station" - I could even repair the shields and ship damage, but couldn't climb out of the atmosphere quickly enough to escape. It should have a "stay away" beacon in orbit! It is possible to leave but it involves shields and looking like a firework! These planets have extremely high atmospheric pressure. You have to be very nifty getting in and more so getting out. Consider managing shields to let you fly at higher than 'safe' speeds

Nebulae - the lowdown

Is there anything special about nebulae?

Besides the fact that you have reduced sensor range and you can't jump inside the dense ones, what DO they do, or what are they good for, if anything?

Not all systems have nebulae - some have several! They come in a variety of colours. First use is eye candy and a different environment. Try combat inside a nebula!

If you have a mining/tractor beam fitted (and every pilot should make this the very first piece of equipment bought!) you can use it retrieve photon particles from stars, nebulae, gas giants and some planetary rings. You have to have a fuel converter fitted. A fuel converter is a remarkable piece of equipment that can transform high energy photon particles into fuel. It connects to the tractor beam system and fuel tank to directly deposit the converted fuel into the tank.

In high energy/density nebulae jump drives and missiles don't work. You can jump in but you have to fly back out!

There are various things to be found in nebulae - stations, wrecks, containers!

What's the difference between background nebulae and those in the NavMap?

The "background nebulae" are just that, background and eye-candy. There are nebulae in-game that aren't, and may be flown into and through. Some have objets d'arte (hidden/obscured items), some are "lumpy" (asteroids), some where you just can't fire your missiles because you can't target other ships (high-energy nebulae). Not every system has nebulae as part of the system's "furnishings". You can turn off the background nebula effect in the Options menu, if desired.

What's a payment "cycle"?

It's the length of time between "pay periods" ... intervals where you get charged for storing equipment at a station, where you are required to pay your crew, and where you get paid for territories you control if you are in a clan. Clan members get paid 101K credits per controlled system every 10-12 minutes.. You get charged for a hangar and crew around every 20 minutes.

Things to do in the game after you finish the quest storyline:

1. learn to survive combat - the new AI are *really* mean
2. hone your combat skills in the Expansion, then do the hard combat contracts solo - many bragging rights!
3. go to Sol system, also Riftspace and Vonari space and the Andromeda Galaxy!
4. go to Sol system and land on Earth (in one piece!)
5. learn to use the Weapon Lab and then write a tutorial to help the rest of us!
6. you can start changing your reputation in the core systems by doing quests for navy/energy, to change them to "Good", so there won't be any more hostiles in there
7. get maximum rank both for civilian (Legend) and for military (Fleet Admiral)
8. get into orbit around a star and a planet
9. change the economy of systems by building stations (of all types) in those systems (trade stations, research stations, ore stations, energy stations, etc.) See what kind of impact *that* has. Raise economies!
10. find an uncharted system with a planet or two and upgrade the technical level in one part of it. You have just created a trading system where decent profits can be made in a quiet environment for newer players (or for you!) Post its location in the forum as a part of a treasure hunt or cryptic clues
11. join or create a clan – make your clan different from the usual
12. become a baddy and join Clan Vonari (or the baddest clan around at that time)
13. fly around and help pilots (SAR missions and general help and assistance)
14. explore, looking for new systems on your own (especially by using a deploy constructor which you can use both for refuelling, and the sensor array which helps you scan the present sector for other AI and human ships) or look for strange artifacts or
15. just load up the coordinates from the many hidden systems already found by other players and go there, see what's there. Just because a pilot found it doesn't mean they've explored it!
16. declare war on a clan - some will defend their territory to the death (probably yours) - other clans will give you a good run for your money. **It's considered rude to attack when on-one is online to defend**
17. find all the places that sell a Stealth Generator - the reusable sort and other bits of hard to find equipment and U2U the locations to me please (for this Hints Guide)
18. there are hundreds of uncharted systems, several asteroid caves with a variety of goodies inside, wrecks with goodies inside and other wonders to seek
19. try flying straight through a trade station @ >4000. Don't forget to switch off auto-docking first (alt-F3 toggles it) or you'll end up smeared on your windscreen as you stop dead!
20. visit the server (9999,9999,9999) and say thank you in person to the person hosting your fun. Leave a station there for future visitors to have a coffee and refuel
21. run your own MP server - create a Universe that's a bit different
22. try doing contracts in different ways (try a scanning contract without firing a shot)
23. organise community activities like a "last man standing" competition or treasure hunt or PvP contest
24. do the player created quests (Quest for Peace / Over the Hill / The Hitchhikers Guide to the Evoverse) - write a story about it - the community loves FanFic
25. create a quest - there are people who will help you code it and beta test it when you've got the story line sorted.
26. check out some of the "facts" bandied about on the forum; how long *can* a C1 particle cannon fire for non-stop. Does it depend on the frame? How does it compare to a C10 etc Does a beam weapon really hammer shields? Does a beam weapon really not touch hulls? Where's the sweet spot for taking a capital ship down?

27. if you have the flair, turn some of your adventures into stories for others to enjoy. The community loves FanFic but it's become a rare commodity recently
28. create the ultimate cannon and/or missile in the Weapon Lab - sell it for fame and fortune or just brag about it!
29. organise a combat contest in the atmosphere of a planet or on the surface (TW vs ship; ship vs ship; TW vs TW. Or just hang around in a hostile system and fight whoever shows up
30. organise a combat contest in an asteroid cave – Last Man Standing
31. learn how to jump through the wormhole found in the centre of many blackholes (though not all!) – really satisfying if you can work it out for yourself
32. be a tourist and possibly create a tourist guide or coffee table book of the wonders you discover (beware of creating a spoiler though – a piccy or vid to wet the appetite but no details of locations or names
33. try to do more than 60 contracts in an hour Yes it can be done! Yes it has been done! Modesty forbids me from naming names!
34. become really really rich I've got 18 billion at the moment but some pilots have more than 50 billion! It can be quite therapeutic! However, no-one has ever become rich enough to bribe Vice

Evochron is a freeform space-sim, a sandbox, so you can do whatever you want.

Source Vice:

And believe it or not, there is also a sizeable number of players who want (and have even demanded from me, lol) that they be given the option to have 'no hardship'. They literally want to fly around in peaceful space as much as possible just to calmly mine asteroids, explore caves, traverse planets, deliver items, transport people, find lost items, design ships, race, and/or recover/sell fuel. It's part of the reason why there are significant areas of peaceful space in the game along with hardship bypasses like high speed travel and stealth/cloaking devices.

Section 02: Training Videos

Combat tactics have changed greatly in the Expansion, so any combat videos will have to be updated. Mecingo's won't be, but RedFalcon's might be. However they are still worth a look to reassure you that what might seem impossible isn't!! All of these videos are available from **SeeJay's** site

Official EM Videos

These can be found in the EM Guide at:

<http://www.starwraith.com/evochronmercenary/universe.htm>

or directly on YouTube:

Tutorial Video #1: Navigation

<http://www.youtube.com/v/hwGOJxYUCoM&hl=en&fs=1>

Tutorial Video #2: Shipyard

<http://www.youtube.com/v/gvms8KW9bk0&hl=en&fs=1>

Tutorial Video #3: Inventory Management and Trading

<http://www.youtube.com/v/19b8ivD200E&hl=en&fs=1>

Tutorial Video #4: Basic Contract Objectives

<http://www.youtube.com/v/xnLPil-8gMo&hl=en&fs=1>

Tutorial Video #5: Combat

<http://www.youtube.com/v/-VLcJboYG5M&hl=en&fs=1>

Tutorial Video #6: Deploying and Building

<http://www.youtube.com/v/8aUu-jMhcos&hl=en&fs=1>

Tutorial Video #7: Mining Asteroids and Planets

<http://www.youtube.com/v/sL35-XNFI24&hl=en&fs=1>

Other Guides

Evochron Mercenary: Using Stealth in Spy Mission (HD)

Sinbad 1006

<http://www.youtu.be/watch?v=quRavPOT4dQ&feature=related>

Evochron Mercenary: Unknown Planet Discovery System

Nokternl

<http://www.youtube.com/watch?v=5rIqbFCmyOQ>

(uses SeeJay's web based trilateration utility)

more on the next page . . .

The following tutorials by **Mecingo** are available from SeeJay's website

Evochron Mercenary (Support Navy against Vonari)

Evochron Mercenary (Contract - Protect Capital Ship)

Evochron Mercenary (Mission - Protect Navy Ship From Vonari)

Evochron Mercenary (Contract - Scan Enemy Capital Ship)

Evochron Mercenary (Contract - Patrol)

Evochron Mercenary (How To Fight 10 Hostiles (Modified))

Evochron Mercenary (Blackhole Jumping (How to do it))

Evochron Mercenary (Atmosphere Combat 101)

A series of guides by RedFalcon

The following tutorials are available from SeeJay's website

<u>00 - An Introduction</u>	Introduction and Pilot Creation
<u>01 - Flight Controls and Navigation</u>	Flight Controls, navigation and basic menus
<u>02 - Our First Contract</u>	Courier & Race Contracts/Landing on Planets
<u>03 - Space Janitor</u>	How to (not) clean a Solar Panel
<u>04 - Shipbuilding and Mining</u>	Ship customization, mine asteroids.
<u>05 - Planet Economies and Guild Caches</u>	Planet Economies, trading and finding a cache
<u>06 - Our First Combat Contract</u>	Basics of Dogfighting
<u>07 - Escort Contracts</u>	Right / Wrong way to do Escort Contracts
<u>08 - How to make Money Fast</u>	Using Hidden Planet in Pearl
<u>09 - Crew Members</u>	Hire/manage Crew Members & exploring
<u>10 - Advanced Combat</u>	Target enemy sub systems and strafing
<u>11 - Spy and Capital Ship Destruction</u>	Spy and Capital Ship Destruction
<u>12 - Ace Pilot Missions & Fleet Commands</u>	Kill an Ace & form a fleet. Fleet commands
<u>13 - Military Frames and More Combat</u>	Military Frames and Rank
<u>14 - How to Dogfight while Outnumbered</u>	Finish the last mission in the Warzone
<u>15 - The Final Guild Contract</u>	The Final Guild Contract in the Pearl System

Section 03: The Shipyard

Source: SeeJay's Evochron Basics Schools - <http://www.junholt.se/evoschool/index.htm>

One of the most important activities in the game is designing/customising your ship. This is done in the shipyard, which is available at stations, carriers, and planet cities. Note: Stations and some other objects in space have their own gravity protection field to prevent ships from ramming into them. Your HUD will display a pathway that will help guide you to the docking area. The pathway will be red if your approach is outside of the required docking angle and it will be green when you are approaching correctly. Line up your ship with the flashing docking lights to approach at the correct angle. The 'Landing and Docking' section below will provide more information on descending into planets and docking with stations.

To access the shipyard, fly to a docking zone near the top of a station, a carrier hangar, or in the middle of a city with a landing zone on a planet. The automatic tractor beam will engage and your inventory console will be opened. Simply click on 'Enter Station/Carrier/City' then 'Shipyard' to open the menu shown in the image above.

Descriptions of each frame and ship component are available on the bottom two displays of the menu. Use the scroll bars to toggle through the available options, then click on one to read its description. (see also the Appendix section at the end of the Guide) To design a ship, select a frame from the right side menu then drag and drop it to the middle display (click and hold the mouse button to move the frame of your choice). If you're designing a civilian ship, the Frame Config menu will open automatically and lets you adjust the available frame's configuration capacities for crew members, equipment hardpoints, countermeasures, and secondary weapon hardpoints. Just click on boxes under the capacity number you want to increase or decrease each limit.

Next, select the parts you want for your ship. You can toggle through the 5 different ship components by clicking on each one on the bottom left display. Each frame provides a certain level of assembly resources that you use to design your ship. Larger frames provides more assembly resources and offer better shielding/armour, but aren't as manoeuvrable or as fast and use more fuel.

If you design a ship that exceeds the assembly resources available for the frame you selected, the 'Assembly Left:' value at the top will turn red and you'll need to reconfigure your design to stay within the resource limit. Each component will use a certain amount of the assembly resources and will effect various aspects of your ship. You will be much more limited in how much you can customise a military frame

Larger fuel tanks will give you more range, larger cargo bays will let you carry more items, more powerful shield cores provide better protection, more powerful engines provide higher speed, and better wing/thruster systems improve agility. You will need to carefully prioritize your design for the features that are most important to you and the role you want to play in the game.

Once you've selected the frame and components you want, you can further customize your ship's appearance by using the position and scale sliders on the middle display. If you make a change you don't like, simply right click on a slider to reset its value to centre. For visual enhancement while editing your ship, you can highlight the component you're editing and paint your ship a different colour. You can also stop the rotation, and/or remove the direction planes.

Once you've designed your ship the way you want, simply click on 'Trade and Build'. You will be given credit for your current ship, then any additional amount will be deducted from your account. The difference between the value of your current ship and the cost of the ship you want to build will be shown at the top of the middle display. If the ship you are trading in is damaged, the total cost for repairs will be deducted from its trade-in value and the adjusted amount will be displayed in red.

You can save the current ship design with the template option. Click on Templates near the top of the shipyard menu, then click on 'Save Current Design as Template'. You can reload a design later to rebuild it, although you will need to be docked at a station that can build the ship saved in the template. Templates are saved in the game's data folder using the filenames shiptemplateX.sw where X is a number from 1 to 10. All of your profiles will have access to the ship templates and you can even share them with other players.

Opinion: Customize your ship!

That's what the Shipyard is there for! Not going to do much cargo/mining/trading? Get rid of some of the cargo bays, it leaves you more space (assembly) for other equipment. Same with fuel - don't take tons of fuel in a ship designed for combat!

Don't want to have full crew? Reduce the crew space to whatever you want!

You have all the reasons to experiment with these all you want, and no reason not to do it, because your ship (frame) costs the same to buy it as you will get back when you to sell it, so you never lose any money by experimenting with your frame

How do you get military frames?

Go to the War Zones and board the carrier or a station that is there. The higher your military rank the better the frames available. When you reach Commander, all military frames are available to you. Your military Rank will only increase in the War Zones and only doing contracts. One point per contract (or per waypoint on multi-waypoint contracts) plus one point per 10 kills (but you must have fired the killing shot! The Vonari you'll face like to play hard - not that recommendable for newcomers, since they're vicious, launch missile volleys that put a *macross missile massacre* to shame, and are tough to kill to boot. And they come in packs of 7+1. Talison WZ (AKA Talison Conflict) is a good place to start a military career. Teaming up with other players on MP is also a great idea (and great fun)

Where can I get better frames and military ships?

Frame availability is keyed to the system - the further out you go, the heavier the frames get; Bigger may not be better though - while bigger have plenty of space for the various goodies, they also tend to be rather sluggish, so most people don't go for the super heavy ones. Subassemblies are available everywhere - you can get a class 10 shield in Sapphire, if you need to.

What about equipment when I swap frames?

Carriers don't have hangars, so that means that the civilian frame you used to fly to the carrier is lost when you buy the military frame; (when you buy a new ship, the one you trade in for it is instantly recycled. Your weapons and equipment are transferred automatically to the new ship, **if** it has enough room for it all . . . If you have a Yoda moment and would lose equipment, the Hangar Chief warns you!

So, before you go to a carrier intending to fly a military frame, **store** your civilian frame into a station hangar (all the stuff on it gets stored automatically), buy another as cheap as possible civilian frame with minimal equipment (Talon, cheapest), fly that to the carrier, and swap it for the military frame. The Talon you swap for the military ship instantly disappears, although its equipment and weapons automatically transfer to the military ship (all of which have 8 equipment points, so you will always have enough space).

Or, since you're carrying all your equipment and weapons with you, you could just discard the Starmaster. You can always go buy another one...sure, it costs some 7-8mil, so what? It can work out cheaper than paying hangar fees over a long period.

What happens to my crew if I swap to a military frame?

All military frames are all single seater combat craft. So you can either fire them (some or all) or send them on paid leave. They'll come back when you get a civilian frame again.

What's the safest way not lose equipment when I swap a frame?

1. Store all your cargo - hire a hangar in a **game** trade station - **Don't** use a player built trade station because it might get destroyed in a clan war or wiped from the server
2. Note how many equipment slots are available on the ship you want to buy.
3. If your new ship is short on equipment slots, exit the hangar and transfer equipment to cargo bays and store it - or you can sell it.
4. Buy the new ship, don't swap it. If you decide you want the other ship back, buy it back.
5. Once you've bought your new ship, configure it. Then reload your cargo.

Things to consider when swapping ship frames

The equipment swaps across when you swap into a new ship, providing that the new ship has enough slots to take the equipment, this is true for both military and civvy frames.

To store the ship, or items from you cargo bay, go into the hangar, and hit the "store" button beside the ship/item name.

Note: You don't have to store equipment when swapping ships, if the ship has enough slots, then, the equipment automatically swaps into the new ship.

For unneeded commonly available equipment just sell it and buy it again when you need it again.

Section 04: Surviving Combat

Introduction

This section has had a major rewrite – additions, deletions and distillations!

Combat in EVOChron Mercenary can seem daunting at first; there is a lot to manage and keep track of compared to what you may be familiar with from other games. The combat in this game is (by many accounts) inherently more complex, difficult, and diverse. It's just not something a new player can quickly be a master of if they're only used to the 'fly in straight and fire' arcade shooter approach. Instead, the game's combat has nuances of Newtonian flight physics, tactics, and weapon systems that require a deeper level of player control and awareness - even at the most basic and introductory level of gameplay. Once you get some of the basics down though, you'll likely enjoy the depth its diversity and available options provide.

In the previous versions of this Guide there were 25+ pages of combat advice, a lot of it on combat tactics. For the Expansion **Vice** has made several significant changes that affect combat tactics:

1. The Weapon Lab has been introduced allowing you to design custom cannon and missiles and fine tune performance to suit your needs and combat style - the usage of custom cannons is particularly influential
2. The statistics of the "off-the-peg" weapons available at stations, carriers and cities have been changed to fit the custom weapons you can build - the present Tables of Classes and stats are no longer correct - look in the station descriptions
3. NPC tactics have been strengthened with AI hostiles now being harder to evade and spoof
4. Ship stats have been tweaked to make them harder to kill
5. NPC ships are now equipped with Repair Units and Shield Rechargers
6. The effectiveness of missiles is greatly enhanced - a two edged sword!
7. The use of equalize shields and augment shields has become much more important
8. The shaking effect of kinetic weapons (missiles and cannon) is a lot larger, making lighter ships more difficult to handle - the effect is now apparent in 3rd person view as well
9. The shield recharger isn't as effective/useful anymore
10. The AMS is now more effective while the ACM is less effective.
11. The "shield equalisation" exploit giving everlasting shields has been removed (What? you didn't know about it either?)

Here are some suggestions from past posts on the concepts, locations, and tactics that can help early on:

What has very quickly become apparent is that you will need to use different tactics in different situations. Therefore tactical advice is given for space contracts (SSC - combat against NPC) - pVp (combat against other players) and atmospheric combat contracts (ACC - combat against NPC). The advice is colour coded and tagged **(ACC)** - **(SCC)** - **(pVp)** - **(All)**

It has to be said that the best way to get hold of good pVp ideas is to join in the pVp fun on MP. There are usually other players more than happy to go head to head with you. MP is a great place to get your questions answered - it is one of the defining features of this game - the community is generous and willingly helpful; don't be afraid that your question will be mocked for being daft - everyone was a complete beginner once and often what you think is something daft to ask, actually isn't. **(Editor:** I only learned when updating this Guide (Oct 2014) why you can have 5 crew slots when there are only 4 crew types! (Answer = so you can do taxi contracts!))

Editor: *I've trawled through the available info and advice - there are many bits that are relevant to combat in general. They are given below as a series of snippets, axioms or maxims. Many of the game's combat jocks have also offered their advice on new combat tactics, based on their recent experiences.*

If you are new to combat you will find the advice more useful if you absorb at least some of the broader advice about general tactics and equipment first. But as one combat junky says . . . "As for flying tactics, I really can't tell you what's the "optimal" way to fight, because there's countless of different tactics, counter tactics and variations being used. All pilots fight differently. I could write an entire book on the tactics I use."

Given the importance and popularity of combat in the game we can fully expect this section to increase in size and scope rapidly!

Combat Advice for Newbies I - General Advice (All)

Stick to systems like Olympus and focus on picking off hostiles that come by one at a time. The hostile presence there is fairly moderate and their ships/weapons/shields are pretty weak overall and the amount of missiles launched at you is still manageable. Also, most NPC ships are friendly or neutral. Compared to Fauston or (heaven forbid!) Thuban, it's downright friendly there.. Don't take combat contracts for a while, just fly around and look for hostiles. Try to pick off one at a time in combat, avoid losing speed, and try to keep your distance on passes. Don't fly directly toward your targets, fly in at diagonal angles wide enough to avoid being hit by incoming gunfire and to give yourself more time to counter missiles. Stay there until you've established an effective skillset that works for you. Don't fly into systems with hostile ships beyond what you and your ship are ready for.

If too many show up, don't stay there and fight until you're ready to do so. Get out of there and return to trying to pick off one or two at a time. Avoid sectors with higher traffic patterns (ones with stations and/or planets in them). Jump to a sector without any major docking points in it which will generally result in fewer hostile ships, less communication between them, and less of a chance of reinforcements coming in to attack you. If needed, deploy a sensor array if you have the constructor or deploy a probe and locate a lone hostile somewhere nearby to practice attacking.

Mercenary is designed to encourage "flight ops"; this means doing contracts in SP with hired fleet ships, and in MP with other players.

One of the things combat in EM helps to encourage is online play, where players can compete cooperatively for contracts (but they still both get paid the full amount for the contract).

Mouse, keyboard or stick or . . . ? When considering remapping keys, perhaps to elsewhere on the keyboard or to a stick, unless your joystick has back-lit buttons, it sometimes works better if you keep some keys where they are: on the keyboard. Especially if you fly at night, in a dark room, where it's easier to see keys lit by your monitor screen (or a back-lit keyboard) than trying to feel your way around the buttons on your joystick. "Easy to reach" mean you shouldn't need to move your hand away from your movement keys(thrusters) ever.

You can use beam cannon ('lasers') and particle cannon separately with different fire buttons. Map them so that you can use them alternately without having to waste time switching. You might even have enough buttons for the two together as well

Do the main IMG quests ASAP, where ASAP is as soon as you have good enough kit to complete the mission not as soon as you complete the previous contract. It will net you a few upgrades early on (as well as asking you to perform a few combat missions in Olympus) and improve your skillset markedly - even racing skills can help in combat, teaching you to remain calm and manoeuvre with precision . . . Hire a fleet of 15 ships and reload until the number of fighters is manageable, they will make short work of all the missions. The reward is worth it and then you can go into combat with the best equipment the Evochron universe has to offer.

Make some money as soon as possible and then upgrade. Get good weapons, shields, and other upgrades as you can afford them. Advice on what is "good" is give elsewhere in the **Equipment** section

Early in the game, it is wise to work on more defensive combat before trying to dive in and attack with guns blazing. If you fly in the same direction for very long, you make it easy for hostiles to shoot you down.

As you improve your ship's capabilities, you can work toward more aggressive offensive tactics, but for now, use the agility and speed of the light ship you have to your advantage by being more selective about attacks and using defensive/evasive piloting

Combat in Mercenary (as a result of the 3 minute reload time for Excals or the limited number of missiles you can carry or afford) forces you to use (and hence become skilled with) your primary weapons - particle and beam cannon. Of course you can still carry up to eight missiles during a contract (and you can go back to the station to get more, if necessary), but you will have a much harder time turning a profit if you don't learn to use your primaries.

For SP contract play **get a fleet**. Hiring a fleet is cheap considering you don't have to buy the missiles your fleet mates fire. Have 15 of them hired at all times and you will burn through the contracts. Just remember to have them reload (or save the game and load, same effect) between contracts. To hire fleet mates just fly up to within 1000m of green ship and open the ship-to-ship trade console (default F4). Down the bottom right is the hire fleet button. Bargain at 63,000 a pop. However, I think wing mates make it too easy so here are some more tips you can use to solo it and improve your skills, though they also apply to flying with a fleet. Unless you have something against fleets like me, use them; if nothing else, they draw some fire from you, but maybe they can also actually kill some enemies. Either way, since a lot of the time it seems there are just **too many** enemies - and constantly bringing reinforcements faster than you can kill them, just bring some wingmen. **They will follow you anywhere except into a war zone. If you need wingmen to assist with taking out the Vonari, you'll need to hire whoever you can find after you've already entered the war zone.**

If you get hit, reinforce the shield facing the direction that got hit. Missiles that do nasty numbers on shield and hull, so try to avoid those or shoot them down. You can also turn to bring a stronger shield segment to face the attacker until you can get out.

Get yourself to a war zone. The name sounds intimidating, but they are actually much safer than hostile sectors. Then you can start doing military missions and get access to the military frames

In war zones there are two noncombat mission types; find lost items and recover a rescue pod. If you use stealth technology, then scanning a capital ship is non-combat too! **These count towards your rank just as like combat missions do. But a seven waypoint, 84 fighter patrol will give you more points for the single mission because you get a point for each waypoint plus a point for each ten kills that you manage (shared kills don't count - you have to be the one who fires the killing shot!) - succeed and you will get a minimum of 7 points and possibly 8 or 9 if you are a fighter jock!).** They do take longer though. However you are more likely to succeed and certainly have more fun if you take on the biggy combat contracts in MP and join a team of players

Recovering escape pods (and containers in the civilian equivalent contract) requires a tractor beam and a cargo bay, are also easy money. War zones also have some of the better equipment and frames available. Even if you don't want to do military missions you can still get the first military frame straight away, a good choice for the IMG combat missions.

The enemy AI will generally target you first, you are usually the designated leader or at least the primary threat. Plan your strategy accordingly and you can actually use this to your advantage. Use their focus against them and bait them into positions that make for easier kills by your hired wingmen. Keep the IDS off and keep drifting away from them slowly in circular patterns that continually keep bringing them into weapon range of your wingmen (if applicable). Keep forcing them to pass in front of your wingmen, giving them a chance to take them out.

As a solo player acquire a cannon relay as soon as you can. This will increase the energy capacity of your primary weapons to make them more effective. Also, make sure to first cut through their shields with a beam weapon before engaging with particle cannons. Particle cannon do do damage shields but the rate of energy depletion of firing your cannon in combo is high.

When it comes to missile evasion and using counter-measures, keep these tips in mind:

- You can bait hostile ships into wasting all of their missiles and running out. Just stay away from a hostile firing missiles at you, at a distance of at least 1000.
- Don't fly directly in toward hostile ships, this leaves you and your counter-measures little time to react to fast flying missiles.
- Watch the yellow inbound missile blips on the radar, turn towards them and shoot them down – it's not a hard skill to develop - or turn away from them and then use counter-measures when the missile warning indicators turn red and the beeps get frantic.
- Launch counter-measures early, then worry about fine tuning your tactics later on to avoid wasting them. Start launching counter-measures when the distance bar is still pretty long, then hold the counter-measure key/button down until you hear the missile explode. Work on distance timing from there. **CM's are cheap (free with fuel)**, so spend some time practicing to learn how best to use them.
- CM's work best when you turn away from the missile entirely and launch them behind you, putting the CM's between you and the missile. Otherwise, if you're between the missile and the CM's, you're the closest target and the CM's won't be close enough to inflict enough damage on the missile.
- Don't fly slow. It gives your enemy more time to obtain a missile lock at a longer range. They will often fire more missiles at you if you're slow and don't move around much.
- Don't fly in a straight line for very long, vary your flight path frequently to make it more difficult for your opponent(s) to obtain a missile lock.

Why do I get attacked by random ships?

Why am I getting attacked by random ships for no reason even though I have no cargo, and they will receive absolutely no benefit from my death, especially since I am actually not affiliated with anything in the game, and or a threat to any of their resources?

Vice: First, you simply need to learn where and how it is safer to travel vs where it isn't. In terms of the 'why's', they are largely based on territorial and historical divisions within humanity as they colonized the quadrant. Here is some information on the topic of why certain ships in certain regions will attack you while others won't (taken from past discussions and debates on the topic over the years):

... If you are from an opposing territory (or allied with it), you will be attacked by the enemy of that territory. By default, you are from Sapphire, an Alliance territory and your reputations start out as allied to that group. This automatically makes you the enemy of forces that oppose the Alliance.

... You start out allied with factions that are against hostile to others and their interests (either because of past conflicts with those factions or simply because you are viewed as a trespasser). For example, if you were affiliated with the US Navy in 1944, why would the Japanese Navy attack you, but the US Navy not? It's the same reason(s) many Richton and Federation territories (and their Navies) will attack you, but Alliance/Sapphire's won't. If you are from an opposing territory (or allied with it), you will be attacked by the enemy of that territory.

As for options to avoid conflict when you don't want to, there are indeed equipment items and tactics available to you including stealth devices, bribing, proper jump drive management, and high speed travel with the IDS off. You can do a lot of trade and exploration without ever having to fire a shot, but it does require a different set of tactics. For now, if you want to approach gameplay as you describe, you'll likely just need to fly faster, avoid lingering too long, keep your distance from hostiles, and plot safer jump points. As you build your wealth and capabilities, you can then move on to acquiring items that can make travelling through even the most dangerous sections of the game's universe much safer.

Ace Combat Strategies Explained

Could some of the aces expand on the combat strategies?? And please, I've read the hints and guides and they really say about the same thing - basically, don't head straight for the enemy (unless it's from the rear) and head in at an angle and turn toward and fire (in Inertial mode

Marvin: Situation awareness is the key. I find that I can't keep track of everything ... ergo, I use the auto CM launcher so that I have one less thing to worry about. As for being attacked by somebody other than my target, I rely on the HUD arrows and shield quadrants as indicators. The IDS multiplier is a must ... especially when fighting Vonari.

Rubber Chicken: These are some tactics I use for IDS-off fighting. I'd say that I fly in inertial mode 95% of the time - even when I'm just Sunday driving in a safe area. Of course, there are pilots who fly and fight quite successfully with IDS on. I'm sure you'll get enough responses to find which tactics work for you.

Try to stay on the targets at the outside edge of the group even if they are not the closest. Binding a key for *Target Ship In Gunsight* is good for this.

(Editor: read these next four paragraphs carefully a few times – it's the basis for not having to joust!)

A good basic attack would be to strafe directly left or right (horizontally) high enough that when you turn with the target you need to full afterburn to stay at the edge of your gun range while letting off the strafe for a moment here and a moment there in order to prevent getting too far away.

For example If you take the target on your left side, your going to turn left to keep the target in your sights, but your going to strafe to the right. As you turn with the target, your ship will bleed off forward and strafe momentum and 'try' to translate it all into going backwards. By using the afterburner and adding/releasing strafe, you should be able to find a point where you can circle the target at the edge of your MDTS lock range.

Keep in mind it's not mandatory to fully circle the target, only to stay in range long enough to lay in damage then break away and do it all over again. The higher your strafe (around 1500 or higher) ought to keep most AI from hitting you unless they have a straight-on bead from another angle. Also, most AI missiles won't reach you if your strafing at 1800+ and have some forward/backward speed as well.

Spam countermeasures when the missile warning starts beeping that the missile is 'gimme a kiss' close. Keep your strafe as high as you can, and as long as it's high enough the missile should take a good long time in that range before a cm gets it or it times out. An anti-missile system is also a good insurance policy, but it needs to be considered as exactly that - an insurance policy.

To keep strafe that high you might need to afterburn as you turn toward the target in order to stay in a reasonable range, and AMS and countermeasures work best when the afterburners are off. It'll take some practice, but you should be able to find a good balance in timing the burners vs. using cm's.

Try not to get surrounded. You might be on a high strafe path relative to one target, but straight-on relative to another. Getting surrounded highly increases the chance of this happening.

Be careful as hostile capital ships do jump in close to your flight path when you're circling a hostile group, and said group will try to force you into the cap's flak, particle cannon, and missile range. If your not careful you'll end up with your ship butted right up against the hull of the cap - tail first. Not a very comfy chair at all.

Nigel_Strange: I use Parthian tactics.

*(Editor: - The **Parthians** were an ancient Iranian people: The Parthian archers mounted on light, agile, fast horses, while retreating at a full gallop, would turn their bodies back to shoot at the pursuing enemy. The manoeuvre required superb equestrian skills, since the rider's hands were occupied by his bow. As the stirrup had **not** yet been invented, the rider relied solely on leg pressure to guide his horse. The tactic could also be used during feigned retreat, with devastating effect. Some people think that the expression has been 'corrupted' to a '**parting shot**' to describe a barbed insult, delivered as the speaker leaves. (yep I'm a nerd, but language is fascinating . . . no really, it is!)*

If you are outnumbered, the reds will often bunch up into a formation. Seems that despite their differences, they'll all form an instant squadron to take you out. I tend to deal with them by approaching at an angle, keeping my speed up, and then turning around. The enemy ships will track you, but as you are flying backward, and they are flying forward, you can control the distance by using reverse afterburner (Shift + afterburner key).

I also use a canon with a longer range than most, so if I carefully bleed off speed so that the foe is in my gun-range, but I am out of his/hers, I can safely plink away with impunity. I do have to watch other foes, though, to make sure they don't close in. Weapon Lab experiments are useful here

If they shoot missiles, since they're all chasing me, their missiles are mostly coming from the same direction, so I shoot at them. I find that shooting enemy missiles is much more effective than countermeasures, especially when you are running hot.

Big groups are always dangerous, so I tend to go for the foes on the edge of the line, rather than attacking the middle. This minimizes my exposure to their guns. The general idea is to get the foes in enfilade, then nail them one at a time. One issue with them in a group is that they'll shield one another: you'll be hitting one, bringing its shields down, and then another one will get in the way and take some shield damage, but allow the first one to recover. Avoid shooting at dense groups.

Last night, I tried this and it worked (others might want to give it a go). The enemy AI tend to ignore you if you are beyond about 5K. I had to attack a large group of foes. When I got there, I fired my Excalibers (taking one out) and kept going, until they lost interest. Then I crept back up on them. I only got close enough to attract the last one of the group, and he turned to chase me, but the others ignored. I kept doing this, taking out one or two at a time, until the entire group was gone.

It takes very careful management of distance, so that you don't "aggro" more than one or two at a time. The way you can tell is by watching the right MFD. As soon as the foe turns around, start backing off so you can pull him out of the group.

picommander: I'm using a slightly different method than Nigel when dealing with large blobs of enemies, mainly in those contracts where I have to kill 10 to 12 with no battleships involved.

First I approach the nearest enemy to a distance of around 1200 where they start spamming missiles. The *Target Nearest Hostile* key is much more important to me than the "target in gunsight" key. (See below for reasons) At this stage I'm in inertial mode and the AI pilots seem to have a strange interest of keeping this distance which after a while will level out at 1250. Their missile supply isn't endless but there's enough time to brew a coffee here. Missiles from AI don't seem to survive at a distance greater than 1000m. Of course I make use of my Excalibur when ever it's ready. Then I start the hunt and the name of the game from now on is 'distance control'.

I'm trying to find a balance of strafing (away from the pile) and approaching with inertial forward (or even backward if needed, rarely with afterburner, only in emergency situations). This method feels a bit slow and cheesy but works - until the AI are updated again. Also, with this method you will find that AI ships continuously swap their positions in order to pull you into the blob. That's why I always spam my "Nearest Hostile" button here. The all ships list (rather than a specific target list) that you can toggle with 'G' is mandatory here.

A Deploy Constructor is your friend. Build a Sensor Station somewhere between the Docking Station and the Nav point. You'll see all the red dots in a certain circle around the Sensor on your F1 map. You still need to guess though, what might be the fugitives and what just random hostiles. When in doubt, kill them all.

Marvin (tactics) : I prefer combat planetside but, when I find myself outgunned, I use a similar tactic while drifting backward into space. Because of the slow relative velocity of the AI's missiles, they do me no harm ... while the positive relative velocity of my Excal's strike home every time. Between that and the number of friendly AI who usually hang around the orbiting distance of a planet and often intercept some of the bad guys in pursuit, things usually work out quite well.

Rooster: Take Your Time. Your approach is more important than any other thing. Then everything happens in a second. Approach for 5 seconds, attack for 1 second. 1:5

Example 1: The Pack

When going up against many ships, pick the one on the most outside of the pack. Who cares how far away he is. Go right at him at 2200 and hit Inertial. Put all power into Shields.....and wait. You may have to strafe a little to the left or the right to avoid too much fire from his cronies. As soon as you can see the whites of his eyes, turn around and thrust hard till your speed is 1300. Use inertial forward/reverse to maintain distance from them while slowly letting them gain on you. Don't panic...you are in charge. Wipe them out one at a time, while keeping distance, never chase.

Example 2: The Dogfight

When in a dog fight...Don't Chase. Always be leading. Herding them. They will come to you. They do want to kill you. Keep your speed at 1100 to 1500 and if you thrust, turn your ship 2 to 4 times more in the direction you want to thrust. Set your shields/guns at -2/+2. Try to use inertial and the strafe keys to "aim" as much as possible. If a ship comes at you and blows past you....lead them. Turn to where they are headed...then 2 to 4 more and Thrust. Speed at 1100, inertial, and ATTACK! Take it easy, your setup approach is everything. What you do after is learned in time.....and oddly enough, it is what determines your skill level.

How fast can you "setup". How fast do you "attack". This is what makes a deadly pilot. It comes in, you guessed it, Time. Work on the approach and leading. Don't rush the kill and amazingly you will become a faster killer.

Iron man: if you have some difficulties, I invite you play with players with more experience online. Observe them and I bet you will get a few tips how to manage the situation in fight. Enjoy!

picommander:

*An aside: **PaulB:** The last couple of waypoint contracts I've done - I kill about 2 Reds and by that time the others are gone and I can't find them. Why am I losing track of the rest of the group? Or how can I find them? I must have spent 15+ minutes jumping around looking for the buggers.*

Nigel_Strange: It could be that your speed of approach and angle are such that you are leaving the area after two engagements. Also, foes will flee after taking damage, and what I find happens is that they will lead you out of the area if you pursue to finish them off. I ride in a Starmaster, so I'm fairly slow compared to the other ships (at least when I'm not doing military missions).

If you shoot a foe, and get the shields down, and the foe turns to flee, do not chase, or, if you do, try to finish it off quickly. They watch your speed, though, as they run, so what I do is turn a quick 360. When your forward speed drops, they will turn around, thinking that you're walking away from the fight, when you're just fooling them into thinking so. At this point, they will be closing the distance, and you can start shooting as soon as they're in range. In this way, you can keep from getting too far out of the combat area that you lose the other fighters.

Rooster: *Pro Combat tips*

Pro Tip: Buy the particle cannon in Sapphire that have the most range and use them until you figure out what "Custom" guns you want. Range is life. Damage will come.

Pro Tip: Your beam cannon's range is determined by your particle cannon's range. A long range cannon makes for a long range beam. A long range cannon helps you hit your opponent but stay out of their hit range.

Pro Tip: If you take damage to your Engines and can't thrust use your 1 -0 keys to set your speed. Set to 0 (the fastest speed possible at the time) and when you reach top speed hit inertial and augment full power to shields until shields are green then back to full weapons energy. Always be at IDS x5.

Taking down a Vonari Battleship - *A story with some good advice:*

Well now . . . I have some kills under my belt. I am getting pretty good at killing NPC's . . . lets go do some military contracts in Arvoch War Zone (access from Pearl!)

Later . . . I had my eyes opened today to the dangers that are in the deep!!

I started my day in the Arvoch War Zone. At first I felt like Rambo from the previous days success and took the biggest baddest missions. I died on those missions. It seems that the Arvoch War Zone requires a little more of a resume – read skill and gear rather than just confidence!

It's the simple things: How to handle ships when outnumbered seven to one. How not to accidentally shoot your battleship – it irritates the Captain so she attacks you. Having to kill a Vonari Cruiser at each and every waypoint. Missile management. Fighting in an area that is mainly taken up by two huge Battleships, both so busy thrashing each other that any ship caught in between is like meat in a mincer. Things like that.

Well, I was having trouble figuring this War Zone out. It is after all the 'crème de la crème' of war zones. Difficult and fun. **Busch**, a veteran pilot, appeared like a Guardian Angel. **Lesson 1:** take your Guardian Angels with you – MP in a team is great fun, a real learning experience and a rapid way to advance!

My final real noob mistake . . . Busch had a 5 waypoint / 35 hostiles mission available. I said, confident, calm, cocky(?) "Take it!" He laughed and said, "Well, alright." I said, "Jumping" . . . and jumped straight into the carrier's protective screen. **Lesson 2:** The protective screen at carrier's hangar entrance are much tougher than your ship. I died. I respawned. I exited the carrier and then jumped. My red face faded to a normal combat pasty white in the heat of the battle I joined – too much to do staying alive to worry about being an idiot! Instant Karma! 😊

(Editor: We've all been there – done that!)

You may not believe it but with experience you can get into 'the zone'. It feels like a symphony of awesomeness. Like painting a picture of destruction. Everything clicks, everything works. No pilot error and a team that you can trust unwaveringly. Awesome

A final thought. Newtonian Physics is what really sets this game apart from others I have played in. The ability to drift in complete silence, in the heat of battle, and then erupt into a full cannon blazing death march. The ability to rapidly orbit a Battleship to gain position on a target and then wipe out his wingman on the way . . . amazing.

If you are confident in your skills, you feel you have learned enough and are bored in your current War Zone . . . grab a wingman/join a team and head to Arvoch.

(**Editor:** If you're just starting out, try Talison Conflict instead. No Vonari cap ships unless you seek them out. Being part of a team is still recommended though!)

Spoiler Spoiler Spoiler

A few tactics from watching the veterans or from hours in the cockpit.

All of these manoeuvres are done in a Chimera IDS x5, speed 1400.

All of these tactics aim to kill an enemy as quickly as possible.

Warning: allowing the hostiles to 'set you up' is a guaranteed way to die. Same as jumping into a planet, star or asteroid!

1: **The Sweet Spot** - When fighting a Vonari-C (Battleship) just approach its center and fly as far into it as you can with full power to your shields and park on its "Core" then start shooting. Slowly adjust the power to full guns and when it is down to 20% hull, hit it with an Excalibur pack. **Dead! (It not you!)**

There is one problem with this approach. You must kill, as they say, 'all the Fleas'. Leave no fighters alive or you are exposed and **will** die. The battleship cannot fire on you when you find the "sweet spot" but if a fighter attacks you then the battleship can too. The fighters seem to send your coordinates to the battleship.

Do not fly into the engines of the ship at a speed greater than 2700 - you blow up just like a collision with a carrier door or a constructor station exit.

2: **The Bait Drift** - When outnumbered 5+ bait them into a chase. Do this by flying right at the furthest opponent (power to full shields) at no less than 2500. When it is within 1500 distance apply full reverse thrust but don't turn around until your speed is +500 even when he blows by you. Hit Inertial and turn around.

You are set up perfectly within 1500 distance of all enemy ships and travelling at a speed that keeps your distance constant. Slowly use inertial forward and left/right strafe to line up on the nearest outside target and eliminate it. Keep a sharp eye out for missiles. **If for any reason you take damage from more than one ship** . . . full reverse thrust for 5 seconds.

You can eliminate all hostiles with this method but it does take a lot of patience and can get really boring . . . fast! This brings us to our next tactic.

3: **Herding Cattle** – Use this when outnumbered 5 to 1 or less and in a "Bait Drift" (this is gonna sound crazy and requires some practice but . . .

Full thrust right at them while holding right strafe - you will strafe a little forward and hard to the right. You can maintain a tight circle around your opponents where 90% of their missiles miss and they cannot keep up on the turn. Set shield/weapons to +3/+2 and just rain down pain while feathering your circle. You should be able to kill every one of them this way **but** this also gets boring so . . .

4: **The Rope-a-Dope** When outnumbered 3 to 1 or less fly straight at the pack and fire on the closest target until all ships are moving away Then chase one until it runs at least 500 away then turn and fire on his buddy who **will** have been suckered into chasing you. Kill him while flying in IDS and slowly gaining on him. You now have two choices; attack the third ship until it runs **or** turn around and kill the one you wounded (it will be coming back) Either choice is good but requires situational awareness. This tactic also works well when trying to escape. Rapidly switch targets constantly firing until they run then just full burn towards your "cursor heading" or the blue indicator on your HUD. This will allow you to force them into a chase formation so you can start a **Bait Drift** again.

There you go! It makes combat sound easy but (and there's always a but!) . . . All of these tactics require **situational awareness** - without it you **will** die. The more gung-ho you are the more damage you will take until you can manage to control the hostile's distance.

One thing is set in stone; **you chase them, they run**. OK, every now and then you get the suicide jockey that will not quit, but again situational awareness is your life line.

more **Rooster** advice: I don't chase anymore. I herd. I still forget about adjusting my shield/weapons power. I think I should remap them to a more accessible key binding. Something close so I don't have to let off the strafe or thrust/reverse thrust keys. The mouse wheel would be optimal.

(**Editor:** I've mapped mine onto a stick throttle slider that's just under my thumb)

I love the Chimera. It is the perfect training ship. It has enough of everything. Enough shields, energy, speed, and turning radius for a new pilot like myself to make some mistakes and still recover and finish the mission.

(**Editor:** can't disagree – it's loses out on agility and top speed but with IDS 5x speed isn't a problem It's also top hard ass and can take a load of damage. Fit a cannon combo that doesn't bleed energy too quickly and has a reasonable range and you'll still be toast against good human pilots but can take on multiple AI's. Still, when you've got the rank to unlock a Chimera (Commander) you've got a decent amount of experience under your belt anyway!)

If there are just 4 enemy ships left I can take them head on but anything above that and it is the inertial reverse dance. One at a time and lots of shooting down missiles and watching my range until the odds are more in my favor. It takes forever but is very effective and by far the safest way I know how to even the playing field.

Busch: Practicing and polishing tactics, maintaining (or striving to) situational awareness, and knowing the strengths and limitations of one's equipment can really help advance one's 'military career', here in the Everse.

Wingmen, especially in co-ops, can make the difference between 'life' or 'death'. A lesson hard learned is one that'll stick. The 'principle pilot' (insert: the one who accepts the mission) can order the AI Navy. But Once you gain Commodore rank or better you can order navy pilots in war zones in support or in lieu of, the principle pilot. Kind of makes 'things' a little less difficult, should you be the sole human pilot in the fur ball. Use these AI Navy wingmen as your 'bait', then back them up. See what happens . . .

Combat Advice for Newbies II - Equipment

There are as many opinions as there are pilots about the 'best' loadout of equipment to carry. However there is a consensus about certain must have gear. The rest comes down to your choice and style of play and what you are doing at any given time. It's easy to swap equipment so experiment and enjoy!

Part I – Core Offensive and Defensive Equipment

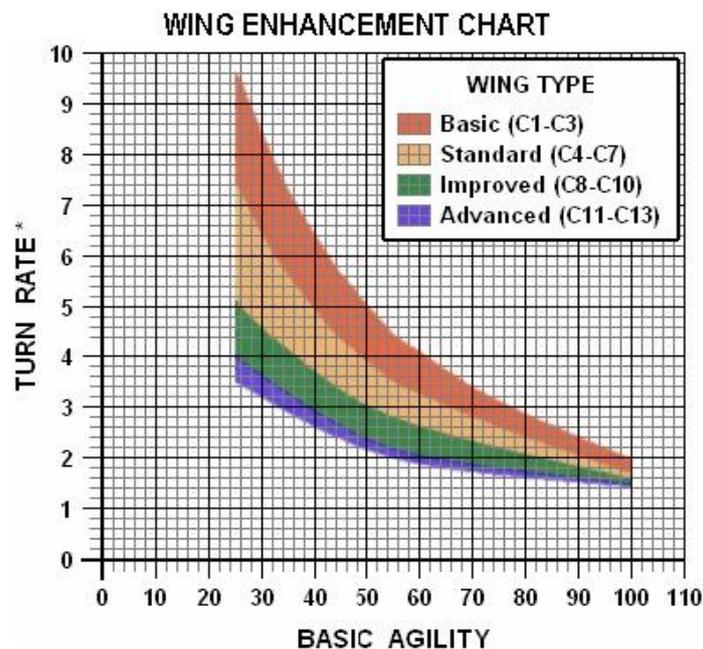
These are the vital ones for combat! **Editor: You will of course have a *Mining/Tractor Beam* fitted as the very first piece of equipment you buy – before you even leave the station for the very first time!**

i: Get a *Repair System* (C3 – the best – as soon as you can). Repair Devices automatically repair subsystem and hull damage in-flight. Installing one of these means you don't have to dock and pay for repairs. Subsystem damage can be repaired fairly quickly, but hull damage takes a long time to repair. Class 1, 2 and 3 devices are available, with increasing speed of repairs. Military ships are rumoured to be fitted with even higher classes.

Get comfortable with using your inertial thrusters when your afterburner stops working due to damage. That way you can survive long enough to let the repair system do its work.

iii: Use the highest class *Shield Boosters* that you have encountered. Shield Boosters are the power storage part of the shield system. You must have at least a x1 booster for the other shield enhancers to work! At an early stage you should have at least a x3 or a x4. Get a x5 shield booster asap.

iv: Subject to the assembly points of your frame, build in the biggest *Shield Class* (Class 10) and a reasonable *Wing System*. They don't cost you equipment slots! There is a graph of the effect of wing systems on turning rate - note that there is a law of diminishing returns!



* Turn Rate indicates the length of time, in seconds, for the ship to complete a 180° turn.

Depending on the ship's basic agility rating, an upgrade to the wing will enhance, more or less, the ship's turn rate.

v: An **afterburner** is fitted to your ship as standard and doesn't use up an equipment slot - use it to reverse course really quickly

vi: Learn to use **Countermeasures (CMs)**. These don't use up equipment slots but they do cost assembly points. Carry at least one pack (25). They are cheap to renew (free with fuel!) so don't be stingy at the start. The right time to launch is when the missile warning range indicator is red with just a little bit of bar left. It takes a while to get the hang of it but when you get good at it you can reliably dispatch a missile with 1 CM in most circumstances.

vii: There are two items - the that will increase the amount of firepower your cannon can pump out;

- The **Cannon Heatsink** helps keep primary particle cannons cooler during their firing cycles, allowing them to fire at significantly faster rates.
- The **Cannon Relay System** doubles the energy capacity of your primary weapon system and adds two additional gun barrels to an installed particle cannon. It works by storing extra power in a network of capacitors between firing cycles, supplying sufficient energy for firing both sets of barrels per cycle.

Part II – Other Offensive and Defensive Equipment Options.

Shield Packs are one shot energy boosts and are fitted to your weapon hardpoints. They provide a significant charge boost for a ship's shield system. They raise arrays power levels by about 50% so don't use them too soon! A shield array reduced to 50% would be boosted to 75% using one shield pack and to 100% using two shield packs consecutively.

There are two types of **Stealth Equipment**. The one shot, short life unit (fitted to your weapon hardpoints) and the much more expensive permanent reusable unit which is fitted in an equipment slot. They are also **very** difficult to find on sale. They work in the same way. You can do 'scan capital ship' contracts without firing a shot, though!

What's the difference between an Auto CM Launcher & an Antimissile System?

The **Anti-Missile System** is a semi-effective beam weapon that targets an inbound missile as it approaches your ship. It fires an (invisible) beam of X-ray frequency laser (coherent) energy at the missile to heat it up and cause it to explode before it reaches its target. Since the system is automated it doesn't emit need to emit any visible light that could act as a tracer and an aid to manual sighting.

The **Automatic CM Launcher** does exactly what the name implies. It will begin launching CM's as soon as a missile approaches effective countermeasure range.

So the difference is that an ACML drops CMs automatically while an AMS shoots them down. Some people love these systems, some hate them:

Here's the Pro's and Con's:

	Pro's	Con's
AMS	<ul style="list-style-type: none"> • awesome equipment! • It works automatically and doesn't run out of firepower!" 	<ul style="list-style-type: none"> • heavily reliant on your positioning and speed - two factors that you may not always have great control of in the heat of battle
ACML	<ul style="list-style-type: none"> • great if you aren't good at or comfortable with your CM skills 	<ul style="list-style-type: none"> • because you don't know the ACML in action you continue to use your afterburner - the missiles will lock onto your engines and ignore the CM's • doesn't have a "low CM" warning to tell you to high tail it back to the nearest station before you run out. • can use up a lot of them quickly and If you don't carry a 3 or 4 packs you can run out – without warning

Part III - Weapons

What does a "Kinetic" weapon do?

Basically, it knocks your opponent around so hard he can't aim. There are kinetic cannon and kinetic missiles available

Which cannon are best?

Long range? Bit hitters? Economical with energy? More rapid fire? Kinetc?

Vice: The idea of 'valuable' is subjective. What is important to you may not be to someone else, and various gameplay design attributes can reflect this difference of opinion among the players. A number of them have requested certain attributes be unique to certain types of weapons, range and yield being two of those. Rather than having everything scale up to be 'super ship', 'super weapon', and 'super equipment' that every player eventually winds up with, many in-game elements offer unique benefits over the others in an effort to help balance gameplay and the results of putting players with varying configurations of ships, weapons, and equipment together and still have a reasonable level of fair gameplay (and with weapons, this obviously relates specifically to combat).

With that said though, the unique attributes of certain weapon types will provide benefits that can be best exploited in certain situations. For example, if you want a high flash/yield weapon that burns out quicker (ie shorter range), you can create or buy one and use it for close range strike attack missions on bigger targets (ie capital ships) that a longer range, slower burning, lower yield weapon might not be so good at inflicting as much damage with, especially when combined with other weapon types and equipment that those weapons work best with.

The point is, there are conditions that are integrated into the design that attempt to limit the 'super ship' concern a number of players expressed over the years. There are particular combinations that are optimal for combat, exploration, resource recovery, and trade, but the varied benefit templates items offer are, at least in part, designed to facilitate some balance and unique configuration benefits that **don't eliminate others**.

(Editor: I think that says it all!)

Summary: Setting up your ship for combat and getting started

You can't hope to win a fight without sorting it! Think weapons - defence - ship

- A **frame you're comfortable with**. Everyone has a slightly different preference as far as this is concerned, but a medium-sized hull should do nicely
- A **cannon relay system**. This one doubles your energy banks, and improves the rate of fire. It's a no-brainer choice when it comes to killing things
- (if possible) a **cannon heatsink**
- A **Repair Unit** as it slowly repairs damage you have suffered, and quite rapidly fixes subsystem damage. (**Class 3**; accept no substitutes. If it isn't in stock, build your own at one of the constructor stations)
- A **shield booster (Class 5, preferably)**. Think of it as a battery you can draw from while you restore your shield facings.

That's four or five of your equipment slots! (I'm assuming you've also fitted the **Mining/Tractor beam**)

Next, optimize your craft for combat. You **won't** need

- excessive amounts of fuel - 800 units are usually plenty for a single combat, especially on the smaller frames.
- cargo space - cargo bays are nice, but they don't improve combat prowess.
- crew space - so out with them! A science officer or navigator don't improve your fighting ability, but they take away 2 slots which could be used for more equipment or more missiles. A weapons officer is nice, but not absolutely necessary, and the same goes for the engineer.

Invest the assembly points you have freed up into shields (Class 7 is a good starting point) and engines, as speed is life. Along with a decent set of wings you'll have a much easier time manoeuvring, and the stronger shields mean you can make an extra mistake or two.

Make sure your ship has enough countermeasures. 100 is nice, 50 will do in a pinch, 25 will only last you for the shortest of engagements. 0 is suicidal. Also, stock up on missiles. The warzone stations usually offer a nice selection, and are relatively safe to reach.

Pick a mission with a manageable number of opponents (3 or 4 is a good start) and **NO** capital ships (those are hard to kill, doubly so when their fighter escorts breathe down your neck). When you feel overwhelmed because the hostiles' buddies keep jumping in, just remember that you only have to kill the number specified in the contract - not all of them!

Military rank allows you to get better military frames that are better than the equivalent civilian frames for combat. You only raise your military rank by doing contracts in Military warzone (Talisson Conflict and Sierra, Cerulean and Arvoch Warzones (the latter is near Pearl))

Weapon Lab - design your own customised weapons

There has been for more than a century a virtual armament build and supply monopoly with one major manufacturer in the Alliance and one in the Federation. Although they each supply specialised weapons to their respective Navies they agreed many years ago to produce and sell a standard set of cannon and missiles to the mercenary market. This led to a significant reduction in R&D and manufacturing costs and, like the "GorfBurger"™ empire, allows mercenaries to buy a uniform product across the whole of Evochron!

The Navy has the opportunity to specify cannon and missile parameters and characteristics to allow them to produce load-outs for specific combat environments. For many years mercenaries have been clamouring for the opportunity to buy customised weapons as well.

Every ready to take up an economic opportunity, Sapphire Industries recently negotiated a licensing deal with the "Big Two" manufacturers to fit a limited version of their weapons design and manufacturing system to every trade station in Evochron. The result is the "Weapon Lab"!

Enter any trade station and you are now presented with a new option along with the shipyard - the WL. The weapon lab lets you design and build custom weapons from raw materials for a small fee. The weapons you design will require a certain number of different materials to construct and you must have those materials in your ship's cargo bay or in the local station's hangar. If you don't have the required materials, you will need to either buy them or mine them. The weapon lab will also let you save your designs as templates, so you can later retrieve exact specifications to rebuild weapons you've designed and saved earlier.

You can design and build three different types of weapons: particle cannons, beam cannons, and missiles. Each type is divided into separate classes.

Particle cannons have Plasma Particle, Metal Projectile, Rail, and Fusion classes to choose from.

Beam cannons have Refractor, Metal-Vapor, Coil, Neodymium, and Fusion lasers to choose from.

Missiles are divided into Impact, Reactive, Fragmentation, Shaped Charge, and Compound Core classes.

Each class has unique default attributes that may have advantages and/or disadvantages compared to other classes. For example, a Fusion cannon may provide a much higher default yield than a Plasma cannon, but at a significantly slower firing rate. The Weapon Lab menu offers slider bars in the upper part of the console display that let you adjust different parameters of a weapon's design. With cannons for example, you can adjust settings to trade off yield for a faster firing rate and vice versa. For missiles, you can exchange speed and range for a more powerful detonation. If you build a design and decide you want to try something else, you can sell the weapon at most location to recover some of the cost. Custom weapons generally don't carry a high value and are not a recommended item for trading, but they can provide an important functional benefit for your ship in combat.

Each type of weapons has different input parameters that can be fine-tuned. Each class of weapon within the types has the same input parameters. Each type of weapon has output parameters that control the performance of the weapon being designed.

The table below summarises this.

	Input Parameters	Output Parameters
Type: Particle Cannon		
classes: <ul style="list-style-type: none"> • plasma • metal projectile • rail cannon • fusion 	<ul style="list-style-type: none"> • emitter output • actuator speed • capacitor reserve • heatsinks 	<ul style="list-style-type: none"> • yield • heat • energy • range • rate of fire
Type: Beam (Laser) Cannon		
classes: <ul style="list-style-type: none"> • refractor • metal vapour • coil • neodymium • fusion 	<ul style="list-style-type: none"> • emitter output • capacitor reserve • heatsinks 	<ul style="list-style-type: none"> • yield • heat • energy
Type: Missiles		
classes: <ul style="list-style-type: none"> • impact • reactive • fragmentation • shaped charge • compound core 	<ul style="list-style-type: none"> • detonator capacity • thruster power • guidance system • casing armour 	<ul style="list-style-type: none"> • yield • agility/speed • range • cm resistance

The following sections begin by describing the standard weapons in each class that has been available for many years and then follows with details relevant to the additions available via the Weapon Lab. This in turn is followed by information on how to use the Weapon Lab

Raw Materials needed in the Weapon Lab

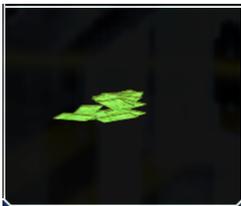
Each type and class of weapon that you want to create in the Weapon Lab requires you to provide certain raw materials. These can be in your cargo bays or stored in a hangar.

Source: SeeJay

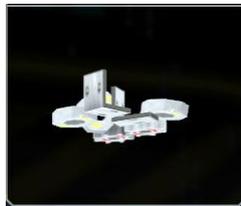
WEAPON	ELECTRICAL	METALS	MACHINERY	FUSION
Plasma Cannon	10	13	7	1
Metal Projectile Cannon	15	16	12	2
Rail Cannon	20	19	17	3
Fusion Cannon	25	22	22	4

Refractor Beam	5	6	3	1
Metal Vapour Beam	7	8	6	2
Coil Beam	10	9	8	3
Neodymium Beam	12	11	11	4
Fusion Beam	15	12	13	6

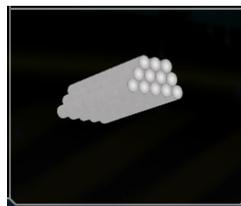
Impact Missile	1	2	2	-
Reactive Missile	2	3	3	-
Fragmentation Missile	2	4	3	-
Shaped Core Missile	3	5	4	-
Compound Core Missile	3	6	4	-



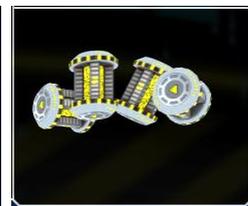
electrical parts



machine parts



metal alloys



fusion units

Using the Weapon Lab

When you enter the WL you are presented with a design screen beginning with the Particle cannon. You can change type and change class - once you have reached your chosen screen you can begin to experiment with the effects of the input parameters

For *cannon*:

Emitter Output determines how much energy is imparted to each round and hence yield
Actuator Speed determines the rate that which energy is fed into the cannon and hence influences the rate of fire

Capacitor Reserve allows a greater store of immediately available energy and hence influences yield and range

Heatsinks are required to help dissipate the heat generated as the weapon is fired and hence prolong the overall firing time

You will find that each input parameter has multiple effects, trading off one improvement for another or increasing the "costs" in terms of energy or heat production

The screenshot displays the 'WEAPON LAB' interface, divided into 'WEAPON CONFIGURATION OPTIONS' and 'WEAPON PERFORMANCE SPECIFICATIONS'.

WEAPON CONFIGURATION OPTIONS:

- WEAPON TYPE: PARTICLE CANNON (CHANGE TYPE)
- WEAPON CLASS: PLASMA PARTICLE (CHANGE CLASS)
- EMITTER OUTPUT: 20
- ACTUATOR SPEED: 81
- CAPACITOR RESERVE: 43
- HEATSINKS: 76

REQUIRED MATERIAL:

- ELECTRICAL UNITS X 10
- METAL UNITS X 13
- MACHINERY UNITS X 7
- FUSION UNITS X 1

CARGO BAY:

HANGAR CONTENTS:

WEAPON PERFORMANCE SPECIFICATIONS:

Parameter	Value
YIELD:	30 Y
HEAT:	94 H/S
ENERGY:	12 E/S
RANGE:	610 M
RATE:	425 RPM

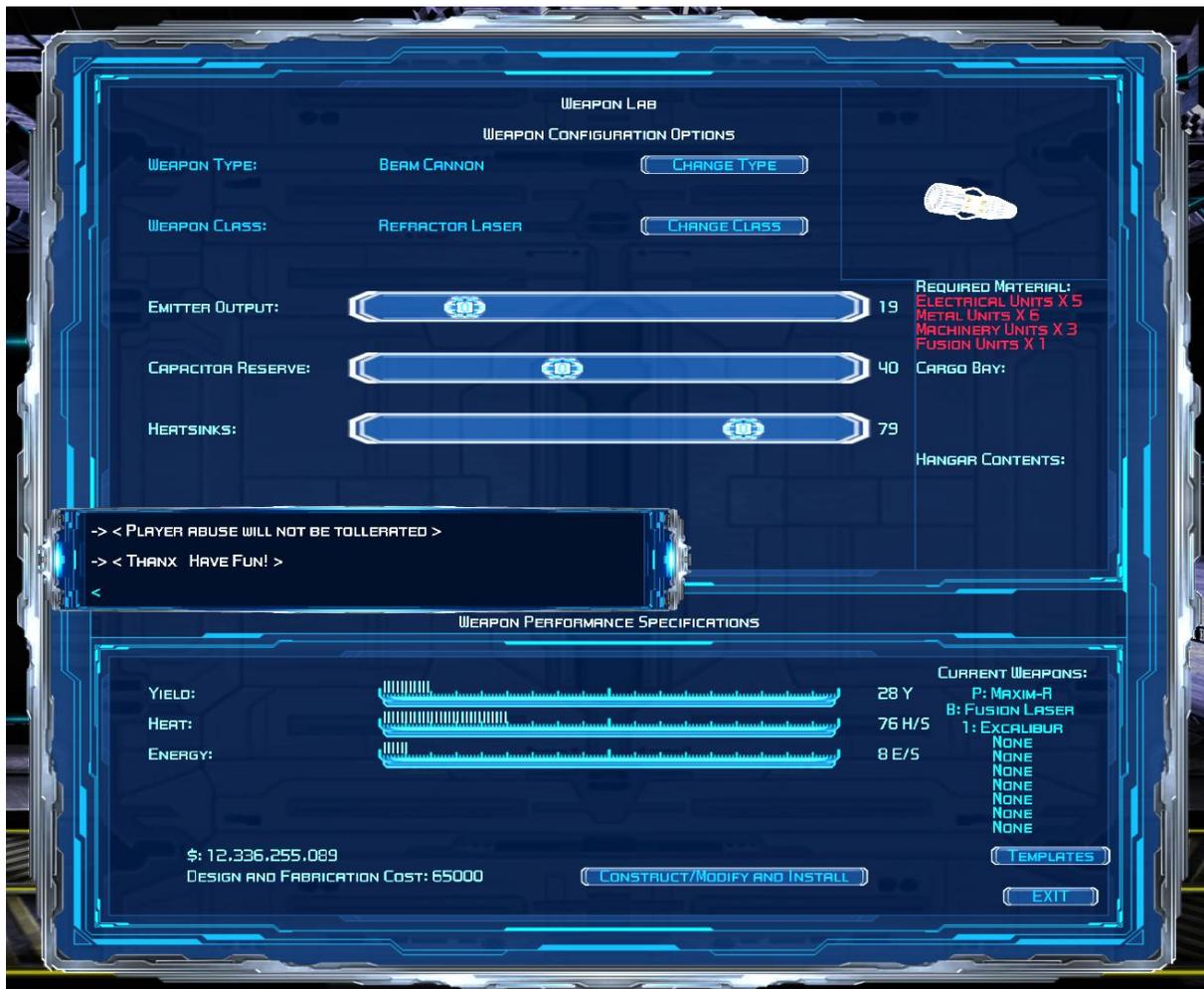
CURRENT WEAPONS:

- P: MAXIM-R
- B: FUSION LASER
- 1: EXCALIBUR
- NONE
- NONE
- NONE
- NONE
- NONE
- NONE

Costs:

- \$: 12,336,255,089
- DESIGN AND FABRICATION COST: 65000

Buttons: CONSTRUCT/MODIFY AND INSTALL, TEMPLATES, EXIT



The characteristics of the cannon you create are pretty much self evident;

Yield determines the damage inflicted per round that hits

Heat production is undesirable as it reduces the time the cannon can fire for. Once the cannon reaches a temperature where damage could occur the AI system shuts it off until it cools enough to fire again - this results in a greatly reduced rate of fire

Energy measures the rate at which your ship's weapon energy supplies are depleted

Range and **Rate of Fire** are self evident

For *missiles*:

Detonator Capacity is self evident - it determines the explosive yield of your missile

Thruster Power influences agility and speed

Perhaps surprisingly it is the **Guidance System** installed that influences the range

The **Casing Armour** determines the CM resistance of the missile



The characteristics of the missile you create are pretty much self evident;

Yield determines the damage inflicted by the warhead

Agility and Speed allow the missile to stay locked on to the target and to reach it quickly before it can respond with cannon fire and CM's

Range is self evident

CM Resistance reduces the chances of the missiles being destroyed by the energy emitted by CM flares

The information offered above is summarised in the Table below

The Weapon Lab is simple to use but complex to analyse. To get you started the following table (Source DaveK) gives an overview of the effect of the various input sliders

Data to maximise output parameters

Particle Cannon	Emitter Output	Actuator Speed	Capacitor Reserve	Heatsinks
Yield	max+	min+	max+	max
Energy	max	N/A	max	N/A
Range	N/A	N/A	max+	N/A
rate	min	max+	min	max+

Beam Cannon	Emitter Output	Capacitor Reserve	Heatsinks
Yield	max	max	N/A
Energy	max	max	N/A

Missiles	Detonator Capacity	Thruster Power	Guidance System	Casing Armour
Yield	max+	min	max+	min+
Agility / Speed	min+	max+	max+	N/A
Range	N/A	N/A	max+	N/A
CM Resistance	max	min+	max	max

"N/A" means the parameter has no effect

"+" means the parameter has a big effect

SeeJay has created a comprehensive spreadsheet of the effect of each slider at 10% intervals on every type and class of weapon! See <http://evochron.junholt.se/menus/downloads.htm>

The raw data can be processed as you wish in the spreadsheet and it is easy to generate graphs in a variety of formats to analyse the data in ways that will help you! The following pages specify some basic data for the effect of the sliders in graphical form to show how much easier it is to understand the data: Which is easier to interpret?

Cannon Weapons
(Source: Marvin)

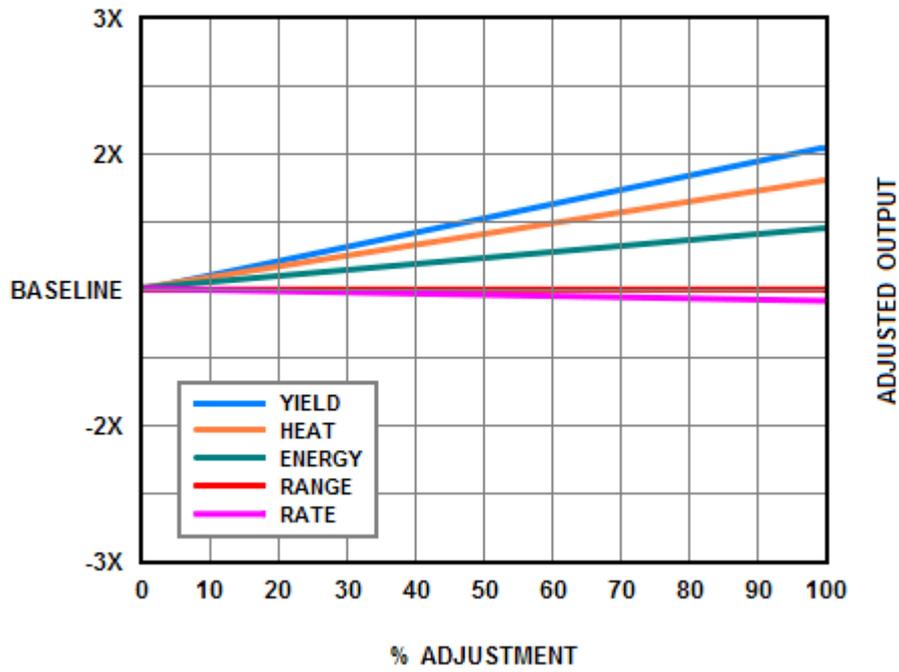
Effects of particle weapons with emitter output, actuator speed, capacitor reserve and heatsinks all set to maximum (100%):

	Rail	Fusion	Plasma	Metal
Yield	148	157	130	139
Heat	172	176	164	168
Energy	21	31	16	17
Range	796	808	772	784
Rate	110	107	115	112

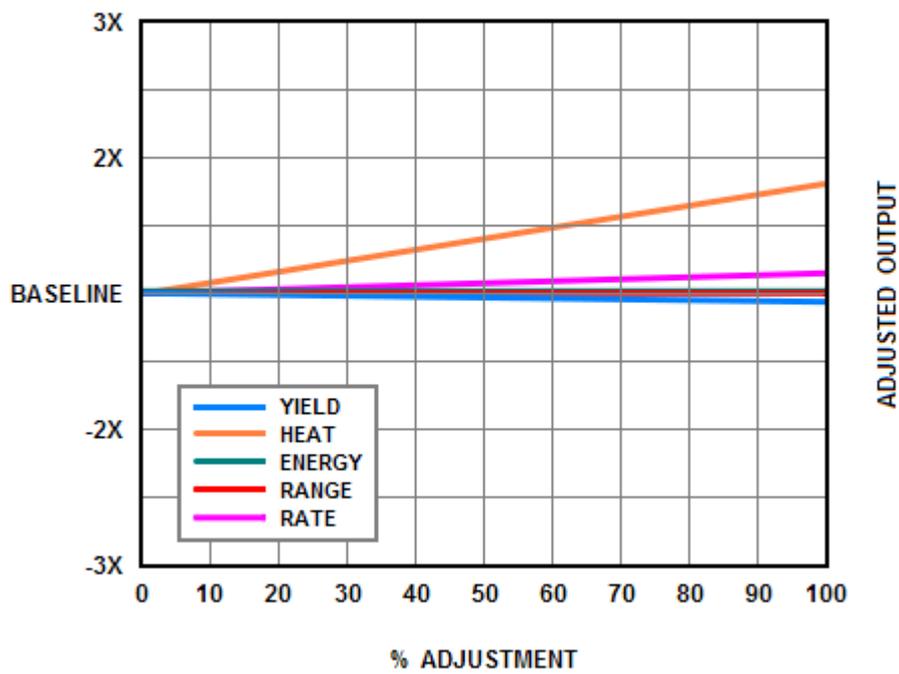
Using the Rail Cannon as a base line, adjustments were made, in ten degree increments, to each of the following functions while the other three functions remained set to zero percent. Changes in Rail Cannon performance were as indicated below.

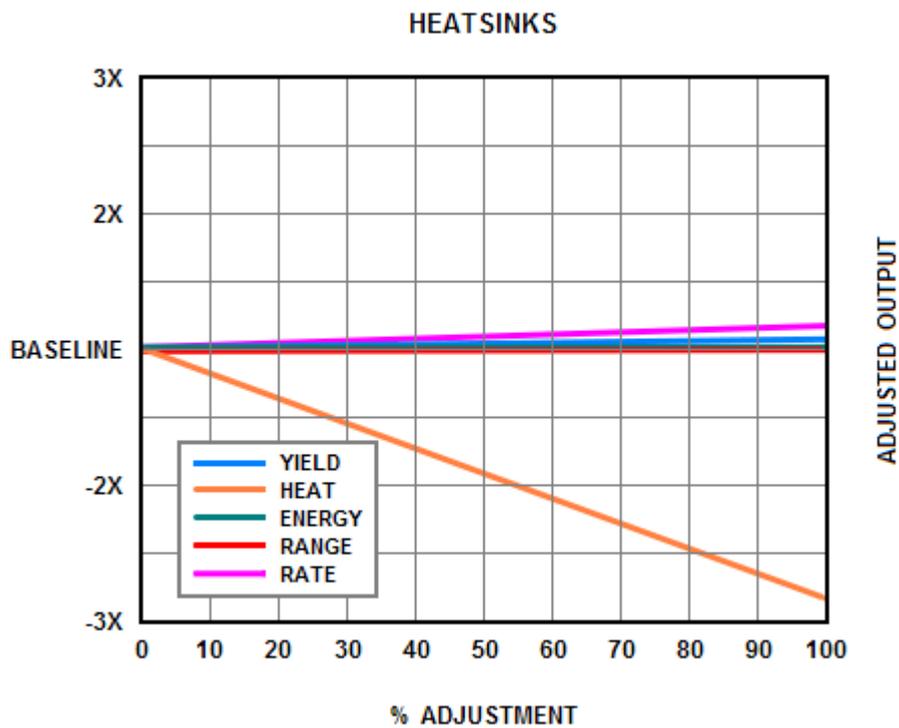
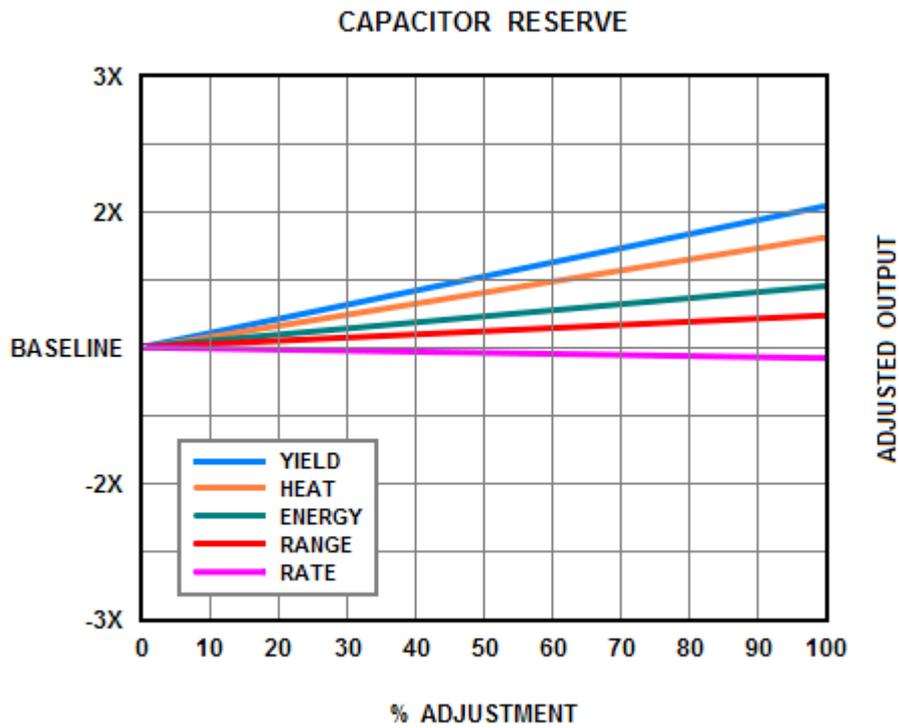
Emitter	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Yield	49	55	60	65	69	74	80	85	89	94	100
Heat	62	66	72	76	82	86	92	96	102	106	112
Energy	11	11	12	12	13	13	14	14	15	15	16
Range	646	646	646	646	646	646	646	646	646	646	646
Rate	92	91	91	90	89	88	88	87	86	86	85
Actuator											
Yield	49	49	49	49	47	47	47	47	46	46	46
Heat	62	66	72	76	82	86	92	96	102	106	112
Energy	11	11	11	11	11	11	11	11	11	11	11
Range	646	646	646	646	646	646	646	646	646	646	646
Rate	92	93	95	96	98	99	100	102	103	105	106
Capacitor											
Yield	49	55	60	65	69	74	80	85	89	94	100
Heat	62	66	72	76	82	86	92	96	102	106	112
Energy	11	11	12	12	13	13	14	14	15	15	16
Range	646	661	676	691	706	721	736	751	766	781	796
Rate	92	91	91	90	89	88	88	87	86	86	85
Heatsink											
Yield	49	51	51	51	51	51	53	53	53	53	53
Heat	62	58	54	50	46	42	38	34	30	26	22
Energy	11	11	11	11	11	11	11	11	11	11	11
Range	646	646	646	646	646	646	646	646	646	646	646
Rate	92	93	95	97	98	100	102	104	105	107	109

EMITTER OUTPUT



ACTUATOR SPEED





In reality there isn't a simple recipe to produce the "best" cannon or the "best" missile. It will inevitably depend on your view, your combat technique and your particular missions. The only way to create your "perfect" weapon is to experiment!

Configuring A Weapon

Source: Marvin:

1. Trade Station Or City - DOCK OR ENTER CITY
2. "Weapon Lab" Button - SELECT
3. "Change Type" Button - PRESS TO CYCLE WEAPON TYPE
4. "Change Class" Button - PRESS TO CYCLE WEAPON CLASS

Note: When initially selecting a weapon, the settings will reflect that weapon's default capabilities.

5. Required Material - CHECK
 - a. Electrical Units - AS REQUIRED
 - b. Metal Units - AS REQUIRED
 - c. Machinery Units - AS REQUIRED
 - d. Fusion Units - AS REQUIRED

Note: Required material can either be stored in the ship's cargo bay and/or stored aboard the trade station. For each individual item, the configuration menu will only take into account material which is available in one location. For like-items divided between the cargo bay and storage, combine the two into a stack of sufficient quantity.

6. Cargo Bay Or Equipment/Weapons Slot - EMPTY
7. Sliders - ADJUST AS DESIRED
8. Weapon Performance Indicators - CHECK
9. "Construct/Modify And Install" Button - PRESS TO CONFIGURE
10. "Templates" Button - PRESS TO SAVE DESIGN
11. "Exit" Button - PRESS WHEN DONE

Combat Advice for Newbies III – Tactics

Tactical advice is given for
all situations (all)
space contracts (SSC - combat against NPC)
pVp (combat against other players)
atmospheric combat contracts (ACC - combat against NPC)

The advice is colour coded and tagged (ACC) - (SCC) - (pVp) - (All)

The first section applies to all situations. (All)

Try to take your enemy one at a time.

Shoot down missiles. If that fails evade and/or use CM's

Avoid flying directly at your target as that just makes you an easier target for your opponent and gives you less time to react if they fire a missile at you. You end up 'jousting' with them

Micro jumping can be an incredibly useful tactic for getting your enemies to scatter. Keep in mind, however, that if you do this in SP with AI wingmen, your wingmen will spend more time orienting themselves after the jump than they will fighting. You must set up a jump point very close by first and you must have full energy before you can jump - so you can't jump out if you are under attack and being hit! (See The Picard Manoeuvre below)

In most cases in this game (and in real life) the biggest thing for a missile to lock onto is heat. The biggest heat generator in the game will be your afterburners. Next to that your IDS. Next to that any of your weapon systems. However don't let that fool you into thinking if you go a drift and have nothing firing that missiles won't lock onto you cause they most certainly will. They'll simply switch to the next "grab" which could be your movement based off common radar. **So, in combat if you have IDS on and/or you are burning your afterburners you can launch as many CM's as you want chances are it will do very little to deter missiles** because your secondary bull's-eye that you're throwing out (aka CM) is nowhere near as bright as the nice red hot engines from your ship - Remember: reduce/eliminate heat signature by using Inertial mode, and having thrusters / afterburner off as much as possible.

Aim for the weapon system of your target - fighting with an enemy you just disarmed is easier. Pressing "U" cycles between three possible systems that you can target on an enemy ship: weapons, navigation and engines. This applies to any ship, red, yellow or green, capital or non-capital. You can target these subsystems on any ship you want to shoot

If you find yourself running short on energy, switch to particle cannon-only mode - that way you'll get more shots out of your gun. Although the following stats were measured in the original game, the principle holds true in the Expansion

(B=beam weapon; P=particle cannon; all times in seconds for weapons energy to be depleted;
(x/x (e.g.5/-5) = energy balance between shields and weapons)

		-5/5	0/0	5/-5
IceSpear (C2)	B+P	10	7	5
	P only	Infinite	25	12
Phantom (C15)	B+P	11	8	6
	P only	52	15	9

(All) Learn to use the different fire modes. Dedicated buttons for particle, beam and combined cannon are better but for AI dedicated buttons or cycling the weapons mode are both fine.

The second section applies to specific situations.

(SCC) Make the AI waste missiles. While you are getting the hang of keeping your velocity up you will find you spend most of your time heading away from the AI because they chase you. AI are much better at following you so flying away backwards isn't effective any more - but they do have some issues if you are travelling vertically up or down. Use the manoeuvring techniques outlined below to face your pursuers whilst moving upwards (or downwards). They will keep firing missiles at you even though they have no chance of hitting unless you slow your velocity drastically. The AI don't have infinite missiles so anything they waste like this can help tone down the missile craziness when you make a pass. Start trying to get a rhythm where you are using this time to recharge your weapons. The technique isn't as easy as when you could just head backwards - practice, practice and then practice again!

(SCC) Abuse the afterburners. Except for multi waypoint patrol contracts even the small fuel tanks have enough to hold down the afterburner almost constantly without running out during a fight. Try to practice not letting your velocity drop too much while using afterburners. You are really vulnerable up to 1000 m/s. If you are going backwards and you afterburn to reverse direction you need to keep lateral and vertical velocity up (or be at a decent range) to avoid having a window of a few seconds when the AI missiles and guns have an easy time hitting you.

The third section applies to missiles.

Are Excalibur Missile Packs the "bees' knees"?

Pro's	Con's
<ul style="list-style-type: none"> they are regenerating – after 3 minutes you have your 8 missiles back again if your target is destroyed by the first few missiles, the rest go hunting for another target – they don't have FoF ID software! great for an explorer or peaceful trader since you will always have missiles – you can distract your opponent while you slip away 	<ul style="list-style-type: none"> 3 minutes = 180 seconds is an eternity in combat even if all 8 hit they don't do very much damage (Yield = 800/missile) they take up 8 hardpoints (the max any frame has); frames with less than 8 can't hold an Excal pack

A discussion about the Excalibur between two pilots plus Vice's contribution!

So far I've used a wingman only once, just out of curiosity. The poor guy didn't last long: He was killed by my own Excalibur missiles (at this time I wasn't aware that if your enemy is down before all 8 Excals are used up the rest would go to the next target, no matter if friend or foe). This can of course also happen with other allies, so you should be careful with Excals if allies are near by.

Really?? That make them useless as far as I'm concerned.

Useless? Not at all! I love this really cheap killing machine and I also love the challenge of the responsibility for the when and where to fire them. But in a way you are right: There are places where I almost entirely refrain from using Excalibur missiles. But you can always put them into your cargo bay and swap some Exodus in. Most of the time I'm just too stingy for that.

Vice: Yes, that's exactly what they are designed to do, require careful application for a given situation. They are a weapon that carries risk and should generally only be used in scenarios against multiple hostile targets as a fighter suppression weapon.

This game provides a unique tactical element with missiles, namely the ability to control them in flight. With the additional capability and control comes some additional responsibility and risk, particularly with certain weapons.

In many games, if you fire a missile, your decision has been made, your control is over, and you're done in terms of directing the weapon fire. If your target is destroyed before your missile reaches it, the missile itself is done and it effectively becomes *useless*. It will then usually either explode immediately or fly around aimlessly for a while and explode later.

In this game, the missile is still live and still under your control. It remains linked to your targeting computer and you can direct it to a new target while still in flight. Your targeting computer will default to the next nearest hostile in the area automatically. But you need to remain aware of what you are tracking to avoid friendly fire scenarios. Missiles in general are often best suited to multiple hostile situations, so their damage can be maximized and risk minimized. If you get caught in a situation where a missile is tracking a ship you don't want it to track, then you may need to cycle through targets to avoid hitting anything until it explodes. Target one at far range to give the missile time to self-detonate before it impacts anything.

In general, if you're fighting only one hostile, you really shouldn't be using (wasting) a missile anyway, especially not an Excalibur. You should be sticking with beam and particle cannons to attack with. Although if you have a low cost missile, it can come in handy to finish off a single target.

How can I avoid being hit by missiles? (SCC)

- in Inertial Mode, turn round and shoot the missiles down with your cannon - this is the best option if you aren't too "busy" at the time
- in Inertial Mode, turn your engines and afterburner off and when the missile warning indicator turns red and the warning klaxon's pitch changes launch a couple of CM's. If successful, the indicator should disappear, along with the warning sound. You don't have to spam countermeasures though, if you time them right you only need 1 per missile
- CM's don't work well when IDS is on or when your afterburners are on. When missiles are inbound try to use lateral AKA manoeuvring AKA strafing thrusters only.
- at 1800-2000 mps, on inertial, you'll usually zip right past enemy missiles (except those headed nose-on). Use your afterburner to reverse course
- outrun them if you don't want to fight (perhaps you're just "passing through")
- fit an Auto CM Launcher (ACML) and/or an Antimissile System (AMS) – see above for the pro's / con's discussion

The fourth section applies to capital ships.

How Can I Kill Cap Ships? (SCC)

Problem: Capital ships are defended by shields plus flak cannon (weak, lots of them) plus missiles (lots of them too). In contracts they also have fighter escort flying CAP. The Evoverse is divided into those pilots who will take a capital ship on and those who can't believe it's possible. The former all have their own success tactics

Solution: Read the following advice and join MP and try to get a practical less. Experiment!

Problem: There is a "sweet spot" under the ship where the cannon can't reach you and the missiles locks can't see you . . . but the fighters can so they give away your position to the missile crew and attack you themselves

Solution: take the fighter escort out first – but don't let the escorts drag you close to the cap ship where (because you'll be concentrating on the escorts) you can get blindsided by a hostile. If it happens eliminate the blinder first . . . then concentrate on the escorts afterward.

- Then just sit there and fire away (You can use your '*match speed with target*' facility to stay in place . . . or
- circle around the ship continuously within guns range. Missiles help as well but lasers/guns will do . . . or
- slowly strafe back and forth behind the engine targeting the engine
- It's a good idea to use a high class beam only until all shields are down, that way you'll have enough energy left for a lot of particles when they actually matter and once shields go down, launch your own missiles at target and hammer away with your particle cannon
- Note: **Rage** missiles that targets a ship's weapons system do work but the effect doesn't last very long and you need to make sure they are not intercepted by the CAP ships anti missile beams. Overall impact damage is relatively low, but the missile can critically damage a ship's weapon system.
- Things really are much easier if you can keep the navy CAP alive.

The following is a story that makes a very interesting tutorial – it would also make a great (YouTube) movie someday!

Evil in the Night – by PaulB

Ok, so I'm a bit of a glutton for punishment and don't know when to leave well alone. I kinda take after my old friend Marlowe. I'd been hopping around Talison Conflict trying to find a lone Vonari-C battleship to test some W. L. Inc. custom missiles to see what they could do against the *Big Bug*. I had eight of the compound core hitech gadgets from W. L. They assured me that 72Y, 2800R, 77 D/S is as good as it gets! Sounded like a lot of double-speak to me. I wasn't optimistic.

I ran across one of the *C Bugs* in a rather empty little sector just north of Eclipse. I came up from behind and within about 2300 I let all eight go into the *Bug's* Weapons Systems . . . it didn't seem to make a dent, as I rather expected. Being out of 'kick-ass' stuff I tried my gats when I got within range, taking out missiles and lighting up the *Bug's* shields - but that was all I was doing and his flak started pounding me. Well, one little ole me against a *Big Bug* and all my 'kick-ass' used up - and the old faithful Mammoth was beginning to take some damage - so I figured I'd better call it a day before it became the Big Sleep - for me. I think those boys in the Missile Department at W. L. Inc. are a little behind the times. But my gats from W. L. Inc. - they are Top Dog.

A few days later I picked up an Excal pack and thought I'd go trolling for *Big Bugs* again. This time took my Firestar and traded it in on a shiny new iron ass Chimera. The Firestar was a little too sensitive for my heavy handed driving methods and the Chimera fit the bill giving me a feel a little better than my Mammoth - but I miss not having my crew aboard. Talking to myself just ain't the same.

So I headed back up north, dropped a Sensor and started strolling about looking around corners and under rocks. It didn't take long at all before there it was - on my radar when I came out of a jump.

The *Evil*, a *Big Bug*, a *Vonari C*.

We were headed right at each other. Well, no sneaking up from the rear tonight - the *Evil* knows I'm here. I whispered to myself, "Well Marlowe old buddy - into the breach!" setting speed to 750 then headed in and above the *C Bug*. The range soon dropped to under 3000 so I let loose the Excal's targetting the *C Bug's* Weapons and as I passed above I pointed my nose down to show him the black eyes of my gats and let him have it. Like I'd hoped, it made him shake in his boots. Sure!!!

When I was past and out of his flak range I hit IDS and started back. Excal's are soooo slow rearming so I dawdled along at about 275 to give them a chance to be ready when I got there - no rushing in empty handed for this kid. I took a bite of a Gorfburger and a slug of brandy and sat back to wait.

As I closed to cannon range the *Bug* began spewing missiles - I just took them down with my cannon. Who was he kidding!!! Closer and his shields began to light up as I hit him with both gats - not that it was doing much good, but it made me feel better. This time I slowed to more or less match his speed and just kept popping his missiles and hitting him as I could until my Excal's regen'ed.

Then I caught a glimpse of green dot to the east on my radar. I did a quick retarget. Yo! -an AI navy Firestar - looking like it might be heading my way. A great thought popped into my head '*I wonder if I gave the Order to Attack Hostiles if he would get it and help out?*' Sometimes those guys will just sit in the bleachers to see if the quarterback gets sacked - sometimes they join in the fun.

Well, I don't know if he heard me or gave a rat's ass if he did, but it looked like he was picking up speed and heading my way - maybe just to get his own kicks. Whichever! You take it if you can get it. Gotta admit, It took some of the chill out of my feet - it's easy to get cold feet and just want to head home to that safe, comfy lounge and chat to a pint of brandy. Attractive against fighting the *Big Evil* all alone in cold, dark, hostile space.

As the Firestar neared my Excal's were back online, ready for another go so I let fly and kept gunning missiles and the *C Bug's* Weapons. The Firestar began gunning the belly of the *Beast*. He'd fire his gats and veer off and come back for some more and at least once I saw him let loose a missile. I was rather busy myself to see everything he was doing but it was sure nice to have a friend.

We kept at it and I wasn't seeing much sign of progress for an awful long time. I lost track of how many times the Excals regen'ed and I fired them - I'd say at least five and maybe even six or eight times. I'd also bumped my weapons energy balance up to +1, then +2, and later to +3 and in the end to +5, since I wasn't taking any damage myself. Part of me got a bit nerdy - at 0/0 I got 15 seconds of firing time for both gats so at +5 I get a hell of a lot more . . . though I haven't tested it on my military frame. On my Mammoth at +3 (and because of my crew) I can shoot over a minute (just sit there and time a minute – makes you smugly glow!) How often do you need that much time? At +5 on the Mammoth? - I guess I could fire forever - I don't know - I got a damned good crew.

I fired what must have been my 5fifth or sixth or whatever salvo of Excals and kept the gats busy. My friend kept banging away and finally, without warning, the *C Bug's* target display turned Yellow and then I knew!!! - we had him!!!

We kept gunning him and he was throwing the kitchen sink at us - and at last the target display turn Red!!!

Pour it into him - and we did and in no time - POP!!!!!!!! goes the Weasle - right in our faces.

What a night!!!! My first Vonari-C - thanks to the help from that Navy Firestar. I owed the guy a glass of brandy but when I looked around he'd gone. Maybe I'll run across him someplace, someday. I hope so.

Anyway, one less *Evil Bug* stalking the night.....

Here's one to you Marlowe old buddy.

The fifth section applies to various stuff.

How do I get (or be) a turret gunner? (All)

Source: **SeeJay's Evochron Basics Schools** - <http://www.junholt.se/evoschool/index.htm>

You can link with another player as a gun turret operator for their ship. This is a great way of getting some heavy combat experience without spending most of times trying to get back to the fight or reloading! (**Editor**: It's also great fun!)

Simply click on the **Connect Gunner Binding** button in the trade console to activate. You will then be in control of a ball turret that surrounds the ship you've linked to while the receiving player will continue to be the pilot of their ship. Either you or the pilot player can click on the **Disconnect Gunner Binding** option to terminate the gun turret mode. When that happens, or if the pilot ship leaves the sector, you will be returned to your ship.

The turret gunner has the canon and beam weapons and all the weapons enhancing equipment installed on his or her ship. The turret can be rotated 360° and the pitch varied between +90° and -90°. You can see your shield strength and hull integrity. You do **not** have missiles.

I'm confused about the MDTS Aim Assist option - what does it do and not do? (All)

This is an auto aiming system called "MDTS" (Multi-Direction Targeting System). You can toggle it on and off to suit your style and the circumstances) Pilot's tend to agree that it's probably one of the greatest equipment assets available in the EVOCHRON Universe, particularly if they try combat with it switched off. And, it's auto-magically there, in place with each ship frames' standard equipment, for free, all the time! Both veteran and newbie derive great benefit in combat scenarios. Whether sandbox, or meta-game, it definitely has its own well-earned place. The true beauty and freedom of its many use options is that you can turn it off (except for the beam cannon controls) and be your very own! OK – sponsor advert over – back to the basics

As long as you keep the target in the center targeting circle beams weapons will always hit and reduce shields but they do very little hull damage (though they do do some), cannons will hit most of the time, depending on speed and other factors. It's cool to see your particle stream arcing across to the other ship as MDTS compensates for your relative lateral drift velocities. Holding your target within the aiming circle can be harder than it looks and keep in mind the players on some videos are very good at not being hit by enemy cannon fire, which will bump and knock you around enough to make aiming **very** difficult.

You can turn off the MDTS if you want the extra challenge but surviving the enemies' cannon and missiles is hard enough as it is. You'll want it on nearly all the time.

Combat Advice for Newbies IV - Developing Manoeuvring Skills (Inertia/IDS)

Source: SeeJay's Evochron Basics Schools - <http://www.junholt.se/evoschool/index.htm>

Note: manoeuvring in space is very different from manoeuvring in an atmosphere

Even though tactics have changed with the release of the Expansion the following skill is still a vital part of combat. The basic principle of inertia is that in Space there is no friction to stop or slow down a moving object. So once your ship is in motion in space it will stay in motion unless you apply an opposite force using thrusters to slow you down or change direction. Combat comes down to managing your speed, drift and direction to control your distance and approach angle to your target and there is not one way since it depends on what your target is using for strategies! So to give a step by step for each situation would be nearly impossible.

(SCC) Probably the easiest way to train yourself in using it is to concentrate exclusively on forward thruster and afterburner.

- Engage Inertial mode.
- Pick out an object in space that's stationary.
- Turn your ship and point at the object.
- Fire your afterburners until you reach about 1000 mps.
- Try to keep your nose pointed at the object.
- After you pass it, fire your afterburners again until your speed is zero.
- Now repeat, only this time watch the drift readouts displayed directly above your radar screen.
- Turn your ship until those drift readouts approach zero

To change direction, you first need to apply thrust against your current direction. Then your ship will begin moving in the new direction. Until then, you will continue to drift in the original direction, at the speed you were at when disengaging afterburner.

Doing laps around a stationary object, such as a station, with IDS off is a useful drill to work on these skills. In no time, you'll be able to do controlled, 3D orbits of the station inside an imaginary sphere. Work at keeping the target at the centre point of your circle.

Another way to practice is to set a Nav Point and turning around the Nav point in circles trying to keep a very short constant distance between yourself and the Nav Point with your nose Pointing at the Nav Point and firing your Weapons at the Nav Point.

(ACC) In the atmosphere keep the following points in mind:

- fly your ship like you would a plane
- keep your speed below around 1400 (experiment with different shield/weapon balance - more shield means you can go a bit faster) to prevent burning up
- look at the advice for a rapid atmospheric entry
- remember that you can stop and you can fly backwards!
- practice landing backwards at a city to get used to the left-right reversal when you use the rear view camera!

Applying It To Combat:

(SCC) The thing to keep in mind is that when your drifting in a certain direction at a speed of around 2000 that no missile will be able to hit you since the fastest missile, the Excalibur, speed is 1800! So you have to know the speeds of your missiles and the speed of your target to know if a missile is going to be effective and shoot the missile at close range so that the enemy does not have a chance to deploy counter measures. So the basic steps are:

1. You set a course towards your target at a velocity of 1500 or more for faster approach (because AI do not use Excaliburs)
2. Once you have your approach angle set switch to inertia at the desired speed once you get in the desired targeting range for missiles or weapons fire the desired weapons.
3. Sometimes a target uses a spiral evasive manoeuvre. The fastest way to take this one down is to get as close as you can on its six, with IDS on and using after burner, to 50 to 300 units and maintain this distance while firing your missiles and or your weapons with energy to all weapons!

For emergencies, stack a few missiles. Oh, who am I kidding, this is your first fight. Fill those racks!

I'm having difficulties with high-speed combat – help!

(Editor: I've included the gist of the details of this question because its so common! It's so easy to get caught up in 'jousting'!)

Right now, the combat missions I'm taking tend to be against groups of small enemy ships that typically do something like 3,285. That's a speed I can match with my engine and my IDS goosed way up, or of course with inertial. But it's so fast that combat turns into a slow, intensely fuel-consuming affair:

A ship and I will fly at each other, and there'll be a single pass that doesn't do enough damage to either of us to count for much. Then the enemy ship will haul out of there, accelerating to this super-high max speed, while its buddies follow the both of us. I can catch up to the enemy ship, slowly, by pouring on huge amounts of speed. This gets me a few shots, likely not enough to do much lasting damage . . .

. . . although a lot of time the enemy manages to whip around on some new bearing and I go plowing off into the distance, with a huge amount of speed to messily bleed off before I accelerate after him again.

Lather, rinse, repeat . . .

Rather, I'm guessing there's something I'm missing, something about ship builds (should I upgrade something to give me super-fast acceleration and deceleration?) or weapon choices (should I be spamming missiles like crazy?) or flying style (should I be sucking less in some specific way?) that I'm not getting. Any thoughts?

Vice: Sounds like most of what you've been dealing with involves falling for the bait of the chase. That is, the AI pilot gets you to follow them, then continues to fly away at high speed, hoping you'll give chase and follow them out for a while, giving them more time to call in reinforcements while also getting you to waste fuel and missiles (definitely do -not- launch missiles at speeds and pursuit engagements like that).

A few early tips are to avoid that situation and also avoid flying straight in at your target(s) (which can have the opposite effect on you in terms of damage/vulnerability). Avoid falling for the bait, actually slow down (but still try to stay above 1000) and watch for another opportunity around you (if there are any other hostiles nearby). Watch for the next closest one and go for that target next (and quickly!). The original hostile will likely soon turn around and come back in after they realize you didn't fall for the pursuit bait. So keep watching for the nearest threats and break engagement, re-acquire, and escape to recharge/repair as needed. The other side of this approach is to watch out for getting bunched up into the middle of a pack of hostiles. Keep your flight lines wide and fast, avoid getting baited into the middle.

This is also good timing for a question like yours. I just uploaded a new series of training videos, one of which focuses on combat flight tactics. Chasing is one of the topics discussed. So you may also want to review the video for additional information:

<http://www.youtube.com/watch?v=us9Oeu1G9o8>

Combat Advice for Newbies V – Creating your own spaceforce – wingmen!

I'm finding it hard to hire a crew and fly my ship at the same time!

When trying to set up wingmen with the F4 ship-to-ship, the 1000 range limit is more than a bit of a pain. I suspect this is to prevent too many ships from being in range of the radio? One of the problems is maintaining contact while being so close which is also a problem when the AI contact me.

When in 'formation mode' (Form) with another ship (AI or player), you need not bother flying your own ship. This allows you to converse with an AI pilot (ask for information, etc.) or scan his ship. It also allows you to more easily rescue another player ... especially if his ship isn't stationary. Remember to make sure ***Inertial is off***, so it can also control your ships velocity.

Are wingmen worth the effort? How can I use them?

- Wingmen can make the difference between 'life' or 'death'.
- your wingmen will follow you through jumpgate after jumpgate. They're just a bit slow, sometimes. It helps to order them to form up while you're in an empty sector so you can take a head count.
- In escort contracts, your ***wingmen*** (if you have any) may well chase the attacking ships away from the ship being escorted..
- Wingmen will follow you into planetside (atmospheric) combat contracts. They may not be as skillful as they are in space though!
- They will follow you anywhere ***except*** into a war zone. If you need wingmen to assist with taking out the Vonari, you'll need to hire whoever you can find after you've already entered the war zone.
- However, they can get enthusiastic and offer too much help, getting mixed up in your personal dogfight!

When you destroy a target, you automatically lock on the next nearest hostile. If you and your wingmen fly in a tight group, you all lock onto the same next nearest hostile when anyone in the group kills that last one. The effect looks like magic! Your wingmen move in a circle formation around the group of hostiles, herding them like cattle while systematically wiping them out one at a time. Each pilot fired on the same target until it's destruction and without any chat or hint of the next target they instantly locked and killed the next one. It's amazing. A dance with death.

The enemy AI will generally target **you** first since you are usually the designated leader or at least the primary threat. You need to plan your strategy accordingly and you can actually use this to your advantage. Use their focus against them and bait them into positions that make for easier kills by your hired wingmen. Keep the IDS off and keep drifting away from them slowly in circular patterns that continually keep bringing them into weapon range of your wingmen (if applicable). Keep forcing them to pass in front of your wingmen, giving them a chance to take them out.

The 'principle pilot' (insert: the one who accepts the mission) can order the AI Navy. But once you gain Commodore rank or better you can order navy pilots in war zones in support or in lieu of, the principle pilot. Kind of makes 'things' a little less difficult, should you be the sole human pilot in the fur ball. Use these AI Navy wingmen as your 'bait', then back them up. See what happens . . .

Combat Advice for Newbies V: "Expansion" Tactical Advice from Vets!

(Editor: and Oldies as well!)

First point - most of these experienced pilots are ~~adrenalin-addicts~~ pVp *aficionados* and hence very experienced and dedicated to combat. Even though combat against NPC has got much harder in the Expansion, pVp is much, much harder than combat against AI's. For new pilots, combat against AI is probably going to be your biggest concern. As a consequence some of the advice about "key remapping" may not be appropriate - suck it and see.

If you fancy pVp the quickest and the best way to develop your skills is to ~~be young and have fast reflexes~~ hop onto MP (it's free!) and join in and ask for help and advice - being shown is better than reading about it and having it done to you whilst you are being shown is the best of all! Ask to be a turret gunner to an experienced pilot - you can feel what it is like to be in combat without getting blown up every few seconds - you can also be helpful since you have your cannon with you in the turret!

(SCC)Marvin: There is definitely a greater need to get close and personal when combating AI ships ... using IDS where, previously, you never needed (or wanted) to use it. This is because you can no longer extend out of the fight because the AI follow at close range. This makes it difficult (if not impossible) to get far enough away to then turn around (under inertial) and build up speed for another pass. Now, when you turn around, the AI are already on top of you.

I run a lot more. Ergo, I now carry a sensor array so I can find my way back to the fight which, due to high speed chases, gets dragged away from the contract nav box.

Busch: Seconding Marv: With the Expansion's new AI "Rules of Engagement", AI no longer are merely content to await your errors - they're coming a-hunting!

Toggling between Inertial and IDS appears to be a more practical approach. Learning this technique (among others), will take time and effort, whether you're a newbie or "old" vet.

Then there's the "difference" between CZ/WZ-Vonari combat scenarios (VSCC) and the "regular" Miners' Anti-Pirate, Navy Ace-kill, and Navy Patrol (SCC) missions in the rest of the Evoverse. I'm now seeing the Vonari AI's take out the Navy AI wing-men first (as/if they can), and then tearing up the æther to come after the "principle pilot" (me). Also seeing the same with the Rebels and Guilders in the Quad; seeing more of the Reds "victimizing" other green/yellow AI ships, as well as hearing the shield/armour impact effects of their efforts.

Strafing runs in Inertial, using manoeuvring thrusters all the while one's firing away at the primary target, then engaging IDS and boosting in afterburner to get distance from the "swarm", has been working for me (on the whole) so far. At least until I goof-up and get englobed.

splatives: (SCC) My personal experience in the new combat system:

- Don't make sharp turns to re-engage the enemy, the moment you're at low speed can be deadly. Instead, use long curves in inertial mode if you want to engage.
- Do not use IDS. this is for the same reasons as I stated above. Also IDS often accelerates slower than inertial thrust (depends on frame and engines used).
- Watch out for missiles. CM's won't always do the trick. Shoot them down if possible. Custom missiles can go faster than off-the-peg do, so staying at 1500+ speed is no longer guaranteed to be safe. 2000 or at least 1800 is advised.
- A good tactic is to let the enemies chase you and killing them when they can't hit you with their cannons.
- For capital ships, switch to a subsystem that's easy to reach, then race past it at 2000 speed (to avoid missiles), and fire beams and cannons once the target circle is in your range in order to do shield damage with beams.
- Watch out for the particle cannons of the cap ships.
- Fire missiles when the enemy is coming straight at you, and is closer than 2000 away from you.
- When hit by particles or missiles, press the equalize shields button once and put all energy in shields for maximal regeneration. However, do not press equalize shields when hit by only beams.
- **(All)** Put both of your primary weapons on a different button. This helps you alternate "cannons only", "beams only" and "all weapons", as well as it gets rid of the small delay when switching from "all" to "cannons only". **This is worth a try - see if it works for you**
- (pVp) Remove your IDS up and down controls and replace them with inertial forward and inertial reverse.
- (pVp) Move your reverse key to an easy to reach button so you can easily use reverse afterburner.
- (pVp) Move equalize shields to an easy to reach button, because this is the most important one out of all the augment buttons as it maximizes shield regeneration and uses the least energy.
- **(All)** Sometimes you have to fight many enemies at once, and you won't have the right one targeted, so it can be useful to map "target closest enemy" and "target next enemy" to easy buttons. **This is worth a try - see if it works for you**

(ACC) More thoughts about atmospheric combat:

- When turning, you can avoid stall by not turning too fast, but you can increase your turn rate by using afterburner while turning. This way you can more easily make quick turns to face your enemies.
- Try to engage enemies on the outside of the "mob", that way you won't get caught right in the middle.
- Try to wait for the right moment when no missiles are being fired to engage. If an enemy does fire a missile, attack this enemy, so you will shoot down the missile in the process of shooting the enemy,
- Be patient. Impatience will be punished by a quick death. Time all your attacks well and try to find holes in the defense.
- When you are on an enemy's 6 o'clock, they will start using the spiral tactic.
2 ways to counter this: Keep moving closer without spiralling yourself until you are at a distance of less than 400. At this time, your cannons will be close enough to hit with MDTS.
- You can also fire beams only to shoot down shields. When shields are down, turn off your MDTS and try to hit them with particle only by "pre-aiming". (**Busch**: "Pre-aiming" a.k.a. "Kentucky Windage" a.k.a. "leading" your target with your gun sight...whilst firing at appropriate opportunities . . .)

King Arthur (LL) PvP has changed dramatically from PvP pre-Expansion. "Energy management" is now paramount. The majority of the time is still spent in "inertial" mode.

In order to maintain the advantage over your opponent it is still "give more damage than you receive" but this has been made much more complex by the need to manage the transfer of energy from weapons to shields as well as all other standard combat systems. Now you have more than just range and speed to consider. You must consider how to allocate energy when in a pass.

With the weapons lab you are able to create cannons/beams/missiles that are in line with your fighting style. If you are in a ship that is able to manoeuvre faster and with more agility than your opponent the use of max yield weapons would be to your advantage. If, like me, you spend the majority of your pass in your opponents weapons range using slightly lower yield weapons is beneficial as you will be able to maintain fire and shields even when your shields are under load. It will take slightly longer to inflict damage but you will have more energy available than your opponent. This is the "gun fighter" mentality.

You must constantly replenish your shields even if this means breaking from your engagement. You may then begin another pass. Transferring energy to shields during a turn at range is usually the best way to get your shields back to green while still manoeuvring for a position to fire. You must also manage energy during a pass when you are both firing and taking fire.

I have found there are two places you want to position yourself when engaging your opponent. One is perpendicular to your opponents flight path. You will see him travelling across your screen either left to right or right to left with his nose pointed in his direction of travel. Get into range and fire. Match his turns to keep yourself at a right angle to him. You will inflict severe damage while taking few or no hits yourself. This manoeuvre requires the use of all readings and radars if it is to be successful.

The other manoeuvre I've found very effective is attacking down the z-axis. You must place yourself above your opponent so only his dorsal area is visible to you. Once in range open fire maintaining a suitable range from target. Watch your opponents beams, they will show you where his nose is pointing. As he attempts to pull up to engage you rotate your nose up in the same degree. This will leave you firing on his dorsal area even as you change axis.

Points to remember:

1. once your opponents shields are down switch to particle cannon only as beam cannon will cause little to no damage and drain your weapons energy
2. maintain your shield strength through energy transfer keeping them as strong as possible while still allowing you to fire cannons
3. position yourself to give more damage than you receive
4. always monitor your screens and readouts. You need to know where your opponent is in relation to your ship and what he is doing at all times and finally, if you must break from your engagement to replenish shields do so. There will always be another pass.

Can I mimic Jean-Luc and perform the 'Picard Manoeuvre'

Stateofpsychosis

I've been having some fun experimenting with using the lock to target plus the microjump during combat to do something sort of like a Picard manoeuvre.

All you do is . . .

- Approach the enemy from a distance.
- Open your Nav Screen (F1), then while keeping the enemy in front of you watch the radar and target list and monitor the target's range on the bottom right hand side. When you get to under 1000 range . . .
- hit "set location" to input your jump destination coordinate and immediately hit F1 again to close the Nav Screen
- get some shots in
- now hit your afterburner and get about 3-5000 away from the targeted ship . . .
- if it's slow moving it'll be near enough to the jump destination that you will be in the range when you come out of jump – but if it's too fast then you'll need to watch the radar while getting them to chase you and get the yellow target in line with the red target
it's essential that you have them dead center in your crosshairs because if it's even a little bit off your fire won't hit them as you start the jump - you'll end up by their side - because it's hard to get dead center
- So after you have them lined up just aim a little downward and focus on getting them centered horizontally because it's more like the Picard Manoeuvre if you warp or jump to the underbelly of the ship you're firing on.
- Once you have them in your crosshairs, hit the jump button (F2), then immediately fire when they're close enough during the build up to the jump . . .
- . . . when you come out of the jump get them in your crosshairs again and fire away - it's preferable for them to be in your crosshairs when you come out of the jump but that requires luck

The only way it's really effective is when you both get them dead center in your crosshairs while jumping and firing while also jumping in close enough to continue doing damage to them.

You can also just gun it as fast as you can getting them to follow you, then they'll be in a straight line sooner or later, then hit the set location button in your nav panel again, and you know the rest.

I don't like this one though because you usually jump in close enough. getting them in line isn't everything. there are a few ways to do this.

Anyways truthfully, this trick isn't very useful half the time - it is a way to do firing runs while taking on little fire yourself but you give the enemy ship too much of a chance to build their shields up. But it **is** very cool when it works and great fun!

Section 05: Flying

What is an IDS multiplier? - How should I use it?

IDS multiplier increases your top speed; acceleration stays the same

You have to assign two keys on *page 3 of Key assignments in the Set Up options* for the Multiplier to work. The default has no Key assignment. I tend to set it to [+] and [-] because that puts it near my shield and weapon energy assignment keys, those are the ones I don't have mapped to stick and that I use most often. **Editor:** I've got mine attached to a slider on my stick throttle so I can make changes HOTAS

This sounds useful. Is there a drawback to increasing the ids multiplier? It seems that having it at x5 at all times would be best . . .

Here are a couple:

- You can easily "overshoot" targets if you come in too "hot".
- Also burning up in atmosphere is more likely to happen if you have it on x5.
- When doing races, it's easy to "fall off" the track if setting is too high. This is less of an issue in the latest upgrades because Vice has increased the race tube diameter quite a lot.

Adjust the IDS multiplier depending on the situation. Some suggestions;

- Running around in open space set to x5.
- Combat set to x3 or even x2. Helps stop overshooting the battle zone. Here's where microjumping can be useful - set a waypoint near the combat area and jump back in!
- Landing on a planet, x2 keeps your max speed below 1400 - burn up speed! In the excitement I tend to push the throttle to the stops!!

What do all the velocity gauges do?

Your spacecraft is equipped with **six** velocity gauges to help you monitor your ship's movement.

The set velocity and relative forward/reverse velocity gauges keep track of your ship's applied velocity level relative to other factors that may apply. For example, if you are in a planet atmosphere and set your velocity to 500, your IDS will apply enough engine thrust to achieve that level of velocity subject to the rotation and gravity forces of the planet. Your indicated forward velocity will read 500 to match the 500 'set' velocity you selected, but your actual velocity relative to the universe will obviously be different because you are above a planet that is rotating, which is carrying you along with it.

So depending on your ship's orientation, your actual overall velocity relative to the universal constant (ie your position in the universe) might be slightly above or below your local indicated velocity due to the rotation of the planet. If you fly against the direction of the planet's rotation, your overall total velocity will be lower than your local velocity. If you fly with the direction of the planet's rotation, your overall total velocity will be higher than your local velocity.

Your ship provides a gauge to help you monitor this velocity level as well. Next to the relative/local velocity indicator after the '/' is the 'total velocity' indicator. It provides your ship's velocity relative to your position in the universe, rather than relative to any local gravitational/atmospheric conditions. Most of the time in open space, this indicator will remain pretty close to the local velocity indicator. However, once you enter a gravity field, you may see these two values differ significantly. For example, if you are flying directly toward a star with the IDS on, your ship will work to match your local velocity with the set velocity you select.

Both your set velocity and the local velocity indicators might read something like 700, but as you approach the star and the star's gravity increases its pull on your ship, you'll see your total velocity indicator increase to a value above 700 as you are gradually pulled in by the star's gravity to a faster overall velocity.

If you disengage the IDS, then your ship's computer will stop trying to maintain your ship's relative velocity and your local forward velocity will also start to increase as the force of gravity is then allowed to accelerate your ship unrestricted by computer offset control, resulting in even faster velocity acceleration.

If your ship is being pulled at an indirect angle by gravity, you'll see your horizontal and/or vertical velocity gauges change value as well. If you turn directly away from the star and engage the IDS, your ship's computer will work to return your local velocity to the selected 'set' level, but your overall total velocity will then be slower since gravity will continue to pull you toward the star. To escape the star's gravity hold, you'll need to accelerate to a velocity that is higher than the force of gravity is pulling you in by.

The gravity velocity gauge will help you determine how much of an effect gravity is having on your ship's trajectory. The gravity gauge displays the level of velocity your ship is being pulled in by, it is not a force factor indicator. So if your gravity gauge reads 500, you can maintain a fixed location by turning away from the object generating the gravity and setting your local velocity to 500. Select a faster velocity to pull away from the object generating the gravity.

Using all of these velocity indicators will help you maintain situational awareness of how your ship is being effected by environmental conditions around you, giving you the ability to formulate flight paths to perform manoeuvres and stay safe in dangerous high gravity environments.

Flying Safely I: Travelling safely through hostile systems

Engage the NavMap before you jump or as soon as it lets you when you are coming out of the jump or jump gate;

Set your throttle to max - moving targets are harder to catch and to hit

Remember you're not obliged to fight every red you come across; for example going through Thuban or Fauston is pretty much an exercise in running, since the entry gate from Sapphire is located close to several stations - as a result, the place is crawling with bandits. In the Expansion, hostiles more than 5000 away will ignore you, but beware of those flying in your general direction - once they get within 5000 you are like a honeypot to a bee! **Editor:** and that's not those nice, helpful Humble Bumblebee pilots.

Ignore hostiles for a moment and plot a jump towards the exit gate to your destination or quickly pick a spot in the middle of nowhere that is near enough to jump to. That way, if you find yourself in the thick of it whilst hunting for the relevant gate, just jump out of the way. After you've played a while you'll remember the locations of the gates in all the main systems. After that you can gate travel from one side of the Evoverse to the other in just a few minutes!!

If you decide to just hunt for the gate then you can launch a few CMs if the bandits start to get too friendly. I've made that trip in a badly shielded Arrow several times, unscathed except for a few launched CMs. And most of these were "just to make sure"

Flying Safely II: Jumping as close to a planet as possible (aka Atmosphere Skimming)

Source Austin

Whilst experimenting with how to land on Earth (easy) in one piece, safely (extremely hard/impossible) I learned a fair bit about atmospheric skimming.

Approaching an Earth-sized planet will result in the following:

1. you will enter the planet's gravity field at 30010 decameters from the centre of the planet, - your altitude meter will read around 508000.
2. An aside - if you are approaching the Earth, you will suddenly become flaming metal confetti at 30000 decameters from the centre, with an altitude reading of 507500. You are warned though by the defence ring traffic/weapons control
3. you will enter the planet's atmosphere at 23100 decameters from the centre, with an altitude reading of 162500m, prompting your ship to switch to planetary mode.

The maximum safe velocity in atmosphere is 1475, which makes for a very turbulent, but non-damaging, flight. Unfortunately, as it appears impossible to slow your ship from 10k to 1475 velocity quickly enough after dropping out of a jump, direct atmosphere jumping is a negative. Even pushing all the energy to shields and frequently boosting your ever more damaged forward shield you can only get to 1600. You do look cool (well hot really) streaking flame and smoke as you head downwards!

Note: If you have a navigator hired on to your crew, he will not be cool with you jumping so close to a planet. Fire him first, for being too scared to push the boundaries...

Now to skim a planet's atmosphere:

- Set your heading to 0° or 180°
- Right click on the desired planet in your Nav Map to lock onto it
- Add or subtract (depending on which side of the planet you wish to come out on) 26900 from the Nav Marker's in sector X coordinate
- Add or subtract (depending on your heading) half of the distance you would normally adjust for a blackhole jump
- Launch!

For other headings, just do the math and adjust your coordinates accordingly. **Editor: Has anyone checked these numbers for the Expansion – Vice increased the size of the planets! Some space wrecks are now on the surface, containers are buried deep underground and a few planets have asteroids floating near the surface!!**

Obviously you have no immediate control of your ship when dropping out of jumpspace. By halving your drop out distance, you have full control of your ship as you make the closest approach to the atmosphere.

I have an in-game method to determine a ship's exact jump space drop out distance. The exact drop out distance for a Starmaster frame is 2950 decameters.

Also worth noting, if you haven't come across it yet, jump times, with a Cannon Relay System equipped and your weapons set to +5 (to minimise recharge time): 4 jump per minute = 20 jumps per 5 minutes

However, if you are doing long distance multi-jump journeys there is a small time saving because you only slow down to the speed set on your throttle. The actual number of jumps you can do per hour is around 310 rather than the 240 Jumps you might expect.

Flying Safely III: Avoiding Friendly Fire

Any time you fly with a tag (e.g. [IM] Marvin), anyone with a different tag will show as an enemy (red) on your target displays (HUD, radar, and right-hand monitor). Consequently, if you enter a sector where combat is taking place, (in the heat of battle) you're likely to be mistaken for the enemy. So, be on your guard and prepare to move out of harm's way. Or wait at the local trade station until the contract is completed. Or at least announce your entry (admittedly, chat messages come fast and furious right now and an announcement might be easily overlooked).

Then, after you've sorted out the fact you're a good guy and not really red, you might notice that all the other tagged pilots are red to you. The solution to this problem is simple: press the Numpad minus key (-) while the apparently red friendly is targeted. S/he will immediately turn green. And request that all other pilots do the same for you.

How do I know when the throttle is halfway or whatever?

There aren't any indicators in the cockpit display. But your "set speed" gives you an indication of the throttle setting - remember, engines only determine top speed (along with the IDS multiplier) so if your maximum speed is 2500 and you have a set speed of 500, your throttle is set at 20%

How can I slow down fast?

Fast deceleration (useful in e.g. planetary descents, also to back off quickly from a place (without turning, which takes forever)): press reverse thrusters (default key "/") and afterburner (TAB). That is identical to afterburner (quick burst of acceleration), except backwards. If you have a throttle on your stick system you can map the afterburner to it in the main options screen. Afterburner then doesn't need a key, it kicks in at the far end of the throttle push – just like the real thing!

Opinion: How can I control the amount of sideways drifting when flying inertial?

Source Flying Brick:

When in Inertial Flight Mode sometimes you want to stabilize your ship, in other words reduce your drift in any direction except forward, during inertial flight. A quick way, if it is safe, is to switch off Inertial Drive until the strafe marker (that show the direction you are travelling in) returns to the centre of the gunsight.

You can also use the lateral thrusters (A or D for lateral, Z or X for down-up) to zero your horizontal and vertical velocity - the info is given just above the radar on your HUD. Some pilots find this is relatively slow depending on your eye-hand-math coordination. You may find it easier and more intuitive to do this by moving the strafe marker towards your gun-sight (which is in the centre of the screen). If you are using a HUD mod it may be a different shape and colour - switch to inertial and play with the lateral thrusters until you spot what it looks like! You can't do this if the marker is off screen though!

The small blue square represents your actual real heading; if you have lateral speed towards right, it will be to the right of centre; if you have speed towards down, it will be below centre; if you have lateral speed towards left and up-down speed towards up, it will be above and to the left of centre. Bringing this back towards centre is, for me, much faster and simpler because I can follow it with my peripheral vision and I don't have to constantly decide which fingers to use on which thrusters, based on what the figures and directions in the display readings are showing. Just focus on getting the square to the centre. If you have a HAT on your stick you can assign it to the lateral thrusters in the main option screen 'Control > Joystick HAT > Strafe

Rapid Atmosphere Descents for Cover

Source Viper: - plus an addition or two

Need to make a quick descent to the atmosphere? Because your ship is basically a flying brick, you can use its high drag to your benefit when making a planetary descent. When flying into an atmosphere nose first, it takes a long time to slow down to safe speeds when approaching at anything over about 2500 MPS. But if you change your descent angle, the drag can make the process much faster. Just as early space shuttles would lift the nose to expose a larger surface area on descent, you can also use a nose up approach to slow your ship down much faster.

Remember though, if you don't use this technique you cannot use speeds greater than 1500 in the atmosphere, because you burn up - gradually, though. Depending on your shield and armour it can be even lower though, so be careful.

It is wise to add power to your shields (5S/-5W) before descending into the atmosphere. Keep an eye on your shield gauge. As soon as you see your shields going down, quickly reduce speed to reduce the atmospheric friction. **If you're too late your shields will give way and your hull will burn away.**

However, there is a neat little trick you can perform, but it takes some practice.

Like the real life Space Shuttle, you can use the friction of the atmosphere to your advantage. If you enter the atmosphere with your nose pitched up about 20 degrees, you will present a much larger surface of exposure to the atmosphere thus creating more friction. This will act as a brake. To do this, set your flight mode to 'Inertial' and increase your speed up to however high you dare it to be, then shortly before you think you're going to hit the top layers of the atmosphere, pitch your nose up to about 20 degrees (more or less aligned with the planet horizon).

The change to atmospheric flight mode is usually around 180000. As soon as you hit the atmosphere, you will see a bright red glow coming from under your ship, and your speed going down really quickly until it reaches normal values. . The faster your initial speed, the lower your altitude will be when you reach safe speeds (so if you want to reach the city docking port faster, approach the planet at higher speeds). Once the burning cycle completes, your forward velocity will remain in the safe zone and you can then fly in any desired direction. Your shields will hold!

If you time this right, you will find yourself able to approach a planet at speeds in excess of 6000 (!) without damaging your ship.

This takes some practice and you will probably burn up a few times before you get it right, but it can save you a lot of time when descending into a planet. It can also be helpful if you want to escape some baddies and find safety on a planet surface.

Is it possible to not use fuel during planetary descent?

I cut my engines out completely when I hit the atmosphere and allow myself to freefall, however I notice my fuel is still draining.

Source Vice: No, although fuel use is pretty low when you turn off the IDS. When the IDS is on and your speed setting is high enough, your ship tries to maintain forward momentum to generate enough lift to keep you in the air. Your ship also often needs to fire thrusters to keep you airborne when the lift is insufficient to hold your ship in the air. Stability is also attempted even when you have the IDS off in an effort to keep your ship moving in the direction it is facing. Although the spacecraft in the game can descend into planet atmospheres, they are generally designed and optimized for space flight. It's a good habit to get into to include descent costs for any planetary trips you want to make. Also, you can often recover some/most/all of your fuel costs on descent by just tractoring oxygen as you descend, then sell it at the city once you arrive.

I 'landed' on water and it's like glue! How can I escape? (AKA 'Sticky Water')

Only rarely encountered but . . . *After crossing to the water's edge, I throttled back and, after hovering, couldn't get up more than about 50kts of speed (depending on the direction of my ship). After I crept back onto land, the ship picked up speed again. (IDS was set to X3.)*

Vice: that will still happen if you nose dive it into the water and/or allow the speed to decrease to 50. Previously, you would be stuck. Now, you can point the nose up and hit the afterburner for a while until you lift off again.

Reverse Thrusters Can Use the Afterburner

A useful tactic to know is your reverse thrusters on afterburner provide nearly the same level of power as your main forward afterburner. Hold the reverse thrust key/button down and hit your afterburner to greatly increase the power of your reverse thrusters. If you ever need to back up in a hurry or increase reverse speed, this option can come in very handy.

Autopilot behaviour

Source shepard_3:

The autopilot only uses jump drive, if your nav point is outside of your current sector you are in. If your nav point is in the same sector as you, it'll just lead you there at full IDS speed

What's the difference between using the jump drive (F2) and using the Autopilot (Alt-F)?

The default **F2** key activates your jump drive and jumps to the destination you have set. (You might want to remap this key if you find yourself jumping when you meant to open the NavScreen(F1) or the Inventory Screen (F3)!

If the destination is further away that your jump drive can reach in one jump, you will get a message that the jump drive can't reach the destination

If you activate the (Alt-F2) Autopilot your ship will swing around to point at the nav marker for your destination and then make a series of jumps to get you to your destination

Also see question about why contracts can automatically fail when you jump to the waypoint

Flight Techniques

Flying In Formation

Source: Marvin

Note: Members of the same clan are already linked. For members of different clans to link up, permission must be initiated by one pilot and subsequently accepted by another. Normally, the wingman will initiate the request, allowing the intended flight lead to either accept or reject the offer.

Lead

1. IDS - ENGAGED (SPACE BAR)
2. Energy - SET 5S / -5W ([])
3. Wingman - TARGET (T)
4. Clan Link Request Received - ACCEPT (NUMPAD -)
5. Wingman - FORMED UP
6. Autopilot - AS REQUIRED
7. Formation - MONITOR
8. Clan Link - CANCEL (ALT NUMPAD -)

Note: When lead accepts the request, both ships display as green (friendly). Conversely, when either pilot cancels the link, only that pilot will then see the other pilot's ship as red (foe).

Wingman

1. IDS - ENGAGED (SPACE BAR)
2. Energy - SET -5S / 5W (] [)
3. Lead Ship - TARGET (T)
4. Clan Link Request - SEND (NUMPAD -)
5. Clan Link Accepted - FORM UP
 - a. Formation - ENGAGE (F)
 - b. Formation - DISENGAGE (F)
6. Clan Link - CANCEL (ALT NUMPAD -)

Note: When lead accepts the request, both ships display as green (friendly). Conversely, when either pilot cancels the link, only that pilot will then see the other pilot's ship as red (foe).

Jumping

How can I jump directly into a station? (or an asteroid cave or a carrier or a Blackhole or a Jump Gate or a Wormhole!)

In a non-hostile system, use the usual left click in the NavMap technique:

- In your nav map just right click on the station, carrier or construction station to have the nav coordinate set.
- To hit the entrances straight on set your compass heading to 180 degrees for a Carrier.
- For a Trade Station the angles are 36 – 108 – 180 – 252 - 324.
- For a Construction Station it's 0 – 90 – 180 - 270 degrees.
- Also set your pitch to zero too.
- Before the jump set a medium/high throttle speed and you will glide right in.

In a hostile system, set your compass heading, right click to set the coordinates and then add 1000 - 1500 to the Z coordinate in the destination section of the NavMap. This is because you come out of a jump about 1500 before the target - you should then enter the station almost instantly because you leave the jump at >10K! The tricky part is getting the nav adjustment correct but after you figure out the "magic number" you can jump straight into anything. You can add coloured 'ticks' to the compass to make it easier to select trade station headings. The others are easy to set!

When doing a "hot dock" in very hostile conditions open the inventory console just before jumping. This negates the time needed for the panel to open after docking (in hostile areas those seconds can really count), and it also prevents those nasty carrier crashes if you have disabled auto-dock.

Summary

- On the nav map, right click on the object you want to jump into.
- Set pitch to 0.
- Headings matter in the Expansion - for carriers (180) / gates (0 - 180) / BH (0) / constructors (0 - 90 - 180 - 270) / Trade Stations (36 - 108 - 180 - 252 - 324) then jump!

Can I jump directly to a planet?

- Yes, but you'll burn up or smash into it and die - guaranteed
- You can't jump and survive while in atmosphere either (Jump from a planet). Wait for the notice that you have changed to space mode
- Right Click only objects in space, not planetary, when you want to jump. Jumping into the centre of a planet is a once in a lifetime event!

How do I jump through a gate inside an asteroid cave?

You need to hit the gate at very high speed (>10K) so line up with it so that you have the longest path to travel and set a jump point somewhere - then jump towards it. If you get it right you enter the gate at 10K+ just before you actually jump and the gate takes over the jump - you are going so fast that you jump before you hit a wall! It's a bit like the jump into the wormhole in the blackhole in terms of getting it just right!

WH & BH Jumping

How do I jump through a Blackhole?

Quick advice: Fly to the same sector ... or at least within range of your jump drive. Pitch zero. Heading zero. Right click on the blackhole. **Add** 2500 - 3000 to the Z coordinate. Then jump.

This is why! . . . When you exit a jump you head in the same direction you were facing when you jump and slow down to the speed your throttle is set to. By setting your heading to zero you will emerge from the jump heading North (ie along the Z axis) around 2500 **in front** of the wormhole in the blackhole. Your hull takes damage very very quickly so you adjust the Z coordinate so that you come out of the jump just in front of the wormhole, hence adding 2500 or so to the pZ coordinate and travelling at >10K, but slowing quite quickly.

Caution! Not all BH's have a WH in their centre - they are certain death!

If you arrive too far away from the WH and explode before you reach it, add 250 to the Z coordinate and repeat until you succeed. You will take a lot of damage so have a repair system fitted in case there aren't any stations at your destination! An engineer helps too.

Save **before** doing any of the above.

Do I have to reinforce the front shield when I jump into a blackhole?

No you don't. In earlier Starwraith games you did have to. In EM the blackhole does damage directly to your hull, leaving the shields untouched. This damages your hull very very quickly. It is the reason why you adjust your pZ coordinate before the jump so that you exit the jump as close to the wormhole as possible (ideally jumping directly into the wormhole!) Basically the inside of blackholes is not the place to rubberneck!

What happens in blackholes and wormholes?

Source Vice:

Blackholes (some of which have wormhole pathways inside them) will crush you quickly if you try to just fly into them. They require a very special approach technique. Many wormholes are not as dangerous and can just be flown to.

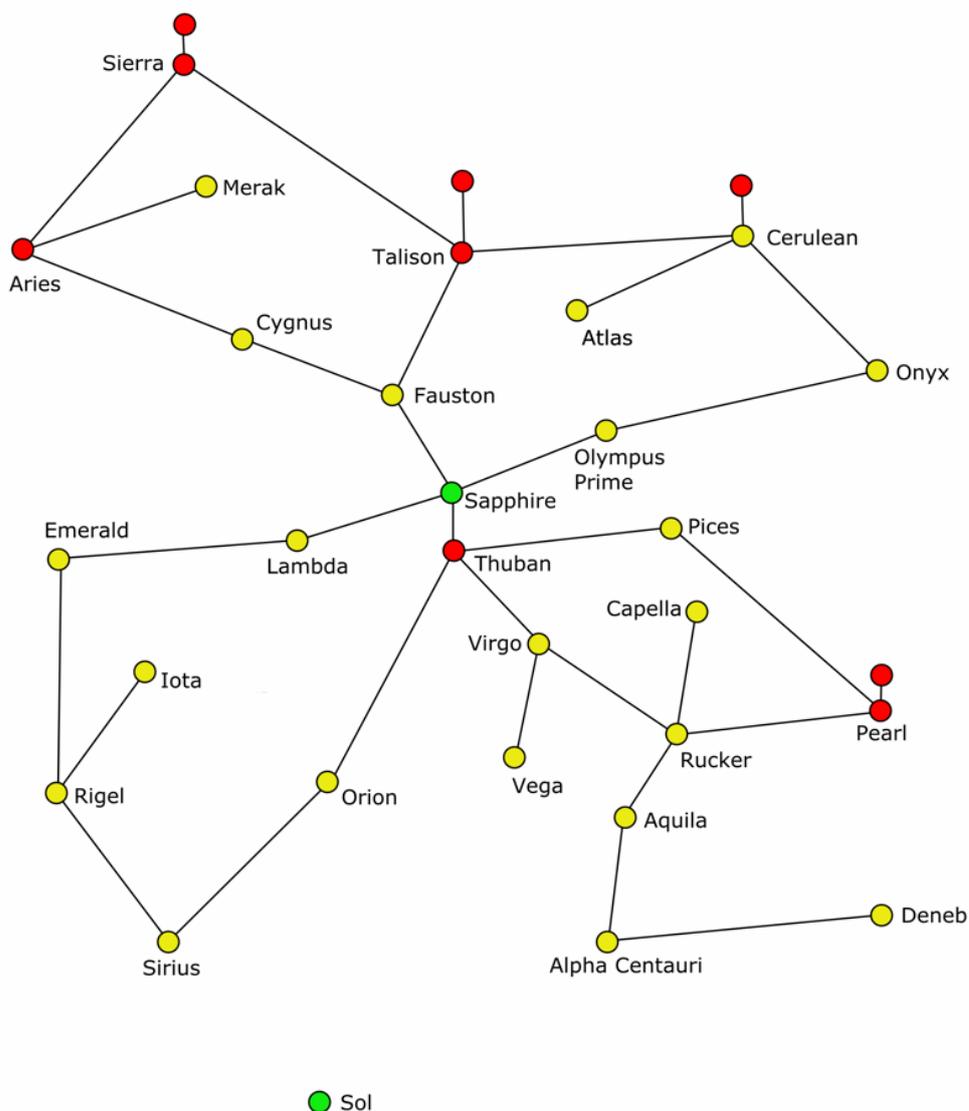
Section 06: Navigation

Navigation I - Overview

Source: SeeJay's **Evochron Basics Schools** - <http://www.junholt.se/evoschool/index.htm>

The space in Evochron is vast and hides many secrets. There are many many hidden systems and items to be found all over this Universe.

The "known" systems are those that are connected by Jumpgates (there are a few uncharted systems with gates as well!). You can however fly between any systems using the "scenic" routes. All main gated systems on the chart below are displayed on your onboard NavMap. (The gate to Sol was damaged a long time ago and hasn't been replaced)



- To zoom in on any sector/object, right click on the sector you want to zoom in on.
- Right click again on an object (Station, Planet, Jump Gate etc) to set your waypoint marker to it.
- You can also use your scroll wheel to zoom in/out.

The universe is set up like this:

Sector Coordinates are labelled: SX, SY, SZ.

The SX+ is East and SX- is West.

The SY+ is Up and SY- is Down. (Use "Rear View" to check how far from the 0 axis the object is)

The SZ+ is North and SZ- is South.

The Position within a sector are labelled X, Y, Z.

They work just like the Sector Coordinates but only tells you where you are in a specific sector.

It ranges from -100 000 to 100 000 in all three directions.

(Think of the Sector coordinates as a city and the Positions as a street address)

Before jumping:

Set Pitch = 0

Set Heading = 0/360 (Set it to 180 when jumping to a Carrier)

Now jump.

This way you will dock right away or go straight through the gate.

Be aware that many planets have atmosphere and you WILL burn up if you jump to close.

To dock with a city you need to jump well outside of the atmosphere and manually fly down and dock.

Keep your speed below 1500.

What gadgets can I get that make navigation easier?

Exploration is a big topic in Evochron. There have been several threads about how hard it was and as a result a couple of people wrote some add-ons to the game that allow you to map where you have been or even download an up to date map of everything that has been found. The map is interactive and even lets you show that position of your ship in real time!

The NavMap screen in your ship lets you see the known systems including overlays of political and economic info. There are several hundred uncharted systems around Evochron.

SeeJay and **Mapman** are the creators of the map (*EvoMetrics*). *EvoMetrics* is available as a web utility or you can download a version that runs on your PC - however, both versions use server side databases. Details below!

Atollski's gem (*MapLog*) is a logging system that lets you cruise around, find boundaries between systems and then use a nifty triangulation option to suggest locations worth exploring for new planets etc. However it is now a bit long in the tooth and a bit temperamental to set up in the Expansion. **Marvin** has written a decent guide for using *MapLog* and how to get it to work on the Expansion to find new systems. See SeeJay's site <http://evochron.junholt.se/menus/downloads.htm> for the guide and the programme

EM_Tools (by **Archie**) has superseded MapLog's logging and also has a notetaking facility, zoomable map and a tonne of info about you, your ship and your targetted ship! Details below!

Travel Buddy (by **Marvin**) is a small utility supports explorers on long journeys outside the core gated systems monitoring journey time, ETA, fuel levels and more

An important issue is that MapLog and Evometrics can be spoilers since they can show everything that has been found.

MapLog can be used without loading the universe data - then you just add the stuff you've found and build up a map of space you've explored. There is a version of the database available from SeeJay's site that just has the charted systems - sort of like buying a set of Michelin or (in the UK) OS maps.

However, part of the fun of the game is exploring everything and discovering things for yourself (wrecks, carriers, asteroid fields, asteroids with caves inside, stations, stars, containers of free goodies, wormholes (to new places), blackholes that with care can be used to go to other systems as well. How much spoiler you want is up to you!

Navigation II - The NavMap

There are definitely gates which don't show up on the NavMap - one is in an asteroid cave! A couple can get you to uncharted systems

1 sector consists of -100000 to +100000 positions in all three directions. Think of a sector as a city, and a position in it as the street address.

Turning text on for gates can help you identify what ones are available without zooming in to an individual sector.

How can I quickly set a jump gates coordinates?

Source: BraveHeart

In your NavMap just right click on the jump gate to have the nav coordinate set. Make sure you're heading is zero or 180 degrees on your compass to come into the gate straight on. Also set your pitch to zero too. Have a medium high speed on your throttle and jump!

How can I quickly set a station's coordinates?

In your nav map just right click on the station, carrier or construction station to have the nav coordinate set. On your compass make sure you're heading is 180 degrees for a carrier, 0, 90, 180, or 270 degrees for a construction station and for Trade Stations (36 – 108 – 180 – 252 – 324) to come into the entrance(s) straight on. Also set your pitch to zero too.

How can I move around and pan the NavMap?

Source Vice: There are a couple of ways;

- First, just right click on the sector you want to zoom in on (and it needs to be on the same SY level you are)
- Second, when fully zoomed in, use the arrow buttons on each side of the map to scroll outside the screen.

When I zoom in I can't see what I've clicked on!

When I right click on a system, it doesn't zoom in on it - nothing seems to be there.

Source Vice: The X direction is East-West, the Z direction is North-South and the Y direction is into and out of the screen - Evochron is three dimensional! SY is the Y coordinate of a sector; PY is the Y coordinate position within the sector

Notice your SY value under the 'Destination Position' values. if it shows a negative or positive value that is not zero, (eg -2 or 3), then anything you zoom in on will be level with SY -2 or 3 (in this example. That means you'll just zoom in on a blank sector if there's nothing at that -2 or 3 SY sector.

Remember that in Evochron, space is fully 3D. Objects can be above or below you, not just level with you. That goes for sectors as well. In the Expansion the areas where you can find uncharted systems has increased greatly - systems are no longer limited to the galactic plane! Systems have been discovered as far out as sY=45 - no-one knows the actual limit above and below the plane of the galaxy (ie sY=0)

If you want to zoom in on that sector which is on a different sY level to what you are on you can do one of three things. You will **either** need to

1. jump up or down vertically to the SY 0 sector **or**
2. left click on your "target" while zoomed out, then click on 'Rear View' to flip the map to a rear perspective, then left click again to set the SY position to level with the sector you want to jump to **or**
3. manually adjust the sector coordinates if you like.

Getting the hang of this issue can take a bit of time but once you've got it, it's like riding a bike - you'll never have problems in the future!

Remember: left click on target - then click on "rear view" - then left click on target again - then click on rear view again and you should see your target in the sector box

Tutorial: The Navigation Console

source Marvin

Hopefully, the tutorial below will answer a lot of questions for guys new to Mercenary. This is the first draft and I have a copy of it saved to hard disk (for when the expansion pack is released and this part of the forum is deleted). If anyone has suggestions for improving the tutorial or spots something which needs to be corrected, let me know or post your comments, corrections and suggestions here.

Part I. Navigating 3-Dimensional Space

A. In-Sector Navigation. When you first start the game, you'll probably find yourself in a star system called Sapphire. Upon opening the Navigation Console (F1 is the default key), this is what you might see:

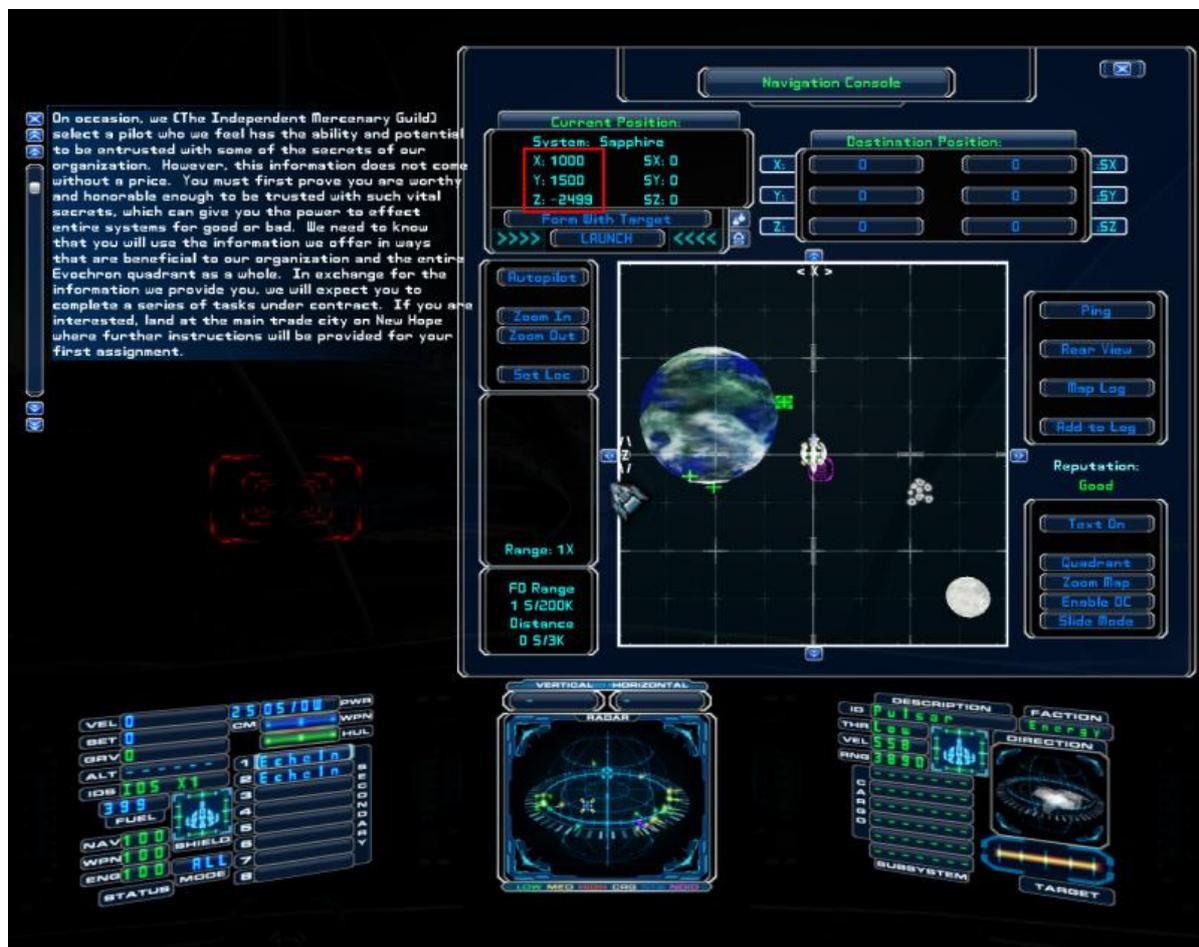


Figure 1

The Console is divided into sections. In the upper-left is your current position. The X, Y and Z coordinates (highlighted by a red box, Figure 1) are your "in-sector" coordinates. They define your 3-dimensional location within the big square ... which is called a sector.

Right now, your ship is placed very close to the trade station ... the station's icon making it difficult to see your own location. So, let's start this tutorial by moving away from all objects ... while remaining in the same sector. You do that by left-clicking on wherever it is you want to go. Like so:



Figure 2

Notice that, when you left-click, a white X is plotted over the place you want to go (see Figure 2). If you switch back to cockpit view (F1) and turn your ship to align the nose with the white X seen on radar (the middle screen on the console), the yellow NAV marker (displayed on your HUD) will be centered.

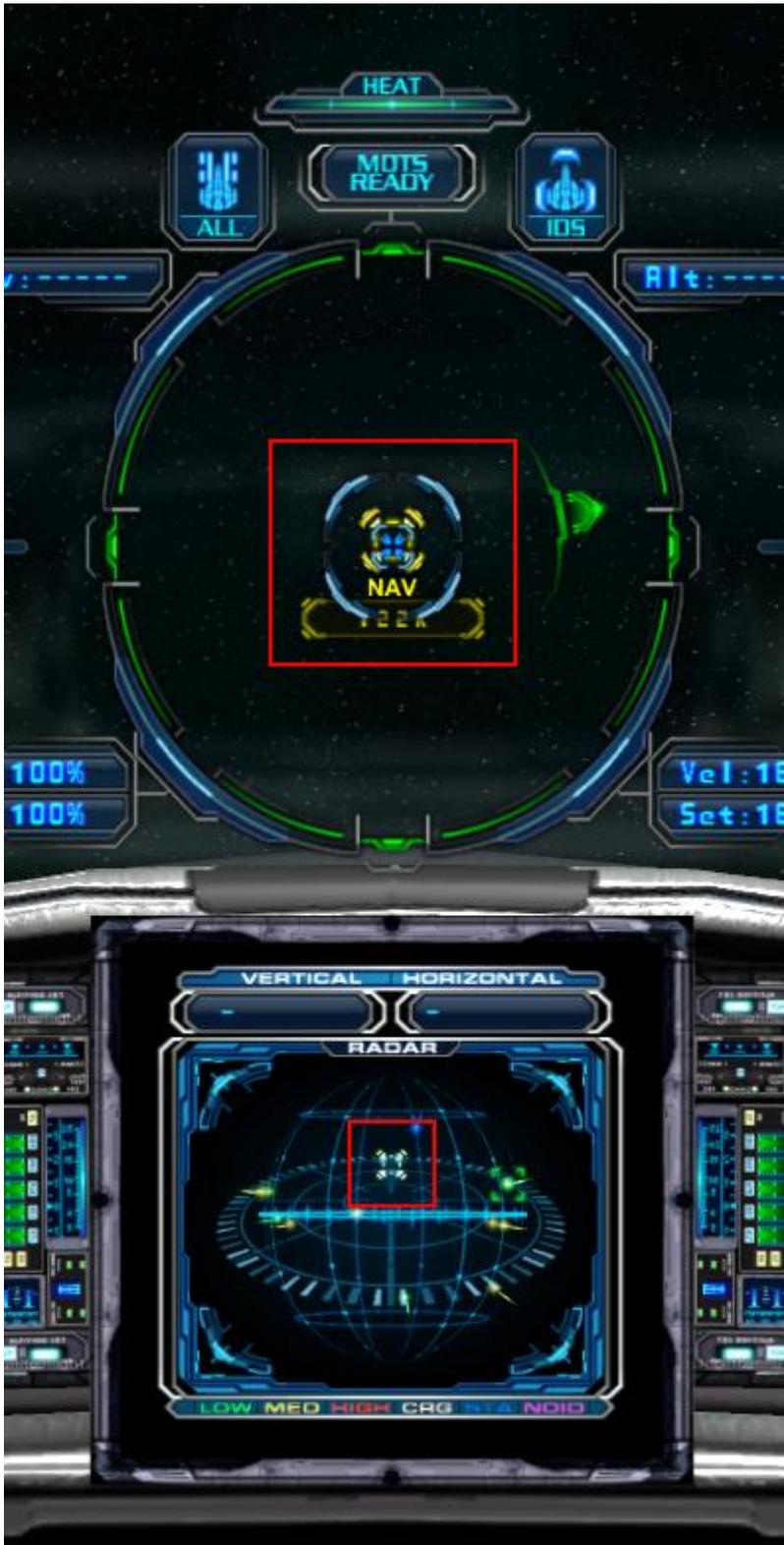


Figure 3

Even with a Class 1 jumpdrive, you can reach any navigation point within the same sector by pressing default F2 ('though I strongly suggest you re-map that key to a location on the keyboard which is far away from F1 and F3).

After jumping, the navigation map should look something like this:



Figure 4

Destination coordinates are located in the windows to the right of your Current Position (Figure 4). Because you've just now jumped to your destination, the current and destination coordinates should almost match. Due to drift after exiting hyperspace, they probably won't match exactly ... but they'll be close.

Whenever you left-click to set a navigation point, the destination coordinates will change accordingly. So far, you've only made changes to the map while it's in the top (overhead) view. For 3-dimensional navigation, you also need to use the rear (side) view.

To the right of the map is a button currently labeled "Rear View" (see Figure 4) ... left-click on it to swap over to the rear view. (Yes, the button is now labeled "Top View" but that's because it always displays whichever option is next.) After the flip, your map should look something like this:

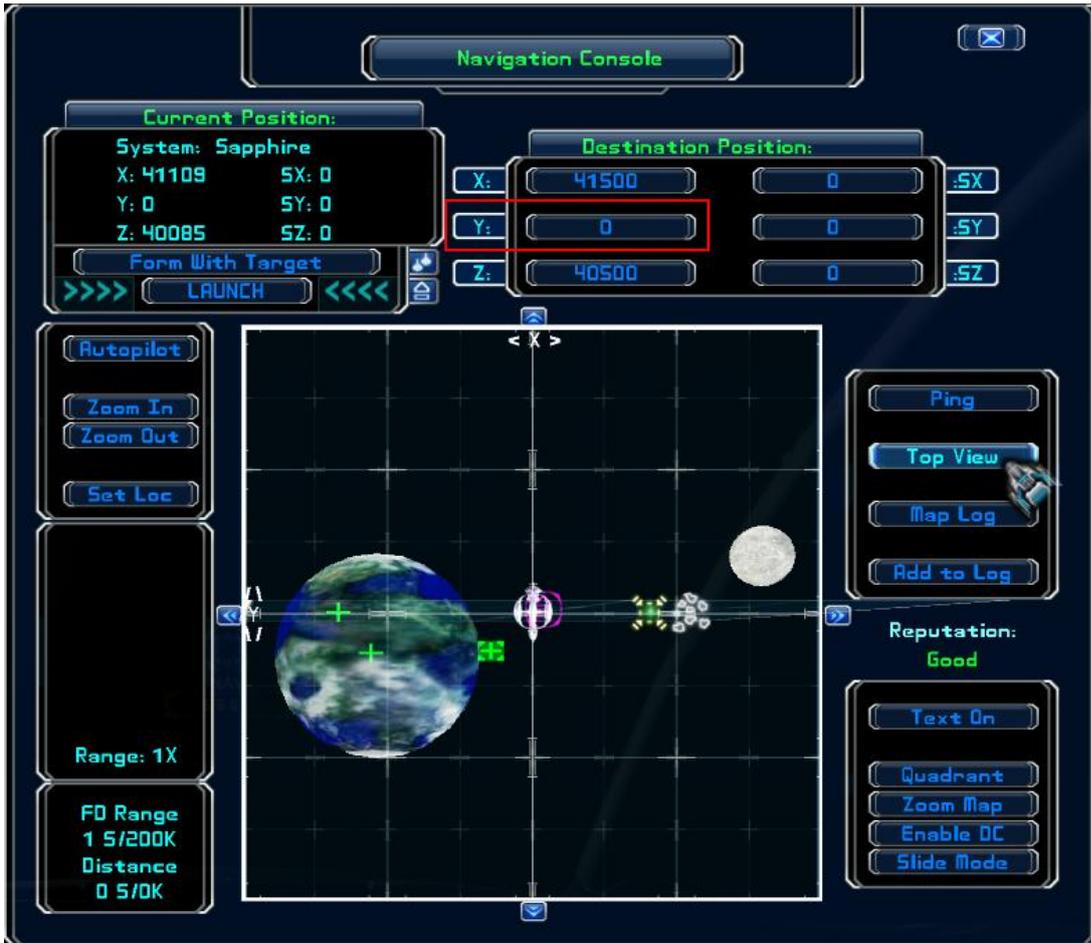


Figure 5

Notice the destination windows in Figure 5. Your Y coordinate is currently reading zero (or thereabouts). That's because, when you set that first nav point, you only used the top view ... and the top view only sets a jump point along the horizontal (X and Z) coordinates.

You can adjust your position in the vertical by left-clicking while in the "Rear View" mode of the 3-dimensional map. When you do, the Y coordinate in the destination windows will change accordingly ... like so:



Figure 6

Jumping to the new nav point will then offset your current position in the vertical.

B. Sector Navigation. Besides in-sector coordinates, the Current Position and Destination Position windows display sector coordinates. If you haven't already done so, click on the "Top View" button to switch the 3-D map back to an overhead view.

Three boxes are located directly to the left of the map. Two buttons, close together in the top box, allow you to zoom the map in and out (see Figure 6). At the bottom of the next box down, the current zoom range is displayed ... and it should now be showing a zoom factor of 1X (Figure 6).

Click twice on the "Zoom Out" button to extend the range to 3X ...

. . . giving you this view of the map:



Figure 7

Now, here's where many new pilots get into trouble. Or, rather, where they get confused, thinking there's a bug in the map.

Usually, you can set a nav point for any of the objects displayed on the map by right-clicking on the object. For example, place your cursor over the purple icon at the far left edge of the map and right-click. This is what should then happen:



Figure 8

The map has zoomed in on the object. If you right-click on it again, it will set a nav point directly to the object. Like so:



Figure 9

Make note of the destination coordinates. Not only have the in-sector coordinates changed, so has the X sector (SX) coordinate (see Figure 9). That's because each big square represents one sector ... and you've set a nav point that's two sectors due west, which is along the X axis. If you had, instead, clicked on the star icon one sector due north of your current location (see Figure 7), the SZ coordinate would've changed. And, if you'd clicked on the far-right asteroid icon, both the SX and SY coordinates would've changed. (Go ahead, zoom out and give it a try.)

Now zoom back out to 3X ... and try the same operation on the white station icon at the bottom-left of the map in Figure 7. When you do, this is what you'll see:



Figure 10

Nothing. No icons. Just blank space.

Once again, zoom out to 3X and left-click on that white station icon to put your navigation point somewhere within the station's sector. Then click on the "Rear View" button to flip the 3-D map.

When you do, this is what you should see:



Figure 11

Notice where your nav point is located: in the proper position ... but only in the horizontal. Why? Because the actual destination is one whole sector above everything else (including your ship). Check the destination sector coordinates in Figure 11. SX and SZ are in the ballpark but the SY coordinate is still set to zero.

You can only set the Y and SY coordinates when the map is in the rear view (unless you do it manually). And you cannot right-click to zoom in while in the rear view. So, left-click anywhere in the station's sector (indicated by the red arrow) to set the SY coordinate. Like so:



Figure 12

Now SY is set to the proper vertical coordinate (in this case, SY=1). Switch back to the top view and right-click to zoom in on the correct sector.



Figure 13

Right-clicking again will center the nav point over your intended target.

C. A Word Of Caution. When using the jumpdrive to get to a navigation point, do not use the Alt key in conjunction with the jumpdrive key (default F2). The combination Alt+F2 is only used in emergencies; it ignores the current nav point and, instead, sets a new nav point to a location directly in front of your nose at the maximum distance of your current jump drive.

Part II. Traveling Via Autopilot

A. In-Sector Hyperjumping. Whenever a navigation point is beyond the range of your current jump drive, use autopilot. If your destination is in the same sector, you have the option to use either autopilot or your jump drive.

If employing autopilot within your current sector, the jumpdrive is not engaged. The ship travels at whatever maximum velocity is set via the IDS multiplier. The multiplier is increased or decreased using the default Numpad 7 and 9 keys and the current setting is displayed in the IDS window on the left side status monitor (see Figure 14). When engaged, the autopilot will turn toward your current nav point and automatically throttle up to maximum IDS velocity.



Figure 14

Using the jump drive is almost always faster for in-sector travel. Unless, of course, you're either very close to your destination ... or you've accidentally discarded the jump drive.

B. Hyperjumping Between Sectors. When using the autopilot to travel long distances, your current jump drive is employed until the destination is reached. The navigation computer will calculate the maximum distance of each jump (depending on the class of your jumpdrive) and plot waypoints, one after another, until the ship is within range of your destination coordinates.

There are a number of ways to get coordinates, some of which are: (1) pick them off the quadrant map; (2) copy them from a chat message; (3) find an out-of-game source.

Usually, when a pilot wanders away from populated space, the easiest way to find coordinates back to civilization is to use the quadrant map. Left-click on the "Quadrant" button, located in the lower box to the right of the map.



Figure 15

The map looks like this:

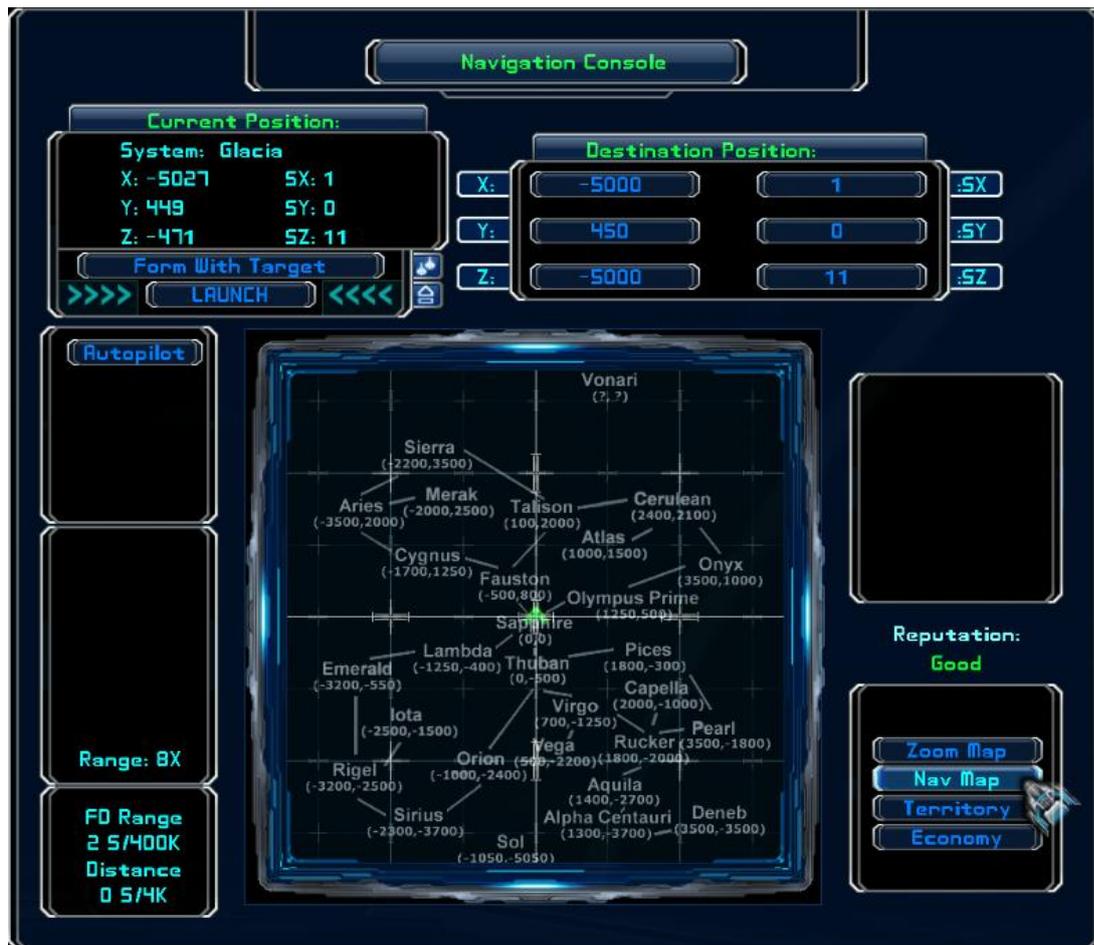


Figure 16

A light-green arrow (in top view) or dot (rear view) signifies your current location on the map. Use your plotted location to determine which star system is closest.

Since your destination is probably beyond the maximum zoom range of the navigation map, you'll need to enter coordinates manually (see Figure 17). Luckily, most star systems are on or near the galactic equator (where SY=0) ... which is why only the SX and SZ coordinates are displayed on the quadrant map (below the name of the corresponding system). To enter coordinates manually, click on the destination SX and SZ windows, type in the coordinates and press Enter. In the example shown in Figure 15, a pilot has drifted beyond range of Sapphires. Using the quadrant map, our pilot sees that the coordinates back to Sapphires are (0,0) ... and enters a zero in both the SX and SZ windows.

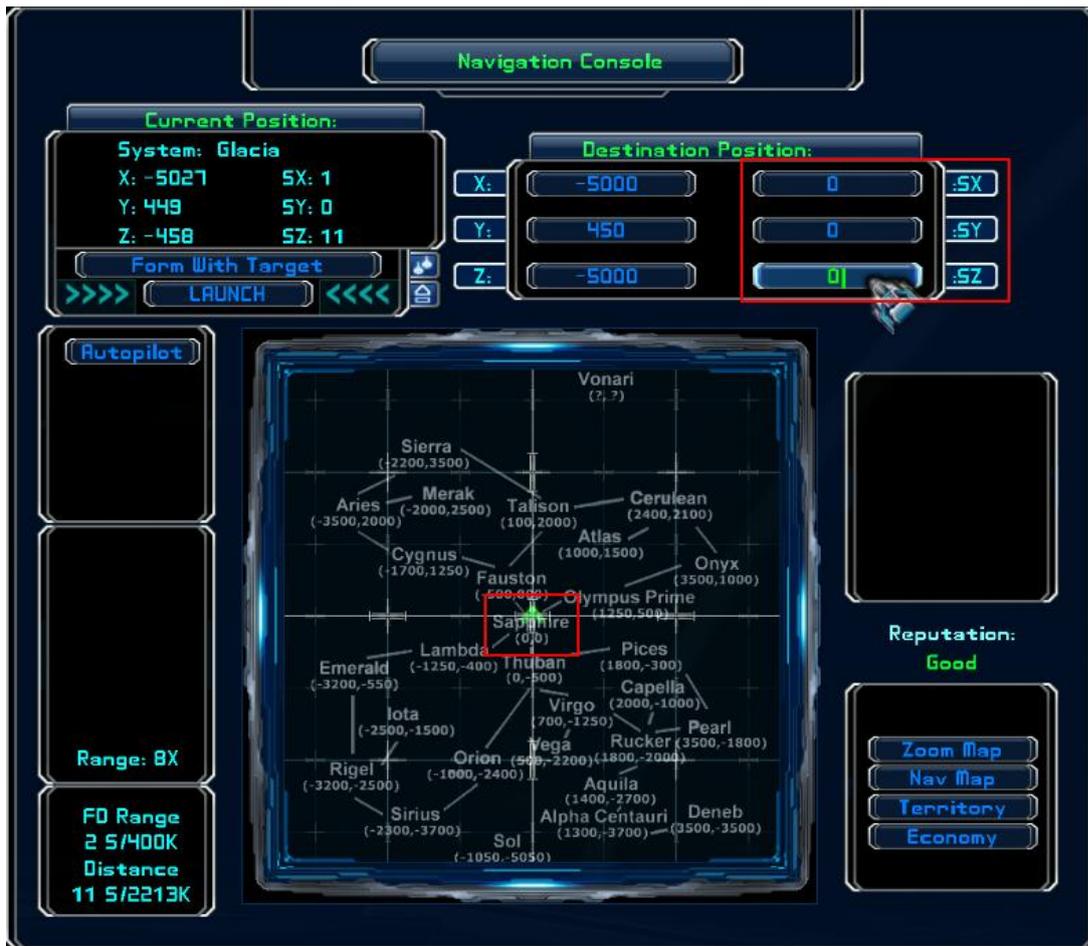


Figure 17

C. Exception To The Rule. If you accidentally used the Alt key to initiate a jump (see Section I.C) and you were pointed up or down at the time, then it's likely you'll find yourself somewhere off the galactic equator (SY=0) when you exit hyperspace. In such a situation, simply change the destination sector coordinate for SY to zero before engaging autopilot.

D. Helpful Hints. There are a few tricks to optimizing the trip so that you get to your destination in the shortest time, using the least amount of fuel.

1: Install the best possible jump drive. There are five classes of jump drive, the Fulcrum C1 through C5. The class number corresponds to the maximum number of sectors your ship can travel in a single jump. There is also an experimental jump drive, called the Mantis, which can traverse up to ten sectors at a time. Your jump drive can be installed in any available equipment slot.



Figure 18

2: Divert maximum power from your shields to energy. The PWR window on the console readout (left side of cockpit) can be adjusted using the default left and right bracket keys. You want them to read "-5S/5W" ... a setting which will re-energize your jump drive the fastest.



Figure 19

3: Turn toward your navigation point.

4: Engage inertial mode by pressing the default space bar. When in inertial mode, the IDS readout will change from "IDS" to "INERTIAL" ... and the ship will maintain a set speed instead of burning additional fuel in an attempt to come to a full stop after each jump.



Figure 20

5: Engage autopilot by clicking on the "Auto" button located in the upper portion of the HUD (to the left of the compass).



Figure 21

6: Open the Navigation Console, zoom all the way out, and monitor your progress. Be ready to disengage autopilot should a jump point place you at or near a solid object.

E. A Word Of Caution. If you think you're already near a star system (and, consequently, near one or more solid objects), you might contemplate calling up the navigation map prior to initiating that first jump. You can then engage autopilot either through the keyboard (default Alt+F) or by clicking on the "Autopilot" button located on the left side of the Navigation Console.



Figure 22

With autopilot engaged, the "Autopilot" button disappears and the "Form With Target" button is replaced with a "Cancel Autopilot" button (Figure 23) ... click on that button to disengage autopilot. Otherwise your ship will either continue on course (not a good idea if your nav point is set to the center of a planet) or continually burn fuel as it strives to maintain position.



Figure 23

Part III. Traveling Via Jumpgate

A. The Quadrant Map. To shorten travel time, many star systems are connected by jumpgates. The connections are depicted on the quadrant map as straight lines, indicating which systems are connected.



Figure 24

Most star systems have more than one gate ... and Sapphire has many. Some of the gates only connect one sector of the same system to another sector ... and those connections are not shown on the quadrant map.

B. The Navigation Map. Known jumpgates (those not hidden) are plotted on the navigation map and, up close, the icon looks like this:



Figure 25

When looking at the navigation map, you'll notice a number of different icons. In order to better identify only the jumpgates, left-click the "Text On" button.



Figure 26

When you do, another button will appear below it ... click on that button to cycle through all the options until the button reads "Gates" ...



Figure 27

... then click one more time so that only jumpgates are labeled.



Figure 28

If you're in Sapphire and the map is zoomed out, labels will still overlap, making it difficult to find whichever gate you want. You can diminish that problem by clicking on the "Zoom Map" button (see Figure 28) which increases the size of the map like this:

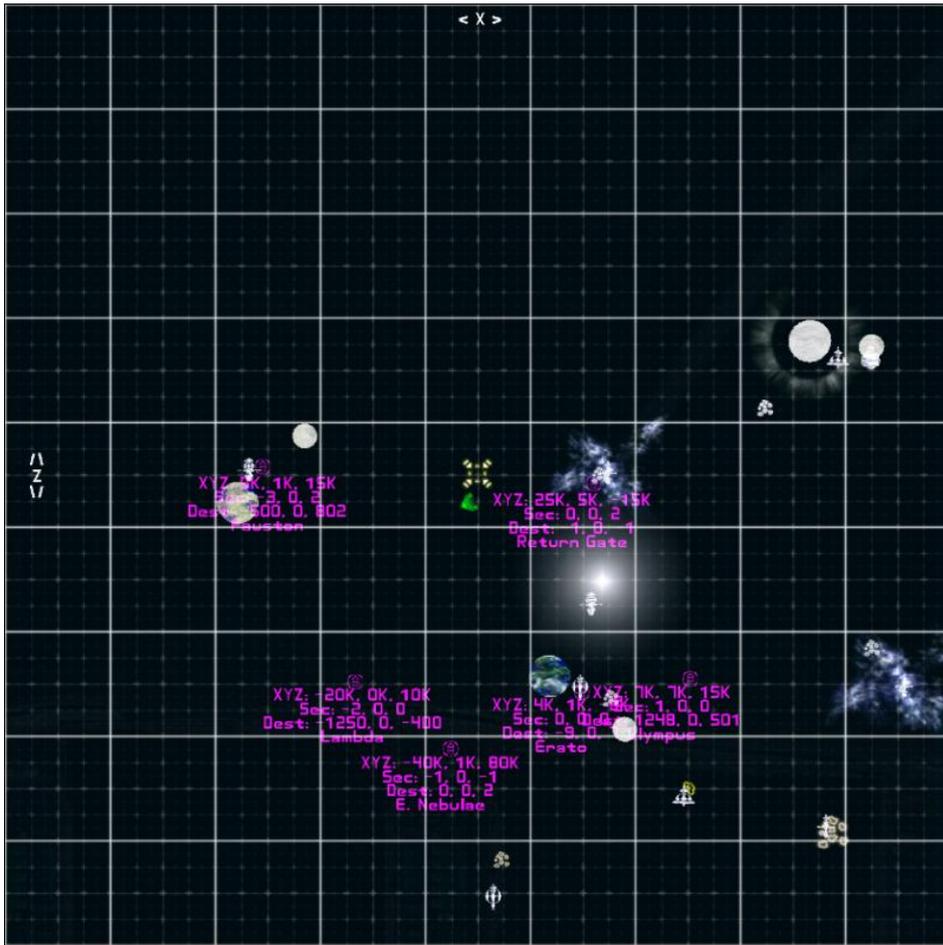


Figure 29

Each jumpgate label lists the sector coordinates of the gate, the exit coordinates and the exit point's closest star system.



Figure 30

If a gate is within range of your jump drive, you can jump directly to it. Otherwise, use autopilot until you're within range. As with any object on the navigation map, if your ship is located on the same SY coordinate as the jumpgate, you can right-click on the icon to set a nav point directly to the gate.

C. Helpful Hint. To turn text labels off, click on the "Highlight" button. You can then view selected labels by placing your cursor over individual icons (as shown in Figures 9 and 13).

D. More Helpful Hints. There are tricks to quickly entering and exiting a jumpgate.

1. All gates are oriented north-south. If you decide to jump to a gate, your ship will exit hyperspace facing the direction it was facing when you engaged the jump drive. Ergo, if you're heading either north or south (and your nose is on the horizon) when you jump, you'll be headed directly toward the gate when you exit hyperspace.



Figure 31

2. If you jump while pointed anywhere other than north or south, then you'll be offset to the left or right of the gate upon exiting hyperspace. If you jump with your nose pointed either up or down, then you'll find yourself either above or below the gate.
3. If currently in hostile territory, you'll want to maintain inertial speed and make use of afterburner to get through the gate as quickly as possible.
4. If the gate takes you into hostile territory, you'll still want to maintain inertial speed ... making quick use of afterburner. Then, in all due haste, open the Navigation Console, plot a nav point to the next jumpgate (or to some less-inhabited area of space) and engage your jump drive.
5. If traversing from one gate to another, usually you need not adjust your heading or pitch. Whenever you exit a gate, your heading will almost always be zero (north) and your pitch will be also be zero (on the horizon).

Part IV. Miscellaneous Buttons and Options

A. The "Form With Target" Button. Allows you to fly in formation with any non-hostile target. An entire flight of ships can form up in trail with one another and remain in formation through multiple hyperjumps and long trips across the entire Evoverse ... leastwise, until the lead ship uses a jumpgate. Once somebody in the flight decides on who follows whom, forming up is easy.

1. Target the intended ship. Once locked into your computer, the target's data readout will be displayed in the monitor on the right.

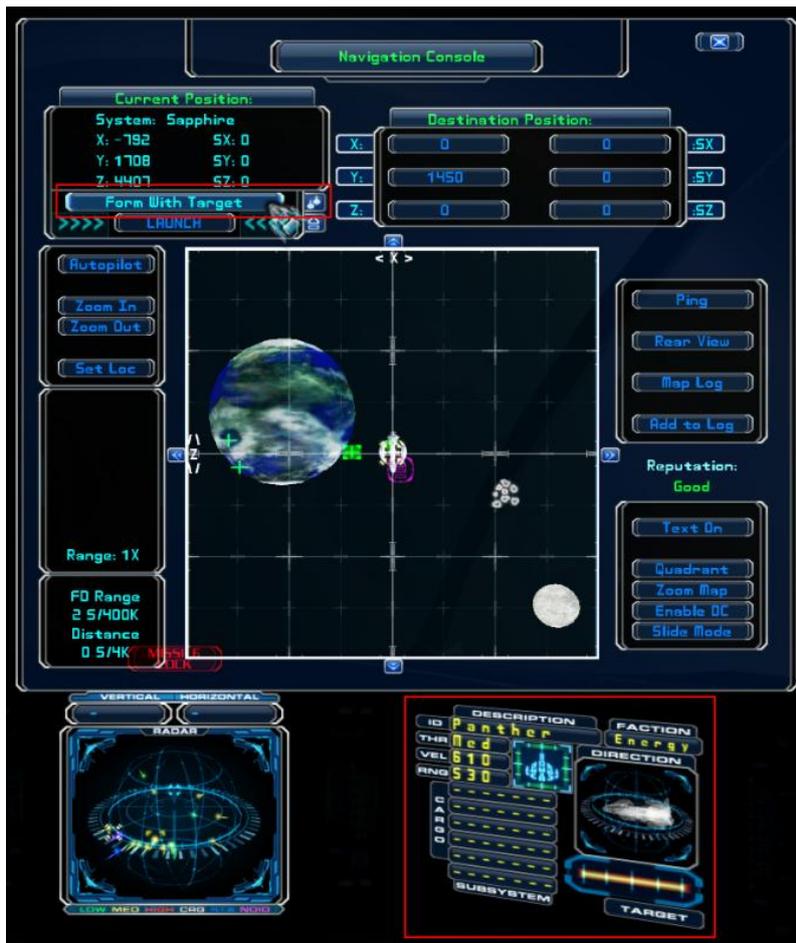


Figure 32

2. Click on the "Form With Target" button (see Figure 32) ... and enjoy the ride.



Figure 33

3. To disengage from your target, click on the "Cancel Form With Target" button.

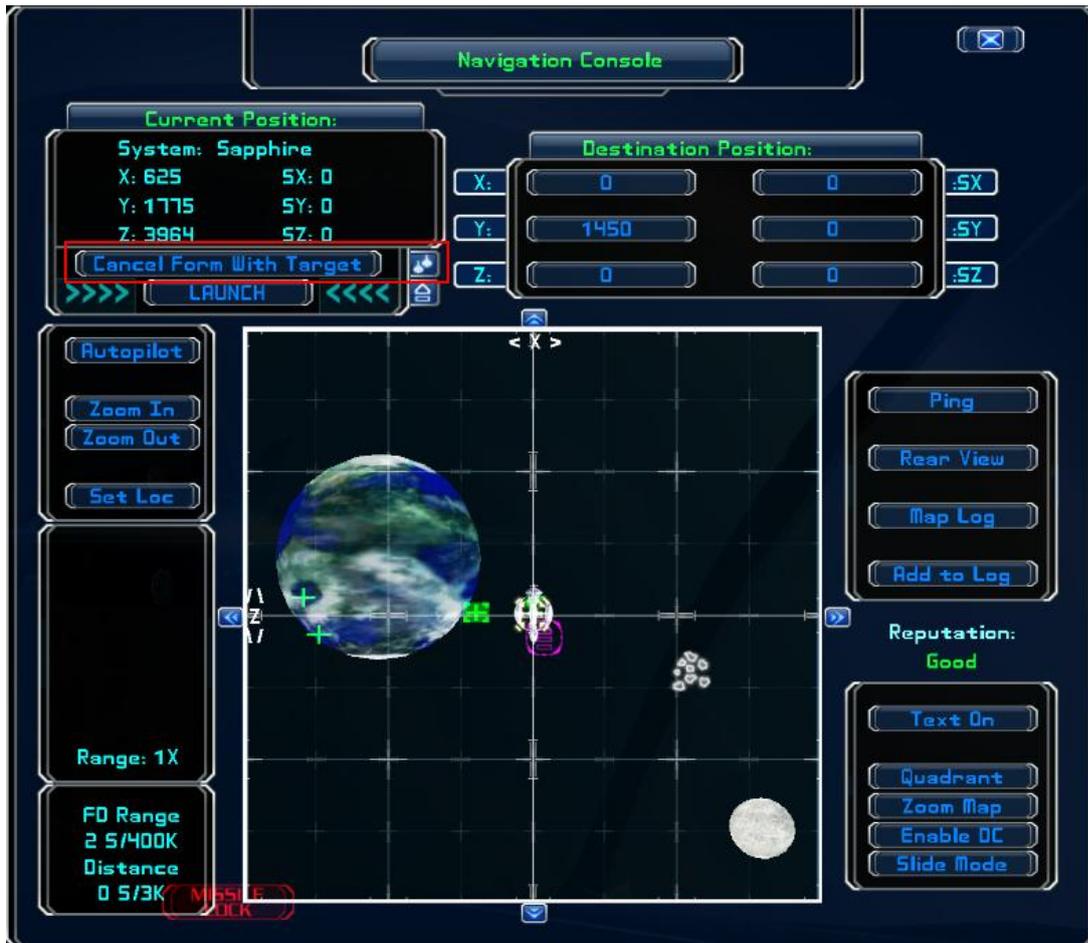


Figure 34

B. The "Launch" Button. Executes a jump through hyperspace to any navigation point within range of your jumpdrive. Use this button instead of the "Jump" button on the HUD (see Figure 33, button on left side of compass) if you decide to leave the navigation map open when initiating a jump.



Figure 35

C. The "Set Loc" Button. Sets your destination coordinates to match those of your current location. After clicking on this button, the numbers in the Destination Position windows should be the same as those in your Current Position window.



Figure 36

D. The Cursor Readout. Whenever the cursor is hovering over part of the navigation map, you'll get a readout of the cursor position. Both in-sector and sector coordinates are listed in the middle box on the left side of the map. You can test it out by moving the cursor around the map and watching the coordinates change. Whenever the cursor is moved outside the map's borders, that part of the box is blank.



Figure 37

E. The FD Range and Distance Window. FD stands for fulcrum drive. The number underneath the "FD Range" header indicates the maximum range of your currently installed drive (either Fulcrum or the experimental Mantis). In the example below (Figure 38), the maximum range is two sectors (2S) which equates to 400,000 subsectors (400K). The number under the "Distance" header indicates the distance from your ship to the current nav point. In the example, that equates to four sectors (4S) or a total of 896,000 sub-sectors (896K).



Figure 38

F. The "Ping" Button. This button is a multiplayer option for sending your current in-sector position to other players. Whenever you click on "Ping" it places a green box at your current location (see Figure 39). Other players will see your location as a small green dot if you carry a clan tag and the other players satisfy the following conditions.

1. They also have a clan tag.
2. They have you set as a friendly. To set as a friendly, any member of a different clan must do the following:
 - Target your ship.
 - Press the default Numpad minus key.
3. They're in the same sector.

Members of your own clan can also see your green dot on the Quadrant map, making it possible for members of the same clan to track one another throughout the mapped part of the Evoverse.



Figure 39

G. The "Map Log" Button. Calls up a list of saved locations. When you first start playing Mercenary, the log is empty ... it's up to you to add whatever entries you deem worth saving (see Section IV.H). Log entries are numbered and those numbers (along with a small blue x) are displayed on the navigation map.



Figure 40

Once you have something listed, you can then click on the "Map Log" button to call up the log (Figure 40) and left-click on your saved location to set a nav point in the Destination Position windows. Right-click on an entry to delete it from the log.



Figure 41

Click on the "Nav Map" button to return to the navigation map.



Figure 42

H. The "Add to Log" Button. Use this option to add destination coordinates for places of interest or as a quick reference to locations which are otherwise hard to find. Click on the button to make an entry to the log.



Figure 43

When you click on the button, the map switches to an entry line where you can type in the description for any location currently set in the destination windows (Figure 44). You do not need to type the coordinates ... after you press the Enter key, the log takes your description and automatically appends it. It also adds a log number and blue x to the navigation map (see Figure 40).



Figure 44

Note: Often, a location you want to save will be one you've flown to manually. In such a situation, it's likely your destination coordinates are not co-located with your current position. Be sure to either set a nav point (see Sections I.A and I.B) or use the "Set Loc" button (see Section IV.C) prior to adding the entry to your log.

I. The "Enable DC" Button. DC stands for distress call. To see distress calls listed in chat and hear the alarm, click on the button (Figure 45). If you only want the distress calls to show up in chat, click on the button again to mute the alarm. If, at some point, you no longer want to receive distress calls, click on the button one more time.



Figure 45

J. Map Arrows. With the map zoomed all the way in (Range: 1X), there are two ways to move the map from sector to sector. The first is to click on the blue arrows located along the each side of the map ... this method advances the map one sector at a time.



Figure 46

K. The "Slide Mode" Button. The second way is by dragging the map incrementally. With the map range at 1X, the "Slide Mode" button appears in the bottom-right corner.



Figure 47

Clicking on the button replaces the standard navigation map with the one shown in Figure 48. To slide the map around, hold down the left mouse button then use the cursor to drag the map in whatever direction you want.



Figure 48

When you've found the sector you're looking for, click on the "Select Mode" button. The navigation map will return to its normal display ... but will still be centered on your selected sector.

L. The Navigation Map and Contracts. Whenever you accept a contract from someone at a trade station or city, the corresponding waypoint will automatically be plotted to your navigation map. On top of the waypoint will be a nav point.



Figure 49

You can adjust the nav point so that, when you exit hyperspace, you'll enter the contract area somewhere other than its center (which is a good idea if the center turns out to be in the middle of combat with a hostile capital ship and its escort). But, once you approach the location of the contract, the waypoint will disappear. If, for some reason, you then move your nav point and jump away from the contract area (say, for example, to make repairs to your ship) then you'll probably need some method of finding your way back to the contract area. That would be the blue box.



Figure 50

To quickly return to the contract area, do the following.

1. While in top view on the map, set a nav point in the center of the box.
2. Go to rear view and adjust your nav point, as required.
3. Engage your jumpdrive.

Now you should find yourself back in the action, where you can complete the contract.

M. The Quadrant Map and Star System Specifications. Besides displaying jumpgate connections between mapped star systems, the quadrant map can also assist the pilot in other ways. With the standard quadrant map open, you then have the option to select either the territory map ...

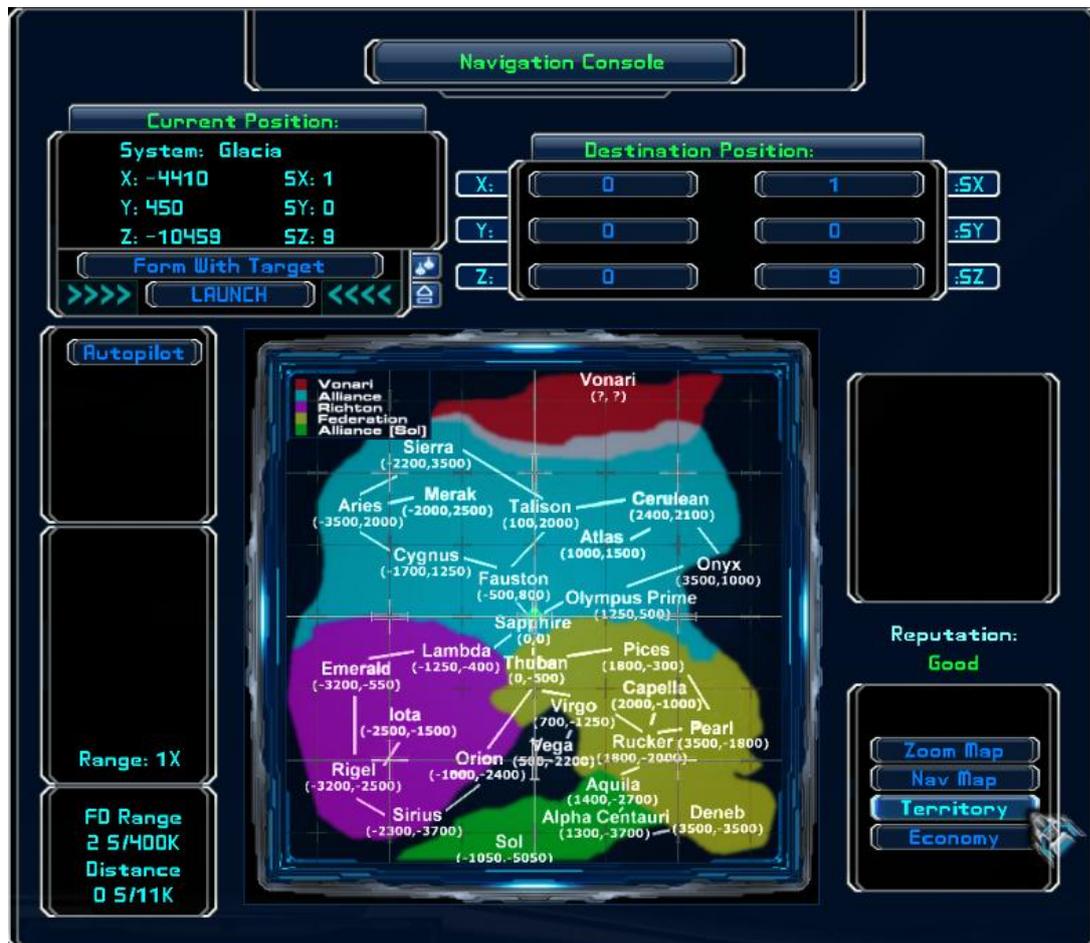


Figure 51

... or the economy map by clicking on the appropriate button.

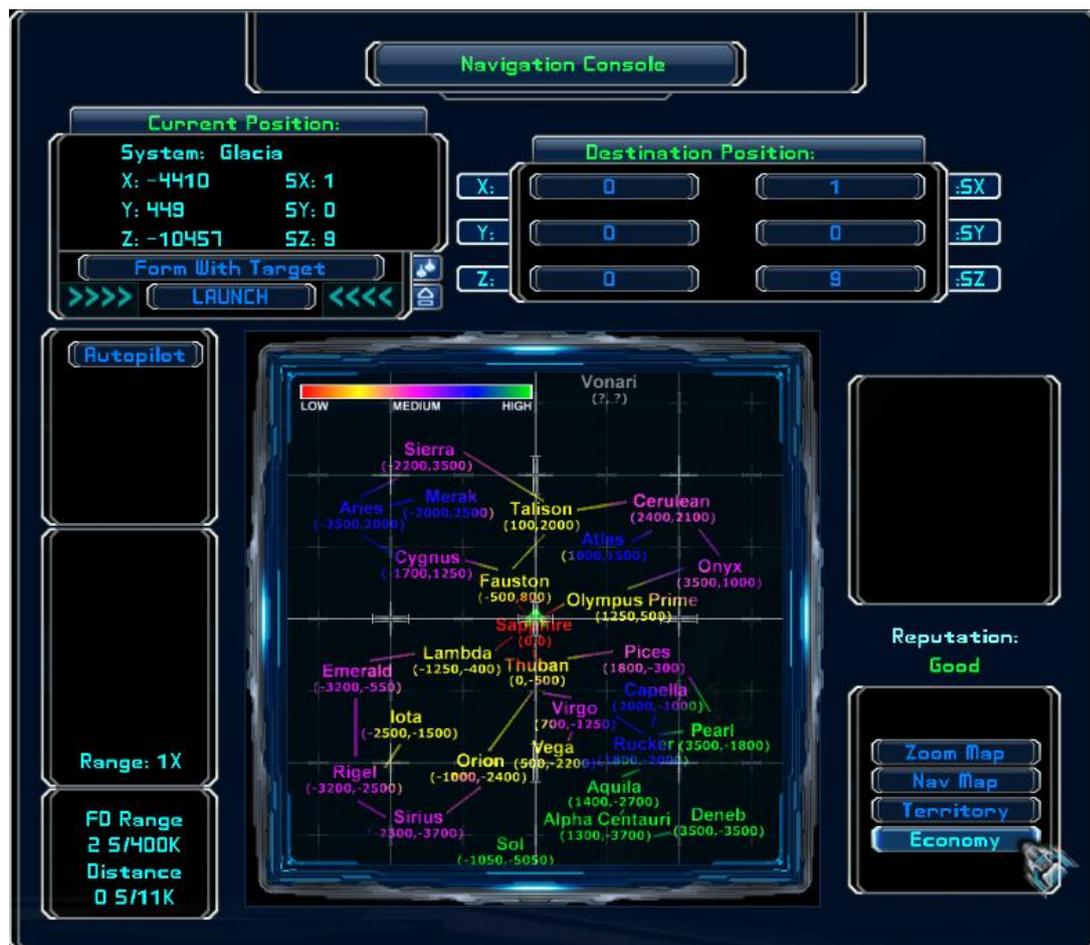


Figure 52

Of the two, the economy map is probably the most important. It displays the basic technology level of each star system. And the higher the technology level, the better the class of available equipment. For example, if you want to purchase that Class 5 Fulcrum jumpdrive, look for it at one of the trade stations or cities in a high-tech system.

N. Limitations On Building And Deploying. As you go about your day-to-day activity in the Evoverse, you'll eventually come across two equipment items which can help: (1) the build constructor and (2) the deploy constructor. Build constructors enable you to expand, hold and improve territory. Deploy constructors aid in combat, exploration and defense.

But there are limitations as to where you can use either type. Examine any of the screenshots of a single sector (Figure 2, for example) and you'll notice that the sector is divided into squares: four large squares in the center surrounded by twelve squares of the same size. Anything you wish to build or deploy must be situated within those four central squares. And only one of each type can be built in a sector. Additionally, when building trade stations, they must be situated at least two sectors apart.

Where is that coordinate pointing to? (tables 1&2)

The first table has the known systems in alphabetical order

The second table has them arranged alphabetically but divided into quadrants

The third table has them arranged scanning left to right across the core

The fourth table has them arranged scanning top to bottom down across the core

Table 1

Agate	-2200	3620
Agate Hub	-2198	3520
Alpha Centauri	1300	-3700
Andromeda	2000	28000
Aquila	1400	-2700
Aries	-3500	2000
Atlas	1000	1500
AWZ(Pearl)	3500	-1500
Capella	2000	-1000
Cerulean	2400	2100
CWZ	2420	2500
Cygnus	-1700	1250
Deneb	3500	-3500
Emerald	-3200	-550
Fauston	-500	800
Iota	-2500	-1500
Lambda	-1250	-400
Lost Rucker	5500	-1000
Merak	-2000	2500
Olympus Prime	1250	500
Onyx	3500	1000
Orion	-1000	-2400
Pearl	3500	-1800
Pices	1800	-300
RiftSpace	7000	9500
Rigel	-3200	-2500
Rucker	1800	-2000
Sapphire	0	0
Sierra	-2200	3500
Sirius	-2300	-3700
Sol	-1050	-5050
SWZ	-2200	3800
Talison	100	2000
Thuban	0	-500
TWZ	100	2550
Vega	500	-2200
Virgo	700	-1250
Vonari	1000	5000
WolfZone	5550	5550

Table 2

NW	Agate	-2200	3620	border
	Agate Hub	-2198	3520	
	SWZ	-2200	3800	
	Sierra	-2200	3500	
	Aries	-3500	2000	
	Talison	100	2000	
	Cygnus	-1700	1250	
	Merak	-2000	2500	
	TWZ	100	2550	
	Talison	100	2000	
	Fauston	-500	800	
	CWZ	2420	2500	
NE	Cerulean	2400	2100	
	Olympus Prime	1250	500	
	Atlas	1000	1500	
	Onyx	3500	1000	
	Sapphire	0	0	border
SW	Emerald	-3200	-550	border
	Lambda	-1250	-400	
	Iota	-2500	-1500	
	Rigel	-3200	-2500	
	Orion	-1000	-2400	
	Sirius	-2300	-3700	
	Thuban	0	-500	
SE	AWZ(Pearl)	3500	-1500	
	Pices	1800	-300	
	Vega	500	-2200	
	Capella	2000	-1000	
	Virgo	700	-1250	
	Pearl	3500	-1800	
	Rucker	1800	-2000	
	Aquila	1400	-2700	
	Alpha Centauri	1300	-3700	
	Deneb	3500	-3500	
Misc	RiftSpace	7000	9500	
	WolfZone	5550	5550	
	Vonari	1000	5000	
	Lost Rucker	5500	-1000	
	Andromeda	2000	28000	
	Sol	-1050	-5050	

Where is that coordinate pointing to? (tables 3&4)

Table 3 West to East

Aries	-3500	2000
Emerald	-3200	-550
Rigel	-3200	-2500
Iota	-2500	-1500
Sirius	-2300	-3700
Sierra	-2200	3500
Agate	-2200	3620
SWZ	-2200	3800
Agate Hub	-2198	3520
Merak	-2000	2500
Cygnus	-1700	1250
Lambda	-1250	-400
Sol	-1050	-5050
Orion	-1000	-2400
Fauston	-500	800
Sapphire	0	0
Thuban	0	-500
Talison	100	2000
TWZ	100	2550
Vega	500	-2200
Virgo	700	-1250
Atlas	1000	1500
Vonari	1000	5000
Olympus Prime	1250	500
Alpha Centauri	1300	-3700
Aquila	1400	-2700
Pices	1800	-300
Rucker	1800	-2000
Capella	2000	-1000
Andromeda	2000	28000
Cerulean	2400	2100
CWZ	2420	2500
Onyx	3500	1000
Pearl	3500	-1800
Deneb	3500	-3500
AWZ(Pearl)	3500	-1500
Lost Rucker	5500	-1000
WolfZone	5550	5550
RiftSpace	7000	9500

Table 4 North to South

Andromeda	2000	28000
RiftSpace	7000	9500
WolfZone	5550	5550
Vonari	1000	5000
SWZ	-2200	3800
Agate	-2200	3620
Agate Hub	-2198	3520
Sierra	-2200	3500
TWZ	100	2550
Merak	-2000	2500
CWZ	2420	2500
Cerulean	2400	2100
Aries	-3500	2000
Talison	100	2000
Atlas	1000	1500
Cygnus	-1700	1250
Onyx	3500	1000
Fauston	-500	800
Olympus Prime	1250	500
Sapphire	0	0
Pices	1800	-300
Lambda	-1250	-400
Thuban	0	-500
Emerald	-3200	-550
Capella	2000	-1000
Lost Rucker	5500	-1000
Virgo	700	-1250
Iota	-2500	-1500
AWZ(Pearl)	3500	-1500
Pearl	3500	-1800
Rucker	1800	-2000
Vega	500	-2200
Orion	-1000	-2400
Rigel	-3200	-2500
Aquila	1400	-2700
Deneb	3500	-3500
Sirius	-2300	-3700
Alpha Centauri	1300	-3700
Sol	-1050	-5050

Navigation III - sectors appear empty when I zoom in

Source Marvin: Sometimes, right click on the map with sectors shows strange coordinates instead of the right. I hover the cursor on the planet (station, gates, any object), click the right mouse button and see the clean sector without planets, and without anything. To normal travelling I have to manually use the arrows to see the map at the highest magnification. Such behaviour can go on indefinitely until you do not restart the game. But very rarely happens that everything returns to normal and I do not why.

You might be suffering from 2D-itis. Make sure your target is not above or below you.

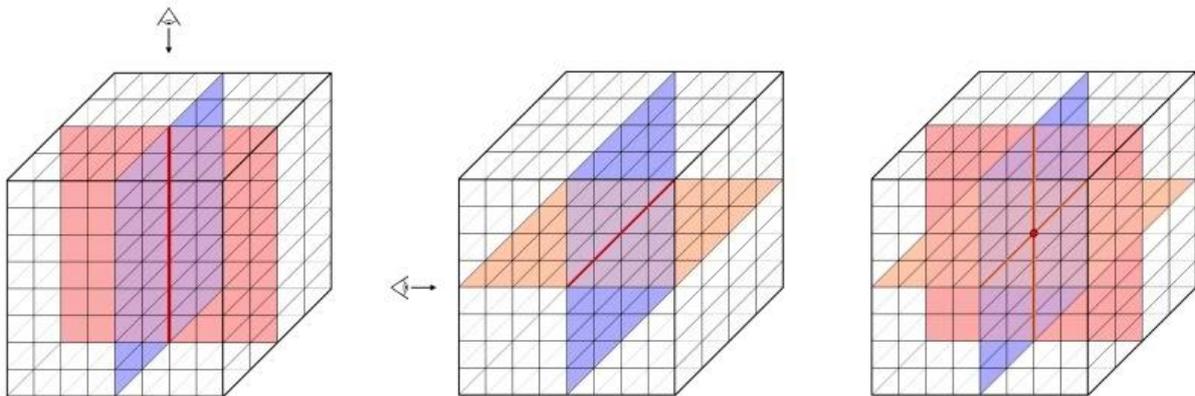
Always do this:

1. Select Top View.
2. Left click on your target.
3. Select Rear View.
4. Left click on your target.
5. Select Top View again.
6. Right click on your target.

The map zooms in when you right click. By left-clicking in both X-Z and X-Y maps, you've set your location in all three dimensions.

I've found that the only time it doesn't work is when your target is in one or more sectors above or below you on the Y-axis ... and you forget to check the Rear View (left click to set the correct Y coordinate) before going back to right-click on Top View.

Here's why:



When you're in the Top View and click (either left or right) on the Nav map, your actual location could be anywhere along the red line in the first diagram. The difference between clicking left or right is, with right-clicking, you zoom in on the map.

When you're in the Rear View and click on the Nav map, your actual location could be anywhere along the red line in the second diagram.

Ergo, you need to click on the Nav map in both views to specify your exact jump point (where the two lines intersect), as indicated in the third diagram.

Section 07: The Station Hangar

A Hangar option is available near the top of the shipyard menu and it lets you store a ship and up to 5 containers of cargo. The option is only available at trade stations and you are required to pay a recurring fee to rent the space. There is a limit of one hangar per pilot at each trade station, but you can rent as many individual hangars from trade stations as you want and can afford.

Hangar fees will be charged on a common billing cycle (every 20 minutes) and will apply for any hangars you are storing ships or cargo in (a list of the station names will be displayed in the message system each time you pay the fees). To remove the fees for a hangar, you'll need to either sell or remove its contents. One thing to note – if you have a hangar and then go off into uncharted space you may find yourself isolated and unable to close your hangar account. You will still be charged the rent though.

If you want to store the ship you are flying at an empty hangar, you'll need to rebuild your current ship so you are never left without a ship. This will be done automatically for you when you select the Store option in the hangar if you have the funds to build another ship of the same design. You can then change the design as desired once you've stored the original. To recover a stored ship, simply use the Swap option that will appear once a ship is in storage.

Your stored ship will then be exchanged with the ship you are currently flying and the contents will attempt to be transferred between the two so you still have the weapons, equipment, crew, and cargo you currently have. If the ship you are swapping into can't carry the same items, they will be discarded or sold. So make sure you sell or store them before you change ships, if you want to recover the credits for them or use them later. If you have crew members and swap to a military ship, they will be sent on paid holiday (at your expense) or you can choose to dismiss them. They return when you transfer to a ship that can carry them. If you want to keep your crew with you, make sure you swap to a civilian frame that can carry them. The game will autosave your progress any time you make changes to a hangar.

Storing Items in a Hangar

Source: Marvin

1. Trade Station - DOCK
2. "Hangar" Button - SELECT
3. "Store" Button - PRESS TO STORE ITEM
4. "Exit" Button - PRESS WHEN DONE

Note: If a pilot uses the same profile on different servers (and/or in single-player), storing various items at different locations (default and/or player built) on each server (or SP), all items will be listed in Hangar Details but only those items stored at locations on the particular server (or SP) will be charged a fee.

Loading Items From Storage

Source: Marvin

1. Trade Station - DOCK
2. "Hangar" Button - SELECT
3. "Load" Button - PRESS TO LOAD ITEM
4. "Exit" Button - PRESS WHEN DONE

Section 08: Rank

What points do I need for what rank?

Source **Vice**: For specific point scoring for each rank:

Rookie	(0-24)
Novice	(25-99)
Competent	(100-499)
Skilled	(500-999)
Advanced	(1000-1999)
Expert	(2000-2999)
Master	(3000-4999)
Superior	(5000-7499)
Veteran	(7500-9998)
Legend	(>9998)

You gain one civilian point per (about 500k credits) plus one per contract (or per waypoint in bigger contracts) plus one per 10 kills during a contract - but you must be the pilot who actually fires the killing shot - shared kills aren't allowed! To buy your rank you will need about 5 billion credits to become a Legend

Trainee	(0-4)	Ferret unlocked
Ensign	(5-24)	Ferret unlocked
Lieutenant Jr. Grade	(25-49)	Ferret + Aries + Shadow unlocked
Lieutenant	(50-99)	Ferret + Aries + Shadow + Wraith unlocked
Lieutenant Commander	(100-149)	Ferret + Aries + Shadow + Wraith + Evoch-C unlocked
Commander	(150-249)	all military ships (Ferret through to Chimera) unlocked
Captain	(250-499)	all military ships (Ferret through to Chimera) unlocked
Commodore	(500-749)	all military ships (Ferret through to Chimera) unlocked
Admiral	(750-998)	all military ships (Ferret through to Chimera) unlocked
Fleet Admiral	(>998)	all military ships (Ferret through to Chimera) unlocked

What other things change when my rank increases?

The size of your hat! - just wait until you get Fleet Admiral or become a Legend!

The higher your rank the more you get paid for contracts; a contract that earns 10000 when you start might earn 100000 when you have a high rank. but the more you will be charged for:

- hangar fees
- fuel costs
- docking fees
- station license costs

(as Legend & Fleet Admiral I'm charged 270000 per pay cycle for a hangar in Talison and 800 000 000 for a licence in Pearl – yep, that's nearly a billion credits. It only costs me a million credits to build a station in Pearl and that comes with a license)

It might be better to buy licenses when you're not-quite-rich yet. and since hangar fees once you have a few billions are so high - it's cheaper to buy a new frame, rather than store one for more than a few cycles. It's cheaper to build a station than buy a licence - but your station can be destroyed in MP. Game stations cannot be destroyed. Pro's and con's – your call!

How do I raise my Military Rank as quickly as possible?

- Do as many military contracts as possible in a warzone (only military contracts count and they can only be found in a warzone)
- Do military contracts on MP with other pilots - each WP in a contract gives a point and you will learn fast by watching experienced pilots. You will also get through contracts quicker
- Decide whether military inspection and retrieval contracts are a cheat or not - if you are happy that they are part of a military pilots life, do them when they appear - they are quick and safe.
- If you are playing solo go to Talison Warzone; the contracts from the carrier there are a bit easier (3 or 4 hostiles rather than 4 or 5 hostiles at the command station)

The warzones are:

- Talison Conflict (a good one to start in or do solo stuff in - there are no capital ships in "normal" contracts and the carrier has easier contracts available)
- Cerulean WZ
- Sierra WX
- Arvoch WZ (near Pearl)

Section 09: Clans in MP

Source: SeeJay's Evochron Basics Schools - <http://www.junholt.se/evoschool/index.htm>

These are pointers to get you up to speed regarding clan stuff and basic skills needed.

I will use HB as an example for the clan tag. This is not rules in anyway. This is what we consider common sense and honourable behaviour.

Clan Systems in MP:

- Add [HB] to your profile name. (When selecting profile, rename first. Mine is: [HB] SeeJay)
- When doing contracts with clan tag on, you affect systems by decreasing % control in another clan controlled system and increase % control in HB systems.
- Check control in Nav (F1) and Quadrant. HB are green.
- When controlling more than 70% in a system all clan members get paid 101 000 credits for each cycle and system. The cycle is around 12 minutes. Control % is frozen when a clan member is online.
- When offline, it decreases. To reduce decrease rate we build stations. Name stations with [HB] Name. The more stations we have, the slower decrease rate.
- Each system can hold up to 50 player build stations.
- To raise % in a system, do contracts in that system.
- Do not do any contracts in another clans systems without approval from that clan. Exceptions are: IMG quest, helping another pilot and warzones.

How does Clan System Control work?

... researched, field tested & compiled by DaveK - thanks to everybody who contributed a correction or extension!

In the past there have been some conflicts that arose through misunderstandings or non-understanding of the rules that determine how a clan gains and maintains control of a system.

As part of an ongoing education and help programme for all citizens of Evochron, GDF commissioned a research report to clarify and check all the rules concerned.

[In the explanation below](#)

"station" means a "Trade Station"

"tagged station" means a Trade Station named with a clan tag at the start of its name

(e.g. [HB] Refuel 01 is a tagged station of the Humble BumbleBees – tag [HB])

Levels of rules

There are **three levels of rules** that determine clan control of systems

1. **rules coded into the game at programme level** by Vice (e.g. the 50 station limit in a system). These are the "chiselled in tablets of stone" rules. The only arguments that can arise are from misunderstanding how the rules work.
2. **rules determined democratically or unilaterally by the server provider** (e.g. no station destruction permitted unless a pilot of the controlling clan is on-line - a USS server rule). Most servers will probably have a mixture of the two. Server Rules are upheld by the server provider; anyone transgressing server rules are dealt with by the server provider according to his/her list of punishments/consequences

3. "unwritten rules" that everyone thinks they understand and thinks that everyone else understands in the same way and thinks that everyone else will abide by (e.g. the 50% rule for a system having been abandoned).

Unwritten rules are inevitably open to interpretation without there being a final judge. They are also open to being ignored by either or both of the parties since they are not "written" rules. They inevitably will cause conflict at some point. If the conflict potential is high and the result of the conflict is serious and detrimental to the enjoyment of players then it is **strongly** suggested that rules be formulated either unilaterally by the server provider or democratically by the players and **preferably before** the conflict arises.

There is a corpus of understanding within the community about clan control and how it works, though many pilots don't know (and don't need to know) the details beyond the facts that clan pilots do contracts to control a system and clans have to build and defend stations in a system.

Generally accepted knowledge:

1. There is a built in limit of 50 stations allowed in any system regardless of whether they are tagged or not (though see below for examples of when this is not actually true)
2. Clans claim systems by having clan tagged members do contracts in that system from any station in that system. Each contract done by a tagged clan member in a system the clan controls increases the control % of the system by one - up to a maximum of 100%. The very first contract is worth 2%. (you have to be clan tagged to do contracts for your clan)
3. If there are multiple clan tagged pilots in a sector then all of the pilots get a credit for a contract done by any one of them. Therefore
 - a. if all the pilots have the controlling clans tag, the percentage is increased by the number of pilots present for each contract undertaken; 3 pilots = +3% per contract
 - b. if all the pilots have a different tag to the controlling clan (and they can be a mixture of "other" clans) , the percentage is decreased by the number of pilots present for each contract undertaken; 3 pilots = -3% pper contract
 - c. If there is a mix of controlling and "other" tagged pilots present the increase or decrease is the difference between numbers; 1 controlling pilot balances 1 "other" pilot for each contract done.; 1 controlling + 1 "other" = 0 overall
4. Only clan tagged pilots can do contracts that have a benefit for that clan. Contracts carried out by untagged (Indie) pilots have no effect on the % control of a clan controlled system. If an untagged pilot or a pilot from a different, allied, clan wishes to help increase the % for their ally they **must** fly with the ally clan's tag.
5. A tagged station is **not** a requirement for clans to take control of a system. However, the more tagged stations a clan has in a system the slower the drop in its control %, up to around 20 - 25 stations. Above that number the rate of decrease in % control doesn't significantly get better. (you don't need any tagged stations to control a system. You only need 20-25 stations to minimise the rate of loss of control %)
6. Tagged stations can be created for a clan by **any** pilot, be they untagged, the clan's own tagged pilot or another clan's tagged pilot. (any pilot can construct tagged stations for any clan)
7. Each contract done by a clan tagged member in a system controlled by another clan decreases the other clan's % of the system by one, down to a minimum of 2%. What happens next depends on whether the attacking clan has a tagged station in the system or not.

8. When the controlling clan's % reduction reaches 2%:
 - a: if the attacking clan has a tagged station in the system the attacking clan's % will increase to 2% (and by 1% thereafter for each contract carried out) and the system will appear in the Quadrant Map as now being in the attacking clan's possession - the attacking clan becomes the new controlling clan.
 - b: if the attacking clan doesn't have a tagged station in the system then no clan will be shown as controlling the system in the Quadrant Map
9. If two clans have a tagged station in a system the clan with the most contracts will control the system and their clan tag will be shown on the Quadrant Map along with their % control. **Only one clan at any time has a controlling % score and that clan is shown on the Quadrant Map**
10. Understanding Point 9 is a vital because of the implication for alliances. If, say, [HB] has Atlas @ 100% and [TM] tagged pilots attack and do 20 contracts, the new result is that [HB] now has 80%. [TM] does **not** have a % score at all - it is **not**: [HB] 80% and [TM] 20% and it is **not** even that [TM] has a score of 0% either. **Only one clan has a % score at any one time**. What [TM] has done is to reduce [HB] % score by 20%.

[TM] will only start have a % control score when it has done **99** contracts. The first 98 contracts reduce [HB]'s score to 2% (remember that at this point [TM] still does **not** have a % score). When [TM] does contract 99 the situation becomes: [TM] 2% and it now controls Atlas and [HB] doesn't have a % score at all. The program does not register 1% or 0%!

Only one clan has a % control score at any one time

11. Clans get paid per system per (12 minute) cycle. Each pay cycle every clan member online is credited with 101 000 credits per system the clan controls (at above 80%). This is one reason that clans control so much territory. If they were to be paid per station in a system at above 80%, there would be less incentive to claim multiple territories and some justification in limiting the number of territories a clan can hold. It would also make systems like Olympus - which have several sub-territories each of which can have 50 stations - more attractive and might lead to more inter-clan clashes! Periodically this discussion resurfaces on the forum

Implications

1. **(Point 3)**; If your clan space is being attacked, then stick with the attackers and you will cancel out their contracts if there are equal numbers. If you have to away from the keyboard for a short while then "park up" in the sector another of your clan member is contracting in – your clan will get an extra point for each contract done
2. **(Point 5)**; There is no minimum number of stations required in a system in order to control it. Having stations simply decreases the rate at which a clan's control % is reduced. There is no real need to have more than 20 - 25 stations for this function to be fully effective. In theory this could leave plenty of building potential for Indie Mercenaries.
3. **(Points 6 & 4)**; Any pilot can create a tagged station for any clan but only clan tagged pilots can do contracts to the benefit of the clan.

4. **(Point 1)**; There is a common method by which clans "protect" their systems. They "hide" 50 stations within the 3D system space on the principle that other clans will not be able to find the stations. It is generally believed that there is a maximum of 50 stations allowed in **each system**. As a result when a system is "maxed out" no-one else (including Indie Mercenaries) is able to build a station in the system. This is detrimental to overall gameplay

This belief that 50 stations per system maxes it out is not totally correct. Some System's control space is divided into several smaller control spaces, **each of which** has a 50 station limit. ***However only one clan can control the system as a whole and only one clan will be shown in the Quadrant Map***

For example, in the Olympus System, Olympus Prime controlled space has a maximum station build of 50; Olympus Delta's space has its own allocation of stations and hence it is possible for two clans to each have 50 stations in the Olympus System - one clan in Olympus Prime and the other clan in Olympus Delta (or both clans with stations in each). There are four or so sub areas in the Olympus System, but only one clan can claim overall control of the "Olympus" system

In this situation the Clan with the most contracts overall will be shown as controlling the System in the Quadrant Map.

Misunderstanding this point may lead the two clans to believe that they are the legitimate controllers of a system because they have many stations within it. This can result in conflict between clans both of whom believe that they are the legitimate controllers of a system. They may interpret the contracts carried out by the other clan as reducing their % whereas the other clan may see their contracts as increasing their %. This is a subtle but important difference. Throughout history the "righteous" have been notorious for being very keen on "smiting" the "unrighteous", making a diplomatic solution unlikely.

The 50 station limit protocol is a Level 1 rule - coded into the game programme. Any changes to the rule would require recoding by Vice. However once everyone understands how the rule is implemented, "confusion caused conflict" should decrease. People can go back to bashing each other's brains out from a choice made for the right reasons (it's fun) rather than from misunderstanding the rules.

5. **(Points 9 & 10)**; Since only one clan can control a system, **shared** control is **not** possible under any circumstances. The rewards from controlling a system can therefore only go to one clan. Clans can join together to attack a system and take it away from its current controller, but only one of the attacking clans will have control after the war is over. Consequently clans need to give serious thought to what they expect from any alliance they are invited to join. As long as all the participants of the Alliance are aware of which will be the final controlling clan, there should be no problems after the conflict. As long as !

Since this is Evochron Mercenary, a clan can recruit and hire Indie's or even other clans to help with vermin eradication at a mutually agreed fee! There is no legal system to enforce contracts though, so get a substantial payment upfront!

Section 10: Careers, Jobs & Making Money

There are numerous careers, jobs and occupations and you can choose from:

- Miner
- Trader
- Mercenary Contractor
- Racer
- Naval Mercenary Pilot
- Explorer
- Custom Weapons Supplier
- SAR & general Galactic Do-Gooder
- Pirate
- Bounty hunter
- Tourist

You will likely change careers as time goes on and may have several jobs at once. The following sections are roughly in order of how your lifestyle will change as you get more experience and money.

The main career options are discussed in detail in sections below the minority jobs (or second job options!)

Answering Distress Calls

These have a tight time limit – though recent upgrades have increased the times and made them much more attractive. You still don't really have time to find the materials required or mine them and then deliver them even within the new time allowed.

However there is a limited number of things that require delivering in a crisis. The only way I could succeed was to have a civilian ship with five cargo bays (to manage typical distress missions) and a big fuel tank (for SAR requests). I stocked up with 25 each of :

- medical supplies
- metal ores/alloys
- water
- oxygen
- food

Other emergency needs that come up now and again include caviar, champagne, designer sunglasses, botox, nail polish with coordinating lipsticks and sunscreen lotion but I concentrated on the commoner (and better "feel good factor") crises.

There is a fairly fixed payout for most of them (1 250 000) so it can be a profitable, smug and fun way to make money fairly easily, cashing in on fellow citizens' misfortune - factor in the time to replenish your supplies though. If you can do a mission every, say, 10 minutes you earn 7.5 million credits per hour - plus get a great feeling of being a good person.

*Or you can become a pirate/Reaver/Bad Alien (a clan) and earn less money but have the satisfaction of sounding like Long John Silver in a bad pantomime. Or you can do one 5 minute runs in Pearl and earn five times as much
Cynic . . . moi???*

If you don't want to be distracted you can switch the distress calls off from the Nav Screen (bottom right hand side)

Selling fuel & doing SAR; Rescuing pilots

Another option in the trade console is transferring fuel in 30 unit chunks. This lets you rescue out-of-fuel stranded players, sell fuel for profit, or give it away to help new players. Fuel can be a very valuable commodity in addition to trading other items.

You can sell fuel at a station: When you refuel at a station you can type in your amount. Instead of buying 1000 units you buy -1000 (note the negative sign in front of the number!) This makes you sell 1000 units of fuel.

Piracy

Hang around and attack NPC (or other pilots) and you can collect cargo containers after you destroy their ships. As your reputation grows you can threaten other pilots and demand a "fee - for safe passage" through your space

You can also expect other pilots to hunt you down if you cause too much of a nuisance!

Don't pick on newbies and spoil their fun before they can get the hang of the game. If you do you will be warned and then booted from the server for bullying. Pick on more experienced players and you will add enormously to the game!

Fraud

Take a delivery contract in a station and then go and sell the cargo. Or take a find and fetch contract and do the same. Don't forget to cancel the contract after you've retrieved the container or go and sell it at a different station

This is a relatively recent 'career' option so there is little info on what it will do to your reputation – but as a ne'er do well, you probably won't be bothered anyway!

Tourist

Fit a screenshot programme and tour the Evoverse - there are some interesting sights to see including:

- awesome planets (including gas giants) and nebulae
- wrecks
- Vonari Capital ships (pink!!)
- asteroids floating in atmospheres (think Avatar)
- plants floating in the atmosphere
- amazing sunrises and sunsets
- epic battles between human and Vonari capital ships
- maze-like asteroid caves with hidden treasures (including a gate, a wreck, a trade station!)
- a Trade station built into an asteroid
- Blackholes and "wild" wormholes

Create a guide or a story about your adventures

Custom Weapons Dealer

Collect and sell offensive and defensive equipment, especially in war zones. Collect raw materials and create custom weapons to order - supply custom cannon and missiles. You can also sell shield and fuel packs to combat pilots too busy to find their own. A Stealth Generator (permanent type) can be sold at an enormous profit to desperate combat pilots!

Section 11: Racing

2014: Vice has increased the diameter of the race tubes which makes it much easier (for some pilots makes it possible!) to stay in the tube. However the following advice/discussions are still generally valid.

General Comments

Completing some races skills, both timed and against AI ships, can also be helpful for developing ship handling. Racing is a useful way to gauge how good you are at controlling your ship. Until you can learn to keep your ship within the tube at higher speeds, you'll still have some work to do in learning to control thrusters, gauge momentum, and compensate for drift.

Forget winning it at first, just focus on learning to fly faster through the pathway. Once you've learned directional control pretty well, then work on drift control/angular momentum to learn how to attack while flying sideways and backwards.

When it comes to racing and learning to control your ship, keep these points in mind:

- > Are you pointing the nose of your ship where you want to go through the race course and/or path you want to fly? If so, don't. That's employing an old style arcade flight mechanism that doesn't work very well in this game. You must lead the nose of your ship ahead of the turn to where you want to go once your speed starts to get above around 700-900 and depending on the weight/thruster power of the ship you are flying. The turns in the racecourse are designed to be just sharp enough to require some lead-nose course correction at the required speeds. Not a lot is required, but similar in form and approach to how you would flare an airplane on landing. Once you get the basic angle and speed range learned, you'll find it's pretty easy to duplicate on successive turns.
- > Keep the control management simpler by focusing on only one primary axis of adjustment. Do this by rolling your ship so that every turn can be navigated with pitch only. Avoid trying to mix and match yaw and pitch until you build your skill level further. Just roll left/right as a turn is approaching so that your course correction involves only having to pitch up or down. Once you get that down, you can work on applying the same concept to yawing left/right. Then later combining them so you can do either or both when needed. This will help build your skillset for managing turns along a set path to get an optimal attack position on a target in combat. (**translation:** fly your ship like a plane!)
- > Use IDS x2. Activate it (numpad 9), then just manage your throttle with the wider range of control and don't use the afterburner for a while. Learn the right speed range to achieve the sliding turns needed for the ship you are flying.
- > Learn to use lateral AKA strafe thruster control. Be sure to practice using that for times when your drift may be too much and you need to counteract the momentum to stay within the tube/path for an attack.
- > Until you get better at drift, slow down for turns. Keep your speed at or above 1200 for the straights, then bring it down well in advance of a turn to around 700-800 so you don't have to do much drift management. Then quickly speed up again as you come out of the turn. Gradually work your way into learning drift control.
- > A very important skill to learn/master is controlling your ship with the IDS off. You'll need to learn to control your ship's manoeuvring/strafe thrusters manually (along with the speed offset controls and afterburner for adjusting forward/reverse movement). When the IDS is off, you are in direct control of those thrusters, the computer won't manage them. Practice engaging your lateral and vertical thrusters with the IDS off (default A, D, Z, and X keys, or variable input control if you're using a joystick).

Summary of Tips from Vets:

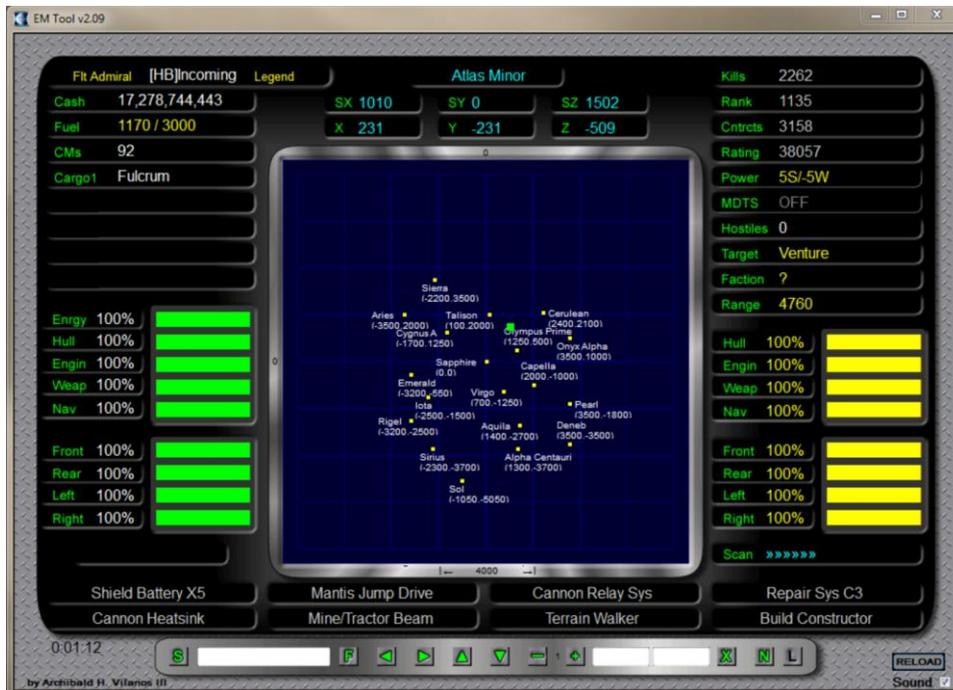
- You need to control the ship and for manoeuvring it's easy and better if you use IDS mode.
- set IDS x 2
- Never use afterburner before a curve, like when driving real cars. Use it when there's a line of straight rings.
- keep your speed at about 1000 – 1100
- develop an appreciation of the line you need to take through curves – you don't have to stay in the centre of the ring! Take the curves like you would at Indy.
- Avoid looking at or even thinking about your opponent racer, just stay totally focussed in your flying. This is a hard but it is the most effective rule - concentrate on finishing the course at around 1000. The other pilot might ram you from behind; ignore him.
- You don't need to buy a special wings or engine. But it will help if you do an upgrade wings make turning nippier but if you are still in a starter ship they are nippy anyway. Bigger engines don't (repeat don't) accelerate any faster they just increase you top speed and with IDS multipliers you can already go faster than you can stay in the rings!

Section 12: Explorer

Useful Utilities

EM_Tools

Source Archie - http://www.evochron2.junholt.se/tools/EM_Tool_2.09_&_Source_B.7z



Definitely designed for those lucky enough to have two monitors (or it can be used on a second machine on a LAN). A wealth of built in info and utilities!

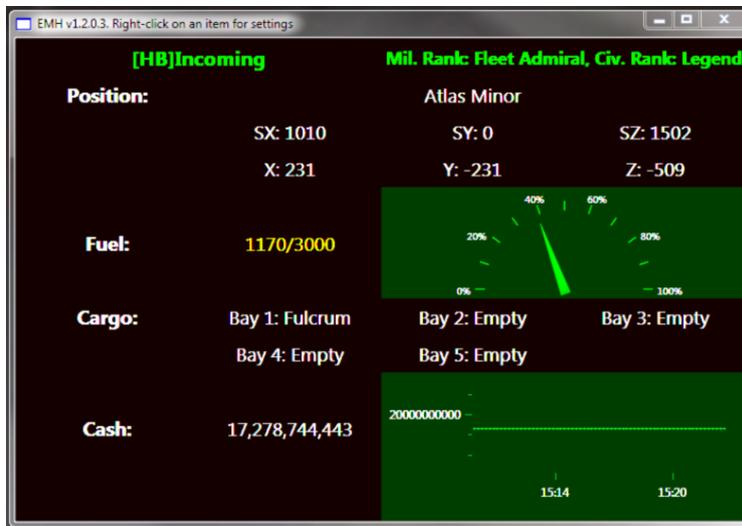
- * The large input box allows you to type in search criteria.
- * Press the [S] button after entering search criteria to initiate the search.
- * The [F] button is used to turn Follow mode on and off. (The map will stop following you around if this is off).
- * The arrow buttons are for panning the map.
- * The [+] and [-] buttons zoom the map in and out.
- * At ZOOM level 8 you can click on the OBJECT markers to see a tooltip with coordinates of the object.
- * The 2 small input boxes allow you to type in map coordinates (SX and SZ) that you want to see on the map.
- * Press the [X] button after entering the coordinates to move the map to that position which will be marked with a red X.
- * The [N] Button is for editing/viewing NOTES about each sector. It will be RED when there are existing notes for the current sector.
- * The Sector Notes window can be moved by clicking and dragging the title. It can also be resized.
- * At ZOOM levels below 8 you can click on the SECTOR markers to bring up the sector notes window for that sector.
- * The [L] Button turns on and off the Ships Log. When this is on, changes in sector will be logged to the SHIPS LOG window and to a file on disk named EM_Tool.log.
- * The FUNCTION KEYS F1 thru F8 can be used to ZOOM directly to the corresponding ZOOM level.
- * The F9 key gives a count of sectors and objects collected in the EM_Tool.txt and EM_Tool2.txt files.
- * The sound checkbox (bottom right of screen) turns the sound on and off.

Evochron Mercenary HUD (EMH)

Source: [jimbobslimbob](#)

<http://www.jimbobslimbob.com/filescat.asp?cat1=Games&cat2=Evochron%20Mercenary>

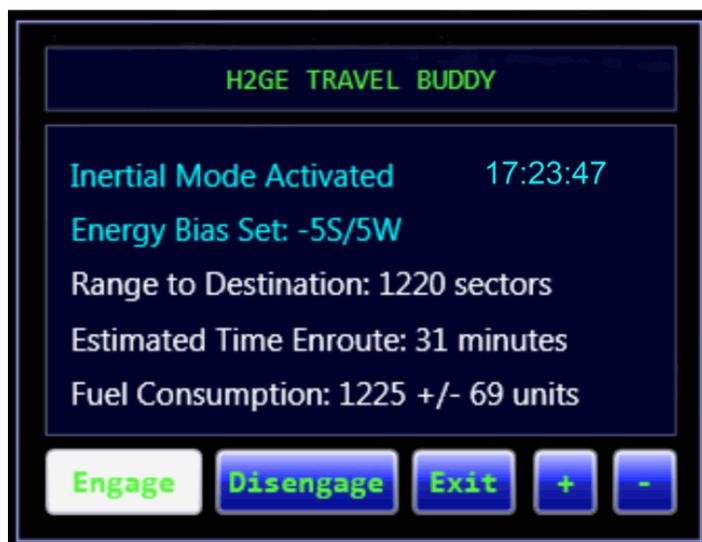
<http://www.starwraith.com/forum/viewthread.php?tid=11045#pid165033>



If you only have one monitor, this is a cut down version of EM_Tools – no map, notes or logging but it does give a graph of your bank balance – useful when trading as well as cargo bay contents and fuel. It can be resized to sit in your HUD. It was designed to work on any resolution. Fonts **and the graphics will resize as necessary**. It uses real-time information on the game that is currently playing. Information includes player position, fuel, cash - including a historic graph, player name and rank.

TravelBuddy - used to monitor your route and fuel

Source [Marvin](#)



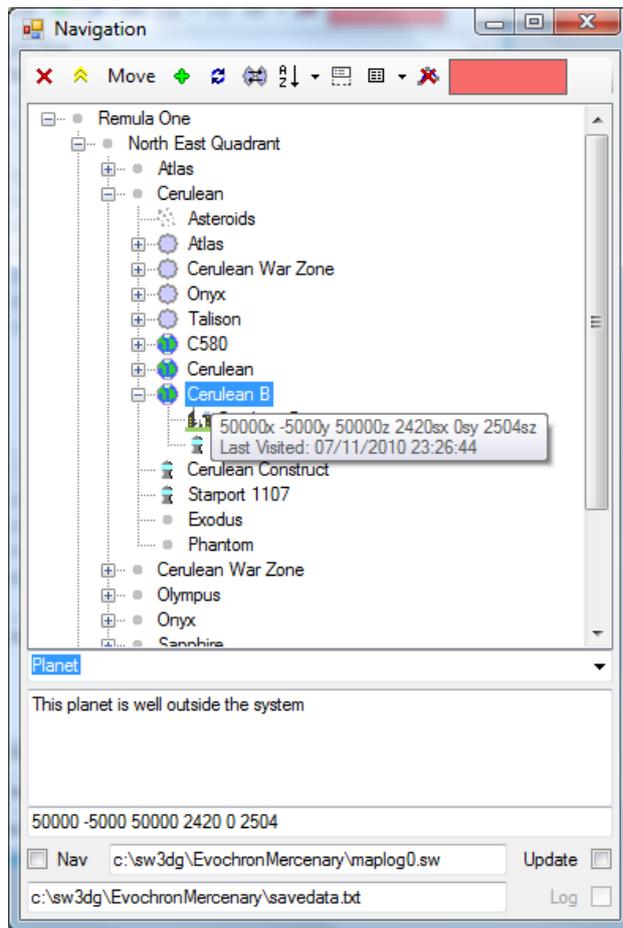
Travel Buddy is a must-have small utility that it monitors your progress across space, be it short hops or vast distances and provides several aids:

1. a system clock
2. current fuel requirements (color coded red/yellow if estimated fuel exceeds fuel on board)
3. distance to jump point and/or destination
4. time en route
5. "arrived at destination" beeper (that can be turned off)
6. constant reminder you to make or maintain the proper energy and power settings

It even compensates for type jump drive, be it a C2 Fulcrum, an experimental Mantis, or anything in between.

MapLog

Source **Atollski** <http://www.starwraith.com/forum/viewthread.php?tid=6799>



This utility (last updated in 2011) was the first navigation utility created for EM. It is an automatic navigation log and navigation system. Basically, it will watch the log entries recorded in-game and dump them into an ever growing list of locations. You can arrange the structure of these locations in a tree type structure of your own choice

If you have the 'save text data file' system running, you can also specify the text file and use the other feature - the route finder. Double click any item on the location tree and the system will calculate the most efficient route (using jump gates if known) and feed these into your nav log as a set of waypoints.

There are full instructions plus a tutorial by Marvin below and it's available from SeeJay's site

It will still work on the Expansion but can take quite a bit of coaxing to get it working. There are useful discussions in the forum.

You might well prefer to use the logging facility in EM_Tolls with the trilateration facility on SeeJay's website instead. **However MapLog does one have major plus.** As a default it comes with an empty map – **you** can log where **you** have been and what **you** have found! **No spoilers.** One step up - DaveK argued (to himself initially!) that information about the **gated** systems would be readily available throughout the Evoverse so he created a map log file of **just** those systems – sort of a Michelin Map of the Evoverse. So you can start MapLog with just the charted systems and use it and it's integrated facilities to explore the rest!

Exploration & Finding New systems

There are several methods of finding new systems each with its group of fans, though many people use a mixture. Some are suited to serious exploration, some are suited to a quick 'what's that there?' event. The list below goes from serious to light;

One important point to note is that the system name displayed in your NavMap (and the map logs) is actually the name of the nearest planet – the one that has political control over that volume of space. Hence as you fly through a system, more than one 'system name' could appear since there are likely to be several planets in that system!

Method 1a – EM_Tools log file + trilateration

Use the logging function in EM_Tools . You can then use the trilateration function in the Excel file available from SeeJay's site or the visual web-based one on SeeJay's site to track down new systems. There is a tutorial (and a link to a tutorial video) about SeeJay's trilateration facility below.

Method 1b – MapLog log file + trilateration

As '**Method 1**' but use the logging facility of MapLog followed other by MapLog's trilateration function or SeeJay's web-based facility .

(Editor: I suggest you examine and evaluate MapLog against EM_Tools and SeeJay's trilateration facility before you invest large amounts of time in getting them to work on your system. There is information immediately above with links to the forum and appropriate sites)

Load up Atollski's MapLog program and tick the log box (at the bottom). Jump from one system to another (keeping fuel requirements or refuel gadgets in mind) and in the text file "logdata" in the main game folder you will have a detailed list of all the systems you have flown through. Alternately you can stay glued to the MapLog window and system changes are shown at the top in the form "Entered new system O182"

You can then use the built in trilateration function to track down new systems (see below)

Method 2 – Starlight Gazing – Tutorial - find a star when you run across its border!

Source **Miaz**

This method helps you find the star at the core of the system. It doesn't help finding the planets that make up the rest of the system. Trilateration is great for when you're serious about exploration. Miaz' method is very useful for those "hey, what's this?" moments. One option for finding the planets is to spiral outward until I find them! Another is to use trilateration!

Notice that in Miaz's tutorial, the Nav map indicates system K434 . . . that's the closest planet. But, as you spiral out, you might work yourself away from planet K434 and toward a different planet in the same system . . . at which time the System name on the Nav map will change. Keep track of the System names and you'll get some idea as to how many planets are in the system. The closest star to current position doesn't have much to do with the system name either –it's the closest planet's name you see!

On to details of the method! *Nine hundred sectors is about average (give or take a couple hundred) for the distance between uncharted star systems.*

When you enter a new system you can see the star light changing inside your cockpit. It's a property of stars in deep space that although you can't tell which is the system star (it's too far away) it still produces more light than the rest of the stars in the galaxy and has a noticeable effect reflecting off the struts and glass in your cockpit. Stop the ship somewhere and use the reflectors on left and right of your cockpit and the nose.. Turn slowly on different axes and monitor how the light changes – brightening and dimming. If you can orientate your ship so that the light seems to be coming evenly from ahead of you then you are facing the star. Head for it!

MiaZ Hint: Look at your hull in 3rd person view and check the light/shadows to see where the closest star is. Leaving a system and finding a new star will change the light/shadow reflections on your hull.

One of the HUD Mods has a simple gadget – a reflector – on each the side struts of your HUD. These reflectors make it a bit easier to orientate your ship a bit more accurately but it's not vital. The reflectors change color when star's color changes which gives you another clue about when you have left a system and entered another one. Again useful but not vital

Once you find the star you are ready to find the planet(s) around it that form the full system.

Finding the star using visual clues is the easy part! If you are trying to find the planets that are **not** close to the star or are trying to find planets by following the system name, then trilateration, using a map log is very useful.

A tutorial for my starlight gazing technique at finding stars.

Miaz

Editor: this tutorial is still relevant but it was created with a HUD without the dome reflectors fitted to the struts.

Keep a close look at the part of the cockpit just along the front ledge above the radar and to the left and right sides of the MFDS. Use the reflection to put the star behind me - I am flying away from the star in search of new system. – both struts are equally bright



After jumping about 200 sectors, Suddenly the light changes. Here it is coming from the left, so it shows up more on the RHS strut



Using that ledge above the radar and to the left and right of the mfd's, I aim for the star.
I keep jumping forwards (Alt F2) until I jump past it. When that happens the light will suddenly change again.



Light changes again now it's to my right – the LHS strut and ledge show this



Now I open the navmap



I hope this helps the semi explorers like me who want to stumble across something rather than do any search patterns or trilaterations.

A practice exercise: As a start you could try from 0,0,0 keep jumping north and you will see there is a system just north west, very easy to find using this method.

I only used the default cockpit because it is best for showing this and makes it easier to see and explain. Some of the cockpit mods aren't so easy to use though, so if exploring I do a quick switch to default pit. But even without a pit the same thing can be done by switching to 3rd person view or you can even switch to external view between jumps and look for light and shadow patterns

Trilateration I - instructions for the web based utility from SeeJay

Source: **SeeJay**

On SeeJay's website is a **Single-Planet Trilateration** utility.
<http://evochron2.junholt.se/main/planetsearch3.htm>

Instructions for use: (Note: there is also a 40 minute video that takes you through step by step! – you can download it from SeeJay's site – see the Video section about

Grid Setup

Set the Grid Center to the SX and SZ coordinates of your known planet.
 Adjust the Mouse Position as required (700,700 would be in the center of the Map).
 Click on the "Set Values" button.

Note: any time you change a value, using one of the "Set Values" buttons, it takes a few seconds for the map to update.

Planet A & B Setup

Enter the SX and SZ coordinates of the known planet in each of the SX and SZ Planet Setup windows.
 Pick a direction ... somewhere into unexplored space.

In the Current Position window of the Navigation Console, watch for the System name to change. When it changes, pinpoint the exact sector where the change occurs ... back up if necessary. Enter the first crossover point (SX and SZ) into the windows for Planet A.

Click on the "Set Values" button.

Pick a direction and fly along the border between the known planet and the uncharted planet. After flying for about 50 sectors, again pinpoint the exact sector where the change occurs. Enter the second crossover point into the windows for Planet B.

Map

Allow time for the Map to update. When it does, you should see two circles radiating at different angles from one large dot (representing the known planet). The two circles should intersect at a certain point ... that's the rough location of your uncharted planet.

Mentally draw a straight line between the two smaller dots (the two crossover points) and then extend the line in one direction. Pick a point along the extended line and use the mouse cursor to get its sector coordinates (SX and SZ).

Note: the actual position of the unknown planet should be along a line perpendicular to the line you've just drawn; if both points A and B are on one side of the perpendicular, pick the third point which is on the opposite side (for a more accurate trilateration).

Planet C Setup

Fly out to the coordinates of the third point and, with any luck, a crossover point will be near by. Perform the same steps you did for Planets A and B.

Map

Check the Map again. Hopefully, you now have three circles and all three intersect at the same location. Use the mouse cursor to get the sector coordinates of that intersecting point. Head for those new coordinates.

When you arrive, have your Navigation Map zoomed all the way out (in case your cursor position was off a few sectors). If you don't see any planet, it might be either above or below the Galactic Plane. Try searching about 100 sectors straight up. If nothing is found, do the same thing, straight down. If you still don't find a planet, complain to SeeJay.

Example

You start your exploration from Orion Delta, entering its coordinates as the center point: -1002 into the Grid Center X window and -2397 into the Grid Center Z window. Then you adjust the Mouse Position to whatever allows you to see the readout while observing the plots. Pressing "Set Values" enters the new parameters into the Tool.

Grid Setup

GRID SETUP	
GRID CENTER X: 0	-1002
GRID CENTER Z: 0	-2397
MOUSE POS X: 600	800
MOUSE POS Z: 600	600
Reset	Set Values

After scrutinizing the Quadrant Map in the Navigation Console of the game, you decide to head toward the middle of the lower-left quadrant. Keeping an eye on the System name in the Current Position window, you notice that, eventually, the name changes from Orion Delta to T777 ... an uncharted planet! You disengage autopilot and start jumping back and forth until you find the exact sector where Orion Delta ends and T777 begins.

For the Planet A Setup, you enter Orion Delta's name, SX and SZ coordinates. You then enter the X and Z crossover points just discovered: -1203 and -2309, respectively. Pressing "Set Values" automatically initiates (1) a computation of the Radius (the offset between the known planet and the crossover point) and (2) a plot of the planet (large yellow dot), the crossover point (small yellow dot) and a yellow circle originating at the known planet (Orion Delta), with the radius equal to the offset.

Now you know that somewhere along the circumference of that circle there exists an uncharted planet.

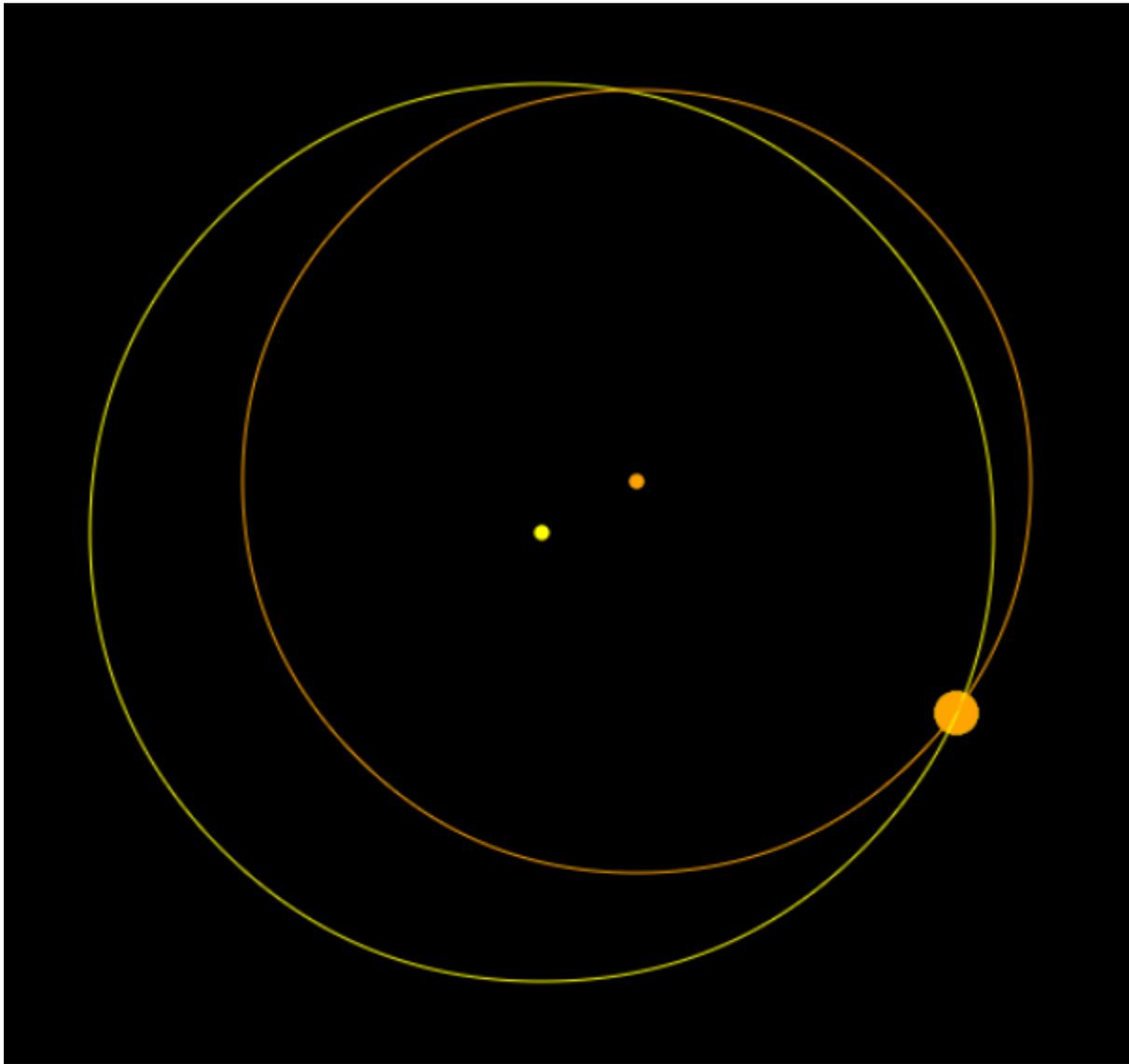
You flip a coin to decide where to go next: heads you go north; tails you go south. Since the coin you flipped was the infamous 1994 Luca Pacioli 500 Lira (Italian) piece with two heads, you proceed north. Zig-zagging your way across the border between Orion Delta and T777, you fly far enough from the first plot to find a second crossover point.

For the Planet B Setup, you enter the same information for name, SX and SZ. You then enter the new crossover point: -1157 and -2284 and send the set values to the Map.

Planet A & B Data

<<< TRILATERATION TOOL TO LOCATE PLANETS IN THE VOID >>>			
GRID SETUP	PLANET A SETUP	PLANET B SETUP	PLANET C SETUP
GRID CENTER X: 0	Orion Delta	Orion Delta	V405
GRID CENTER Z: 0	SX: -1002	SX: -1002	SX: -1002
MOUSE POS X: 600	SZ: -2397	SZ: -2397	SZ: -2397
MOUSE POS Z: 600	CROSSOVER-POINT X: -1203	CROSSOVER-POINT X: -1157	CROSSOVER-POINT X: -1157
Reset	CROSSOVER-POINT Z: -2309	CROSSOVER-POINT Z: -2284	CROSSOVER-POINT Z: -2284
Set Values	RADIUS: 219	RADIUS: 191	RADIUS: 191
	Reset	Reset	Reset
	Set Values	Set Values	Set Values

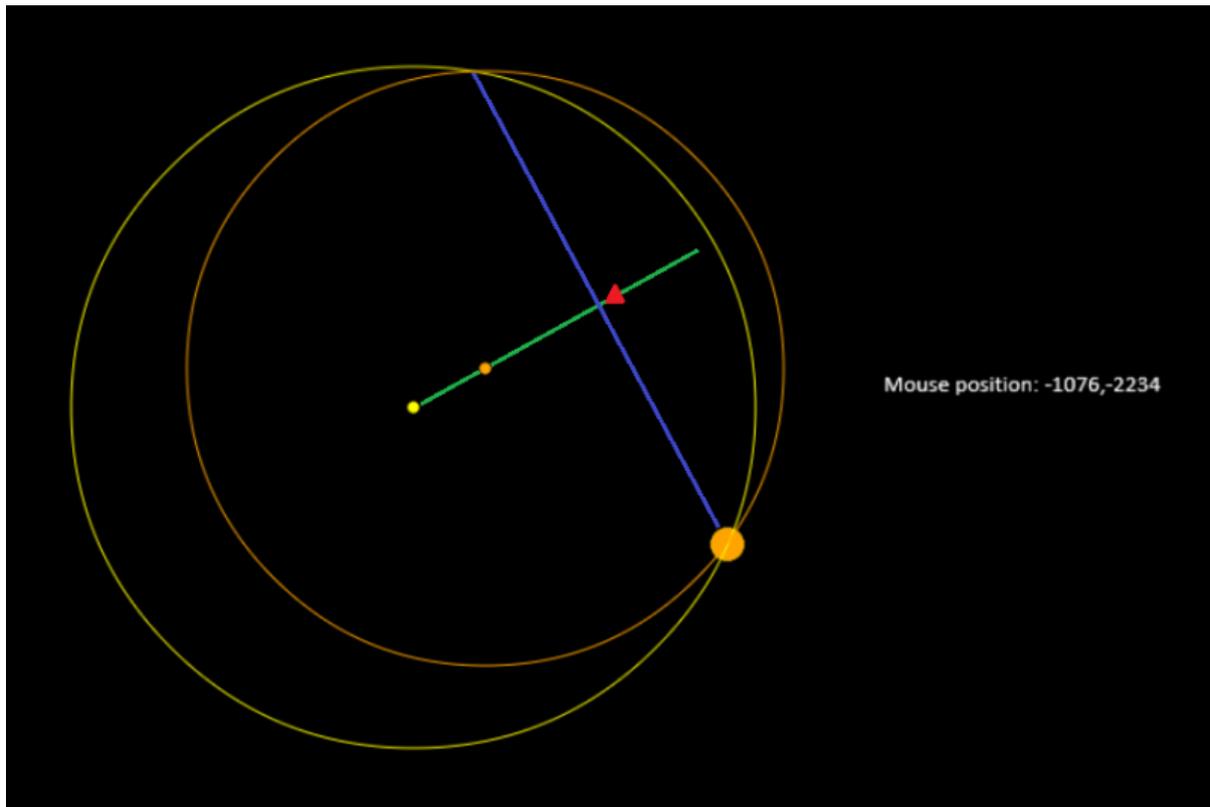
Planet A & B Plot



Now you can scrutinize the resulting plots and maybe get a little creative. For instance, you notice that the circle for plot A and the circle for plot B intersect. If you inserted the correct parameters, a line drawn from the known planet (Orion Delta) to the point where the circles intersect should be perpendicular to the line connecting the two crossover points.

You can also take a good guess at where a third crossover point might be ... somewhere along an extension of the line drawn between the crossover points. Eyeballing it and using the mouse cursor to get a position readout, you estimate that a crossover might be somewhere near -1076 SX, -2234 SZ.

Eyeballing a Crossover Point



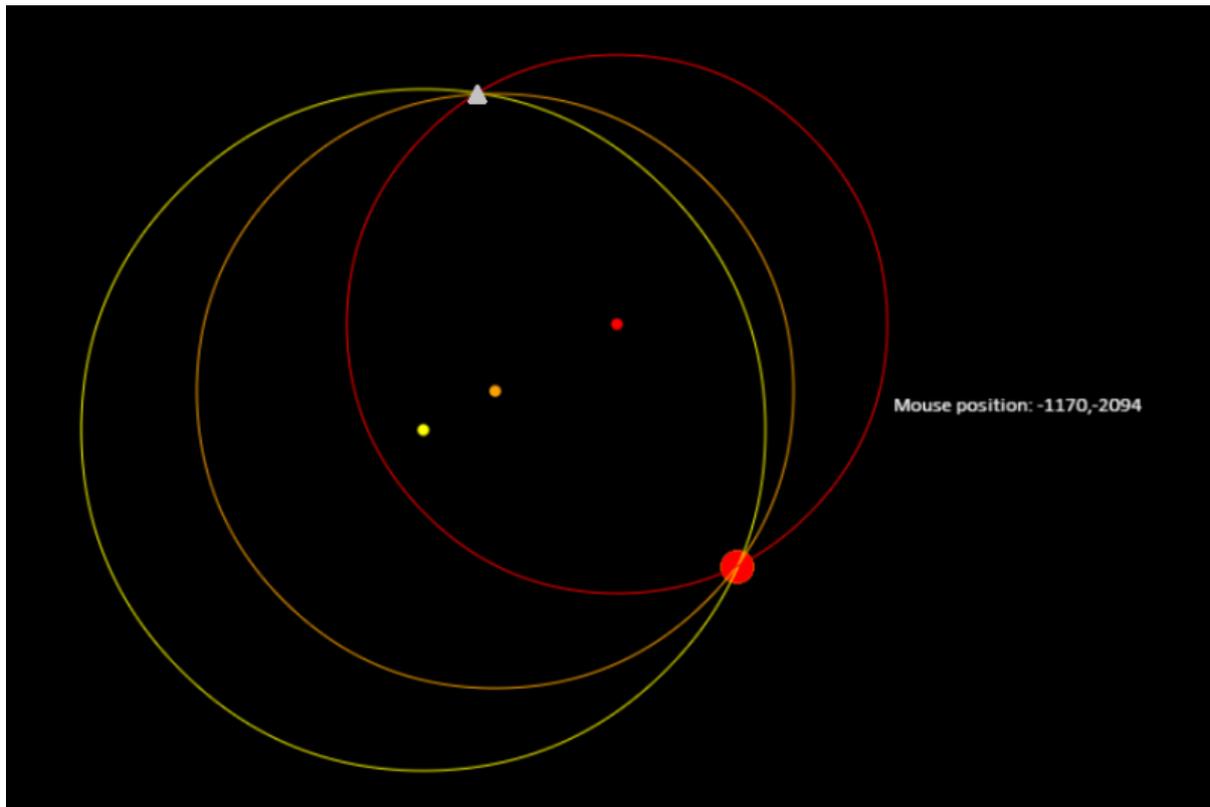
Arriving at those coordinates, you discover that you've gone past T777 and are now in D449. So you drop down a few sectors until you're back where Orion Delta crosses over to T777. The point of crossover is entered in the corresponding Planet C Setup windows: -1079 and -2241. With Orion Delta data properly entered, you again send the set values to the Map.

Planet C Data

<<< TRILATERATION TOOL TO LOCATE PLANETS IN THE VOID >>>			
GRID SETUP		PLANET A SETUP	PLANET B SETUP
GRID CENTER X: 0	0	Orion Delta	Orion Delta
GRID CENTER Z: 0	0	SX: -1002	SX: -1002
MOUSE POS X: 600	600	SZ: -2307	SZ: -2307
MOUSE POS Z: 600	600	CROSSOVER-POINT X: -1203	CROSSOVER-POINT X: -1157
<input type="button" value="Reset"/>	<input type="button" value="Set Values"/>	CROSSOVER-POINT Z: -2309	CROSSOVER-POINT Z: -2284
		RADIUS: 219	RADIUS: 191
		<input type="button" value="Reset"/>	<input type="button" value="Set Values"/>
		PLANET C SETUP	PLANET C SETUP
		Orion Delta	Orion Delta
		SX: -1020	SX: -1020
		SZ: -2307	SZ: -2307
		CROSSOVER-POINT X: -1079	CROSSOVER-POINT X: -1079
		CROSSOVER-POINT Z: -2241	CROSSOVER-POINT Z: -2241
		RADIUS: 173	RADIUS: 173
		<input type="button" value="Reset"/>	<input type="button" value="Set Values"/>

Now you have three circles ... all intersecting in the same location. Placing the mouse cursor over the intersection point, the Mouse position readout displays coordinates of -1170,-2094 ... the likely location of the unknown planet.

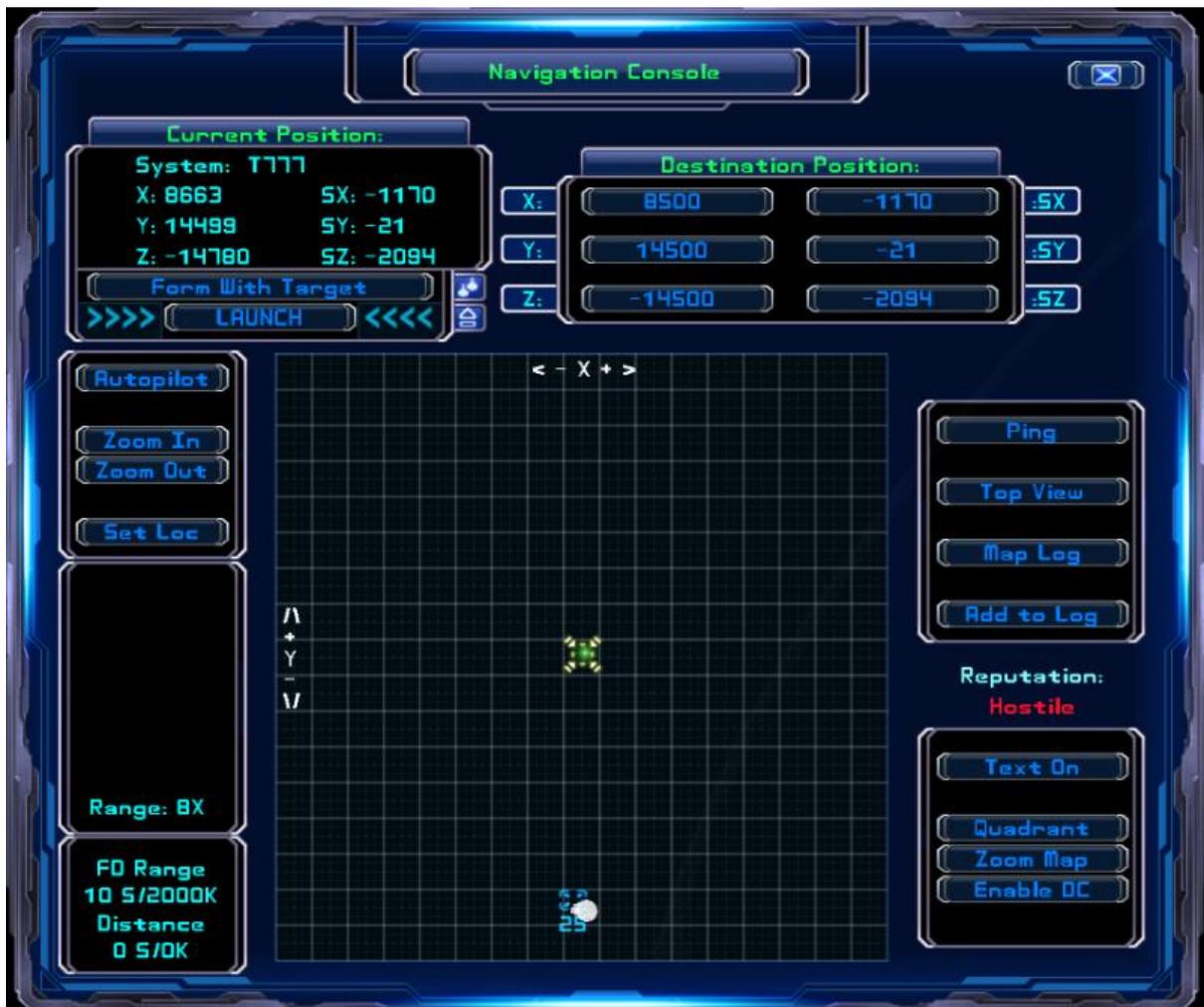
Pinpointing the Unknown



When you arrive at the destination coordinates, you discover that the sector is empty. If you haven't already done so, you zoom your Navigation map out to see as far from your current sector as possible. The area is still empty. Leastwise, it's empty for a few sectors above and below the galactic plane ($SY=0$). So you flip a coin: heads you go up; tails you go down. Since it's the same coin you used previously, you first search up (above the galactic plane).

After ascending a hundred sectors, you still find nothing. So you head straight back down to the galactic plane and then continue down below it. By the time you reach $SY=-21$, you spot a planet on your Navigation map. Planet T777! You enter its coordinates in your Map Log and then celebrate your new finding.

Uncharted Planet



Note: the same method works for more than one known planet; to use two or three planets, substitute the known planetary name and coordinates in the appropriate windows for Planet B/C Setups.

Trilateration II - Marvin's Instructions for using Atollski's MapLog program for finding new systems and planets

These instructions can be downloaded from <http://evochron.junholt.se/menus/downloads.htm> - **MarvinsInstructions.doc**

How do I get to the Sol System?

Flying to Sol is almost an initiation rite for Indie mercs. A common problem pilots face when cracking the flight, given that there are no gates to Sol are related to fuel and where to start from.

One common misconception is that a better jump drive will somehow get over the fuel problem – it won't. A C5 Fulcrum jump drive will take you 5 sectors per jump and a Mantis drive will take you 10.- twice as far per jump!. But a Mantis drive will use 10 units of fuel and a C% will use only 5 units of fuel! However it's quicker using a Mantis because you half the number of energy recharge cycles

So what loadout would be the best to send me to Sol? A flying gas tank? The shortest route between the core systems and Sol is xxx sectors. The largest fuel tank is 4000 units of fuel – so we have to think again!

It would seem that you have to refuel on route. There are no stars, nebulae, gas giants or stations to call at, so you can't harvest or buy fuel.

Hmmm . . .

You can create your own refueling stops! A Deploy Constructor lets you create a (cheap) refuelling station – a fuel processor that converts your ship's energy into fuel but at a rate of 5 units a time!. A Build Constructor lets you build a Trade Station (expensive) but refuelling is nearly instant and you will also have access to all the other facilities a station provides. Your call!

What's the best system to travel from to get to Sol?

Taking 'best' to be the shortest distance then Alpha Centauri and Sirius seem to be the nearest. We'll ignore the rumoured "Portal" from RiftSpace (where???) for the moment. A bit of simple trig using Pythagoras's famous theorem;

There were three Indian squaws. One slept on a deer skin, one slept on an elk skin, and the third slept on a hippopotamus skin. All three became pregnant. The first two each had a baby boy. The one who slept on the hippopotamus skin had twin boys. This just goes to prove that.... the squaw of the hippopotamus is equal to the sons of the squaws of the other two hides.

shows that the distances are:

- Sirius > Sol = 1840 sectors
- Alpha Centauri > Sol = 2710 sectors

Going from Sirius is two thirds the distance than from Alpha Centauri

For the real '**Elite's Generation Ship**' purists, or those who don't trust modern new fangled Fulcrum jump drives, the distance from Sapphire to Sol is 5158 sectors – under normal engine speeds this will take over a RL year playing 24/7/365 not taking account of refuelling.

Spoiler – look away! - Spoiler

There is a wild wormhole in Riftspace that links to Sol. A wild WH is a natural version of the generated WH in a jump gate – the blue watery ball - so you can just fly into it without damage, just like a normal gate.

However you have to get to RiftSpace first. There is an uncharted gate in an uncharted system that you have to find and then fly to. You then jump to RiftSpace. From there you have to find the wild WH to Sol at <Spoiler Text Protected> : L573 (-1598/0/-2048) <Spoiler Text Protected> One bit of good news is that there is a station in RiftSpace for some R&R

Exploring Asteroid Caves

What are asteroid caves?

There's at least 5 asteroid caves, with cool stuff inside the caves (wrecks, stations, containers, gates etc).

CTF power cores/receivers are just the window dressing, and a game component no one apparently is interested in pursuing. In an earlier game they were used as flags for "capture the flag" competitions. Someone has written a quest story that uses them though!

There is a cave in Sapphire with goodies inside!

Where are there asteroid caves?

	System	Type	Sec X	Sec Y	Sec Z	Pos X	Pos Y	Pos Z
1	Agate	Asteroid Cave	-2202	0	3620	5500	0	8500
2	Agate	Asteroid Cave	-2198	0	3620	71453	290	-8147
3	Pearl	Rebel Construct	3502	0	-1798	6625	305	13563
4	Sapphire	Asteroid Cave	1	0	-1	0	0	5000
5	WolfZone	Asteroid Cave	5550	0	5549	50000	0	30000

It seems that the asteroid cave reported to be very close to the star in Merak has now been engulfed. Raise a glass to those intrepid researchers who were toasted confirming that.

How do I explore an asteroid cave?

Fly round it to find the entrance – you can't miss it because it's not natural. Fly into the cave – your outside light automatically come on when it gets dark. Explore!

Spoiler: There is a generic map that is included in *the Authorised Mercenary Tech Manual* and is available as a graphics file - both can be downloaded from **SeeJay's site** (CaveMap). A smaller version of the map is also included here:

The caves are made of merged boulders so the passages and chambers are lumpy

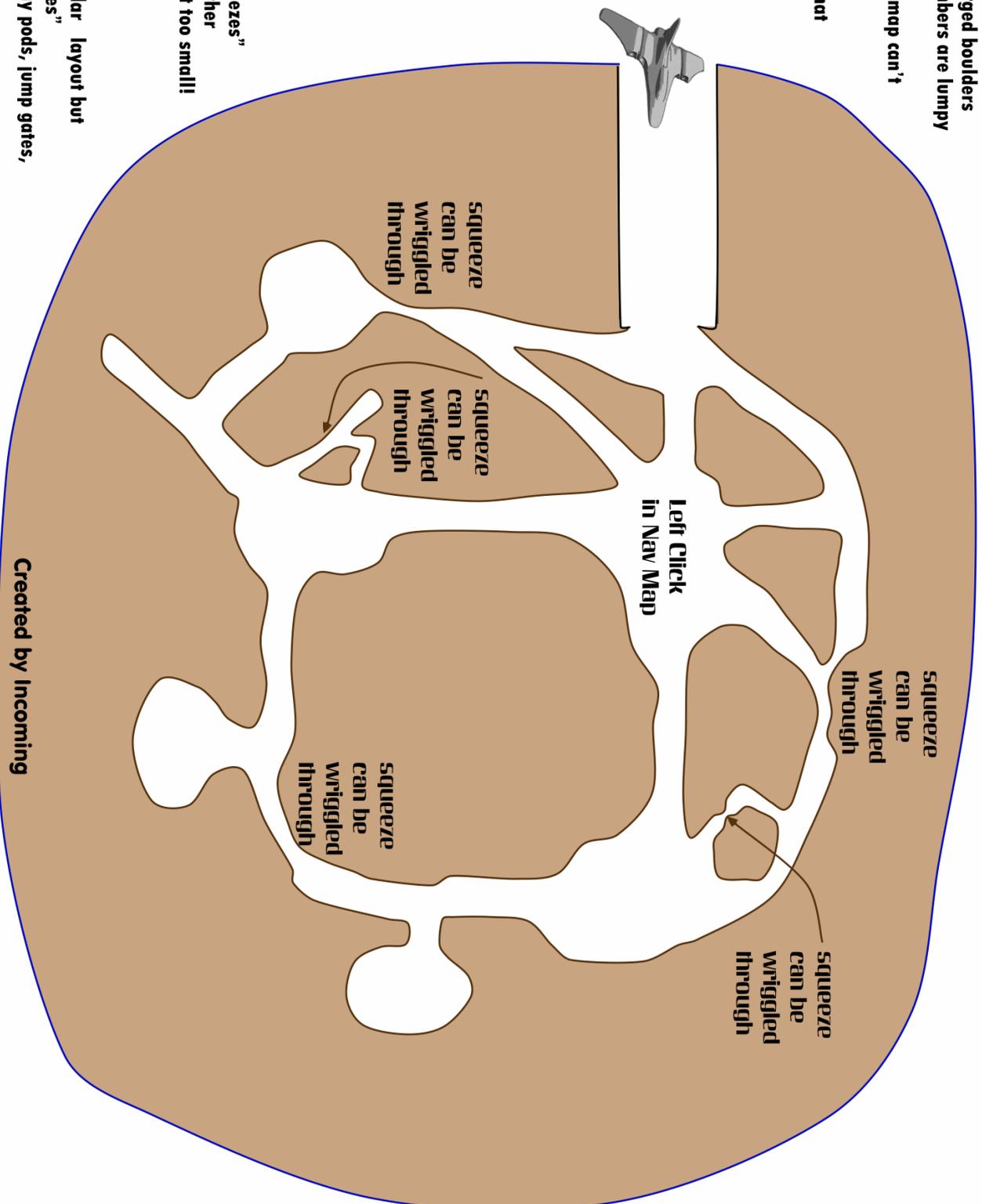
The passages are 3D - the map can't show the Y coords

There are no guarantees that All of the passages have been found!

You can jump directly into the main chamber but you have to get the coordinates and heading and pitch spot on!

You can get through "squeezes" by wriggling - there are other "peep holes" that are a bit too small!

The caves all have a similar layout but contain different "treasures": wrecks, containers, energy pods, jump gates, stations and more



Created by Incoming

Section13: Contracts

In the Expansion you can now offer contracts to other pilots as well as trade with them.

Conducting Contracts Between Pilots

Source: Marvin

Note: To successfully initiate a contracts between two pilots, it is important for the parties to complete the following steps in the order listed.

1. Contractor - TAGET CONTRACTEE (T)
2. Contractee - TARGET CONTRACTOR (T)
3. Contractor - SEND TRADE REQUEST (F4)
4. Contractee - ACCEPT TRADE REQUEST (F4)
5. Contractor - DETERMINE REWARD
 - a. "Arrange Contract" Button - SELECT
 - b. "Cash" Button - SELECT
 - c. "Enter Amount" Window - INPUT CREDIT PAYOUT
 - d. Correct Amount Offered - CHECK & PRESS ENTER
6. Contract Type - CYCLE TO SELECT OPTION
 - a. Destroy Player - SELECT NAME OF TARGET
 - b. Destroy Hostiles - SELECT TOTAL NUMBER
 - c. Recover Materials - SELECT TYPE OF MATERIAL
 - Platinum Units
 - Biological Units
 - Oxygen Units
 - Gold Units
 - Silver Units
 - Water Units
 - Metal Alloys
 - Diamonds
7. Contractor - PRESS "SUBMIT" BUTTON
8. Contractee - PRESS "ACCEPT" BUTTON
9. Contract - CHECK
 - a. Inventory Console - OPEN (F3)
 - b. Trade Contract Description - CHECK
10. Contractee - COMPLETE THE CONTRACT
11. Trade Contract Completed - CHECK
 - a. Credits Paid Out - CHECK
 - b. Credits Received - CHECK
 - c. Current Pilot(s) Status - AUTO SAVED

Note: For "Recover Materials" contracts, pilots need to perform a standard Trade in order to complete the contract.

Trading With Other Pilots

Source: Marvin

1. Ship-To-Ship Trade Console - OPEN (F4)
2. Trade Link Accepted - CHECK
3. Items To Offer - SELECT
 - a. Credits - AS REQUIRED
"Enter Amount" Window - INPUT PAYOUT
Correct Amount Offered - PRESS ENTER
 - b. Item - SELECT FROM CARGO BAY
4. Items Being Offered - SELECT
 - a. Credits - AS REQUIRED
"Enter Amount" Window - INPUT PAYOUT
Correct Amount Offered - PRESS ENTER
 - b. Item - SELECT FROM CARGO BAY
5. Submit Button - SELECT

Snippets of useful information!

Save Before Taking A Contract: Make certain you save **before** taking a contract. Else, you will get a short message (usually overlooked) telling you it's a no-go for saving in the middle of a contract. And most of the time you'll get it a few minutes after starting a contract to kill all the enemy ships when you get the feeling life might be short – you know the situation . . . just as they're running out of missiles (so you can get up close and personal), that's when reinforcements show up. You still only need to kill the agreed upon number of Reds but those new guys usually mean: more missiles are on the way. But you didn't save the last hour's play. If you die you lose all the rank points and \$\$\$ you've sweated blood to accumulate.

Pick your contracts. Think nothing of saving and then self destructing (I think the quickest way to reload since it avoids the loading progress bar) to generate a new set of contracts. The game randomly generates contracts on load. (**Editor:** if you consider this to be cheating try flying to another station instead – the variety of contracts on offer changes.)

If you want a particular kind of work reloading is the quickest way to get it. You can also use this to make the IMG quests easier. I got up to 150 military missions (allowing me to purchase all military ships including the Evoch-E, probably the frame you want for hardcore combat) doing nothing but lost item, escape pod and spy missions. (**Editor:** You might like to think about whether you will feel as proud of your achievements if you have spent your time ducking any challenging contacts that appear. Such contracting is sometimes called 'pizza deliveries'. Boring and repetitive – perhaps not the route to fame and riches though!)

Even if you just do the lost item and escape pod missions by the time you reach 150 missions (4-6 hours, your results may vary) you will have made over 10 million. More than enough to finish the IMG missions and get some real walking around money.

Do non-combat contracts until you have decent kit. While you can actively seek combat contracts (ie not just IMG missions) at your stage in the game you are making it harder for yourself than necessary. (**Editor:** . . . than **necessary**????) This is fine if that is what you want to do. It is like being a dedicated miner or trader. It takes longer and is more difficult than the most efficient route to getting a top tier loadout. And, combat is far harder than mining or trading.

As a way to get the best stuff I can only recommend it for veterans of the Evochron series. I kick AI posterior in Legends but I almost completely avoided combat in Mercenary until I had finished the IMG quest. If I had dedicated myself to combat missions rather than getting on with it I would probably still be saving for a Starmaster plus kit rather than getting one in the first day of play (and that is with getting 150 military missions before finishing the IMG quest).

General:

- If you get killed in a shared MP contract, reload immediately and as soon as you enter the Universe hit the jump button - if you can get back before the fight finishes, you still get the points!
- For any contract as soon as you hear the "contract complete", SAVE, even in the middle of a fight, (Alt-F9) to save your newly earned credit!
- Stuff gets more expensive as your civilian rank increases. It costs me more than 500k a cycle to rent out a hanger. Station licenses now cost me a couple of hundred million
- You don't have to be very close to complete a visual inspection - the container can be above or below you by a significant amount - you don't have to bump into it! You need to be a bit closer for a retrieval. Don't forget to turn your beam on though or you'll have to go chase the container to retrieve it!
- Military contracts are only offered in war zones - WZ's are not the same as hostile systems (like Thuban and Fauston) - there are four WZ's Sierra, Talison, Cerulean and Arvoch (near Pearl)
- You can do both civilian and/or military contracts in a civilian ship

Can I make everyone love me?

You're better off doing contracts for the Navy, Miners and Energy ... working to get each of them to 100%. By doing that, you automatically turn the Rebels and Guild against you ... which is what you want.

You'll still run into hostile Miners, Energy and Naval ships ... even the big ones. Especially in Hostile systems. But, by the time your reputation has turned a system to Fair, the enemy ships will begin to see things your way. So much so that, by the time the system is Good, everyone (including Rebels and Guild) will behave themselves.

Harder contracts like killing more hostiles increases your reputation faster than cleaning contracts because amount paid, number of hostiles killed, number of waypoints involved in the contract and the number of contracts completed successfully are part of the reputation equation.

For military rank it is just missions completed and hostiles killed no matter how much credit you have, you cannot buy your rank in the military

My contract is failed as soon as I jump to the nav point given

It's not a bug nor a deliberate irritant! But it is a common confusion because there are two ways of using your jump drive: F2 and Alt-F2

For contracts, **don't** use the Alt key when jumping to the contract's waypoint. Alt-F2 produces a maximum jump which depends on the class of your jump drive. A Class 2 jump drive would cause you to jump two sectors. If you jump out of the sector then the contract automatically fails. If you use F2 you jump to the contract waypoint (which is always in the sector)

I get attacked as soon as I jump into a contract! - help!

Open your nav map after clicking on the contract/mission and set a new nav marker a little ways away from the original nav point - 10 or 20 give or take, then fly manually to the original nav point. This will give you more time to prepare for combat. As an alternative you can turn away from your line of flight as hard as you can as you come out of the jump. You can then decide how and where to attack

Never head directly towards the enemy - offset your approach just off to one side of the enemy and build up your speed turn IDS off and target the lead hostile. Fire off a missile close to your target followed up with beam weapons and particle cannon.

Keep in mind the missile's they are firing at you - hostiles seem to have double figure missile hardpoints! Your chances to get the missile to chase a CM go down when your thrusters or worse, your afterburners, are firing. With IDS active, you're nearly constantly thrusting, which is like a big homing beacon for any incoming missile.

Can I repair and reload during a contract?

Short answer – yep! The only mission you **can't** dock for in the middle of the contract is the retrieve missions **without** the retrieved cargo. Returning without the cargo is one of the fail criteria.

Even in a multi WP mission, you can still jump back to the station and replenish your CMs / refuel / repair – repair units are very slow at fixing hull damage.

How do I...

... find the item I have to return to a station or inspect?

Make sure that your pitch set to 0 and your ship is pointing at the Nav Point before jumping from station to Nav point - Keep flying directly till you see a purple blip. Sometimes it means flying directly to and past the nav marker till you see it, but it is there.

My standard routine is:

1. accept the contract
2. open the nav screen
3. use the radar to orientate directly at the target
4. jump and set the throttle to max during the jump (you don't have to leave the station first but it's a bit more 'realistic' to do so. If doing contracts in a spaceship can be realistic!)
5. right click the station as soon as your ship icon jumps away in the nav map
6. close the nav map
7. if I'm on a retrieve contract, turn the tractor beam on – I usually get sidetracked homing in, don't turn on the beam in time and have to turn round and chase the container!!

On military missions it doesn't matter what your heading is - the pod or container tends to be off to one side. - keep your eyes peeled for the purple blip and see if you can spot the rescue pod or containers as soon as possible so you can head towards it. You need to turn further than you think because it takes time for your lateral drift to decrease

When you see the purple blip, close on it till it is directly in front of your ship, close enough to be picked up with the tractor beam (for a 'fetch it back' contract) or until you hear the "contract completed" message (for a 'go and look' contract). You don't complete the 'fetch it back' contract until you return to the station you set off from!

... make retrieval contracts efficient?

Before you set off aim your ship at the nav marker. Press F1 to get the nav map up and set the throttle to 2000 or more. Jump. As soon as you are coming out of the jump, select the station and then switch the nav map off. Use your strafe keys to move your nose up or down a bit and look carefully for the container - it may only be a flicker of a single pixel against the dark background! As soon as you spot it aim at it turn on the tractor beam and accelerate. As soon as it is captured, turn off the beam, set your pitch to zero, set your heading to one of the station entrances and hit jump.

You will come out of jump about 3500 away from the station – you can use afterburner to cruise in a bit faster, but you only slow down to the throttle setting after a jump - choose the next contract!

... make inspections efficient?

Before you set off aim your ship at the nav marker. Press F1 to get the nav map up and set the throttle to 2000 or more. Jump. As soon as you are coming out of the jump, select the station and then switch the nav map off. Use your strafe keys to move your nose up or down a bit and look carefully for the container - it may only be a flicker of a single pixel! As soon as you spot it aim at it and accelerate. As soon as you bump into it, set your pitch to zero, set your heading to one of the station entrances and hit jump. You will come out of jump and cruise into the station - choose the next contract!

... clean solar panels

Sit in front level with one corner and use your manoeuvring thrusters to sweep up a column, down the next column and repeat until you finish the array

Don't rush it - the cleaning is a two stage thing and if you leave even one cell half cleaned you won't have finished! If you don't get a completed message you'll have to go over the cells again unless you can spot the slight colour difference of the one(s) not properly cleaned - it's better to take the time to get it right the first time.

... do scanning/spying contracts?

You can jump in and take out the escort and then wait for your shields to fully recharge before sneaking onto the blind spot on the capital ships tail but this is slow, slow, sloooow and hazardous - still it is a nice feeling when you finally manage it!

Upgrade your shields and configure your ship to carry at least 50 CMs. Then, when you jump to the contracted waypoint, route all you're energy to the shields and get right underneath the capital ship. If you're close enough to its belly, you'll be inside its shielding and fairly safe from attack. Do this with IDS on. After you've completed the contract, use afterburner and engage inertial - burn fuel until you've reached about 2400 kps, then coast until you're out of range of the enemy. Finally, before anything bad happens, **save** (ie before the contract and then as soon as you get a contract completed message and are safe.

Use a stealth generator or stealth pack while flying below the ship - use the stealth device before you are spotted by the larger ship or its escorting CAP. You can ignore the CAP of protecting hostiles - they can't see you either! But you can't use a stealth generator unless you have full energy, so if you get shot or a missile hits you then you can't stealth the mission unless you retreat and wait for full energy again. I pull up and away as I come out of the jump so my energy has time to recharge before I turn in towards the enemy ships

Editor: One pilot suggested that Interesting idea! Simple? Simple should be less hassle than stealth scanning. Hmmmm

You will of course need a Deploy Constructor – no problem, they're common enough. I went to Talison and picked up a Deploy Constructor and took on a scanning contract.

Problem: The capital ship is moving – fairly slowly (around 1000 in 2 minutes)

Possible solution 1: You need to deploy in front of it and hope it doesn't float out of range before the scan finishes.

The CAP screen can do lots of (even lethal) damage before you can get in position to deploy the shield – I got killed a few times before I managed to deploy the shield and several more times before I managed to deploy it close enough to start the scan – the ship moved out of range before it finished.

Possible solution 2:

Conclusions? Successful? Yep! - Simple? Nope!.

... make scanning/spying contracts efficient?

- First thing to know is that you can ignore the escort. Secondly you need a stealth generator (not the one-shot units - they don't last long enough!)
- jump to the start and immediately turn to put the hostiles behind you and hit the afterburner. As soon as your energy reaches maximum, hit the stealth button and swing back towards the convoy.
- If your shields are not all at 100% the stealth generator will not start. Run away until you are out of range and wait until the shields are fully charged - setting the shield/weapon balance to S5/W-5 speeds this up. As soon as they are charged return to S-5/W5
- If a missile has been launched take it down with CM's. If it hits after you cloak, it will do hull damage but your stealth field should hold.
- As you approach the convoy stay out of the way of the escort. Lock onto the capital ship and the scan countdown will start as soon as you are closer than 1500 - stay near or the countdown will stop and you will have to start over again!
- While you are waiting get your pitch to zero, heading to one of the station entrances and lock onto the station. When the mission is complete turn away from the hostiles and accelerate. When you are about 2800 - 3500 away (depending on your confidence), turn off stealth as jump as soon as your energy is recharged. Also set S5/W-5 to speed up the recharging of your shields. As soon as they are charged return to S-5/W5
- If you took hull damage it will slowly repair with a repair module. Speed things up at the station by paying for the repair if you can afford it.

... do escort/protect missions

These are best done with other pilots. In theory just jump in and take out the attacking hostiles. However this type of contract doesn't have a specified number of hostiles you need to kill. You have to keep going until the ship you're protecting jumps away. As time passes (and you can't speed the process up!) more and more hostiles jump in to help, having been given a call from their mates who you're busy toasting. It's fun but a slow way to increase your military or civilian rank.

For the "defend disabled ship" mission: I had this mission many times and apart from 4 fighters there are always some other ships that will come after you. Hiring 4-6 ships helps greatly.

When doing a protect contract keep your speed up, but stay close to the ship you are protecting. It is easy to chase one ship away while the others are attacking the ship you are guarding so always remember to fly back to your escort ship and protect it

This is a good mission to use missiles generously, because you need to kill the foes quickly. You can make up for the economic disadvantages later (hopefully with some new guild-revealed free swag).

"Save your missile's for the hostiles that are real close to the ship you are escorting and dog fight the others. But remember to concentrate on the fighters close to the escort ship. These mission's are so much easier to do in MP where you have more than one friendly ship helping you

The number of enemy ships you encounter will increase if you take too long to kill the original four or six or whatever. That's because the enemy has called friends and family - all of which love to pick on a lone mercenary

... do combat missions

Use the usual combat tactics described elsewhere in the guide! Hire a fleet of wingmen in SP or team up with other players in MP

... destroy a capital ship

This is the hardest contract to take on. Especially solo. You have to be **very** good to manage it solo. Either hop onto MP and see if you can get a team together or hire a team of wingmen or (if you have sufficient military rank) head for a warzone and order the navy pilots around – they'll obey! Secondly, there isn't a *simple do this . . . then do this* recipe for success. Different players favour different tactics, though the menu is limited

Editor: The best way to find out how to do this is to hop onto MP and ask for a demo – even better is to become the gunner – you'll get a real close up view and will be able to help by protecting your mentor's six! There are few hints below to give you a flavour

- save your missiles until last – the *coup de grâce*
- kill the defense screen of fighters first. Leave no fighters alive or you are exposed and will die. The battleship cannot fire on you when you find the "sweet spot" but if a fighter attacks you then the battleship can too. The fighters seem to send your coordinates to the battleship.
- get to the sweet spot - The Sweet Spot - When fighting a Vonari-C (Battleship) just approach its center and fly as far into it as you can with full power to your shields and park on its "Core" then start shooting.
- First target the engine by pressing the "U" key and cycling through the target's sub systems
- Slowly adjust the power to full guns and when it is down to 20% hull, hit it with an Excalibur pack. Dead! (It not you!)
- Do not fly into the engines of the ship at a speed greater than 2700 - you blow up just like a collision with a carrier door or a constructor station exit.

Some pilots strafe around the battleship rather than just staying in the sweet spot.

- set your course so you can strafe the engines as you pass by
- hit your max speed and then turn off IDS to I cruise by the ship around 700 away
- strafe using your beam weapon (Which work on taking down the shields) and my particle cannon (Which pounds on the Hull)
- once past turn IDS back on and start another pass going back the other way, turn IDS off again and strafe away
- If the Capital ship fires missiles either shoot them down or use my CM's
- Once the shields are down you can use your missiles when you pass close to the engines"

Some pilots favour using their missiles first to soften the cap ship up a bit. Favoured choices are an Excalibur 8 missile pack (regenerates) vs (more powerful) Exodus x 8. Once used they're gone . . . unless you dock at a station in the same sector reload another 8 Exodus missiles *but you have to make sure before you take this mission that there are at least 2 rounds of 8 exodus missiles available at the station where you launched from.*

Fulcrum torpedoes are the easiest but very expensive, not to mention too easy (as long as you can get far enough away yourself before they detonate!!) No really a challenge though – point at capital ship – launch – jump away before the boom!

If you would like to do this solo remember you can dock for repairs and reloading for mission involving combat in the same sector.The only mission you cannot dock for in the middle of the contract is the retrieve missions without the retrieved cargo

Editor: The following story is repeated from the Surviving Combat section, but it is a great tutorial! It's here because you may not have needed the combat stuff yet!

Evil in the Night – by PaulB

OK, so I'm a bit of a glutton for punishment and don't know when to leave well alone. I kinda take after my old friend Marlowe. I'd been hopping around Talison Conflict trying to find a lone Vonari-C battleship to test some W. L. Inc. custom missiles to see what they could do against the *Big Bug*. I had eight of the compound core hitech gadgets from W. L. They assured me that 72Y, 2800R, 77 D/S is as good as it gets! Sounded like a lot of double-speak to me. I wasn't optimistic.

I ran across one of the C Bugs in a rather empty little sector just north of Eclipse. I came up from behind and within about 2300 I let all eight go into the Bug's Weapons Systems . . . it didn't seem to make a dent, as I rather expected. Being out of 'kick-ass' stuff I tried my gats when I got within range, taking out missiles and lighting up the Bug's shields - but that was all I was doing and his flak started pounding me. Well, one little ole me against a Big Bug and all my 'kick-ass' used up - and the old faithful Mammoth was beginning to take some damage - so I figured I'd better call it a day before it became the Big Sleep - for me. I think those boys in the Missile Department at W. L. Inc. are a little behind the times. But my gats from W. L. Inc. - they are Top Dog.

A few days later I picked up an Excal pack and thought I'd go trolling for Big Bugs again. This time took my Firestar and traded it in on a shiny new iron ass Chimera. The Firestar was a little too sensitive for my heavy handed driving methods and the Chimera fit the bill giving me a feel a little better than my Mammoth - but I miss not having my crew aboard. Talking to myself just ain't the same.

So I headed back up north, dropped a Sensor and started strolling about looking around corners and under rocks. It didn't take long at all before there it was - on my radar when I came out of a jump. The Evil, a Big Bug, a Vonari C.

We were headed right at each other. Well, no sneaking up from the rear tonight - the Evil knows I'm here. I whispered to myself, "Well Marlowe old buddy - into the breach!" setting speed to 750 then headed in and above the C Bug. The range soon dropped to under 3000 so I let loose the Excals targetting the C Bug's Weapons and as I passed above I pointed my nose down to show him the black eyes of my gats and let him have it. Like I'd hoped, it made him shake in his boots. Sure!!!

When I was past and out of his flak range I hit IDS and started back. Excal's are soooo slow rearming so I dawdled along at about 275 to give them a chance to be ready when I got there - no rushing in empty handed for this kid. I took a bite of a Gorfburger and a slug of brandy and sat back to wait.

As I closed to cannon range the Bug began spewing missiles - I just took them down with my cannon. Who was he kidding!!! Closer and his shields began to light up as I hit him with both gats - not that it was doing much good, but it made me feel better. This time I slowed to more or less match his speed and just kept popping his missiles and hitting him as I could until my Excals regenerated.

Then I caught a glimpse of green dot to the east on my radar. I did a quick retarget. Yo! -an AI navy Firestar - looking like it might be heading my way. A great thought popped into my head 'I wonder if I gave the Order to Attack Hostiles if he would get it and help out?' Sometimes those guys will just sit in the bleachers to see if the quarterback gets sacked - sometimes they join in the fun.

Well, I don't know if he heard me or gave a rat's ass if he did, but it looked like he was picking up speed and heading my way - maybe just to get his own kicks. Whichever! You take it if you can get it. Gotta admit, It took some of the chill out of my feet - it's easy to get cold feet and just want to head home to that safe, comfy lounge and chat to a pint of brandy. Attractive against fighting the Big Evil all alone in cold, dark, hostile space.

As the Firestar neared my Excals were back online, ready for another go so I let fly and kept gunning missiles and the C Bug's Weapons. The Firestar began gunning the belly of the Beast. He'd fire his gats and veer off and come back for some more and at least once I saw him let loose a missile. I was rather busy myself to see everything he was doing but it was sure nice to have a friend.

We kept at it and I wasn't seeing much sign of progress for an awful long time. I lost track of how many times the Excals regen'ed and I fired them - I'd say at least five and maybe even six or eight times. I'd also bumped my weapons energy balance up to +1, then +2, and later to +3 and in the end to +5, since I wasn't taking any damage myself. Part of me got a bit nerdy - at 0/0 I got 15 seconds of firing time for both gats so at +5 I get a hell of a lot more . . . though I haven't tested it on my military frame. On my Mammoth at +3 (and because of my crew) I can shoot over a minute (just sit there and time a minute - makes you smugly glow!) How often do you need that much time? At +5 on the Mammoth? - I guess I could fire forever - I don't know - I got a damned good crew.

I fired what must have been my 5fifth or sixth or whatever salvo of Excals and kept the gats busy. My friend kept banging away and finally, without warning, the *C Bug's* target display turned Yellow and then I knew!!! - we had him!!!

We kept gunning him and he was throwing the kitchen sink at us - and at last the target display turned Red!!!

Pour it into him - and we did and in no time - POP!!!!!!! goes the Weasle - right in our faces.

What a night!!!! My first Vonari-C - thanks to the help from that Navy Firestar. I owed the guy a glass of brandy but when I looked around he'd gone. Maybe I'll run across him someplace, someday. I hope so.

Anyway, one less *Evil Bug* stalking the night . . .

Here's one to you Marlowe old buddy.

Where did my targets go? - kill target missions

If I leave the combat zone by warping out because of either I was running out of fuel, supplies or I was simply getting too beat up, can I return and track down my targets again? In my recent game, I had 1 kill target with 3 wingmen. I killed 1 fighter and warped out to the nearest station to refuel and repair. I returned to the mission way-point and manage to find 1 enemy ship. Whether that ship was one of my targets...I don't know.

Do the enemy ships stay around the way point? Or is there a general way one can track them down? In my game, I warped to the adjacent squares and others and didn't find any other enemy ships. Or are they simply removed by the game once you leave the combat zone?

- You might try using the Deploy Constructor to refuel in sector or repair in sector or a sensor station and you can see the enemies (and friendlies and neutrals!) near in the Nav Console. A Long Range Probe is an alternative to a deployed Sensor Array. The downsides cost and the quarter sector range of the station.
- Assign a key directly to deploy shield array. If you are almost dead, you can hit this key and you are instantly safe.
- AI will leave the area of combat at times. You will have to wait for them to return or go and search for them
- Another option is to search for and kill **any** reds you can find, in or out of the contract/mission area (immediately proximate to the little blue box). You could try just loitering in the area of the mission (little blue box) and making oneself a rather handy target. Someone always shows up . .
- If you have a mission to kill a particular named target, like A.D.Z then when you arrive kill that named target first. After that, any reds you kill in the area will count toward your goal, even if you have to leave to repair/refuel.

A related issue is finding the capital ship in Talison Conflict

- There's also go and scan a capital ship contract - combat or not depending on your tactics. This is a complicated contract if conducted in Talison Conflict. The Vonari always manage to confuse Alliance Intel by stationing the Von cap ship at one location and its escort at a second location. Without exception, Intel will give you coordinates to the escort (I guess because the cluster of ships shows up better on Alliance sensors). Ergo, to find the cap ship, it's a good idea to bring along and deploy your own sensor array. The good thing about this is that it leaves the Vonari cap ship unguarded. Deploy Sensor Station close to the waypoint then look for a lone red dot and set a jump point near it. If more than one red dot is visible inside the array, go from one to the other until you find the cap ship.

What types of contracts are available where?

Source Marvin:

Trade Stations And Constructor Stations Contracts

Contract No.	Contractor	Type of Contract
1	Rebels	Spy on escorted capital ship
2	Rebels	Destroy capital ship and escort
3	Navy	Multi-waypoint patrol of shipping lanes
4	Guild	Deliver goods to a capital ship under fire
5	Navy	Single waypoint patrol
6	Navy	Eliminate a smuggler
7	Guild	Destroy capital ship and escort
8	Navy	Escort a capital ship
9	Guild	Deliver goods to a capital ship under fire
10	Miners	Eliminate ships attacking transports
11	Rebels	Destroy a disabled capital ship and escort
12	Guild	Destroy an escorted capital ship
13	Energy	Clean a solar array
14	Navy	Recover and return a cargo pod
15	Energy	Deliver goods to a capital ship
16	Navy	Locate a lost cargo pod
17	Miners	Clear away 20 asteroids
18	Locals	Race against time
19	Locals	Race against an AI pilot
20	Energy	Mine 25 units and deliver**
21	Energy	Survey land for development via terrain walker*
22	Energy	Survey land for mining via terrain walker*
23	Energy	Recover biologicals via terrain walker*
24	Energy	Recover and return lost item via terrain walker*

City Contracts

Contract No.	Contractor	Type of Contract
1	Guild	Spy on escorted capital ship
2	Rebels	Destroy capital ship and escort
3	Navy	Multi-waypoint patrol of shipping lanes
4	Rebels	Deliver goods to a capital ship under fire
5	Navy	Single waypoint patrol
6	Navy	Eliminate enemy ace and squadron
7	Guild	Destroy capital ship and escort
8	Navy	Escort a capital ship
9	Guild	Deliver goods to a capital ship under fire
10	Miners	Eliminate ships attacking transports
11	Rebels	Destroy a disabled capital ship and escort
12	Guild	Destroy an escorted capital ship
13	Energy	Clean a solar array
14	Navy	Recover and return a satellite
15	Navy	Deliver a satellite to a capital ship
16	Navy	Locate a lost cargo pod
17	Miners	Clear away 20 asteroids
18	Locals	Race against time
19	Locals	Race against an AI pilot
20	Energy	Mine 25 units and deliver**
21	Energy	Survey land for development via terrain walker*
22	Energy	Survey land for mining via terrain walker*
23	Energy	Recover biologicals via terrain walker*
24	Energy	Recover and return lost item via terrain walker*

War Zone Trade Stations And Constructor Stations Contracts

Contract No.	Contractor	Type of Contract
1	Navy	Spy on escorted capital ship
2	Rebels	Destroy capital ship and escort
3	Navy	Multi-waypoint patrol of enemy shipping lanes
4	Guild	Deliver goods to a capital ship under fire
5	Navy	Destroy capital ship and escort
6	Navy	Single waypoint combat support
7	Guild	Destroy capital ship and escort
8	Navy	Escort a capital ship
9	Guild	Deliver goods to a capital ship under fire
10	Miners	Eliminate ships attacking transports
11	Rebels	Destroy a disabled capital ship and escort
12	Guild	Destroy an escorted capital ship
13	Energy	Clean a solar array
14	Navy	Recover and return an escape pod
15	Energy	Deliver goods to a capital ship
16	Navy	Locate a lost cargo pod
17	Miners	Clear away 20 asteroids
18	Locals	Race against time
19	Locals	Race against an AI pilot
20	Energy	Mine 25 units and deliver**
21	Energy	Survey land for development via terrain walker*
22	Energy	Survey land for mining via terrain walker*
23	Energy	Recover biologicals via terrain walker*
24	Energy	Recover and return lost item via terrain walker*

* These contracts can only be accomplished planetside.

** Contracts specifies what is required

Section14: Mining

Snippets

- In Pearl system there is a platinum asteroid field (only platinum).
- A superb system for mining is the Atlas system, it is also pretty safe and you can sell your ore for high prices - platinum 7k - 9k, diamonds 2k - 6k plus gold and silver around 3 or 4k.
- You can 'prime' your cargo bays by buying or leaving 1 unit of the desired item in each cargo bay, then travel to an asteroid field to mine. This lets you recover only the material you want while mining. It saves time having to jettison stuff you don't want. To buy or sell individual units of items at a time, use right click instead of left click.
- If you have a cargo bay that isn't primed just jettison every item you mine that isn't what you want until what you want appears!
- You can mine faster by repeatedly passing the tractor beam across the surface of your target, rather than leaving it in the same place. This isn't logical because the asteroids rotate in front of you anyway – it's just one of the fascinating mysteries of space travel in the 24th Century!

Basics of Mining (Asteroids and Planets)

Source: **SeeJay's Evochron Basics Schools** - <http://www.junholt.se/evoschool/index.htm>

Locate and Acquire a Mining/Tractor Beam

The first objective you may want to complete is finding a mining/tractor beam. This is one of the most important equipment items in the game as it lets you recover cargo and mine for valuable materials (found in asteroids and planets). One of the most profitable activities early in the game is mining asteroids and this device is needed to harvest the ore. Asteroids generally carry valuable material that is easy to get to since they are in open space, but to find the mining/tractor beam, you may want to land at a city on the surface of Sapphire or a station in orbit where they are often available in the local inventories. Once you find one, click on it in the 'Items for Sale' list to install it on your ship. Once installed, travel back into space and head for the local asteroid field.

Mining

To get started mining, simply fly close to an asteroid and activate the mining beam. You can lock the beam on by pressing the default Alt-B key combination. If you are close enough to the asteroid to mine it, you will see hot red particles of the asteroid fly off from its surface as the beam cuts into the rock. If you do not see this effect, you're not close enough to the asteroid. In Sapphire, metal ore is generally not very valuable, so you can discard any metal you recover in favour of platinum or diamonds, which are far more valuable. To discard an item, simply click on its listing in your cargo bay.

Once a cargo bay slot is empty, it can accept any material. But once one unit of a material is placed in a cargo bay slot, you can only continue to load units of that material type into that cargo bay slot. The reason for this is so you can manually manage what material you mine and it accommodates the different shapes and sizes of each material type. Each unit of a material is assigned a unique shape for every container that holds it. These shapes are only compatible with each other and must 'fit' together inside each of your cargo bay slots. Your mining and loading system will automatically take care of this sorting procedure for you, all you need to do is select which materials you want to keep or discard. You can pre-prime your cargo bays by buying or leaving only 1 unit of an item in each cargo bay, then travel to an asteroid field to mine. This lets you recover only the material you want while mining. To buy or sell individual units of items at a time, use right click instead of left click.

Once you have filled your cargo bay with the material(s) you want, travel to the nearby planet Rivoch to sell what you have for better profit. You can also mine the surface of planets for other valuable materials. Mining this way is a safe way to make decent credits early in the game.

You can also earn a few credits while you descend into a planet atmosphere. Keep your tractor beam on as you descend into a planet atmosphere to recover oxygen. This can be sold for as much as 30-50K once you arrive at a city by the time you land, easily covering the costs of fuel for the descent and also leaving you with plenty of credits left over.

You can mine diamonds and gold from planets and moons

Install four or five cargo spaces, land on a planet near a city, mine for gold, silver, diamonds and that other expensive stuff - filling one cargo bin with each. Then turn around and sell it all at the city station. Others prefer to mine asteroids and sell at stations - the scenery planetside is nice.

If you have a Terrain Walker you can mine one cargo bays worth very quickly - return to your ship and store it and then hop back out again! (However at 10 million credits a pop, TW are expensive so if you can afford one, you've probably moved beyond mining!

Why does my mining beam disappear when I jettison unwanted cargo?

When you are trying to prime your cargo bays you will inevitably have to jettison unwanted material. You can still hear your beam but it disappears! The beam is set to lock onto the nearest cargo container - look in the rear view and you will see the beam and the cargo about 70dm behind you!; If you swing round and you will pick the cargo up again - not what you want!



Solutions;

1. the best and the easiest is to get close to the asteroid – less than 60m and your beam mines the asteroid and ignores the container
2. next if your nervous about being too close to a big lumpy chunk of rotating rock is to back off from the asteroid about 200 - 300m and jettison the cargo - then return to the asteroid and try again
3. Thirdly for those who can't sit still for long is to jettison the cargo and then fly to the next nearest asteroid and try again

The second two solutions are time consuming so once you have primed your cargo bays, sell the materials one unit at a time and make sure you leave one in the bay!

What are mining drones?

You can deploy a mining drone to mine for you whilst you go off and do more important things, like having a coffee. Hang on - what's more important than making money when you have't got any?! Once you have the money though, a mining probe makes the whole process a lot less tedious

When deploying, the green wireframe disc is your aim point - especially if you're deploying a mining drone. It might seem like hit-or-miss if you don't realize that the disc must cover the area you're attempting to mine.

Constructor recipes - which raw materials make which goodies?

Source Blackthorne: <http://www.starwraith.com/forum/viewthread.php?tid=4037#pid49531>

Rather than selling your mined materials you can take them to a constructor station and have them converted into more valuable commodities! After spending the entire evening shuttling stuff to and from the constructor stations, here's the gist of it:

Constructors are a pretty straightforward affair - you fly in, the station checks your cargo bays and tells you what it can manufacture from the contents. There don't seem to be any "mixed" recipes, so basically it just converts one commodity into another.

The result of some conversions varies with the amount of material provided. 25 Units will net you the top-of-the-line model of a certain device, with lower amounts yielding the lower-class models. If there are 5 different classes for example, the distribution is as following:

- 05-09 Units - Class 1
- 10-14 Units - Class 2
- 15-19 Units - Class 3
- 20-24 Units - Class 4
- 25-25 Units - Class 5

Several items aren't triggered until you show up with exactly 25 units of a certain commodity.

- ~~Food~~ -> can't be converted.
- ~~Medicals~~ -> can't be converted.
- Hydrogen -> Shield Booster
- Electrical -> Cargo Scanner
- ~~Solar~~ -> can't be converted.
- Metal Ores -> Armour Plating (1 Armour per 2 Metal)
- ~~Diamonds~~ -> can't be converted.
- Antimatter -> Fuel Converter (requires 25 units)
- Fusion Cells -> Fulcrum Drive
- Mechanical -> Repair System
- ~~Textiles~~ -> can't be converted.
- Platinum -> Electrical *
- ~~Biological Materials~~ -> can't be converted.
- ~~Oxygen~~ -> can't be converted.
- ~~Gold~~ -> can't be converted.
- ~~Silver~~ -> can't be converted.
- ~~Water~~ -> can't be converted.
- ~~Armour~~ -> can't be converted.

* **Editor:** In previous versions of the game you could convert 25 units of platinum into a long range probe. Now you are offered electrical units. There is some confusion with suggestions that you can still do the conversions in high tech systems, as with the weapons construction immediately below.

I checked this out in Rucker (low/no tech), Aquila (T3) and an uncharted T4 system. I had to build a constructor in each since there are no in-game constructors in high tech systems. I was offered Electricals in each!

You can add weapon options via electronics and metal ore.

- *I have both metal and electronics on board (25 each), but the only things offered are Cargo Scanners and Armour. Do I need to go to a special constructor station to be offered weapons?*

Vice: Yes, well, just one in a technology economy.

- *Would that include "homemade" constructor stations in orbit around a type T-Planet, or does that only work with "official" ones?:*

Vice: Should work with custom built constructors also.

Tutorial: Esben's Tips for efficient mining

This tutorial can be downloaded from SeeJay's website:

<http://evochron.junholt.se/menus/downloads.htm>

Forum link: <http://www.starwraith.com/forum/viewthread.php?tid=6652>

Some additions and changes by DaveK (AKA Incoming)

Contents:

1. Introduction
2. The miner, his ship, and his crew
3. The beginning
4. Waypoints and travelling
 - 4.1 Travelling, a small but helpful tip
5. Maxing cash flow
6. Getting a station license in Oasis, the way to get rich
7. Conclusion

1. Introduction

Mining is a good way to start in Evochron. You can make reasonable money quite quickly and upgrade your equipment in preparation for the better but harder money making methods. I will in this short guide cover your basic needs to become a good miner with some tips along the way. People reading this will help themselves by already having watched the tutorials on the site and knowing the basics of the game. Minimum: Navigation & Inventory Management and Training & Mining Asteroids and Planets

2. The miner - his ship - his crew

As a miner you need a ship suited for mining. To save time going back and forth from station to asteroids have as many cargo slots as possible. Get 5 ASAP. In the long run you want a mining beam that only mines a specific material. But to start off with the tractor beam/mining laser is fine.

Starter setup

- 3 cargo slots
- 1 shield booster
- 1 mining beam
- 1 Fulcrum drive

Crew: Eventually you might want a Science ops. The balance is that they cost money to hire them, but they reduce the time it takes to mine.

3. The beginning

When you start your new miner. The first thing you want to do is travel to Rucker.

To do it a bit faster you might want to mine a few cargos in Sapphire and upgrade your Fulcrum drive for longer jumps.

This is the route: Sapphire->Thuban->Virgo->Rucker (*Read section 4 about travelling*)

Some of the jumpgates are very close to stations or planets and might be a little hard to find) for example



You want your base here as it is miners' paradise. Your reputation in the system will be fair. Meaning you will encounter hostiles rarely and you won't have to pay docking fees in the stations. Get settled in Rucker station in the middle of the system. Find a good asteroid belt and start mining. When mining make sure to jettison metal. Only go for platinum and diamonds.

Sell it at the station when your cargo is full. And keep repeating to build up your first cash. Use the first cash you get to upgrade your ship to have 5 cargo slots *asap*. Keep building up cash. The first few hours of the game is investment! investment! investment! so though you feel low on cash you will soon see an explosion in cash flow

4. Waypoints and travelling.

Waypoints, the miners best friend. I will here cover how to set waypoints and use them to save a lot of time.

When you have found that asteroid field you want as your second home it's time to set a waypoint. Fly into mining range of one of the asteroids.

1. Go into the navigation console (F1),
2. Copy "Current position" into "Destination Position" and
3. click "Add to log"
4. This give this location a name you can remember, like "my favourite asteroid"



Now let's jump to the station the best way possible:

When jumping to a station, right-click on the station on the navigation map. Close the navigation map. Set your pitch to 0 and press F2. When jumping like this you will get directly into the station when you come out of warp. Or, you will be very close. Simply set Inertial mode and glide into the station. Easy as that.

Now open your navigation map, press "map log" and choose the location you just saved and jump to it. Remember to switch to IDS mode. Now when coming out of jump you will be very close to that asteroid, and within seconds you can mine it

4.1 Travelling, a small but helpful tip

When jumping to a jumpgate:

1. Right-click the gate on navigation map
2. Set your heading to 180° or 0°
3. Set your pitch to 0°
4. Set throttle to a reasonably high value – when you come out of the jump you slow down to your set speed
5. Jump

In this way you will glide directly into the gate when coming out of warp.

5. Maxing cash flow

You've had a good start – and hopefully 5 cargo slots. Now comes the slow start for the increasingly speedy build up of your bank balance & income.

Build up some cash. Somewhere between 3 and 4 million.

Get a mining beam harvesting only Platinum. Big hint: Vega. So we need to do a small but dangerous trip; Rucker->Virgo->Vega

This is **hostile** area. And to get the beam you need to be fast! When you jump into the system make sure to save your progress!!! Then jump to the station, pay the docking fee and buy a Platinum mining beam. You're safe in the station, but as soon as you leave get to and then through the gate as fast as possible and get back to Rucker.

If a Platinum beam is not available and you are greedy like me, load progress and try again. If you want to keep immersion – fly (jump is safer!) to another station or into another sector and then fly back to the station - new items are being added to the inventory all the time. The beam was there for me on second try. The cost is quite high; 3 – 4 million, but worth every credit. Now when back in Rucker you can start mining only for platinum without priming cargo bays!

The last bit to do to max cash flow is selling at the right place. Rucker doesn't pat too good. Oasis does though! Very good actually.

So when you cargo is full jump to Pearl. You arrive in Oasis region. Scroll out on the map and find Port Oasis - the station to the southwest.

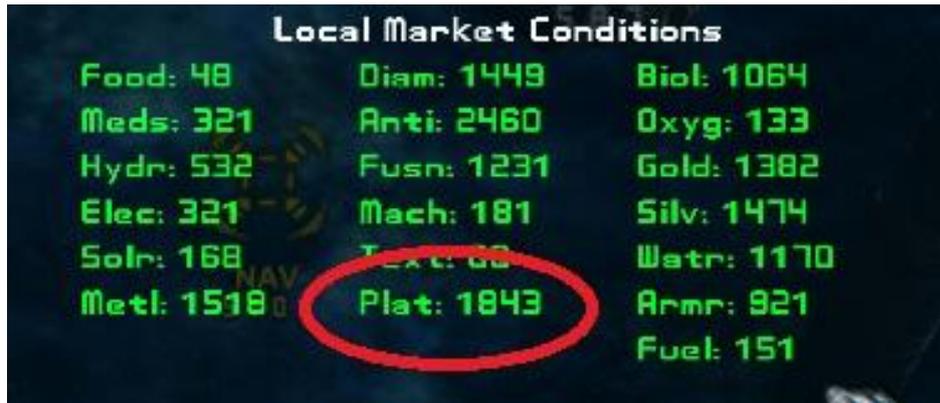


This is where you want to sell. You will quickly realise that you're in a hostile area! You once again have to be fast!

Here's the real trick since you have to pay a docking fee. You don't want to do that and find that platinum prices have bottomed out:

1. Jump to the station
2. Press F3
3. Open news console
4. Check the going rate for platinum

If the rate is less than 6k (=150k per cargo bay) jump to a neighbouring sector and immediately jump back to station. Never sell if the rate is below 6k. Most of the time it will be above so you won't be doing a lot of jumping.



Local Market Conditions		
Food: 48	Diam: 1449	Biol: 1064
Meds: 321	Anti: 2460	Oxyg: 133
Hydr: 532	Fusr: 1231	Gold: 1382
Elec: 321	Mach: 181	Silv: 1474
Solr: 168	Text: 88	Watr: 1170
Metl: 1518	Plat: 1843	Armr: 921
		Fuel: 151

- Pay the docking fee
- Sell your platinum
- Get out as fast as possible and resume mining. As they say – wash, rinse and repeat!

Keep doing this until you can pay for a station license. Then you can safely dock (and for free!) without having to rush out. Remember heading (one of the five station headings (see above) and pitch while doing all this and it should be no problem. Might want save progress often though

6. Getting a station license at Oasis in Pearl - the way to get rich (well, one of them)

Now you have:

- A mining vessel with 5 cargo slots
- A Platinum Mining Beam
- A Science Op (optional but recommended)
- A waypoint to an asteroid to mine fast
- A station license in Port Oasis
- A short and fast travel back and forth from Rucker->Oasis

Now it's time to make that station license worth it and expand business! You have made some initial investments and are ready to go large.

Now you mine full cargos of platinum. It will take you around 3 trips to have around 2 million. Let's invest to cash!

Spoiler – to read this, Select the text – Copy (Ctrl-C) – Paste (Ctrl-V) into a Word doc

When docked in Oasis look for a Fulcrum Torpedo. It will cost you around 1.5 million. When you get back to Rucker dock at the centre station. Sell it. Notice they will pay around 2.5 million.

Do a mining run more(or do another single torpedo sales run). Now you can buy 2 Torpedoes. I guess you already now have figured out what's going on

Now you could skip mining and buy/sell torpedoes.

Within minutes you will have a lot of cash. But hey! These aren't the only profitable item!! Have a look in Oasis Station. There are easy cash to be made here. A little hint: The more you invest, the more you make. I don't need to give you more hints on this little adventure. Your money is already multiplying fast

7. Conclusion

I hope you enjoyed this tutorial. You should now know the basics of travelling fast and smooth. You know how to setup a basic mining routine. You have done your first investments of many to come. You have an income that can easily get you going wherever you want! There are many other profitable trades to be done. You have setup a small trade route that can give you those easy cash you need to get a good ship. And you have only tasted a drop of the ocean! Time to go enjoy Evochron! May you have safe travels and joyful hours

How do I actually use fleet mining?!

Vice: At the moment, it's been set up as a simplified system that gives the player a small profit share from the mined material as it is being recovered by the fleet ships (the mining ships themselves keep most of it). So functionally, they pay you your required share out of their credit reserves first as they recover the material and they can cash in the material themselves later on. So all you need to do is order the ships to be in formation with you, travel to an asteroid field, then order them to mine. Credits will be applied gradually as they finish mining cycles.

I can't really recall why it was originally set up like this all those years ago, but it was likely polled or proposed to players and then designed based on that feedback.

It's a new experience to add to your CV but in fact you can make a lot more money, in a much shorter time, doing it yourself.

Section15: Trading

A reminder about reading spoiler text

We're getting to the bits that tell you how to make lots of money very quickly. For some players this is OK – they want to do other things than simulate being the 'wage slaves' they are in real life. For others it spoils it – they want to succeed the hard way, working things out for themselves, finding stuff themselves.

To avoid players even glimpsing spoilers by accident I've developed hidden the spoiler text by colouring it as 10% black, so it's virtually unreadable.

To read it is as easy as one, two, three. Do the following:

1. Select the text
2. Copy the text
3. Paste the text into a blank Word doc or a blank text editor file e.g. Notepad

The text will appear!

Maximising profit - general (non-specific) advice

If you want to trade you have to explore the systems to find out where to buy cheap and where to sell high. The green area on the economy map (in the NavMap) is the high Tech area where prices are the highest for buying and selling. The Agricultural area is the low economy area where prices are lowest. You can however increase the Technology level in a System by building certain Stations and increasing the economy in a particular sector.

Prices climb the further you go from Sapphire system, and there are places not shown on the quadrant map that offer very high prices. Prices are the same for buying or selling at a location. Buying something in Olympus will cost you more than buying the same thing in Sapphire. Therefore buy in Sapphire and sell in Olympus

Basics of Inventory Management and Trading

Source: **SeeJay's Evochron Basics Schools** - <http://www.junholt.se/evoschool/index.htm>

Inventory Console (default F3 key and third console button): Displays and manages on-board inventory items. When you are docked at a station, you will be able to buy and sell items by simply clicking on them. Auxiliary equipment is displayed in yellow, commodities are displayed in purple, and weapons are displayed in green.

To sell and unload an item, simply click on it from one of the sections of the console showing loaded equipment/commodities. The selling value (displayed when you hold the mouse pointer over an item) of what you sold will then be added to your account. Selling items on a planet or station will give you full market value for the system you are in while selling to other ships usually results in lower values.

To buy an item, click on the one you want from the Items for Sale section. You can use the slider bar on the left side of the list to scroll through all of the available items. With the mouse pointer held over the list, you can also use the mouse wheel to scroll through the list. If your ship can store or load the equipment/commodity item you want, it will be loaded and the cost deducted from your account. Each item will be automatically routed to the default installation option.

Commodities will be loaded into your cargo bay while equipment and weapons will be installed onto your ship. Right clicking on an item provides alternate functions for buying, selling, and installation. To load upgrades, weapons, and equipment into your cargo bay instead of installing them on your ship, right mouse click on the item(s) you want instead of left clicking on them. This way, you can use your cargo bay as a storage point for items other than commodities.

You can later install desired items in your cargo bay onto your ship by right clicking on them from your cargo bay list. Likewise, you can transfer installed items on your ship to your cargo bay by right clicking on them instead of left clicking on them. If you only want to buy or sell one unit of a commodity at a time, simply right click on the listed item.

Source: Vice.

- To consolidate commodity cargo, dock at a station, carrier or city, then hold the Alt key, then Right Mouse Click on the cargo you want to consolidate.
- For the list of equipment installed on your ship, you can also use the slider bar on the right side of the list to scroll through all installed items, if your ship has more than 5 equipment slots. You can also hold the mouse pointer over the list and use the mouse wheel to scroll, just like the items for sale list.
- The inventory console also lets you refuel, search for contracts, or buy a new ship.
- If you buy fuel, your countermeasures will also be refilled free of charge. Even buying a small amount of fuel refills your CM's. However if you do not have enough money to refuel as much as you have chosen in the options you won't get the fuel you expect and the CMs will not be refilled as expected, either.
- A description of items you highlight with the mouse pointer is provided at the top middle of the console display. Most of the descriptions are self-explanatory, but when you highlight a weapon, the Y: stands for Yield, S: stands for Speed, C: stands for Cycle rate, and R: stands for Range. This console also provides the shipyard and crew management consoles.

The shipyard lets you design a ship by selecting a frame and then installing the various components for fuel capacity, cargo capacity, engine, wing design, and shield capacity. You can further enhance the design parameters of your ship with additional upgrades and crew members.

Crew members can be hired for various roles and you need to pay them based on their loyalty, trade, and skill. The fair wage for each crew member is displayed in the crew management console. If you pay them less than the fair wage indicated, their loyalty to you will likely drop, which increases the chance they will leave your ship. Pay them well and their loyalty will increase. The longer you keep your crew, the more loyal and skilled they will become, which also increases the amount of money they expect to be paid. Checking and adjusting your crew's pay levels each time you dock is a good habit to get into for improving loyalty. Your crew's loyalty will also increase if you successfully complete contract objectives and their loyalty will decrease if you fail contract objectives.

The news console is also available in the main inventory console display. The news console give you local news headlines which provide details on market conditions and recent events specific to the system you are in. Your statistics are also displayed at the lower right while market prices for commodities and fuel are displayed in the two lower columns on the left. The 'System Information' option gives you a brief background on the system you are in and details on local factions/groups.

The inventory console will automatically open when you enter a hangar at a station or carrier. When the inventory console opens, the hangar's tractor beam will engage and hold you in place until you close the console. You can disable automatic inventory console control by pressing the default Alt-F3 combination. You will then need to manually open the console when you dock to engage the hangar's tractor beam and access docked options available in the inventory console.

Ship-to-Ship Trade Console (default F4 key and fourth console button): Lets you arrange commodity and money trades with other ships. Commodities and other items in your cargo bay aren't part of your ship, so they can be exchanged with other ships in flight. You can also exchange credits, so you can arrange to sell or buy items if the pilot of the other ship agrees to the terms. You can try to bribe other hostile ships with this console by just sending cash. However, the other pilot may not agree to open the trade console if they want to attack you for something in your cargo bay. So the best time to bribe another pilot is when your cargo bay is empty. When you've selected the items or money you want to trade and agree to the offer from the other pilot, click on SUBMIT to accept. In multiplayer, both pilots must click on SUBMIT for the deal to be finalized.

Pilots can also exchange small 30 unit fuel pods in multiplayer as well as challenge each other to races using the trade console. When a race challenge is submitted and accepted, the race course is placed in front of the player who sent the challenge at a heading of 0.

Discussion: Which is Best - Mining or Trading?

Another 'how long is a piece of string' question but worth exploring for what it brings up.

Some players have expressed concern about how trade items are distributed around the Evoverse. Others are just puzzled or interested in the way trade is supposed to work.

Source Vice: Trading is kind of geared toward a multi-point, high effort for higher potential reward structure. You're certainly not limited to only having to dock at one point to search for something in a desired economy type for many locations, there are usually orbiting stations and even other cities within the same economic zone type. And although I don't want to give too much away, I will say that even short trips from certain locations to certain 'ground' locations can even provide a healthy profit percentage... in the same system. You can obviously do ok mining, but many of the biggest pay-offs are a result of finding the high end trade routes, many of which involve learning where the various economy types and levels are, then learning what that means for specific items and inventories. From there, it's pretty much just a matter of putting the pieces together to come up with trade runs that make excellent profit.

There are certain systems/conditions that can result in Metal Ore being worth more than Platinum, especially for what it can be used for and how it can be traded.

Source Various:

- mining is easy, therapeutic and you can sip coffee whilst it's happening. It's not a bad way to start off and earn some money to get some upgrades so you can turn to . . .
- trading is far more profitable than mining
- Think out of the box a bit. You might find equipment to be a good trading item.
- Early on travel from station to station and buy anything that is cheap to buy, jump to another station and sell the things that are profitable/buy stock that is cheap at the second station. It's a good way to make money while you are checking the prices for the items and moving to the next station. Then it's just a matter of finding the station or city that gives the best price.

- top mining income is around 700k a run. On the other hand, I found an item of equipment, buy in one system, sell in another generating 2m profit. This 'run cycle' times aren't too different either. It is possible to refine your technique and 'earn' averages of around 20million (yes . . . 20 000 000) per minute or more – around a billion (yes 1 000 000 000) per hour. **Editor:** Occasionally I trade just to chill – at the moment my bank account stands at just over 18 billion credits, letting me playas I like – RL provides enough 'earning a living' challenges for me.
- There are locations where you can buy **spoiler text > Fulcrum Torpedoes < spoiler text** for around 700k; you can resell them for over 4m in other locations - fill up your cargo bay, plus your weapon slots, that's 13 slots - very nice profit.
- You can buy a station licence at the location you buy stuff from, 25 per cent reduction in costs, which equals 25 per cent increase in profit.
- Do some exploring first, note the price of items, even missiles. Gun running isn't illegal in the Evoverse!
- Look at the everyday items you can buy, and then turn into something else at a construction yard. You can re-sell the construction yard stuff at a good profit. Anti-matter is a very good, and cheap buy, if you can find it. You can get anti-matter by blowing up a cap ship and tractor beaming its cargo into your hold. I found a planet selling anti-matter, took it to the construction yard, turned it into fuel processor and sold it at another planet for a 2m profit. If you look at the Legends instructions (or elsewhere in this guide!), you'll find a full list of what materials transform into something else, at a construction yard
- You can make **Legend**, just by accumulating enough money, around 5- 6bn

Inventory (handling cargo and equipment)

Moving equipment around

Vice: Be docked at a station, city, or carrier. In the inventory console (F3),

- left-click on one of your weapons/equipment to sells.
- right-click on one of your weapons/equipment moves it between the weapon/equipment point and your cargo bay (assuming you have free slots in your cargo bay).

For the "for sale" items that are being offered by the station, left click buys the whole stock up to the limit of your cargo bay, right click buys just one (if they are stackable, like commodities).

For example, you have a build constructor in your cargo. If you left click it, you sell it. If you right-click it, you move it to one of your equipment slots (if you have one available). If you right-click on it again in its equipment slot, it will be moved back to cargo.

How can I combine same type cargo?

It's frustrating to have cargo bays part full with the same stuff! It's easy to shuffle things around – consolidate your cargo as the discerning trader describes it:

Vice: Be docked at a station, city, or carrier.

Let's say you have 4 cargo bays:

- 1) Fusion Cells x15
- 2) Fusion Cells x10
- 3) Platinum x20
- 4) Platinum x10

How do you add the 10 Fusion Cells from slot 2, to slot 1 to free up slot 2 and 5 of the platinum from slot 4 to slot 3 to fill slot 3 completely?

Hold the Alt key, then Right Mouse Click on the cargo you want to consolidate so if you Alt + right-click slot two, it will combine with slot one. Similarly, Alt + right-click slot four, it will combine with slot three. The cargo bays don't have to be sequential to work, so the Fusion Cells could have been in slot 3 and Alt-Right click slot 3 would work.

You can consolidate cargo only for minerals and commodities. With equipment and missiles you can only load one item per cargo bay so that bays are full.

Sometime I can't buy equipment! - What am I doing wrong?

Equipment that is 'normally' designed to be 'installed' and deployed from those hardpoints (FT's, all missiles, stealth fields, shield/fuel/charge packs, probes etc) need you to have a free hardpoint to hold them; you will get the message that those hard points are full and that you need to sell (or move) an item in order to make room for what you are currently purchasing. You can either sell a piece of equipment, move it into your cargo bay or put the item you want to buy into your cargo bay. Hopefully, you've room in your cargo bay(s) for your selected item(s) - otherwise, you'll receive the same type of chat message regarding your cargo bay capacities.

It's the same for non offensive/defensive equipment if your equipment slots are full.

Right-mouse-click on the item you want to buy, while it is still listed on 'the boards' to auto-move the item into your cargo bay, and complete that purchase instance.

Also, depressing the 'Alt' key while right-mouse-clicking will serve to move selected commodity items from the IMG-board offering into your cargo bay, should you have less than max capacity (25 items per type). A real handy tool, I must admit.

Where can I get market information?

Source Vice: That'd be the news console. As soon as you arrive in a new area (planet or solar system), you can open the news console and view the market ticker, showing the commodity values of all items in the area, even if they aren't currently available for sale. Combine this with the economic type data provided and you can quickly get an idea of what's valuable and what's not. For most charted systems, you can also get additional details that can sometimes be useful in the 'System Information' section.

Why can't I sell my stuff in a some places?

Trade stations and cities will generally buy anything, unless you need to have a license at a particular station. But Constructors and Carriers can be restricted.

When might I have to pay docking fees?

if you are in a hostile system you will have to pay a docking fee before you can sell anything or enter the station to be protected from surrounding hostiles

How can I improve the prices in a system?

The local economy can be raised by building stations a mix of trade, research, energy and constructor are effective, - be careful of their placement.

How can I maximise profits trading in weapons?

If you want to do missile trades you can load your cargo spaces with 5 missiles and your 8 hardpoints with 8 missiles so the maximum amount of missiles you would be able to trade is 13 at a time - but with a possible profit of 2-3 million per missile that's 25 - 40 million per run

You can also use your equipment slots for trading - you can buy your regular equipment back later or put it in a hangar

How can I find containers?

Containers are small! They show up on the radar as pinky-purple (No-ID) blips on your radar once you get very near them

SeeJay has created an Excel sheet that lets you pinpoint the location of containers in space in two jumps: Download the file from <http://evochron.junholt.se/menus/downloads.htm>

How do I mount weapon from found container?

I found a container on planet surface with a Maxim-R cannon in it. So it is inside my cargo now Is it possible to install it into my weapons bay?

You have to be docked first (trade station/city/carrier) because shifting cargo around requires the auto-handling systems found there. Then **right-click** the cargo to equip it. If you want to keep the cannon you have, you'll need an empty cargo bay to right-click the currently equipped weapon into it. This also works for ship equipment (shield batteries, terrain walkers and such).

In an emergency – e.g. no station anywhere close – you if (and only if) you have a free cargo bay you can jettison a piece of equipment and then tractor it into a cargo bay. I can't think of a situation where you would want to do this though!

Could you all list the really great special different things that can be found in containers?

As one experienced pilot said . . . Pods are like the proverbial 'box-o-chocolates'. Never know jist whatcher gonna git 'til ya open it up and try one. (Or use a cargo scanner.)

Depending on location/economy, pods usually contain either basic commodities (hydrogen/fusion/metals/biological/etc.), weapons implements (missiles/cannons), or ships' equipment. Pod contents do not change with successive visits. Some locations have an item quantity limit per visit. There are some pods whose contents/locations, if stated here, would be spoiler info. There are a few of these yet to be found, from what I've heard.

Collect containers from destroyed ships

You can become a pirate and rob people. Sometimes when you are defending yourself some containers survive the hostile being destroyed. These will be visible/easily identifiable if you're within a reasonable distance because they have white square corners surrounding them, like so:



You can use your mining/tractor beam to pick them up. Containers drift down to planet surfaces from space - get a Terrain Walker and go prospecting!

In SP or MP do containers refill/respawn?

Is there a disadvantage to searching in multiplayer, versus singleplayer? Do containers "respawn"? Is it possible I would see things in singleplayer, but they're not appearing in multiplayer as they've already been taken by another player?

- Containers respawn both in MP and SP after some time.
- Same stuff appears in SP and MP
- If you have a Science Ops as a crew member, he will point out directions when you enter a sector with "interesting" stuff.
- On SeeJay's website you can download a "Container Finder" that will get you to it in 2 jumps. (Spreadsheet with instructions).

There are two classes of containers to look for;

1: 'hidden' containers (hard-coded spawn with constant items and item limits) These tend to be tucked away in remote parts of a sector, or (occasionally) in asteroid caves, and are marked with purple blips on the radar

It's a cheat and a bind and probably takes a lot of fun out of your play, but but if you restart the game hidden containers will be full again. Not a cheat (and probably actually quicker!) they will respawn/refill once you leave the sector/system where the containers are located.

There is a 'bag limit' - the number of items taken per visit and visits frequency. The limit was placed so as to inhibit abuse and to reduce the potential for an unfair advantage. This works in both SP and MP.

Many of the hard-coded containers were placed close to the surface of a planet back before Vice released the Expansion. Due to the fact many planets are now larger than they were prior to the Expansion, some containers are unreachable . . . being buried below the surface.

2: 'dropped' containers are dropped by destroyed ships (capitals drop huge amounts in particular) and are marked by white blips, as well as white boxes on the HUD.



Containers dropped from an AI can accumulate . . . as long as someone remains in the sector. This is easily observed when doing planetside contracts where you're likely to be sent to the same or nearby location, to do combat, more than once.

Section16: Ship Equipment

Editor: This is another of the 'how long is a piece of string?' sections! Your ship and its equipment and weapons load-outs will depend on you, your playing style, your bank balance, your military rank and your activities at any given time. That is one of the great attractions of the game. Every player will have his/her/its favourites.

Having said that, there is a strong consensus about certain basic 'must have' items and the type of equipment that's most suited (or unsuited!) to various roles.

Designing ships, tradeoffs between components

For the most part, higher classes of equipment are "stacked". A class 5 fuel tank, for example, is five fuel tanks stacked together. Same for cargo bays, repair kit, etc There are several options for each main system – several weapons support devices, several shield enhancement devices, even two ways of making your ship disappear! Here's an example;

Source Vice: Compare the shield system in Evochron. Rather than just having one part that controls all aspects of the system, you get to choose 3 separate and functionally unique components to effect how well or poorly the shield system on your ship works. First, there's the frame, which sets the raw power your ship can provide to the shield core. Then you select which shield core you want, each one can provide better protection, but each one is also limited by how much power you feed into it by which frame you select (this is where things can get better or worse depending on your configuration/design selection, not just which part you pick). Then once you've established the frame and core, you select boosters, also known as the capacitors, which determines how much power you can store and for how long. The combination of these factors determines the level of impact your ship can sustain and how well it can recover/recharge lost energy displacement.

Combined with these primary function factors, you also have to consider how the components you select will impact other systems on your ship, including engine, cargo capacity, fuel capacity, and wing/thruster system. Each frame offers a certain level of assembly resources that you can deplete from one design element to give to another, so you must balance your design with your preferred preferences in all of these areas.

What equipment is vital? (Everybody agrees on these!)

1. Mining/Tractor beam (first piece of equipment you should fit!!)
2. Cannon Relay System which doubles cannon firepower
3. Cannon Heatsink which improves the rate of fire
4. Particle Cannon and Beam Weapon combination (see elsewhere for options) - though a few players think that the beam weapon is a waste of time
5. Class 3 Repair Unit
6. Class 5 Shield Booster
7. Mantis Jump Drive - jumps 10 sectors at a time – quick travel
8. Terrain Walker – if you want to do any planet-side contracts or exploration

Note that this takes up 8 out of your maximum of 8 equipment slots – lower class frames have less equipment slots! it's usually agreed that a Deploy Builder or Construction Builder (or both!) are pretty important

The IDS multiplier!! This comes as standard and allows you to use lower class engines and still have a high top speed. Bind that to two keys, since it's not bound by default to anything and you want to use it.

Next down the list is the 'mount as needed' stuff 9in no particular order;

- Stealth Generator **or** Shield Recharger (just don't mount both – they clash over energy) One to hide and one to weather any assault.)
- Deploy Constructor (the swiss army knife of equipment slots)
- Fuel Converter (when you want to siphon fuel from a nebula, sun or gas giant)
- Build Constructor (when you need to build something that will be permanent)
- Specialized Mining/Tractor Beam (when you need X amount of Y quickly)

- Anti-Missile System (pops missiles and doesn't use limited resources to do so) **or**
- Auto CM Launcher (goes through CMs like candy, you risk leaving yourself high and dry when you really need them)

What advantage is there having bigger engines?

See the ***Evochron Mercenary Technical Guide*** for detailed discussion of engine performance. It's also worth looking at the Appendices at the end of the Guide. To summarise;

The acceleration of the ships is **slightly** modified by different engine classes, the effects getting less and less as the frame gets bigger and more massive. **The biggest effect is that the size of the engine affects the top speed of a frame.** Before the standard installation of the IDS multiplier to all frames the advantage of the bigger engines was significant for the larger (and slower) bigger frames. However, since the IDS multiplier increases the basic frame top speed by between x2 and x5, even the slowest bigger frames have more than adequate top speeds. For example in combat many pilots use IDS x3 to stop then reaching speeds that are too high!

With the IDS multiplier you can reduce the engine class, increase the multiplier and keep the same max speed but free up some points for a bigger fuel tank and perhaps nippier wings!!

What are a ship's "Assembly Resources"?

The assembly resources indicated for each frame are not merely a limitation of space available to components, but also the power available to them. With a higher assembly rating comes more available power overall. So you can use that as a general guide for an idea of the power available to a ship's systems. So you'll notice that a Pulsar offers a slightly higher level of power/resources versus a Talon while the Leviathan offers 250% more.

Equipment clashes I - Shield Recharger and the installed (multiple use) Stealth Generator

If you use both the shield recharger and the installed stealth generator, then when you enable the stealth the shield recharger will instantly use all the weapon energy for trying to restore the shields, so the stealth will very quickly – much to your embarrassment and detrimental to your life expectancy! **Vice** says that this is intended behaviour; you need to decide how you want to play and choose which pieces of equipment you want to use - devices do not necessarily work well with all others.

Equipment Clash II - Is a Shield Recharger worth fitting?

There are differing opinions here, though most players are negative about the shield recharger, possibly because they are a blood thirsty bunch in Mercenary!

The Shield Recharger detects when your shields are being compromised and diverts energy to top them up. Basically giving you the ability to auto-focus full energy to the shields and not have to alter the shield/weapon energy balance when taking hits. In that respect it's cool and **if** you are really good at dodging shots or just want to escape to carry on trading or exploring it is a very nice piece of hardware.

Where it fails however is that it uses a lot of energy and more often than not you can and probably will find yourself out of energy for fighting or jumping. What this essentially means is that your shields are beefier but you won't have energy to fire weapons if you're taking hits. Not a very good trade off in a fight - but good for escaping - run away until you have enough energy to jump! Godd for the traders and explorers

The big problem with the Shield Recharger is that it doesn't have an **Off** button. It's Fit & Forget. It may well get you killed (can't fight back) as save you (shields last longer). But you can use missiles and then run for it in the confusion!

Finally remember the clash with the Stealth Generator. It's worth noting that the secondary weapons, hardpoint installed use-once generator doesn't have this clash problem - it has its own energy store. But doesn't last as long. But you can fit several and use them one after another though!

Vice says that this is intended behaviour; you need to decide how you want to play and choose which pieces of equipment you want to use - devices do not necessarily work well with all others.

How should I choose ship armour and shields for the most efficient balance?

The shield system on all ships in the game depends on two components, a Shield Core and Shield Boosters.

The core is the central control and energy emitter management system. Its performance is determined by the core class you select when designing your ship. Larger frames with more assembly resources can generally handle more powerful cores with fewer compromises in overall design. Military frames come with a Class 10 core as standard

Boosters are the capacitors of the shield system; they store the energy for each array and deliver it to the shield core. More boosters means more energy storage capacity, resulting in more resistance against weapon impacts and more power to manage between all four shield arrays. Class 5 is the best

Larger frames also generally provide better armour to protect the hulls.

In the Expansion you can now buy one shot shield packs that give an instant boost (around 50%) to your shields - they have taken over from the Shield Rechargers as equipment of choice - but, as with much in the Evoverse, try it out for yourself - which is the best for your style of play?

What are stealth devices? What are they used for?

Source **Vice** and various:

There are two types of stealth devices in the game. Both use the same stealthing technology but have different delivery systems

- weapon hardpoint-installed, single use devices (60 seconds and then discard). You can install several and use them sequentially
- reusable equipment device. (time per charge depends on ship - recharge for re-use). These are expensive and are hard to come by.

The first type provides a stealth field on demand at virtually any time.

- It's cheap but it's a one time use device.
- It installs on a hardpoint—a secondary 'weapon' and can be activated the same way as you fire your missiles. Just select it from your secondary weapons and hit the fire-your-secondary-weapon-key.
- You can carry up to 8 of these or mix and match with missiles and various energy packs.
- Stealth devices are 'active devices'. Not Fit&Forget. So you have to activate them.

The second type is reusable and is installed in one of your equipment slots.

- It is vastly more expensive but it is reusable
- It requires all shield arrays to be at full power as it uses those arrays to create the stealth field, rather than generating it internally like the use once device.
- It depletes your main energy, which requires recharging after you 'decloak'.
- Advice: as soon as you are safe, set the energy balance to 5S / -5W until your shields have recharged.

So each device has its own advantages/disadvantages and installation/use requirements.

What do Shield Boosters do?

Shield Boosters are like the capacitors/batteries of your shield system.

Source **Vice** – in the strategy guide:

The shield system on all ships in the game depends on two components, a shield core and boosters. Boosters are the capacitors (energy store) of the shield system, they store the energy for each array and deliver it to the shield core. More boosters means more energy storage capacity, resulting in more resistance against weapon impacts and more power to manage between all 4 arrays. There are five classes of shield boosters - Class 5 is best

Is an Afterburner Booster Drive worth fitting?

All ships are fitted with afterburners (AKA Military Burners) as standard. The Afterburner Drive is an add-on that boosts the fitted afterburner's performance.

It certainly boosts afterburner performance in combat the afterburner is in combat, but it siphons energy from weapons/Fulcrum Drive and uses it to increase afterburner thrust output 40-75% depending on your frame/engine setup. It's better on heavier frames but only being able to use the standard afterburner in bursts can be limiting. Using weapons' energy is a negative! But it can be useful to run away if you need time to repair but in combat.

Where can I get a ... ? I - Equipment (spoiler!)

The table gives at least one example of the harder or more interesting things to find. Several systems contain a "Hidden" (uncharted) planet that sells equipment not available commonly from elsewhere (Stealth Generator for example). These are marked a "H"

equipment v	Maxim-R Cannon	Phantom Cannon	Baneshee Cannon	Trebuchet Cannon	Eclipse Cannon	Proximity Mine	Fulcrum Torpedo	Station Detonator	Excalibur Pack	Cannon Relay System	Cannon Heatsink	Stealth Generator	Anti-Missile System	Shield Array Recharger	Auto CM Launcher	Afterburner Drive	Specialised Mining Beams	Deploy Constructor	Build Constructor	Mantis Drive	Fuel Converter	
Agate Hub	§	§	§			§			§	§						§	§	§	§		§	
A-Centauri		§					§	§	§	§						§		§	§	§	§	§
Aries									§									§	§	H		
Atlas		§	§					§		§						§		§	§			§
Aquila		§							§		§		§	§	§	§	§	§	§			§
Capella		§	§				§		§	§						§		§	§			§
Cerulean	§	H	H				H	H	H	§											H	§
CWZ																			§	§	H	
Cygnus					§					§												§
Deneb		§	§					§								§		§	§			
Emerald	§																					
Fauston					§					§												§
Lambda					§					§												§
Lost Rucker																					§	
Olympus					§																	
Onyx	§									§												§
Orion					§					§												§
Pearl		H	H	§		H	§	H	§	§	§	H	§	§	§		§	§	§	§	§	
AWZ		§	§	§		§	§	§	§	§			§	§	§		§	§	§	§	§	
Pices						§				§												§
RiftSpace		§					§	§	§		§		§	§	§	§	§	§	§			
Rucker	§	§					§		§							§		§	§			§
Sapphire																						§
Sierra				§			§		§	§									§	§		
Sirius	§								§							§		§	§			
Sol		§	§				§	§	§	§			§	§	§	§	§	§	§			
Talison					§																	§
TWZ		§	§			§	§	§	§											§	§	§
Thuban										§												§
Virgo					§					§											H	§
Vonari		§					§	§								§		§	§	§	§	§
Wolfzone		§					§		§							§		§	§			

Terrain Walkers – everything you need to know

This section is copied from *The Evochron Mercenary Technical Guide* - it will be expanded with FAQ, hints and advice as we gain experience!



The **IMG-TR Terrain Walker (TW)** is a multi-purpose planetary exploration and recovery platform. They are designed to allow mercenaries to explore planetary surfaces up close without the need to use expensive spacecraft fuel. They also provide several important functions via standard equipment that normally has to be purchased and installed separately on ships. Terrain walkers are often available in high technology systems, but are generally very expensive. They are installed as an equipment item.



Designed for protecting the pilot against the harsh environments of most planets, terrain walkers utilize a nuclear power source generating enough electricity to power an extensive life support and environment system. Various electrical actuators and motors handle movement and rotation while remaining power is devoted to available combat systems. Terrain walkers also utilize the surrounding atmosphere for life support and cooling. As a result of these dependencies, **they can't be used in the vacuum of space or on the surface of moons with no atmospheres or inside stations or on or in asteroids.** For safety a TW will not deploy over water or if the ship is on a city station (or any other city building!)

While primarily designed for exploration and recovery (they are similar in size to your ship) terrain walkers also come equipped with powerful particle cannons and shield arrays. A terrain walker can generally protect itself effectively against one or two attackers flying spacecraft.

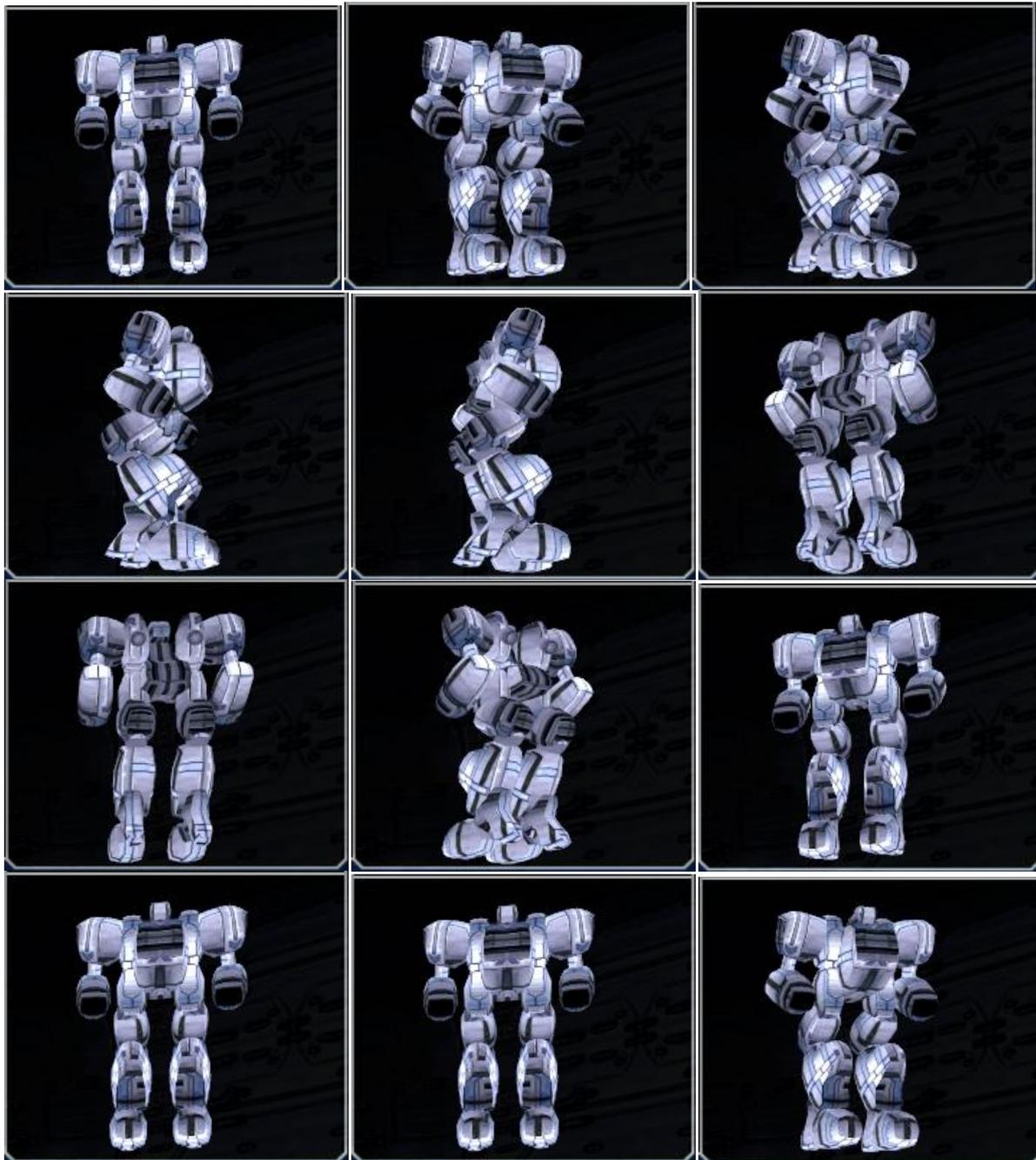
TW's are capable of functioning underwater - an enhanced image mode automatically cuts in when you submerge in a sea or a lake.

At present TW's are **not** capable of accepting upgrades . . . but Terrain Walkers are equipped as standard with;

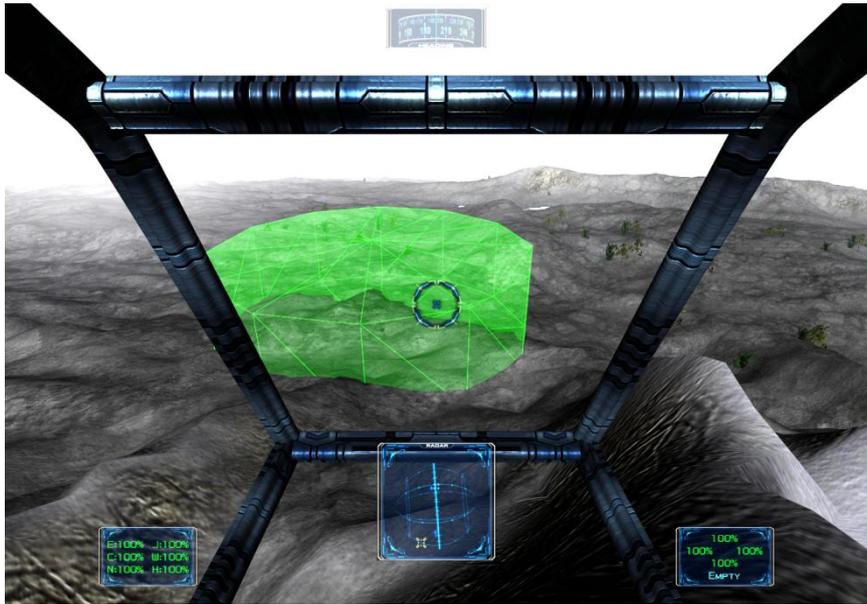
- shields (like a ship) - four projectors cover front, rear, left and right
- a pair of particle cannon of a higher spec than the best off-the-shelf cannon available from trade stations, carriers etc
- short range jump jets enabling you to fly in short bursts. They can provide a quick escape and a way to quickly reach the tops of mountains and buildings or increase the range you can see. The jump jet's fuel system utilizes materials extracted from planet atmospheres and recharges after use.
- a mining/tractor beam - mercenaries are often hired to recover a full load of a specific material due to their faster mining rate (roughly 5X as fast as a typical spacecraft mining system).
- one cargo bay
- a high powered cargo scanner allowing them to retrieve details about container contents at long range for example from canisters that have been abandoned or dropped from space
- advanced 3D imaging equipment designed for close range surveying. Some energy companies are known to hire mercenaries with terrain walkers to survey an area before construction or mining projects.

Combined with their built-in mining beams, terrain walkers make a valuable addition to the toolset of mercenaries interested in cargo salvage and planetary surface exploration

External View of a TW



The HUD is significantly simpler than the one fitted into a ship. It includes a



1. target reticule
2. compass
3. radar globe
4. shield readout
5. cargo bay readout
6. scanner readout
7. status display of
 - hull integrity
 - nav system integrity
 - engine/motor integrity
 - cannon integrity
 - cannon energy reserve,
 - jump jet energy reserve
 - shield integrity

The LHS display is arranged as;

Engine damage level (%)	Jump Jet energy level (%)
Cannon damage level (%)	Cannon energy level (%)
Navigation System damage level (%)	Hull damage level (%)

The RHS display shows the four shield energy reserves above the cargo bay contents.

A linked stealth device comes standard with every terrain walker, giving mercenaries a way to hide and protect their ship while they travel around in the walker. A green HUD marker is 'left behind' to guide pilots back to where they left their ships. They simply need to return to the marker and park their walker inside it. They can then deactivate the walker, returning it to its compact state in an equipment slot, then continue to fly their ship.

The radar globe always displays a blue icon that shows the position of your stealthed ship so you can always find it if you are outside visual range. It can also show the location of canisters and ships (with the usual hostility level colours). The compass and radar globe are linked to the galactic disc - **not** the planetary coordinates. It must be emphasised that the radar globe does **not** show the planet and the compass reading of zero does **not** point North! Set waymarkers will also show, but be aware that because they are fixed in relation to the galactic plane and not the planet surface, the waymarker will appear to drift as the planet rotates! You cannot use a waymarker to identify the location of a city for example!



Terrain Walkers are about the same size as your ship!! The walker and ship in this picture are close enough for the walker's shield to be activated as they bump.

When not deployed, terrain walkers fold into a package unit small enough to fit into a ship's equipment slot. When activated (default K key), the walker core extracts itself and uses the detailed design specs to compile its various structures into the complete design with legs, arms, centre torso, and head. As is usual the QVee extracts atomic matter from the quantum vacuum and nanotechnology systems create the appropriate extensions onto the core.



The deployment and recovery is virtually instant; this sequence of photographs taken on a high speed camera shows what happens on deployment. The terrain walker in the foreground has called for ground assistance from the ship.

As can be seen, the ship reorientates, and starts to drop. The deployment of the walker occurs at the same time as the ship is stealthed. The walker is lowered to the ground on a tractor beam and activated



Operating a Terrain Walker

Source: marvin

1. Terrain Walker - INSTALLED
2. Planetside - HOVER
3. Terrain Walker - ENTER (K)
4. Status - CHECK
 - a. E - Engine Integrity
 - b. C - Cannon Integrity
 - c. N - Navigational Radar Integrity
 - d. J - Jump Thrusters Power
 - e. W - Weapon Power
 - f. H - Hull Integrity
5. Directional Control - AS REQUIRED
 - a. Forward - STICK FORWARD (W)
 - b. Back - STICK AFT (S)
 - c. Turn Left - STICK TWIST LEFT (MOUSE)
 - d. Turn Right - STICK TWIST RIGHT (MOUSE)
 - e. Strafe Left - STICK PUSH LEFT (A)
 - f. Strafe Right - STICK PUSH RIGHT (D)
 - g. Jump/fly - (SPACE)
6. Cannon - FIRE (LEFT CTRL)
7. HUD - TOGGLE (H)
8. Terrain Walker - EXIT (K)

You can only re-enter your ship when you are inside the green marker

ANNA - your own ship's voice activated AI control system

Introduction:

The following is taken from the sales spec for ANNA.

AI is expensive. However a voice-based system has been developed by **Galaxy Defence Industries** (CEO: **Galaxian**) that is affordable by the more experienced and affluent mercenary. To reduce costs and data processing overheads the system doesn't have a visual interface. The **Advanced Neural Network Artificial intelligence** ('ANNA') modules are not easy to obtain, but a search on the forum will help!

ANNA's operation is based on a voice recognition and response (VRAR) module with an ability to learn idiosyncratic speech patterns. The ANNA AI module has capabilities ranging from managing routine ship operations such as navigation, docking and cargo management to assisting the pilot with such tasks target acquisition, threat identification and advanced combat manoeuvres, thus increasing ship/pilot effectiveness and survivability during combat operations.

ANNA is thus able to translate commands given in a variety of sentence forms . For example the phrasing like . . .

- Anna execute jump to next waypoint
- Anna execute jump to next nav point
- Anna execute jump to rendezvous point
- Anna execute jump to rendezvous coordinates
- Anna engage the F T L
- Anna engage the jump drive
- Anna fire up the F T L
- Anna execute jump to next nav coordinates
- Anna jump to next waypoint.
- Anna jump to next nav point
- Anna jump to next rendezvous point
- Anna jump to next rendezvous coordinates

When Anna has carried out your command she will verbally report back to you with something along the lines of . . . *'Acknowledged. Jump point plotted, Stand by for F T L jump'* or *'Acknowledged. Warning. Graviton ellipse anomaly detected on projected flight path. Recalculating jump point. Stand by for F T L jump'*

How do I install ANNA?

Unlike most mercenary equipment, you can't buy ANNA from a station or a city. It's actually a utility programme (written by **Galaxian**) - like EMTools, Map Log, Evometrics, Travel Buddy, EMH and so on - you have to 'install' ANNA into the game for it to work. It also requires a couple of other programmes to be installed and running. The following will hold your hand through the process of getting the software you need, installing it and integrating the programmes to create your own ANNA module.

The Good News: work your way through these instructions and you will have one of the coolest pieces of gear in the Evoverse, be the envy of your friends, have bragging rights in bars across the core and have the effectiveness of your ship increased by a zillion percent. Just imagine . . .

You spot a hostile on an intercept vector

"Anna Evasive Pattern Sierra One"

The hostile weaves and jinks to stay with you as it continues its interception.

"Anna execute tactical jump"

You make a microjump and reappear behind the hostile

"Anna switch from multi to single target"

"Anna target gunsight"

"Anna attack pattern Alpha Two"

"Anna, let's take that frakker out of our sky!"

. . . a period of tight turns and strafes . . .

"Anna launch missile"

. . . a short pause then boom!

"The hostile is now stardust, sir"

"Thanks Anna. A hot relaxing drink I think, if you please - Earl Grey . . . black . . . hot"

"Coming right up, Sir"

The ~~Bad~~ Slightly Less Good News: you will have to fork out a (very small) amount of real life money to buy the **VAC** software. VAC stands for 'Voice Activated Commands' and does the core work of translating your commands into the key presses that do the business!

(Cost = USD \$18 / GBP £11.16 / €13.22 / SEK kr114.41 / AUD \$19.07 / RUB py6577.69). However, you can **try it for free for 14 days** and see if you fall in love with Anna. Quote from **DWVAC.com**: 'This will give you one license to use Voice Activated Commands (VAC) for one installation on all current and future versions.'

The other pieces of software you need are (freeware) **AutoHotKey** and (freeware) **Microsoft Speech** (comes built into Windows Vista, 7 & 8 and can be installed in XP). It is required for the Anna's voice.

You will (obviously) also need a microphone (Microsoft are not yet at StarTrek's 'just talk to the computer from anywhere in the house' quite yet!). Set it up (useful for TeamSpeak as well).

The command flow sequence is: **your voice → VAC → AutoHotKey → EM**

VAC converts voice commands to keyboard presses
AutoHotKey sends key press sequences to the EM game

For those wanting a little more detail, Galaxian says ...

*'Voice command is issued by the pilot > ANNA generates the key press(es) in the order/rate/frequency they are configured in the command stack for that command and vocalizes the acknowledgment phrase (at random from the "reply stack") so the pilot knows the command has been understood and executed. Both EM and AHK "trap" and execute, in order, the key presses that they recognize as "theirs" in the order they are generated by VAC. AHK is only controlling the mouse cursor and buttons. It is not set up (for this profile anyway) to generate any other actions. So when it *sees* a key press that it has a cursor or mouseclick action for, it moves the cursor to whatever the screen coordinates are for that action and sends the click. The pilot will see this as the mouse driving itself, rather quickly. Some of the command stacks have 10-15 individual commands that are executed for a single voice command issued by the pilot.*

For the lovers of real minutiae or those wanting to hack this mod, Galaxian offers the following detail;

(Note for the sane 'rest of us' skip to the section on Installation Steps which can be found immediately after this section!!)

*'VAC converts voice commands into key presses that are read by the PC and invoke some action just as if you had pressed the same key(s) yourself. Key presses are basically broadcast across the system. For keys that are bound to a function within application(s) that are running, in our case EM and AutoHotKey, when the application *sees* a keypress/combo that it recognizes as being bound to some action, it *traps* that key press/combo and takes whatever action is bound to that key or combination of keys. Anything that the application doesn't recognize as requiring some action on it's part is ignored.*

Since we have two applications that are trapping key presses/combos, the scripted key presses in the profile must be specific and unique to each application. Meaning that any command or command string within the VAC profile that contains a key press that is bound within EM to some action cannot be used to invoke some action from the .AHK script, with the inverse being true as well, or mayhem will ensue.'

I have taken a great deal of time and care to ensure that there are no shared key presses or combos. EM is also limited in what key press combinations it will recognize. I was running out of "native", useable keyboard commands trying to maximize AI functionality, so you can see why there are a few key bindings that are utilized for non-critical systems like deploys.

As currently delivered, the ANNA profile is only using the .AHK script to manipulate the mouse cursor and mouse button and these commands are only invoked when wasn't a way to do it without involving the mouse, such as clicking on a coordinate box in the nav console to set up a combat jump.

So, for commands that do not involve the mouse (which is most of them) the command flow goes like this: Voice command is issued by the pilot > ANNA generates the the key press(es) in the order/rate/frequency they are configured in the command stack for that command and vocalizes the acknowledgment phrase (at random from the "reply stack") so the pilot knows the command has been understood and executed. The key press(es) are "trapped" by EM and whatever action they are bound to in the game take place.

For commands that involve the mouse, scripting the "command stack" for a given AI command gets more complicated. However, in execution of the AI command it is nearly the same as the above with the exception that individual commands (key presses) within the command stack will invoke (be "trapped" by) AHK to do something with the mouse cursor and/or buttons.

Installation steps for the VAC profile and AutoHotKey script

Galaxian has created both the VAC file (EM ANNA v2.7.xml) and the AutoHotKey script file (EM ANNA v2.7.ahk). You can download the required command files from here:

<http://www.starwraith.com/forum/viewthread.php?tid=10411>

The VAC profile and companion AutoHotKey script are free to use/modify and distribute. However, he (quite properly) requires that he is given credit for the large amount of time and effort he has put into the project so please give credit where it's due.

Reminder: All the other software required to run these scripts, free or otherwise, are under the jurisdiction of their respective developers. Please respect their rules of use.

Step 1: Install each of the programmes. Put a shortcut onto the Desktop for easy access.

Note: Anna is actually programmed to start everything via the command:

Action: ANNA startup (starts AHK, EM, launches pilot 1)

Phrase 1: Anna this is YOUR NAME get the ship ready for launch

Phrase 2: Anna prep the ship for launch authorization YOUR NAME beta six

Phrase 3: Anna prep the ship authorization YOUR NAME beta six

Note: In the VAC profile you'll see "YOUR NAME" and "YOUR CLAN" in some of the commands (like YOUR NAME in this one!).

If you open the profile in Notepad (or your favourite text editor, you can use the Find&Replace function to substitute your callsign (and clan tag if you use one!) and clan name for these values - **but first** make a backup of the profile in the event it get hosed.

Editor: In my case I replaced 'YOUR NAME' with '[HB] Incoming' and 'YOUR CLAN' with '[HB]'

Step 2: To install, all you need to do is copy the VAC profile to your VAC profiles folder, copy the script to wherever is handy

Step 3: then start 'em up!

VAC - AutoKey - MS Speech Recognition Programme info

Programme 1: VAC Builder (Voice Activated Commands) v3.2.0 (as of 08/10/2014)

<http://www.dwvac.com/>

'The VAC system is a useful program which you use to issue commands to your flight simulator , role playing game or any program. Since you have your hands full while playing those busy games you can now put your voice to work for you. Use your voice to speak words or phrases to issue commands to your favourite games. VAC uses a unique method in phrase recognition which greatly reduces unwanted issued commands caused by ambient noises.

The VAC system consists of two programs, the VAC profile builder and the recognition program. The VAC Builder is used to create and manage game profiles while the recognition program runs the game profile.

VAC was created from the start so anyone could build their own profile for any software that uses keyboard commands. You no longer have to wait for someone else to create and release a game profile or modify your game keyboard assignments to make the profile work. You can easily create or modify your own profiles.'

Programme 2: AutoHotKey v1.1.16.05 (as of 08/10/2014)

<http://www.autohotkey.com/>

AutoHotkey is a free, open-source utility for Windows. With it, you can automate almost anything by sending keystrokes and mouse clicks. Create hotkeys for keyboard, joystick, and mouse. Virtually any key, button, or combination can become a hotkey. Remap keys and buttons on your keyboard, joystick, and mouse. You can also convert any script into an .exe file that can be run on computers that don't have AutoHotkey installed.

Programme 3: Microsoft Speech Recognition

This may need to be installed on Windows XP. To determine if the speech recognition engine is installed click Start, click Control Panel, click Sounds, Speech, and Audio Devices, and then click Speech.

If the Speech Recognition tab is available in Speech Properties, the speech recognition engine is installed. If it is not available, the engine is not installed.

It is built into Vista, W7 and W8.

Important - read this: Galaxian says . . .

I've made a big effort to run as close to default keyboard command layout as possible. However due to limitations in keystrokes that can be read by EM, some keys that in the default keyboard config are used for flight control (made obsolete by the use of analog flight controls) need to be remapped to take full advantage of the "EM Anna AI" profile.

It's also worth noting that many of the usable keys in-game will have their "shift" and "alt" variants mapped to scripted mouseclicks in the AutoHotKey script. If a VAC command is activated that includes keystrokes tied to the AutoHotKey script and it isn't running to trap the keystrokes, there may be unexpected in-game results. Make sure the .ahk script is running when the VAC profile is in use.

Some Key Mappings that you need to make . . .

Key mappings you'll need to make to take full advantage of this profile and the .ahk script.

Fleet commands:

Key	required mapping
1	Send order - Form up
2	Send order - Defend me
3	Send order - Attack hostiles
4	Send order - Mine asteroids
5	Send order - Reload/Refuel
6	Send order - Dismiss all

Deploy items:

Key	required mapping
7	Deploy - Energy Station
8	Deploy - Repair Station
9	Deploy - Sensor Station
0	Deploy - Fuel Processor
F11	Deploy - Shield Array
F12	Deploy - Mining probe

Build items:

Key	required mapping
w	Build - Trade station
a	Build - Constructor
s	Build - Research station
d	Build - Energy station
e	Build - Ore processor

Misc:

Key required mapping

KeyPad + Afterburner

(using the default Tab key can cause issues at times if commands are issued while the afterburner is lit)

Troubleshooting:

Galaxian has put in a lot of effort to ensure that neither the VAC profile nor the .AHK interfere with normal game operations, but unforeseen things can happen!

- If you experience odd behaviour within the game (e.g. seemingly 'random' deployment of items, consoles opening themselves etc.) it may be due to the .AHK script being suspended or not loaded at all. Exit and restart the script (or start it if not running).
- VAC may also play up a bit from time to time. If things go wonky, restart it!
- Also note that in the VAC profile where mouseclicks are called, **Galaxian** has done extensive testing to come up with the most reliable timings and mouse operations for these complex commands that he can. At this point, the timings and number of clicks executed by each command are what he's found to work reliably on his test system. Some of these values may need some tweaking on some systems. As they say . . . Your mileage may vary.
- a note regarding the automated combat manoeuvres and the possibility of seemingly random command processor "faults":

Occasionally you might experience an odd "malfunction" when a longer command string is executed, such as a combat manoeuvre and the command string being executed gets disrupted by another issued command (keypress).

VAC commands get processed very quickly and most of the time "stack" in a queue to be processed in order, but it is possible from time to time for the command string to get interrupted if a key is pressed on the keyboard during a "wait" state in the VAC command string, resulting in unexpected characters being introduced during the "command processing" by VAC causing a "malfunction". Symptoms are typically something along the lines of a fault in the coordinate setting process or the Nav Console getting hung open.

Galaxian reports that he's only experienced this during heavy combat manoeuvres where he had initiated AI controlled combat jumps and engaged the 'afterburners' while the VAC command string is being processed. Even under these conditions, the "fault" only occurs rarely, which is why it took quite a while to sort out what was happening. If you momentarily refrain from issuing any keypress bound commands while the VAC AI command string is being processed the "fault" does not occur.

What commands does ANNA understand?

Galaxian has included a whole series of actions ANNA can perform. For each action ANNA can recognise several different ways of telling 'her' what you want. One example - for jumping to the next nav point - was given at the start of this section! ANNA recognises a dozen different ways of telling her that you want to carry out this action. By default you have access to over 200 commands and ANNA recognises well over 500 phrases.

Note: commands like F T L (with spaces between the letters should be spoken as separate letters - i.e. say 'eff' 'tee' 'ell' rather than 'fettle')

Note: It is possible to edit the commands. As mentioned above there are several commands you have to edit if you want them to work, by inserting your name and callsign. You can also add to the phrase list for any command so that you can add your favourite ways of telling ANNA what to do, using the VAC editor. See the site for Documentation

The commands ANNA recognises by default are collected into Action Groups. For most individual 'commands', there are several different ways of activating them, labelled 'phrase 1, phrase 2 etc.

Most Action Groups have several commands within them - for example under the 'Jump Drive' Action group there are 5 separate Actions commands:

- Action: Jump drive - Activate (max range on current heading)
- Action: Jump drive - Activate (to contract WP)
- Action: Jump drive - Activate (to next WP/coords 5 sec delay)
- Action: Jump drive - Activate (immediate, safety warning)
- Action: Jump drive - Activate (no acknowledgement)

and, for example, the second Jump Drive Action - **Activate (to contract WP)** - has 9 different phrases that ANNA recognises to activate the Jump Drive

The following shows that various 'Action Groups' you can access.

1. InvCon = Inventory Console (27 commands)
2. Jettison Cargo (1 command)
3. AutoDocking (2 commands)
4. TradeCon = Trade Console (2 commands)
5. NavCon = Navigation Console (5 commands)
6. Jump Drive (5 commands)
7. Autopilot (6 commands)
8. IDS = (5 commands)
9. Deploy (6 commands)
10. Scuttle (5 commands)
11. Build (5 commands)
12. Shields (5 commands)
13. Power (11 commands)
14. Weapons (9 commands)
15. Decoys = CM's = Counter Measures (1 command)
16. Targeting (19 commands)
17. Manoeuvres (14 commands)
18. Attack Pattern Beta (1 command)
19. Fleet (6 commands)
20. MP msg = Multiplayer messages (33 commands)
21. Startup = starts AHK, EM game and launches pilot01 (1 command)
22. Shutdown = quick save and exit menu (1 command)
23. Scan for locator beacon/transceiver (1 command)
24. * Prepare ship for combat (1 command)
25. * Ship systems status check (1 command)
26. * Pull up star system data (22 commands)
27. Toggle player camera view (1 command)
28. Fly-by view (1 command)
29. Exit (Esc) (1 command)
30. Mining/tractor beam (2 commands)
31. Terrain Walker (planet surface only) (2 commands)
32. Self Destruct (2 commands)
33. Quick Save (1 command)
34. Standby Mode = pause (1 command)
35. Msg Log (3 commands)
36. Clan Link (2 commands)
37. HUD Cycle Mode (1 command)

Note: There are some VAC commands that are **just for some added fun**. They don't have any in-game function. These are contained in the "Player ship AI" and "Star system database" and marked with * above.

Available commands (over 200!) ANNA recognises

This is the list of available pilot commands for ANNA 2.7. The "action" is what the pilot wants ANNA to do and the "Phrase <n>": is command phrase the pilot speaks to execute that action. The pilot may speak any of the phrases, number 1 through whatever to execute that particular action.

ANNA replies with a randomly chosen response

Action: InvCon - Activate (in flight)

Phrase 1: Anna bring the inventory system on line

Phrase 2: Anna pull up the inventory

Phrase 3: Anna activate inventory systems

Phrase 4: Anna bring up the inventory system

Phrase 5: Anna bring up the inventory

Action: InvCon - Deactivate (in flight)

Phrase 1: Deactivate inventory console

Phrase 2: Anna deactivate inventory systems

Phrase 3: Deactivate inventory systems

Phrase 4: Anna shut down the inventory systems

Phrase 5: Anna close inventory system

Action: InvCon - Activate (Station docking)

Phrase 1: Anna initiate docking procedures

Phrase 2: Anna begin docking procedures

Phrase 3: Anna begin station docking procedures.

Phrase 4: Anna initiate station docking procedures.

Phrase 5: Anna initiate docking protocols

Phrase 6: Anna initiate station docking protocols

Phrase 7: Anna prep for docking

Phrase 8: Anna prepare to dock

Action: InvCon - Deactivate (Station departure)

Phrase 1: Anna deactivate docking tractor

Phrase 2: Anna begin station departure procedures

Phrase 3: Anna prepare to depart station.

Phrase 4: Anna initiate station departure procedures.

Phrase 5: Anna initiate departure procedures

Phrase 6: Anna get the ship ready to depart

Phrase 7: Anna prep the ship for departure

Phrase 8: Anna prep the ship for launch

Phrase 9: Anna prep for departure

Phrase 10: Anna prepare to get under way

Phrase 11: Anna prepare to disembark

Action: InvCon - Items for sale (toggle contract/item data)

- Phrase 1: Anna bring up station inventory
- Phrase 2: Anna display station inventory
- Phrase 3: Anna show station inventory
- Phrase 4: Anna show me what's for sale

Action: InvCon - Contract (toggle contract/item data)

- Phrase 1: Anna show station contracts
- Phrase 2: Anna show available contracts
- Phrase 3: Anna show contract listings
- Phrase 4: Anna show job listings
- Phrase 5: Anna let's see who's hiring
- Phrase 6: Anna show me the contract listings
- Phrase 7: Anna show available missions
- Phrase 8: Anna show mission board
- Phrase 9: Anna show mission listings

Action: InvCon - Contract (display next, docked - no acknowledgement)

- Phrase 1: Next contract
- Phrase 2: Next mission

Action: InvCon - Contract (display next, docked)

- Phrase 1: Anna show next contract

Action: InvCon - Contract (accept, docked)

- Phrase 1: Anna accept contract
- Phrase 2: Anna let them know we accept the job
- Phrase 3: Anna let them know were interested
- Phrase 4: Anna let them know well take the job
- Phrase 5: Anna let's take that job
- Phrase 6: Anna that looks like a job for us.
- Phrase 7: Anna that's easy money right there
- Phrase 8: Anna tell them well take the job
- Phrase 9: Anna that looks like a good job let's take it
- Phrase 10: Anna that one looks good
- Phrase 11: Anna that looks good let's take it

Action: InvCon - Contract (accept, docked, no acknowledgement)

- Phrase 1: Accept contract

Action: InvCon - Contract (display current, in flight)

- Phrase 1: Anna pull up current contract information
- Phrase 2: Anna bring up current contract
- Phrase 3: Anna display current contract information
- Phrase 4: Anna display current contract
- Phrase 5: Anna show current contract data

Action: InvCon - Contract (cancel)

- Phrase 1: Anna terminate contract
- Phrase 2: Anna cancel contract
- Phrase 3: Anna tell them were off the job
- Phrase 4: Anna tell them we quit
- Phrase 5: Anna tell them to hire someone else

Action: InvCon - Contract (close contract display)

- Phrase 1: Anna close contract screen

Action: InvCon - Refuel (resend "fill fuel tank")

- Phrase 1: Anna open fuel door
- Phrase 2: Anna unlock fuel door
- Phrase 3: Anna did you forget to unlock the fuel door

Action: InvCon - Refuel (from InvCon, docked)

- Phrase 1: Anna fill the fuel tanks
- Phrase 2: Anna looks like we need fuel
- Phrase 3: Anna transmit fuel request to station
- Phrase 4: Anna let station ops know that we need fuel
- Phrase 5: Anna refuel the ship
- Phrase 6: Anna send a fuel request to station ops
- Phrase 7: Anna requisition fuel from station ops
- Phrase 8: Anna let station ops know that we need gas

Action: InvCon - Reload CMs (from InvCon, docked)

- Phrase 1: Anna ask station ops to reload countermeasures
- Phrase 2: Anna transmit request to station ops for countermeasures
- Phrase 3: Anna let station ops know that we need countermeasures reloaded
- Phrase 4: Anna request station ops to reload countermeasures
- Phrase 5: Anna contact station ops and requisition countermeasures
- Phrase 6: Anna requisition countermeasures from station ops
- Phrase 7: Anna let station ops know we need countermeasures

Action: InvCon - News (toggle news/system data)

- Phrase 1: Anna bring up the next page
- Phrase 2: Anna show next page
- Phrase 3: Anna go to next page

Action: InvCon - News (show system info, in flight)

- Phrase 1: Anna bring up system data link
- Phrase 2: Anna bring up the system data link
- Phrase 3: Anna pull up system data

Action: InvCon - News (close system info, in flight)

- Phrase 1: Anna shut down system data link
- Phrase 2: Anna shut down data link
- Phrase 3: Anna close data link
- Phrase 4: Anna close system data

Action: InvCon - News (close news, in flight)

Phrase 1: Anna shut down news link

Phrase 2: Anna close news link

Action: InvCon - News (show news, in flight)

Phrase 1: Anna bring up sector news link

Phrase 2: Anna bring up the news link

Phrase 3: Anna bring up news link

Action: InvCon - News (close news, docked)

Phrase 1: Anna shut down station news

Phrase 2: Anna close station news.

Phrase 3: Anna close station news console

Phrase 4: Anna go back to station menu

Phrase 5: Anna go back to inventory

Phrase 6: Anna go back to station

Phrase 7: Anna go back to the station

Action: InvCon - News (show news, docked)

Phrase 1: Anna bring up station news

Phrase 2: Anna show station news

Phrase 3: Anna go to station news

Phrase 4: Anna display station news

Action: InvCon - News (show system information, from news page)

Phrase 1: Anna show system information

Phrase 2: Anna go to system information

Action: InvCon - News (go back to news from sys info page)

Phrase 1: Anna go back to the news

Action: InvCon - Flight log (open from InvCon)

Phrase 1: Anna bring up the flight log

Action: InvCon - Flight log (close, from log)

Phrase 1: Anna close flight log

Action: Jettison cargo (1.5 second lead)

Phrase 1: Anna drop cargo

Phrase 2: Anna activate cargo delivery sequence

Phrase 3: Anna jettison cargo

Phrase 4: Anna dump the cargo

Phrase 5: Anna deliver cargo

Phrase 6: Anna open the cargo bay

Phrase 7: Anna release the cargo

Action: Auto docking - Deactivate

Phrase 1: Anna take auto docking off line

Phrase 2: Anna shut down auto docking

Phrase 3: Anna disable auto docking

Action: Auto docking - Activate

Phrase 1: Anna bring auto docking on line

Phrase 2: Anna activate auto docking

Action: TradeCon - Activate (ship to ship)

Phrase 1: Anna activate ship to ship comms

Phrase 2: Anna open a trade channel to that ship

Phrase 3: Anna open a low band channel to that ship

Phrase 4: Anna open a channel let's see if this guy wants to trade

Phrase 5: Anna open a trade channel

Phrase 6: Anna open trade channel

Phrase 7: Anna open a channel let's see if this guy wants a job

Phrase 8: Anna let's see if this guy wants a job

Action: TradeCon - Deactivate (ship to ship)

Phrase 1: Anna close channel looks like they're not interested

Phrase 2: Anna shut down trade comms

Phrase 3: Anna close trade channel

Phrase 4: Anna close ship to ship comms

Action: NavCon - Activate

Phrase 1: Anna bring up the NavCon

Phrase 2: Anna activate NavCon

Phrase 3: Anna activate the NavCon

Phrase 4: Anna bring the NavCon on line.

Phrase 5: Anna power up the NavCon

Action: NavCon - Deactivate

Phrase 1: Anna deactivate the NavCon

Phrase 2: Anna deactivate NavCon

Phrase 3: Anna take the NavCon off line.

Phrase 4: Anna shut down the NavCon.

Action: NavCon - (Execute jump and shut down NavCon (10 sec delay))

Phrase 1: Anna transfer plot to the F T L and execute jump

Phrase 2: Anna hand off plot to the F T L and execute jump

Phrase 3: Anna verify coordinates and execute jump

Phrase 4: Anna spin up the F T L and execute jump

Phrase 5: Anna check coordinates and execute jump

Phrase 6: Anna link up the F T L and execute jump

Phrase 7: Anna transfer plot to the F T L and execute jump

Phrase 8: Anna transfer NavCon plot to the F T L and execute jump

Phrase 9: Anna transfer NavCon data to the F T L and execute jump

Phrase 10: Anna were doing a manual jump spin up the F T L

Phrase 11: Anna verify my coordinates and execute jump

Phrase 12: Anna verify my coordinates and spin up the F T L

Phrase 13: Anna check my coordinates and spin up the F T L

Phrase 14: Anna check my plot and spin up the F T L

Phrase 15: Anna check my coordinates and execute jump

Phrase 16: Anna check nav data and execute jump

Phrase 17: Anna verify nav data and execute jump

Action: NavCon - Activate w/10 sec delay to set coords then jump

Phrase 1: Anna bring up the NavCon and execute F T L jump in ten

Phrase 2: Anna bring the NavCon on line and execute F T L jump in ten

Phrase 3: Anna bring the NavCon on line spool up the F T L and execute jump in ten

Action: NavCon - Toggle map view

Phrase 1: Anna toggle map

Phrase 2: toggle map

Action: Jump drive - Activate (max range on current heading)

Phrase 1: Anna execute emergency jump procedures

Phrase 2: Anna initiate emergency jump procedures

Phrase 3: Anna execute maximum range jump

Action: Jump drive - Activate (to contract WP)

Phrase 1: Anna jump to contract waypoint

Phrase 2: Anna execute jump to contract coordinates

Phrase 3: Anna execute jump to contract waypoint

Phrase 4: Anna execute jump to contract rendezvous point

Phrase 5: Anna execute jump to contract rendezvous coordinates

Phrase 6: Anna jump to contract coordinates

Phrase 7: Anna jump to contract rendezvous point

Phrase 8: Anna jump to contract rendezvous coordinates

Phrase 9: Anna execute jump to delivery coordinates

Action: Jump drive - Activate (to next WP/coords 5 sec delay)

Phrase 1: Anna execute jump to next waypoint

Phrase 2: Anna execute jump to next nav point

Phrase 3: Anna execute jump to rendezvous point

Phrase 4: Anna execute jump to rendezvous coordinates

Phrase 5: Anna engage the F T L

Phrase 6: Anna engage the jump drive

Phrase 7: Anna fire up the F T L

Phrase 8: Anna execute jump to next nav coordinates

Phrase 9: Anna jump to next waypoint.

Phrase 10: Anna jump to next nav point

Phrase 11: Anna jump to next rendezvous point

Phrase 12: Anna jump to next rendezvous coordinates

Action: Jump drive - Activate (immediate, safety warning)

Phrase 1: Anna bypass safeties and jump now

Action: Jump drive - Activate (no acknowledgement)

Phrase 1: Activate jump drive

Action: Autopilot - Engage

- Phrase 1: Anna take the flight controls
- Phrase 2: Anna engage autopilot
- Phrase 3: Anna take the controls
- Phrase 4: Anna take control of the ship
- Phrase 5: Anna switch to automatic flight control
- Phrase 6: Anna activate autopilot.
- Phrase 7: Anna take the con
- Phrase 8: Anna bring the autopilot on line

Action: Autopilot - Disengage

- Phrase 1: Anna release flight controls
- Phrase 2: Anna disengage autopilot
- Phrase 3: Anna switch to manual flight control
- Phrase 4: Anna release flight controls
- Phrase 5: Anna switch to manual control
- Phrase 6: Anna release the controls
- Phrase 7: Anna release the con
- Phrase 8: Anna take autopilot off line

Action: Autopilot - Formation (on)

- Phrase 1: Anna activate auto formation
- Phrase 2: Anna enable auto formation
- Phrase 3: Anna form up on target.
- Phrase 4: Anna form up on that ship.
- Phrase 5: Anna engage auto formation.
- Phrase 6: Anna follow that ship

Action: Autopilot - Formation (off)

- Phrase 1: Anna activate auto formation
- Phrase 2: Anna form up on target.
- Phrase 3: Anna form up on that ship.
- Phrase 4: Anna engage auto formation.
- Phrase 5: Anna enable auto formation

Action: Autopilot - Match target speed (on)

- Phrase 1: Anna match target speed
- Phrase 2: Anna activate auto throttle
- Phrase 3: Anna bring auto throttle on line
- Phrase 4: Anna enable auto throttle
- Phrase 5: Anna engage auto throttle

Action: Autopilot - Match target speed (off)

- Phrase 1: Anna Deactivate auto throttle
- Phrase 2: Anna take auto throttle off line
- Phrase 3: Anna disable auto throttle
- Phrase 4: Anna disengage auto throttle

Action: IDS - Activate

- Phrase 1: Anna activate the I D S
- Phrase 2: Anna bring the I D S on line.
- Phrase 3: Anna activate I D S
- Phrase 4: Anna bring I D S on line
- Phrase 5: Anna engage I D S

Action: IDS - Deactivate

- Phrase 1: Anna deactivate the I D S
- Phrase 2: Anna take the I D S off line
- Phrase 3: Anna deactivate I D S
- Phrase 4: Anna take I D S off line
- Phrase 5: Anna shut down I D S
- Phrase 6: Anna disengage I D S
- Phrase 7: Anna disable I D S

Action: IDS - Set to 1

- Phrase 1: Anna set I D S level one

Action: IDS - Set to 2

- Phrase 1: Anna set I D S level two

Action: IDS - Set to 3

- Phrase 1: Anna set I D S level three

Action: IDS - Set to 4

- Phrase 1: Anna set I D S level four

Action: IDS - Set to 5

- Phrase 1: Anna set I D S level five

Action: Deploy - Mining probe

- Phrase 1: Anna deploy mining probe

Action: Deploy - Shield array

- Phrase 1: Anna deploy shield array

Action: Deploy - Fuel processor

- Phrase 1: Anna deploy fuel processor

Action: Deploy - Sensor station

- Phrase 1: Anna deploy sensor station
- Phrase 2: Anna deploy sensor buoy
- Phrase 3: Anna drop sensor buoy

Action: Deploy - Repair station

- Phrase 1: Anna deploy repair station

Action: Deploy - Energy station

- Phrase 1: Anna deploy energy station

Action: Scuttle - Energy station
Phrase 1: Anna scuttle energy station

Action: Scuttle - Repair station
Phrase 1: Anna scuttle repair station

Action: Scuttle - Sensor station
Phrase 1: Anna scuttle sensor station

Action: Scuttle - Fuel processor
Phrase 1: Anna scuttle fuel processor

Action: Scuttle - Shield array
Phrase 1: Anna scuttle shield array

Action: Build - Trade station (NS)
Phrase 1: Anna contact ops and request a trade station at these coordinates

Action: Build - Constructor (NS)
Phrase 1: Anna contact ops and request a constructor at these coordinates

Action: Build - Research station (NS)
Phrase 1: Anna contact ops and request a research station at these coordinates

Action: Build - Energy station (NS)
Phrase 1: Anna contact ops and request an energy station at these coordinates

Action: Build - Ore processor (NS)
Phrase 1: Anna contact ops and request an ore processor at these coordinates

Action: Shields - Increase shield power (fore)
Phrase 1: Anna increase forward shield power
Phrase 2: Anna increase power to forward shields

Action: Shields - Increase shield power (aft)
Phrase 1: Anna increase aft shield power
Phrase 2: Anna increase power to aft shields

Action: Shields - Increase shield power (port)
Phrase 1: Anna increase port shield power
Phrase 2: Anna increase power to port shields

Action: Shields - Increase shield power (starboard)
Phrase 1: Anna Increase starboard shield power
Phrase 2: Anna increase power to starboard shields

Action: Shields - Equalize power
Phrase 1: Anna equalize shield power

Action: Power - Transfer to weapons (+1)
Phrase 1: Anna transfer power to weapons level one

Action: Power - Transfer to weapons (+2)
Phrase 1: Anna transfer power to weapons level two

Action: Power - Transfer to weapons (+3)
Phrase 1: Anna transfer power to weapons level three

Action: Power - Transfer to weapons (+4)
Phrase 1: Anna transfer power to weapons level four

Action: Power - Transfer to weapons (+5)
Phrase 1: Anna transfer all available power to weapons

Action: Power - Transfer to shields (+1)
Phrase 1: Anna transfer power to shields level one

Action: Power - Transfer to shields (+2)
Phrase 1: Anna transfer power to shields level two

Action: Power - Transfer to shields (+3)
Phrase 1: Anna transfer power to shields level three

Action: Power - Transfer to shields (+4)
Phrase 1: Anna transfer power to shields level four

Action: Power - Transfer to shields (+5)
Phrase 1: Anna transfer all available power to shields

Action: Power - Equalize distribution
Phrase 1: Anna equalize power flow

Action: Weapons - Cycle secondary (fwd 1 position)
Phrase 1: Anna load missile two

Action: Weapons - Cycle secondary (fwd 2 positions)
Phrase 1: Anna load missile three

Action: Weapons - Cycle secondary (fwd 3 positions)
Phrase 1: Anna load missile four

Action: Weapons - Cycle secondary (fwd 4 positions)
Phrase 1: Anna load missile five

Action: Weapons - Cycle secondary (fwd 5 positions)
Phrase 1: Anna load missile six

Action: Weapons - Cycle secondary (fwd 6 positions)
Phrase 1: Anna load missile seven

Action: Weapons - Cycle secondary (fwd 7 positions)
Phrase 1: Anna load missile eight

Action: Weapons - Fire secondary

Phrase 1: Anna fire missile

Phrase 2: Anna launch missile

Phrase 3: Anna launch weapon

Action: Weapons - Cycle primary

Phrase 1: Anna change gun

Phrase 2: Anna change to gun

Phrase 3: Anna change to beam

Action: Decoys - Launch (5 @ 1.5 sec intervals)

Phrase 1: Anna launch countermeasures

Action: Targeting - Next closest hostile

Phrase 1: Anna target the next bandit

Phrase 2: Anna track the next bandit

Phrase 3: Anna track the next hostile

Phrase 4: Anna target the next hostile

Phrase 5: Anna target the next bad guy

Phrase 6: Anna track the next bad guy

Phrase 7: Anna lock on to the next hostile

Phrase 8: Anna lock on to the next bandit

Phrase 9: Anna lock on to the next bad guy

Action: Targeting - Nearest hostile

Phrase 1: Anna target the nearest hostile.

Phrase 2: Anna target threat

Phrase 3: Anna ID threat

Phrase 4: Anna locate threat

Phrase 5: Anna target the nearest threat

Phrase 6: Anna give me a target

Phrase 7: Anna lock up threat

Phrase 8: Anna lock on to threat

Phrase 9: Anna identify threat

Phrase 10: Anna track the closest threat

Phrase 11: Anna track the nearest threat

Phrase 12: Anna target nearest threat

Action: Targeting - Next ship

Phrase 1: Anna target the next ship

Phrase 2: Anna track the next ship

Phrase 3: Anna lock on to the next ship

Phrase 4: Anna target next bogey

Phrase 5: Anna track next bogey

Phrase 6: Anna lock on to next bogey

Phrase 7: Anna give me the next target

Phrase 8: Anna identify the next ship

Action: Targeting - Nearest ship

Phrase 1: Anna target the nearest ship

Phrase 2: Anna target the closest ship

Phrase 3: Anna track the closest ship

Phrase 4: Anna lock on to the nearest ship

Phrase 5: Anna lock on to the closest ship

Phrase 6: Anna track the nearest ship

Phrase 7: Anna identify nearest ship

Phrase 8: Anna identify closest ship

Action: Targeting - Ship under reticule

Phrase 1: Anna target bore sight

Phrase 2: Anna target gun sight

Phrase 3: Anna bore sight targeting

Phrase 4: Anna bore sight threat

Action: Targeting - Subsystem (weapons)

Phrase 1: Anna target their weapons

Phrase 2: Anna target weapons

Action: Targeting - Subsystem (engines)

Phrase 1: Anna target their engines

Phrase 2: Anna target engines

Action: Targeting - Subsystem (sensors)

Phrase 1: Anna target their sensors

Phrase 2: Anna target sensors

Action: Targeting - Subsystem (next)

Phrase 1: Anna target next system

Phrase 2: Anna change system target

Action: Targeting - MDTS (on)

Phrase 1: Anna bring M D T S on line

Phrase 2: Anna activate M D T S

Action: Targeting - MDTS (off)

Phrase 1: Anna take MDTS off line

Phrase 2: Anna shut down M D T S

Phrase 3: Anna deactivate M D T S

Action: Targeting - MFD (cycle mode)

Phrase 1: Anna switch MFD targeting mode

Phrase 2: Anna change MFD targeting mode

Action: Targeting - MFD (multi > single)

Phrase 1: Anna switch from multi to single target

Phrase 2: Anna change from multi to single target

Action: Targeting - MFD (off > single)

Phrase 1: Anna bring targeting computer on line single target

Phrase 2: Anna enable targeting single target

Action: Targeting - MFD (off > multi)

Phrase 1: Anna bring targeting computer on line multi target

Phrase 2: Anna enable targeting multi target

Action: Targeting - MFD (single > multi)

Phrase 1: Anna switch from single to multi target

Phrase 2: Anna change from single to multi target

Action: Targeting - MFD (single > off)

Phrase 1: Anna shut down targeting computer single

Action: Targeting - MFD (multi > off)

Phrase 1: Anna shut down targeting computer multi

Action: Manoeuvres - Attack (auto set loc & jump)

Phrase 1: Anna attack pattern alpha one

Action: Manoeuvres - Attack (manual coordinates)

Phrase 1: Anna attack pattern alpha two

Action: Manoeuvres - Attack (immediate, from NavCon)

Phrase 1: Anna execute tactical jump

Phrase 2: Anna execute tac jump

Phrase 3: Anna execute combat jump

Action: Manoeuvres - Attack (set loc X "*1")

Phrase 1: Anna attack pattern x ray one

Action: Manoeuvres - Attack (set loc X "*2")

Phrase 1: Anna attack pattern x ray two

Action: Manoeuvres - Attack (set loc Y "*1")

Phrase 1: Anna attack pattern yankee one

Action: Manoeuvres - Attack (set loc Y "*2")

Phrase 1: Anna attack pattern yankee two

Action: Manoeuvres - Attack (set loc Z "*1")

Phrase 1: Anna attack pattern zulu one

Action: Manoeuvres - Attack (set loc Z "*2")

Phrase 1: Anna attack pattern zulu two

Action: Manoeuvres - Evade (set loc X "*00")

Phrase 1: Anna evasive pattern x ray

Action: Manoeuvres - Evade (set loc Y "*00")

Phrase 1: Anna evasive pattern yankee

Action: Manoeuvres - Evade (set loc Z "*00")

Phrase 1: Anna evasive pattern zulu

Action: Manoeuvres - Evade (evac to SY -1)

Phrase 1: Anna Evasive pattern sierra one

Phrase 2: Anna take us out of the fight

Phrase 3: Anna time to bug out

Phrase 4: Anna time to retreat

Action: Manoeuvres - Return Jump (to SY 0)

Phrase 1: Anna take us back to S Y zero

Phrase 2: Anna take us back to the elliptic

Phrase 3: Anna take us back to the galactic plane.

Action: Attack pattern beta

Phrase 1: Attack pattern beta

Action: Fleet - Attack hostiles

Phrase 1: Flight this is lead engage hostiles

Phrase 2: Flight this is lead engage bandits

Phrase 3: Flight this is lead go weapons free

Phrase 4: Flight this is lead cleared hot

Action: Fleet - Defend me

Phrase 1: Flight this is lead cover me

Phrase 2: Flight this is lead give me some cover

Phrase 3: Flight this is lead I could use some help

Phrase 4: Flight this is lead how about some cover

Action: Fleet - Form Up

Phrase 1: Flight this is lead form up

Phrase 2: Flight this is lead return to formation

Phrase 3: Flight this is lead disengage

Phrase 4: Fleet this is lead terminate mining operations

Action: Fleet - Reload/refuel

Phrase 1: Flight this is lead top off your tanks and reload

Phrase 2: Flight this is lead refuel and reload

Action: Fleet - Mining OPs

Phrase 1: Fleet this is lead start mining operations

Phrase 2: Fleet this is lead begin mining operations

Phrase 3: Fleet this is lead stop mining operations

Action: Fleet - Dismiss all

Phrase 1: Flight this is lead return to base

Phrase 2: Flight this is lead bug out

Action: MP msg (begin txt to all)
Phrase 1: Anna open channel
Phrase 2: Anna give me an open channel
Phrase 3: Anna give me a clear channel

Action: MP msg (send msg)
Phrase 1: Anna transmit message.
Action: MP msg (private msg to target)
Phrase 1: Anna give me a secure channel to that ship

Action: MP msg Hostile stand down
Phrase 1: Send hostile stand down

Action: MP msg State your intentions
Phrase 1: Send State your intentions

Action: MP msg YOUR NAME on station **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME on station

Action: MP msg YOUR NAME enroute **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME enroute

Action: MP msg YOUR NAME disengaged **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME disengaged
Phrase 2: YOUR NAME disengaged

Action: MP msg YOUR NAME engaged offensive **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME engaged offensive
Phrase 2: YOUR NAME engaged offensive

Action: MP msg YOUR NAME engaged defensive **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME engaged defensive
Phrase 2: YOUR NAME engaged defensive

Action: MP msg YOUR NAME engaged pursuit **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME engaged pursuit
Phrase 2: YOUR NAME engaged pursuit

Action: MP msg YOUR NAME MayDay **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME MayDay

Action: MP msg Negative YOUR NAME engaged **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send Negative YOUR NAME engaged

Action: MP msg Final Warning
Phrase 1: Send Final Warning

Action: MP msg Yee Haw
Phrase 1: Send Yee Haw

Action: MP msg Greeting
Phrase 1: Send Greeting

Action: MP msg Good shooting
Phrase 1: Send Good shooting

Action: MP msg That will learn em
Phrase 1: Send That will learn em

Action: MP msg Lets get em
Phrase 1: Send Lets get em

Action: MP msg Weapons Hold
Phrase 1: Send Weapons Hold

Action: MP msg YOUR NAME in hot **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME in hot

Action: MP msg Weapons Free
Phrase 1: Send Weapons Free

Action: MP msg Fox One
Phrase 1: Send Fox One

Action: MP msg YOUR NAME disengaged **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME disengaged

Action: MP msg Tally Bandits
Phrase 1: Send Tally Bandits

Action: MP msg YOUR NAME bingo fuel **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME bingo fuel

Action: MP msg YOUR NAME rearming **In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)**
Phrase 1: Send YOUR NAME rearming

Action: MP msg Team go to open channel
Phrase 1: Send YOUR CLAN go to open channel **In order to use this command replace 'YOUR CLAN' with your clan's Tag**

Action: MP msg Team go to secure channel In order to use this command replace 'YOUR CLAN' with your clan's Tag

Phrase 1: Send YOUR CLAN go to secure channel

Action: MP msg Team engage bandits In order to use this command replace 'YOUR CLAN' with your clan's Tag

Phrase 1: YOUR CLAN engage bandits

Action: MP msg Team disengage In order to use this command replace 'YOUR CLAN' with your clan's Tag

Phrase 1: YOUR CLAN disengage

Action: MP msg Team Stand down In order to use this command replace 'YOUR CLAN' with your clan's Tag

Phrase 1: YOUR CLAN Stand down

Action: MP msg Team weapons free rearming In order to use this command replace 'YOUR CLAN' with your clan's Tag

Phrase 1: YOUR CLAN weapons free

Phrase 2: YOUR CLAN go weapons free

Action: ANNA startup (starts AHK, EM, launches pilot 1) In order to use this command replace 'YOUR NAME' with your callsign (and Tag if you use one)

Phrase 1: Anna this is YOUR NAME get the ship ready for launch

Phrase 2: Anna prep the ship for launch authorization YOUR NAME beta six

Phrase 3: Anna prep the ship authorization YOUR NAME beta six

Action: ANNA shutdown (quick save & exit menu)

Phrase 1: Anna secure the ship

Action: Scan for locater beacon/transceiver

Phrase 1: Anna scan for lifepod transceivers

Phrase 2: Anna scan for distress beacons

Phrase 3: Anna scan for locater beacons

Action: Prep ship for combat

Phrase 1: Anna prep the ship for combat

Phrase 2: Anna prep for combat

Action: Ship systems status check

Phrase 1: Anna run a systems check

Phrase 2: Anna initiate systems check

Phrase 3: Anna run diagnostics

Phrase 4: Anna status check

Phrase 5: Anna give me a status check

Phrase 6: Anna give me a systems check

Action: Anna pull up system data on Sapphire.

Phrase 1: Anna pull up system data on Sapphire.

Action: Anna pull up system data on Lamda
Phrase 1: Anna pull up system data on Lamda

Action: Anna pull up system data on Emerald
Phrase 1: Anna pull up system data on Emerald

Action: Anna pull up system data on Rigel
Phrase 1: Anna pull up system data on Rigel
Action: Anna pull up system data on Sirius
Phrase 1: Anna pull up system data on Sirius

Action: Anna pull up system data on Orion
Phrase 1: Anna pull up system data on Orion

Action: Anna pull up system data on Thuban
Phrase 1: Anna pull up system data on Thuban

Action: Anna pull up system data on Pisces
Phrase 1: Anna pull up system data on Pisces

Action: Anna pull up system data on Pearl
Phrase 1: Anna pull up system data on Pearl

Action: Anna pull up system data on Rucker
Phrase 1: Anna pull up system data on Rucker

Action: Anna pull up system data on Virgo
Phrase 1: Anna pull up system data on Virgo

Action: Anna pull up system data on Aquila
Phrase 1: Anna pull up system data on Aquila

Action: Anna pull up system data on Alpha Centauri
Phrase 1: Anna pull up system data on Alpha Centauri

Action: Anna pull up system data on Deneb
Phrase 1: Anna pull up system data on Deneb

Action: Anna pull up system data on Sol
Phrase 1: Anna pull up system data on Sol

Action: Anna pull up system data on Fauston
Phrase 1: Anna pull up system data on Fauston

Action: Anna pull up system data on Cygnus
Phrase 1: Anna pull up system data on Cygnus

Action: Anna pull up system data on Aries
Phrase 1: Anna pull up system data on Aries

Action: Anna pull up system data on Sierra
Phrase 1: Anna pull up system data on Sierra

Action: Anna pull up system data on Talison
Phrase 1: Anna pull up system data on Talison

Action: Anna pull up system data on Cerulean
Phrase 1: Anna pull up system data on Cerulean

Action: Anna pull up system data on Onyx
Phrase 1: Anna pull up system data on Onyx

Action: Anna pull up system data on Olympus Prime
Phrase 1: Anna pull up system data on Olympus Prime

Action: Toggle player camera view
Phrase 1: Camera switch view
Phrase 2: Camera change view

Action: Fly-By view
Phrase 1: Camera do a fly by
Phrase 2: Camera give me a fly by

Action: Exit (Esc)
Phrase 1: Exit Simulation
Phrase 2: Negative clear that
Phrase 3: Break break break

Action: Deactivate mining/tractor beam
Phrase 1: Anna disengage the tractor beam
Phrase 2: Anna take the tractor beam off line
Phrase 3: Anna shut down the tractor beam

Action: Activate mining/tractor beam
Phrase 1: Anna engage the tractor beam
Phrase 2: Anna bring the tractor beam on line
Phrase 3: Anna activate the tractor beam

Action: Deactivate walker (planet surface only)
Phrase 1: Anna prep the ship for launch and pick me up

Action: Activate walker (planet surface only)
Phrase 1: Anna prep the walker for deployment
Phrase 2: Anna lock the ship down and prep the walker

Action: Cancel self destruct
Phrase 1: Anna cancel self destruct. Authorization deta six
Phrase 2: Anna abort self destruct. Authorization delta six

Action: Quick save
Phrase 1: Checkpoint

Action: Initiate self destruct

Phrase 1: Anna activate self destruct. Authorization delta six.

Phrase 2: Anna launch distress beacon activate emergency eject sequence and self destruct

Phrase 3: Anna execute self destruct. Authorization delta six

Phrase 4: Anna initiate self destruct. Authorization delta six

Action: Standby Mode (pause)

Phrase 1: Anna halt Mercenary

Phrase 2: Anna resume Mercenary

Action: MP status list (MP only)

Phrase 1: Anna bring up pilot list

Action: Msg log (clear last)

Phrase 1: Anna clear last message

Action: Msg log (clear all)

Phrase 1: Anna clear comm log

Phrase 2: Anna clear messages

Action: Msg log (view prev)

Phrase 1: Anna show last message

Phrase 2: Anna recall last message

Phrase 3: Anna recall messages

Phrase 4: Anna show comm log

Phrase 5: Anna show message log

Action: MP clan link (activate)

Phrase 1: Anna open secure channel

Action: MP clan link (deactivate)

Phrase 1: Anna close secure channel

Action: HUD - Cycle mode

Phrase 1: HUD Cycle mode

ANNA has many responses she uses. They are not listed here so as not to spoil your fun! They are editable though!

Section 17: Stations - Permanent, Build & Deployed

Snippets

- Building stations costs - the richer you are the more it costs and the more a license costs as well. Also the further you go away from central civilisation, the more they cost. See the **Authorised Mercenary Technical Guide** for an explanation
- For fast & accurate docking: take a heading of one of the five entrances – it's worth modding or getting hold of a modded compass tape file with ticks marking the 5 entrances - and a pitch of 0 and a medium high throttle setting and then do the jump; at the destination you'll arrive perfectly positioned on the docking path, on the correct plane and on the approach path.

General Points

Source: **various**

Good things!

- Build your own station (you automatically get a license for free) or buy a license at a station of your choice, in the system of your choice. There's a 25% discount on all commodity/equipment/etc. purchases.
- The understanding/practise is that you're going to hang out and perform contracts at the station you've got a licence for, in that system for a while. Because of your station license, that station will protect you from the bad guys. (Pretty much nuking the in-bound missiles before you have to concern yourself).
- If you are flying for a clan, Constructing trade stations, helps to secure that clans' control of a given system. And really helps slow down the control percentage decay rate – and hence the number of pizza delivery contracts you'll have to do.. After 80% system control is attained, there's a sliding scale of monetary benefit derived from those controlling efforts - 110k credits per 12 minute cycle per held system.
- For an independent pilot/mercenary, building a trade station could serve many purposes (as well as those stated above). Etiquette usually dictates a request to the clan, should you think to build in a clan-controlled system. (a condition commonly known as situational dementia)
- building stations (trade/constructor/science/ore processor/power) in a system raise the available tech level within that system. And, it's usually a "global" benefit for that system, rather than being "restricted" to that station/location. You can make significant inroads on the local economy. You can usually achieve a 2 or 3 level tech "bump" in that system.
- you can also **deploy** certain items like shield/sensor arrays and mining probes, fuel, repair, and energy stations. These deployed items are generally "single-use" structures, and will auto-magically disappear/self-destruct should you leave the sector where built. The upside to this is if there are other pilots in the area where you deploy some of these items, they'll stay 'til the last pilot departs the AO, turns off the lights and shuts the door. Handy for those pesky war zone situations/stations where not many, or any, have a license.

Bad things!

- Beware – In your licensed station there's a reduction in the amounts offered for posted contracts/missions.
- You don't get a price break on hangar fees by having a station license. Those are pretty much standard where ever you go in the Evoverse, regardless of rank or rating. You really don't get a "station break" until you attain the civ rating of Legend. Then you'll never pay station docking/trading fees again or ever after.

Neutral things!

- The stations you build in SP do not transfer to the MP environment and the contrary is also true. The stations you build in MP, stay in MP on that game server/platform where built.
- Don't store anything on a build station. They can be destroyed! You can hide the station, just put it into an area of space that generally pilots are not going to visit, but do use caution when and if you store your things in a player built station. Its generally uncommon that your stations will be blown to bits, you do however, run the risk.

What do I get in return for building a station?

You can build trade stations in SP and MP; their advantages are that

- they give you free docking and a safe haven from enemy ships
- you get a "free" license giving you 25% all purchases (beware though there's 25% off all sales as well, so buy from your station but don't sell there! The 'discount works for all your licences)
- constructor/science/ore processor and energy stations helps boost the economy and technology in the system, so there are more items for sale on the trade stations.
- If you build a trade station in a Hostile system, your station will act as sanctuary for you. But only for you. When you're tractored into the station, hostile ships (AI) will leave you alone unless they're already within attack range.

You **don't** get any rental or a cut of the sales profits (or a sales tax)

Are player built and game coded Trade Stations the same?

Yes, a player built trade station functions the same as a computer trade station. You automatically have a license for your own built station You cannot build a trade station in a sector that already has one they need to be at least two sectors apart (station - clear sector - station / a chess knight move also works) and the built station has to be within the limits of in sector coordinates of +/-50k for pX,pY,pZ.

The only difference is that player built stations can be destroyed with Station Detonators.

Much less likely occurrences are if the server provider resets the server universe or the universe data gets trashed. The latter hasn't been reported and the former usually only follows extended discussion on the forum about the need to 'clean up' the game universe, so players have plenty of warning and time to clear out their hangars

Station License – What are they? What do they do? The low down

A station license drops prices for items 25% for both buying and selling (except for fuel), so it's best to not get a license at places you plan to sell your goods. It also removes all docking fees. Finally a License it will protect you from being fired upon while docked.

Since a station licence simply reduces buying and selling prices to you by 25% if you build a Trade Station (you are given a licence for building it) near to another station (the stock and prices will be similar) and you can buy from your station at a 25% discount and sell at the other and make 25% on each sale. It's about as short and safe a shuttle run as you're likely to get. It's a good way to make some money for upgrades but it's also boring

The cost of a licence depends on how rich **you** are and where the Station is. A pilot early in their career might be charged 200 000 for a licence - a rich pilot might be charged 750 000 000. A well chosen licence on a good trade route will pay for itself very quickly. I bought a 30 000 000 credit licence in the middle of my trading career and it paid for itself in about 20 minutes! A similar thing occurs with building stations – they cost a lot more when you're rich! However it's cheaper to get a license by building a station than by buying a license at a game coded station.

Station Fees - what might I have to pay?

There are two things you can be charged for:

Hangar Bills: If you get billed with a fee from another station than the one you are currently docked with, it seems that you have stored items/ship in the Hangar of the one that is billing you. To cancel that you need to pickup/sell the stuff you have there. Keep this in mind if you like to explore deep space making it hard to get back to sort your hangar out.

After removing the items stored you may be charged one more time because they were there during the pay cycle. The charging cycle is around 20 minutes (ie you get charged three times and hour)

Docking fees: When you acquire Legend status (w/ large amounts of \$ and reputation points), you will no longer be charged docking fees. Just be careful where you dock 'til then.

Or you can change a hostile systems to friendly and then you do not pay docking fees. However, by the time you change all hostile systems to friendly you would have reached (fee free) Legend Status anyways unless you keep making bad decisions

Why can't I build a trade station – the sector is empty?

If you try to build a trade station and receive a message saying you cannot, make sure you are at least one full sector (in all three dimensions) away from any other trade station and less than 50K from the sector centre. If you still cannot build a station, read the message closely - if it says you've reached your limit for the number of stations in the system, then move ten or twenty sectors away and try again. The maximum number of stations allowable in any specific system is fifty.

How do I Build a Trade Station?

Install a Build Constructor. If you're going exploring make sure you buy one before you set off or you may not be able to refuel. You can take a Deploy Constructor instead – it's cheaper to deploy a refuelling station but slow to refuel

Just click on the Build icon in the HUD, then if you leave the mouse over "Trade Station" (don't click it yet) a field will appear where you can enter the name. You don't need to press return when you've entered the name, just click on "Trade Station". I think you have to be at least 2 or 3 sectors away from another Trade Station in order to build otherwise nothing happens. A chess 'knight's move' will do

Building a station when being attacked!

If you move at all during the countdown the station build is cancelled. This makes defending yourself a bit of a challenge:

1. If there are only a couple of hostiles just rotate on the spot. Target the first with your missiles and take it down at 1500 - 1800; if you don't use Excalibur missiles, do the same until your missiles run out. If you do, target the second hostile and hit it with cannon fire and hope you destroy it or at least hold it off until the station appears. It can be a tense time watching the build countdown and the hostiles' range!
2. When they get to about 2500 - 3000 activate your stealth mode and they will move away again
3. deploy a shield array and sit in it – you need a Deploy Constructor
4. Give up on the station you are building and fly around for a few jumps and then come back - you might have time to finish before hostiles reappear.
5. in MP team up and have someone fly CAP whilst the other builds

Blowing up a station whilst being attacked!

You might want to do this to tidy up after you if you built a station in the middle of nowhere to refuel and find yourself bounced by AI hostiles. You might also be in a Clan War! The advantage is that you can fly around a very small amount - go too far away or too close and the detonator countdown timer stops

1: NPC/AI - see building a station when being attacked points 1-5

2: Real pilots see building a station when being attacked

1 above - try this and you tend to be toast quicker than real toast is made

2 gives you a chance if you have a relatively short time left to wait

3 (or better 2&3) works until the attacker bumps you out of the array - be ready and play avoidance games

4 perhaps you're a bit too conservative to be building in this sort of system

5 is the honourable way

Building your own stations for improving economy I (spoiler)

Source DaveK: Find an uncharted system – it unlikely to be fully developed already - which is fairly low tech and with a couple of planets several sectors apart. Near one of the planets build lots of stations - a trade station (cancel the license for this station - it is the station you will sell at), constructor stations, energy station, ore and research stations. Build a Trade station near the other planet - this is the station you will buy at.

Source Vice:

- If you build additional research stations and processors in a system that is already maxed out for them, then you won't likely see much of a difference. See the next question for more details
- Also be sure to review the default economy classes to build stations where you want particular market improvements. Where you build is often just as important as what you build.

Building your own stations for improving economy II: not working? (spoiler)

I built a full set of stations in Cerulean War Zone and stayed there for 9 hours and did 30 contract and did not see anything change on anything. Still only able to get the same weapon/missile and equipment.

DaveK: If you are just interested in \$\$\$ see my suggestion immediately above

Source Vice: I reviewed the stations and effects on the economy and it is working as intended. I think what you are running into is the inherent market caps/limits of the system, which can restrict and/or reduce the frequency of certain items depending on economy class and the starting inventory level. With what you have there, you will probably run into some higher end items from time to time, but overall the limit will be where most of the items fall into (both MP and SP).

Also, you had built stations in a war zone and while they do effect the inventory there, you'll likely have better results in other civilian systems. Cerulean is OK for a 'general' build project, but other locations can offer quite a bit more.

DaveK: If you are just interested in \$\$\$ see my suggestion immediately above

How should I use a deployed refuel station?

1. Come to a stop
2. Level your ship (not vital but easier to manage)
3. Deploy a fuel processor (you must have a Deploy Constructor installed)
4. Dock with it and move as close to the central pillar as you can. You'll know if you're "in the slot" even before you see the gas gauge go up 'cause your Energy gauge will start fluctuating madly. The station converts your ships energy into fuel, 5 units at a time
5. Set energy balance to -5 shields and 5 weapons.

You get 5 units of fuel every 9 sec or so. This means that you need to . . . wait . . . and wait some more . . . and some more . . . go have a coffee - it takes 45 minutes to fill a 2400 unit fuel tank - and 45 minutes to empty on a multi-jump journey of 2400 sectors!

How can I survive in a deployed refuel station long enough to fully refuel?

In less friendly systems you may be hassled by hostiles. You have a couple of options;

1: Leave the station and go take out the hostiles but don't leave the sector or you station will self-destruct.

2: When you have touched the pillar and refuelling has started:

1. turn 180 degrees
2. move forwards a few dm (a ship length is enough) make sure you are still refuelling
3. Deploy a shield array
4. look behind (rear camera view) and make sure you can see the shield behind you. The station should be surrounded by the shield – making it a toast free zone!
5. do the wait/coffee thing above.

If you are not sure whether you will be attacked or not then stay alert (coffee – OK; reading, yard chores, distractions – **not** OK) and if **hostiles** approach closer than 5000, deploy an array. If they are more than 5000 away they will ignore you, so if they are heading in your direct they may just be flying in that direction and may even jump out before they get nearer than 5000. The 5000 limit gives you enough time to shuffle into position and deploy the shield

Section 18: Reputation

The main source of information is the Legends Guide and the two extended debates in the Forum. Several individuals have contributed data and evidence and interpretations and are acknowledged below.

This topic appears to cause more confusion than most others in the game, with Clan Control in MP running it a close second! Or vice versa! Partly this is because it is quite complicated with one overall system reputation plus five separate faction reputations in every system and partially because the rules are different in MP and SP. The link between SP and MP reputation seems to have changed from what it was in Legends (and may have changed as a result of extended discussions in Mercenary) which probably adds to the mix because some experienced pilots are still applying older Legend and preExpansion rules to Mercenary!

Firstly there are some explanations about the what's and why's from Vice – the creator of the game.

Vice (developer) on reputation in SP vs MP

includes excerpts from previous discussions, debates, etc, on the topic:

The main reason for the separate reputation structure between SP and MP in Evochron is to allow players to perform activities in MP that do not impact their earned individual SP reputations while still allowing them to keep everything else they've earned to use in both SP and MP. From previous discussions/debates about it:

Multiplayer reputations are synchronized for human players as part of the fleet system and to accommodate the conditions for multiplayer itself. Reputations are 'locked' in to protect your earned reputations for various actions while you're in multiplayer (primarily so that taking actions you may need to in multiplayer do not adversely affect the reputations you have earned in single player).

The primary reason for this are the player requests for a 'no-penalty' environment in multiplayer. That is, players want to be able to take actions in multiplayer (coop or otherwise) that they normally would not take in single player and not have their reputation penalized for it. As an example, they may have to attack ships that they were normally allied with in single player due to circumstances in multiplayer caused by helping out other human players. They want the option to do that without harming the reputation they worked so hard to achieve in single player. This lets the player do whatever actions they want in multiplayer without worrying about hurting their (hard) earned single player reputations.

And if you've played certain other games, you've probably encountered the scenarios where one player has a bad rep in the same system one of their coop buddies has a good rep, it then hinders their ability to find jobs where they want when they want and to complete those objectives because they fail to share a reputation... even if they are of the same 'clan'... even if they are 'linked' together in a group... even if they are flying together in formation both as human players. And that's another element to why human reputations are linked together... but really just for common location.

So rather than having a spaghetti reputation system, where even friends can have different enemies and allies in the same system (even though they themselves might be linked by group or common coop interest) resulting in interference for working together or even just trying to travel together, human reputations follow human activities based on location. If you're flying with a buddy, you can expect to have the same enemies and allies come along.

Pros and cons to each method, but this system does have its reasons. In short, the system is designed to facilitate group participation more than individual rep threads. Plus, you don't lose what you earn in SP, whether by your actions, the actions of others, or your actions together as a group.

Several players were still confused or unconvinced and so Vice added this . . .

Here are the considerations that would need to be addressed if a game had persistent reputation threads for players in multiplayer:

- How would most players want their reputations to be linked? That is, with each other as a global human entity factor, or individually where each player can have different reputation threads for every system (if the latter, then the issue above, which has been struck down previously, would apply).
- Should players lose or keep their earned SP reputations when they transition over to MP? If kept, they would be mismatched with other players, causing coop limitations/difficulties.
- How should their actions against a faction they are allied with effect them when they transition back to single player if the reputations threads are to be consistent between the modes? If inconsistent, how/why should their actions effect the reputation threads of other human players who may not even be online at the time or have opposing interests toward those reputation threads (negative or positive)?
- If the reputation threads are to be global for human players to retain consistency, then they must be stored server-side. This can negatively effect other players joining who want/expect to be allied with certain groups (and were when they last left off) that are now hostile toward them. If the reputation threads are individualized, then they would likely need to be stored locally with each player, causing player-to-player inconsistencies rather than a global human entity reputation thread group. How would you want these issues to be addressed in either direction?

Currently for multiplayer, you can simply select what level of friendly or hostile contacts to have by choosing where to play in the game's universe. While generally static with some localized variation based on immediate actions, the structure has been set up to be location based to give players the choice of where they want to perform collective or opposing actions, PvE or PvP.

One possible new direction for such a system (using a similar design) might be to limit the scope of the available groups in the game to just two or three, thus limiting the scope of the potential variation to a more predictable and manageable level. For example, if only Federation and Alliance systems were used instead of numerous independent systems, the player could easily manage and keep track of the threat levels they encounter by aligning with one of the two available factions before they join. The game would then treat them as allied with those forces uniquely dependent on the choice they selected. Then if there are any transitions for certain systems based on player actions (such as territory lost or gained by one side or the other), players would know what to expect and where they stand based on which faction they chose to align themselves with.

Perhaps this would make things more manageable for some, offering some variation, but still without penalty to their SP reputations and open for reasonable coop and PvP activities. I don't know though, just some thoughts I've been pondering about this very thing. It's been one of the most challenging aspects to work on in terms of development for the EVOCHRON series.

Overview: How does the reputation system work?

Basics:

First, there are 4 global reputation categories: Hostile, Moderate, Fair, and Good. Each one of these establishes your overall reputation in an area of space. Generally speaking, having a positive reputation in a system means you are on better terms with local military, energy, and mining factions/companies and are on poor terms with local rebel and guild/clan factions.

To earn a better reputation in a system, you need to improve your standing with the local navy, energy groups, and miners (although navy and energy have the biggest impact, so focus on those).

To reduce your reputation, work against navy and energy interests while working for the interests of rebels and guilds/clans. It takes time, consistency, and loyalty to make a major change in your overall global reputation.

Short term efforts are often ignored as the various factions in the game view that as 'system hopping', considering you only an impatient opportunist and not someone they can count on to work for them long term. So to effectively transition from one reputation level to another, you need to consistently work for and protect interests of the needed groups. As you do this, you'll notice your individual reputation levels will start to change.

Second, each global reputation is divided into specific faction reputation levels (displayed in the News Console). These secondary values are the core of how the reputation system works and is what you will need to monitor in order to gauge your progress. They indicate the specific progress you are making toward the next tier. You have to shift specific faction reputations to the near maximum or minimum limits to make a change in your overall global reputation.

As the faction reputations approach very high or low levels, you are likely getting close to the next global reputation tier. If you want to earn a better reputation, your goal is to increase the faction values for navy, energy, and miners while decreasing values for rebels and guilds/clans. The top and bottom 10-15% of the reputation bars are where transitions from one tier to another can take place. Once you achieve about 85-90% positive reputations with the local navy, energy groups, and sometimes miners while at the same time reducing the values for rebels and guilds/clans down to below about 20%, you will likely be very close to advancing your reputation to the next level. Once a transition occurs, you will be notified on your HUD and your faction reputation levels will reset for the new global reputation level (usually around 50% or so, indicating the middle of the new global level).

Third, In addition to the overall system reputation level, you also have individual reputation levels with the specific factions in each system. There are five factions: Energy Companies, Navy, Rebels, Guilds and Miners.

The overall system and individual reputation levels are Good, Fair, Moderate, and Hostile

- A *Good* system reputation level generally means you won't encounter hostile ships, unless you attack friendly ships.
- A *Fair* reputation level generally means you will likely encounter hostile ships on some occasions.
- A *Moderate* reputation level generally means you'll encounter many hostile ships and have to pay docking fees to be given permission to conduct business at stations and planets.
- A *Hostile* reputation generally means you'll encounter mostly hostile ships and have to pay docking fees. Fair and moderate systems typically offer the widest variety of contracts.

When you first start the core system reputations are:

Good: Sapphire - Sol - Atlas

Hostile: Sierra - Aries - Thuban - Pearl - Vonari - Capella - Merak - Riftspace

Fair/Moderate: all the others

Improving your reputation in SP Part I - System Reputation

- Your overall system reputation will likely increase by staying on the 'legal' side and completing contracts with company/military factions who are generally part of the system's economy and government.
- Completing contracts with rebels and guilds who often work against the other groups will likely decrease your system reputation.
- There are advantages and disadvantages to aligning with one group or the other.

Source Flying Brick: It is very easy to raise your rep with Navy: you get many contracts offered all the time; each contract for the Navy will also raise your rep with Energy, although it seems that by a lesser amount. Usually, I saw each contract raise my rep with Navy by an amount between 1% and 3%.

You do not get offered any contracts for Energy, but if you check out the tables below, you'll note that some contracts for the Navy also make the Energy happy; killing Guild/Rebels (which you'll do in Navy missions) makes Energy happy as well.

So in the first part, while focusing on getting Navy to 100%, you'll also get Energy to raise whether you want it or not.

The other thing you need to do is reduce reputation with Guild/Rebels. Rebels are easy enough because in most missions for Navy your enemies will be Rebels. Guild is considerably more difficult because it's very rare for me to get Guild enemies in Navy missions, and those were most of the time "new" guys coming in (i.e., reds that appear after you get to the navpoint, guys who come in because they are called by their friends).

So how do you lower your Guild rep? By doing contracts for the Miners (again, see the table). That's easier said than done, because you get at most one contract from Miners, and often not even that. So the only thing left to do is take all the Miner contracts you can get, and kill lots of Guild reds. Look at all the reds first in any mission, and choose Guild ones over Rebel ones, if any.

The amount of rep after each contract seems to be between 1-3%, as above. Except for the Miners - but thankfully, you don't need to care much about them. For Miners, I sometimes did 3 contracts in a row without the reputation changing until after the 3rd contract - by 1%...

You should probably start by focusing on reducing Rebel/Guild, as opposed to increasing Navy/Energy. This is because Navy/Energy are much closer to 100%, than Rebels/Guild are to 0%. If this is not the case for you, then do it the other way around

Improving your reputation in SP Part II - The Five Factions

The five factions are independent but are grouped into friendly "clumps", these being Energy and Navies that are enemies of Rebels (aka Pirates) and Guilds (aka Clans). Miners are neutral to everyone although you will upset Energy if you attack Miners.

This will mean completing contracts for Energy companies and Navies can lower your reputation with Rebels (aka Pirates) and Guilds (aka Clans) while completing contracts for Rebels and Guilds can lower your reputation with Energy companies and Navies. (see the tables below)

- You can change your individual reputation by selecting and completing contracts for particular groups and/or attacking ships that are hostile to them.
- Contracts are faction specific, meaning objectives will be offered based on your reputation and will involve objectives related to the interests of the faction offering it.
- Long term loyalty to a faction can provide overall reputation benefits, while short term contract completing can result in losing progress you've made in building your reputation.
- **If you leave before you achieve an overall reputation shift, then you've pretty much abandoned the reputation you were working toward.** It tends to return to more average values because the faction's interest in you will quickly diminish if you stop working for them and they'll be on to hiring the next, possibly more loyal, long-term mercenary to work for them.
- If you want to use contracts as a way to shift your reputation, be consistent, work for them long enough to make it worth their time and investment to know they can count on you, otherwise, you'll just appear like a system hopper who only works a few jobs, then moves on, which won't help your reputation much.
- Loyalty and consistency is rewarded with the game's reputation system.

Civilian Contracts (Some WZ contracts are slightly different)

Source Marvin:

- 1 = Rebel contract to spy on a capital ship (Navy)
- 2 = Rebel contract to destroy capital ship (Navy) and escort
- 3 = Navy contract to patrol and destroy Rebels; multi-waypoint
- 4 = Guild contract to deliver goods to a capital ship (Guild)
- 5 = Navy contract to patrol and destroy Rebels
- 6 = Navy contract to destroy Guild ace and escort
- 7 = Guild contract to destroy a capital ship (Navy) and escort
- 8 = Navy contract to escort capital ship (Navy)
- 9 = Guild contract to deliver goods to a capital ship (Guild)
- 10 = Miner contract to destroy Guild ships
- 11 = Rebel contract to destroy a disabled capital ship (Navy) and escort
- 12 = Guild contract to destroy a capital ship (Navy); need not destroy escort
- 13 = Energy contract to clean a solar array
- 14 = Navy contract to recover an item (cargo, satellite or escape pod)*
- 15 = Energy contract to deliver goods to a capital ship (cargo or satellite)*
- 16 = Navy contract to locate a lost item
- 17 = Miner contract to clear an asteroid field
- 18 = A race against time
- 19 = A race against another pilot (Navy)
- 20 = Energy contract to mine 25 units of a specified item

Is reputation separate or linked between MP and SP?

This is probably the most misunderstood and contentious part of reputation. Several very experienced pilots have offered different opinions! What has happened is that the rules have changed since Legends where what happened in SP was not mirrored in MP. In Mercenary, Faction Reputation carries through between SP and MP

The situation in Mercenary can be summarised as:

- You can change your Faction Reputation in MP but not the System Reputation - everybody's System Reputations are fixed in MP
- Faction reputation changes made in MP affect your Faction Reputation in SP and vice versa
- Since your System Reputation in SP depends on your Faction Reputation, changes to your (Faction) Reputation in MP can change your System Reputation in SP - but not vice versa because System Reputation in MP is fixed
- Pilot profiles carry the Faction Reputations with them.

Data Source Miaz: Miaz provided the following data and interpretation

Editor: This data sequence is detailed and quite complex. It's probably only worth looking at if you are willing to put some effort and thought into interpreting it and how it would affect your play behaviour

"I did a little test using Fauston;

In SP overall reputation was Good with Faction scores:

Energy 82

Navy 82

Rebels 21

Guild 27

Miners 90

then I loaded for MP

All Faction Reputations were the same but Overall Reputation = Moderate.

I did a few contracts, saved and then went back to SP

Overall Reputation was still Good in SP. Factions had changed a bit

Energy 83

Navy 84

Rebels 21

Guild 26

Miners 90

So I went back to MP and up to Talison Warzone and did some contracts, then back to Fauston and did one or two contracts there and saved again. Then I loaded up for SP.

Overall Reputation was still Good. However, the Miners, Rebel and Guild Faction scores had changed a lot more this time.

Energy 83

Navy 83

Rebels 30

Guild 30

Miners 85

Does killing Guild/Rebels affect general system reputation, or only raises it with the Navy and Energy factions?

You can improve your reputation by actively hunting and killing Rebels and Guilds only but this will take longer and is more work to achieve your goals. It is faster and easier to increase your reputation and rank by doing high paying contracts that involves killing Guilds and Rebels and these are always contracts you get from Navy, Energy and Miners that involve getting rid of hostiles. If you kill a Navy hostile while doing a Navy contract it still counts as a hostile kill for the contract but it slows down your reputation change for the system where the hostile Navy was from.

Once your Rebel and Guild reputation gets near zero and the other factions are high enough, your system reputation will shift. At that point, you can leave the system without worrying about your system reputation dropping back down ('though your local reputation will often drop).

Summary of effects of contracts on reputation

In the EL Guide there is a table of the effect of each type of contract on your reputation for each faction. This is **Table 1**. Sometimes it is easier to look at what you need to do to increase your reputation or what will lower your reputation with a particular faction or group of factions. This is shown in **Table 2**

Table 1: Summary of effects of contracts on reputation described by contract

Action V	Faction>	Energy	Navy	Rebels	Guild	Miners
Bribe Energy		+	=	-	-	=
Bribe Navy		=	+	-	-	=
Bribe Rebels		-	-	+	=	=
Bribe Guild		-	-	=	+	=
Bribe Miners		+	=	=	=	+
destroy Energy Allied Ship		-	=	+	+	=
destroy Navy Allied Ship		=	-	+	+	=
destroy Rebel Allied Ship		+	+	-	=	=
destroy Guild Allied Ship		+	+	=	-	=
destroy Miner Allied Ship		-	=	=	=	-
Spy, Solar Cleaning, Item Transport (for Energy)		+	=	-	-	=
Patrol, destroy capital ships, locate items and recover		=	+	-	-	=
Item Transport (for Rebel)		-	-	+	=	=
Attack capital ships (for Guild)		-	-	=	+	=
Destroy Intercept Ships, Clearing Asteroids		+	=	=	=	+

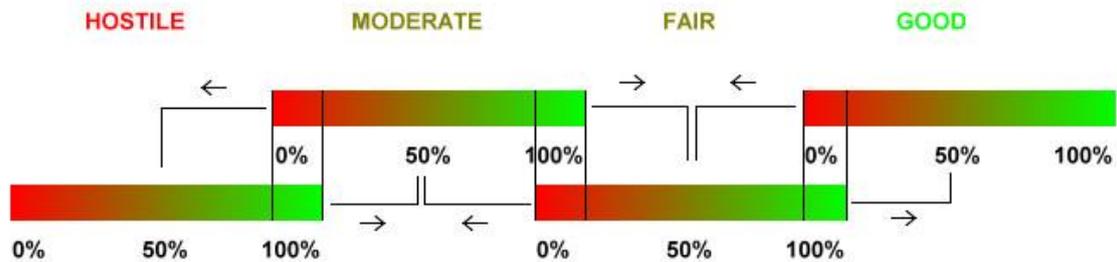
+ reputation increases **=** reputation doesn't change **-** reputation decreases

Table 2: Summary of effects of contracts on reputation described by reputation change

Faction>	Energy	Navy	Rebels	Guild	Miners
Your reputation increases if you . . .	<ul style="list-style-type: none"> • Bribe them • destroy Rebel or Guild ships • spy, clean solar panels, transport Items (for Energy) • Clear asteroids 	<ul style="list-style-type: none"> • Bribe them • destroy Rebel or Guild ships 	<ul style="list-style-type: none"> • Bribe them • destroy Energy or Navy ships • Transport items for Rebels 	<ul style="list-style-type: none"> • Bribe them • destroy Energy or Navy ships • Attack capital ships for Guild 	<ul style="list-style-type: none"> • Bribe them • Clear asteroids
Your reputation doesn't change if you . . .	<ul style="list-style-type: none"> • Bribe Navy • Destroy Navy ships • Patrol, destroy capital ships, locate items and recover escape pods (for Navy) 	<ul style="list-style-type: none"> • Bribe Energy or Miners • Destroy Energy or Miners ships • Spy, clean solar panels, transport Items (for Energy) • Clear asteroids 	<ul style="list-style-type: none"> • Bribe Guild or Miners • Destroy Guild or Miners ships • Attack capital ships for Guild • clear asteroids 	<ul style="list-style-type: none"> • Bribe Rebels or Miners • Destroy Rebel or Miners ships • Transport items for Rebels • Clear asteroids 	<ul style="list-style-type: none"> • Bribe Energy, Navy, Rebels or Guild • Destroy Energy, Navy, Rebels or Guild ships • Transport items for Rebels • Attack capital ships for Guild • Patrol, destroy capital ships, locate items and recover escape pods (for Navy) • Spy, clean solar panels, transport Items (for Energy)
Your reputation decreases if you . . .	<ul style="list-style-type: none"> • Bribe Rebels or Guild • Destroy Energy or Miners ships • Transport items for Rebels • Attack capital ships for Guild 	<ul style="list-style-type: none"> • Bribe Rebels or Guild • Destroy Navy ships • Transport items for Rebels • Attack capital ships for Guild 	<ul style="list-style-type: none"> • Bribe Energy or Navy • Destroy Rebel ships • Spy, clean solar panels, transport Items (for Energy) • Patrol, destroy capital ships, locate items and recover escape pods (for Navy) 	<ul style="list-style-type: none"> • Bribe Energy or Navy • Destroy Guild ships • Patrol, destroy capital ships, locate items and recover escape pods (for Navy) 	<ul style="list-style-type: none"> • Destroy Miners ships

When will my reputation go up or down to the next level/band?

There is a chart in the Evochron Legends Guide. It is still relevant in EM. Some pilots find it difficult to interpret so I've included a translation into text to (hopefully) help



Translated into text:

- complete contracts until your System Reputation within the band (Hostile, Moderate etc) you are in reaches 90-100% - you will then be promoted to 50% on the next band up
- Be aware that your System Reputation with other Factions will be falling because you are working for the opposition!
- When your System Reputation within a band falls to 10% your will be demoted to 50% on the next band down
- **Remember though - If you leave before you achieve an overall reputation shift, then you've pretty much abandoned the reputation you were working toward.**

However your System Reputation is determined by your Faction Reputations.

Vice: You need to get Energy and Navy above 85-90%, and Guild and Rebels below 10-15%. At some (random) point after that, your reputation will shift. You don't need to worry about the Miners (not much, anyway).

An example from a pilot: When my system reputation finally shifted, my stats were:

Energy and Navy 100% (for a long time)

Guild and Rebels about 9% and 5%, respectively.

Miners: 39-40%.

How can I monitor my reputation?

- Your reputation with each Faction in a system will be displayed in the News Console (accessed from the Inventory Screen) along with the other stats. A series of bar graphs is presented, including colour coding, to help make the various levels easier to read.
- Individual ship faction affiliations are displayed on the target detail MFD next to the ID indicator.
- The game will report to you when there is a change in your overall reputation in a system, which is a good time to save your progress as it can take a lot of effort to make major changes to your Overall Reputation.

Why do Navy ships attack me in a friendly system? Faction Confusion!

Editor: If the following pleas strike a chord, then hopefully Vice's response in the following discussion will help! A thought . . . how many games do you know where the developer will give this level of support!?!

I might be in a moderately hostile zone. The Navy are sometimes red, as are the Rebels and Guild. However, when I show up, I could swear that the Navy, Rebels and Guild, form a joint coalition to kill me. They should be fighting one another, but they are more interested in me, a disinterested 3rd party.

There are two Navies - Alliance and Federation. Since the Vonari wars they are no longer officially at war with each other, but old grudges die hard! Read the FanFic stories in the Short Story Anthology which also includes the History of Evochron. It will give you a lot of background to the Evoverse.

I still don't comprehend well how the Mercenary player is meant to deal with (mainly) Navy and Energy factions outside of Sapphire.

I understand the difference between Federation Navy and Alliance Navy (& Energy, aka allies I guess). At best there is an uneasy peace between them, aka Fair systems, and at worst NO peace, aka Thuban and Pearl.

So the Mercenary - being Alliance - will see RED Navy (& Energy) in varying degrees depending on the System he's in. But how am I meant to deal with them and NOT have my Navy & Energy % ratings and overall rating in News lowered? - at least in Good and Fair areas that I return to.

Simplest way is to not attack those ships in Good and Fair areas you return to. Good systems generally won't have any threatening Navy and Energy ships in them anyway, Fair will have few, so it's an easy measure to take.

"Should I try to avoid shooting RED Navy and Energy and Miners anywhere outside of Sapphire?"

No, you're free to engage any ship at any time outside of regions you do not want impacted. The Navy and Energy ships in Olympus for example are unique to Olympus (much like the Japanese Navy in WWII was different from the US Navy). So you are free to engage such hostile ships in self-defense, to complete contracts, as an ambush, or for other reasons outside of a region you want to preserve.

"As an example, in Lost Rucker I saw a few mostly Red Rebels while docked at Novachron station but when I was landing on planet Rucker B (is that the name?) there was a Red Navy ship in orbit. I didn't take any action against any of them and they didn't attack me - but if the goal is to kill Rebels and Guilds to raise my Navy, Energy, and Miners and overall rating I want to be sure I understand how I should deal with Red Navy and Energy in the systems I go to."

Avoidance is good if that's the direction you want to build those reputations in that area. There is certainly no obligation to attack either, plenty of ways to escape and avoid when your situation calls for it. You might even want to consider bribing a few of those ships to leave you alone and build a little reputation with those factions.

"I assume systems like Thuban are a write-off for attempts at raising Ratings since every time I exit Thuban Gate there is nothing but billions of Red ships in every direction and they all start shooting missiles at me immediately and I skedaddle as fast as I can and try to enable Stealth as soon as my energy is back up from the jump gate. But It's tempting to want to buy some FT's and let them fly."

I know of a few players who've wanted to build a reputation there and did so, but because it is so hostile, you may indeed decide it's best to let it be and let the FT's fly :-)

"So, should I try to avoid them or fight back (if the odds aren't too high)?"

In that example (Thuban) I personally wouldn't hesitate to engage them in combat for some practice, and yes, if the odds aren't too high. Expect them to quickly call in reinforcements though, so keep an escape plan ready.

"Now I think I understand that for a Fair or Moderate system the goal is to kill Rebel & Guild to raise your Navy, Energy, and Miners and overall Ratings?"

If you want to transition your reputation over to a higher, less hostile, standing. Gradually, you will drive away the residual Rebel and Guild forces opposed to the Navy, Energy, and Miner forces and your reputation will improve over time with the latter forces on the positive end of the spectrum, lowering overall hostility in the long term.

"Can you just 'do it' and improve rating or must it be done via contracts? I know you get paid via contracts but what if I don't want to stick around long term doing contracts and lose rating by leaving too soon?"

You can build it either way, by attacking ships (or bribing them for the other direction) or by completing contracts. Contracts simply give a structured format to the objective of shifting reputations and in many cases, can be somewhat faster in the rate of progression.

Perhaps I can resolve some of your concerns here. First, you do not need to do 33 more missions for the miners. If you have the energy and navy factions that high, you should just be within a few more to switch the reputation, regardless of what the miners are at.

Second, you can leave the system and not lose your place. The ability to store local faction reputations was added to the game a long time ago (with the expansion in December 2012). So as long as you've saved recently in that location, you can leave and come back and pick up where you left off. You can test this by simply flying to another system outside of the current region, then fly back and observe if the faction reputations return to what they were when you left.

Section 19: Crew

There are two concepts of "crew" - the first is experts you hire to fly in your ship with you - on board crew. The second is when you hire other mercs with their ships to form a fleet with you in charge.

On board crew

You can only have one of each of the four types of crew members unless your transporting them as passengers and not hiring them as part of your crew. On some of the bigger frames you are offered five crew slots! – this is so you can carry a passenger and do ‘taxi’ contracts

Here’s a great hint on training crew members up to 100 per cent quickly. Do military missions in the war zones but only use the carrier. By only using the carrier the crew has nowhere to go, they are stuck with you, and you don't have to overpay them a fortune to keep their loyalty. Once you have 100 pc loyalty by successfully completing contracts you can go anywhere, they won't leave you, unless their pay goes into the negative pay bracket. It’s a sort of legalised short term kidnapping!

When they first arrive on your ship show them the airlock. Anytime they aren't working well, remind them about the airlock!

A recent change (2014) is that if you change to a military frame your crew don’t desert you – they can be dismissed by you or you can send them on paid leave and they will return when you change back into a civilian frame. You can also send all or part of your crew on paid leave from a civvy ship.

What do crew members do?

Crew members can significantly improve the performance of your ship's system and provide you with useful information. Each crew member must be paid regularly and their loyalty is directly linked to how well you pay them. They will build skill the longer they work for you and they will expect to be paid more as their ability improves and you wealth increases. The more skilled they are, the more benefit they will offer your ship. Here is an overview of each crew member trade and the benefit(s) they offer:

- A **Navigator** helps to prevent you from jumping head on into objects especially when auto-piloting for very long trips. they also increase sensor performance
- A **Science Officer** will help you locate items and tell you about systems you enter. They will give you messages in the info/chat screen when you enter a new system or get close to something interesting.
- An **Engineer** will help fix your ship by increasing the speed of the repair unit and shield recharge rate.
- A **Weapons Operator** improves how fast your guns recharge and give them a little extra oomph.

The higher their rating the better they are at doing their jobs. If you hire one at low loyalty they may jump ship when you dock. Save before you dock and reload that save if they do jump. Or overpay them by up to 500 credits, just to keep them from leaving until their loyalty is high.

Go for crew **Loyalty** over **Skill**. Both are earned "traits", which increase the more you use them. Your crew, that is. If their skill is down they still do the job, but not as well – you can work at retraining them to get the skill back up. If their loyalty is down they may jump ship and you lose all your investment in them, as well as not having their job done until you replace them!

Pay them well, then work them hard. Successful contract/mission completions boosts both skill and loyalty points. Work towards 100/100 mark. Loyalty can drop below 100% if you fail a contract.

- Take the mining contracts to work your engineer and science ops.
- Clear asteroid fields to work your weapons ops and engineer.
- Do the other types of contracts as well; the snoopies - go-find-ums and the bring-ums-back. These will exercise you navigator and science ops. It all counts and it all depends on what you want to do.

Hire my crew with high experience and pay 3000-4000 to keep them from leaving until their loyalty reaches 100% then drop their pay to around 1000. An easy way get their loyalty to 100% is to load up on gas and take a long, long trip without ever docking.

Crew details (from the Legends Guide – still relevant)

The 'fair' wage value they expect to be paid is based on several criteria including their skill, loyalty, and your wealth. Each crew member's trade also impacts how much they expect to be paid. Here is the calculation used to establish the base fair wage for each trade:

Engineer	$((\text{skill} + \text{loyalty}) * 10) + (\text{cash} / 1000000)) * 1.75$
Weapons Ops	$((\text{skill} + \text{loyalty}) * 10) + (\text{cash} / 1000000)) * 1.5$
Navigator	$((\text{skill} + \text{loyalty}) * 10) + (\text{cash} / 1000000)) * 1.25$
Science Ops	$((\text{skill} + \text{loyalty}) * 10) + (\text{cash} / 1000000)) * 1.0$

- Pay your crew well and their loyalty will increase, pay them poorly and their loyalty will decrease.
- Once a crew member reaches 100% loyalty, you'll just need to maintain their pay at the fair wage and perform well with contracts to keep their loyalty.
- Crew members with low loyalty have a higher chance of leaving your ship next time you dock.

The chart below shows how much a crew member's loyalty can increase or decrease based on how much you actually pay them relative to the fair wage they expect and also whether you complete or fail contracts.

<≈ 90% of fair wage	↓ 5 - 9% per pay cycle
≈ 90% - 199% of fair wage	↑ 1 - 2% per pay cycle
>≈ 200% of fair wage	↑ 10 - 20% per pay cycle
Contract Failure	↓ 1 - 3% per contract
Contract Success	↑ 1 - 3% per contract

Hiring a fleet – How? Why?

The why is obvious – you get to boss your own private army of fighters to help with combat contracts – attacking hostiles and defending you!

- In **MP** you **cannot** hire any AI/NPC ships for fleet actions.
- In **SP** you **can** hire as many civ merc ships as you can afford.

- In the Talison Conflict and the other Warzones **you can order* the AI/NPC Navy ships** from the drop-down menu under "Order" as long as your military rank is high enough – Commodore or above.
- For those engaged in co-op missions in the CZ/WZ's, the "Primary Pilot" (aka the pilot who accepted the mission for all) **can order* the AI/NPC Navy ships** to action stations.
- in the absence of the Primary Pilot's orders, any co-op mission-involved pilot of Commodore rank or better, **can order* the AI/NPC Navy ships**.

You cannot hire the AI/NPC Navy, you may only "order" them for that current mission.

Your fleet won't make through any jump gates either.

To gather a fleet of your own you need to ask **green** ships that are friendly to you. **Yellow** ones are only neutral and very unlikely they will join your fleet. **Red** ones will attack you!!

Section 20: Quests

What Quests are available to do?

The quest that 'comes with the game', the IMG Quest is the official 'training quest'. It is well worth doing because it takes you through the various skills you need to progress in the game. It also rewards you at various points with money and equipment!!

You don't have to do the quest in one go. There are points where you need to go off and practice newly learned skills or earn enough to upgrade your ship

If you want you can just do the quest until you get the first container location, selling stuff from that gets you enough cash for serious trading pretty quickly, though the number of times you can visit containers per session has been limited in recent upgrades. It's a very good idea to come back sometime and finish the quest if for no other reason than you can then do the other quests that have been created by players! It's also very satisfying and the skills you learn in the latter parts will boost your confidence no end! You can't not feel good after taking out 10 hostiles in a planetary atmosphere!!

There is a bit of complication in terms of doing a series of quests because of the way they are coded into the game!! However it only takes a couple of minutes to set your game up for a different quest and there are instructions are given on **SeeJay's website** so that you can set them up as and when you want to do them.

The available quests are:

- **The 'Official' IMG Quest**
- **The 'Official' IMG Quest – with a concurrent story** - the chapters are released at various points in the quest. This story is the prologue to . . .
- **Over the Hill** (Created by SeeJay)
<http://www.starwraith.com/forum/viewthread.php?tid=10871#pid162715>
This quest uses the background to the **Quest for Peace** as part of its storyline. Again there is a concurrent story – the chapters are released at various stages in the quest
- **The Quest for Peace** (created by Marvin)
- **The Hitch Hikers Guide the Evochron** aka **The H2GE Quest** (created by Marvin)
<http://www.starwraith.com/forum/viewthread.php?tid=11011#pid164605>

The 'Official' IMG Quest – both versions

The style of the first two versions of the IMG quests are that you are given tasks (contracts) to do that take you hither and thither in the Evoverse. The tasks are framed to introduce and develop new skills you'll need to succeed in the game.

Successful completion of a task leads to the next task being offered. At any point you can take a break from the quest and go off to do other things. You can return to the quest when you are ready. This allows you to refine skills for the later (harder) tasks and make money to get a better ship and equipment! To recall the last message and continue from where you leave off open the **Inventory Console**. Open the **News Console**. Choose '**Last Quest Message**'. It has all the information you need to start your IMG quest or to continue it if you have taken a break

Over the Hill

Over the Hill is based around an illustrated Novella (140 pages - 17 Chapters) about the adventures of Chuck Yeager. It is set around two decades after The IMG Quest. SeeJay negotiated with Marvin and with Vice and they agreed to allow him incorporate the **Official IMG Training Quest** as a prequel and also a significant portion of **The Quest for Peace** into 'Over the Hill'.

This version of the the IMG Training Quest covers Chuck's early life from his eighteenth birthday and enrolment in Flight Training through to his successful instatement as a Colonial Pilot! Chuck's early story is told in seven short chapters. If you have already done the IMG Quest you can start 'Over the Hill' from where it finishes. Contact SeeJay and he will give you access to the complete 'story' and you can continue it from there.

The Quest for Peace

The Quest for Peace puts you in the role of a Mercenary helping IMG and the 'Government' in delicate and secret negotiations between Humanity and a faction of the Vonari who are weary of the decades old war.

H2GE

H2GE uses Marvin's hilarious **Hitchhikers' Guide** to inform your adventures as you travel around the Evoverse experiencing some of its many wonders!

The player created quests are an upgrading of the methodology of the official training quest. They are more explicitly story based! Rather than doing a sequence of tasks with a small amount of intro to each, they are based on a story. You complete a number of tasks and are then given a 'password' that lets you download the next chapter of the story from SeeJay's website. Effectively you are 'living' the storyline. This makes the quests easier to become involved in (at least the creators think so!)

Snippets for the IMG Quest:

A Class 1 Fulcrum drive cannot make the trip to New Hope in a single jump. In fact, sometimes a Class 1 drive has trouble jumping to a computed waypoint. If you find your autopilot going nowhere, disengage and manually jump one sector at a time, via the (default) "F2" key, until you reach your destination.

In the past you could do a shuttle run between the (in)famous container and a nearby station and boost your bank balance very quickly. Now there's a limit to the number of times you can visit the container in any session. You can still 'mine' the containers but not as brainlessly

Tutorial: Starting The Mercenary Quest - **Caution: Spoiler Alert**

Marvin

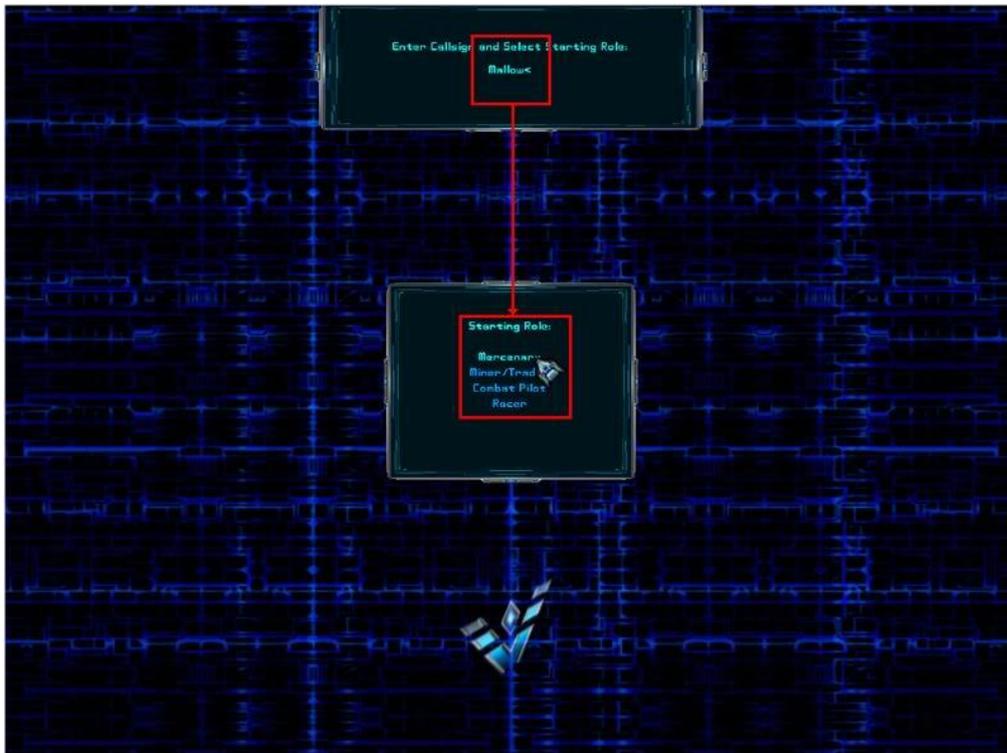
<http://www.starwraith.com/forum/viewthread.php?tid=6644>

This tutorial was written for the original official version of the IMG quest. However it gives clear indication of what the 'in game' playing part of the quest is. If you choose to do the story-based version the only difference is that at certain points you will be given the password to access the next chapter on Chuck's (your!!) story.

1. Launch the game and, at the "Available Pilot Profile" menu, select the "Create Pilot" option:



2. Enter a Callsign (name) and then select any option except “Combat Pilot.” You will only be offered the Quest when piloting a civilian ship:



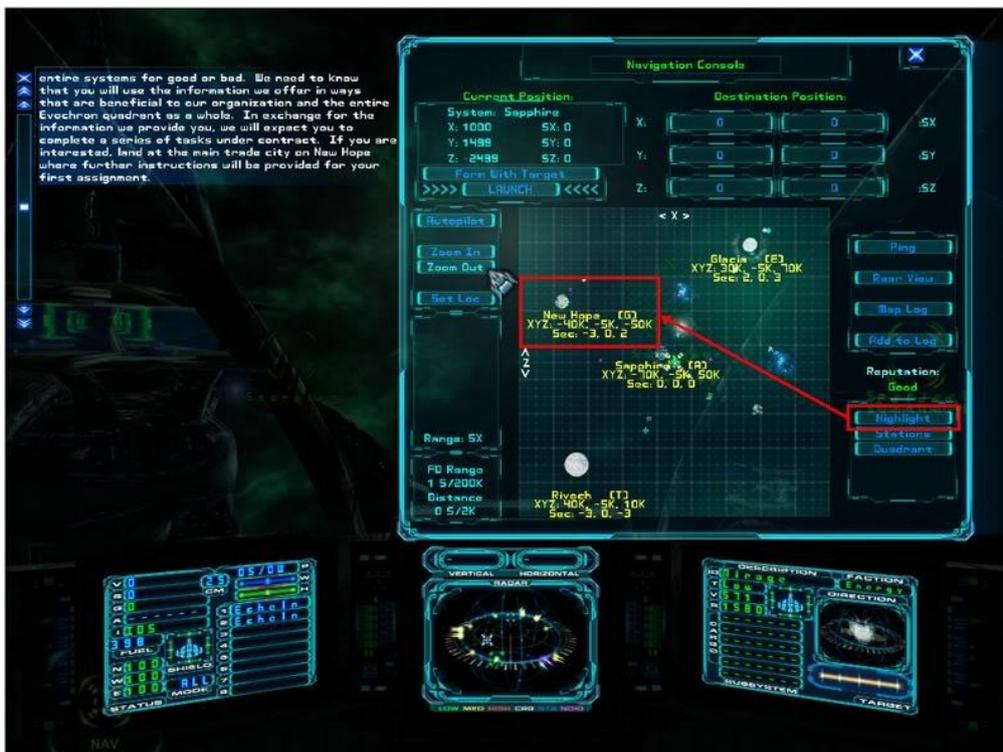
3. Launch the game:



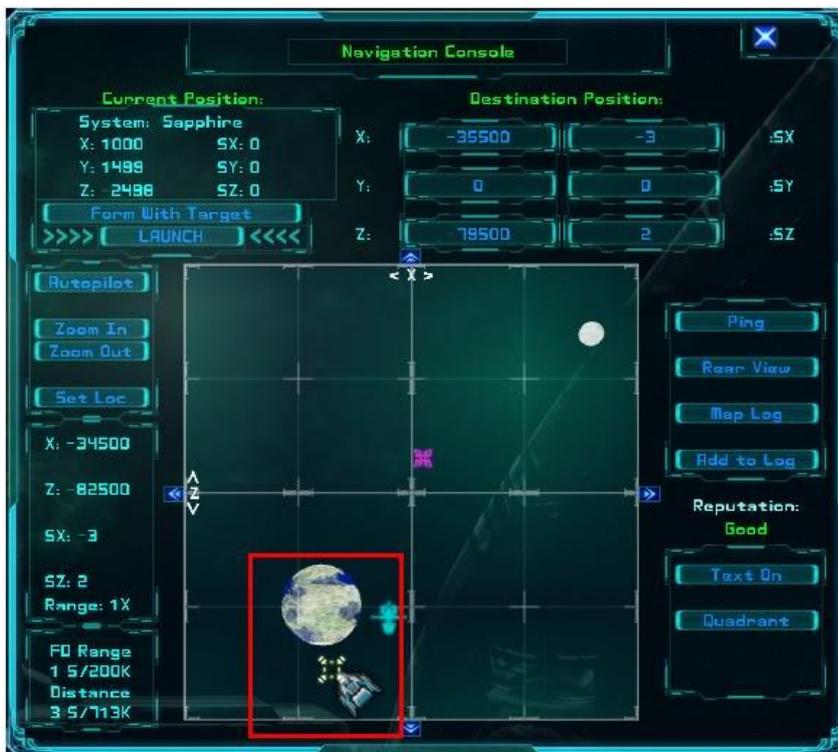
4. Carefully read the message displayed in the chat box:



5. Zoom out on the nav map to find the planet called New Hope. You can use the "Text On" option (button near the bottom, right) ... click on it and it will become a "Highlight" button, then cycle through the options in the next button down to select "Planets" ... thereby turning off any label that isn't a planet:



6. Left click to set a waypoint near the planet (but not too near, else you'll destroy yourself upon impact with the planet's surface ... or burn up in the atmosphere). Then press the (default) "Alt+F" key to engage autopilot, hyper-jumping* to your waypoint:



7. Find the main city (a bracketed plus sign) and set a waypoint to it. Then click on the "Rear View" button (near the middle, right side) to switch map views:



8. Adjust your waypoint in the vertical (up and down):



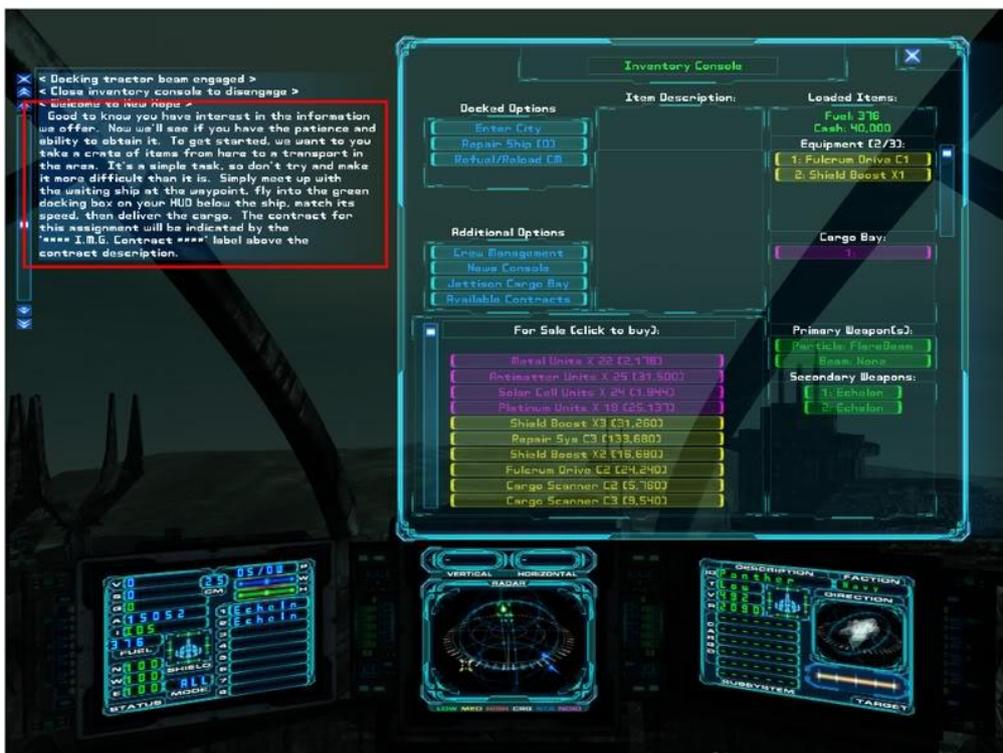
9. At full normal speed, head for the waypoint. (Warning! Do not attempt to hyper-jump!) When you start getting green guide boxes, adjust your flight path toward the center of the boxes:



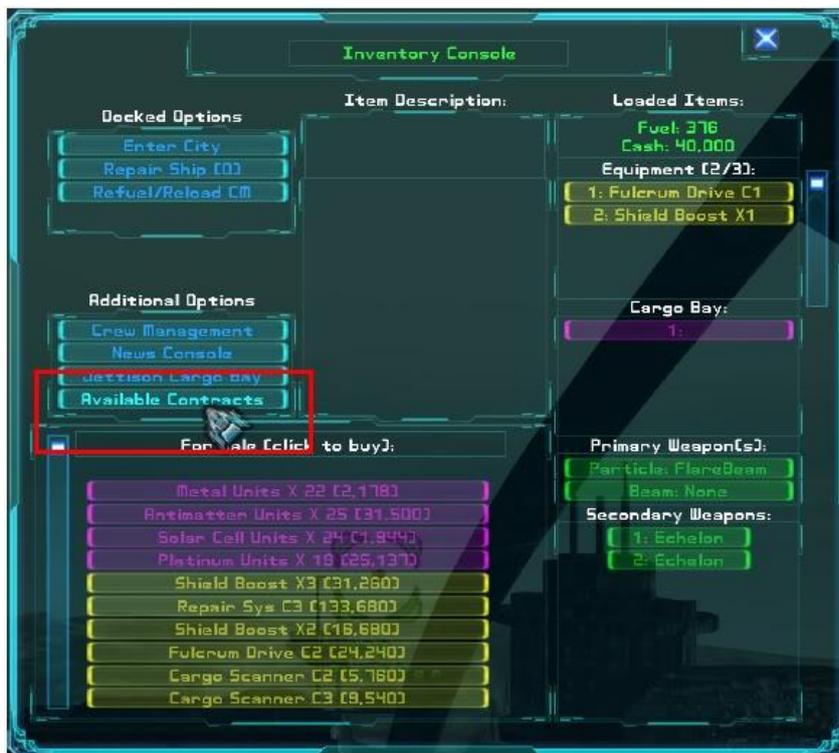
10. The guide boxes will direct you toward the city station. Continue inbound until the docking tractor beam engages and you're safely docked:



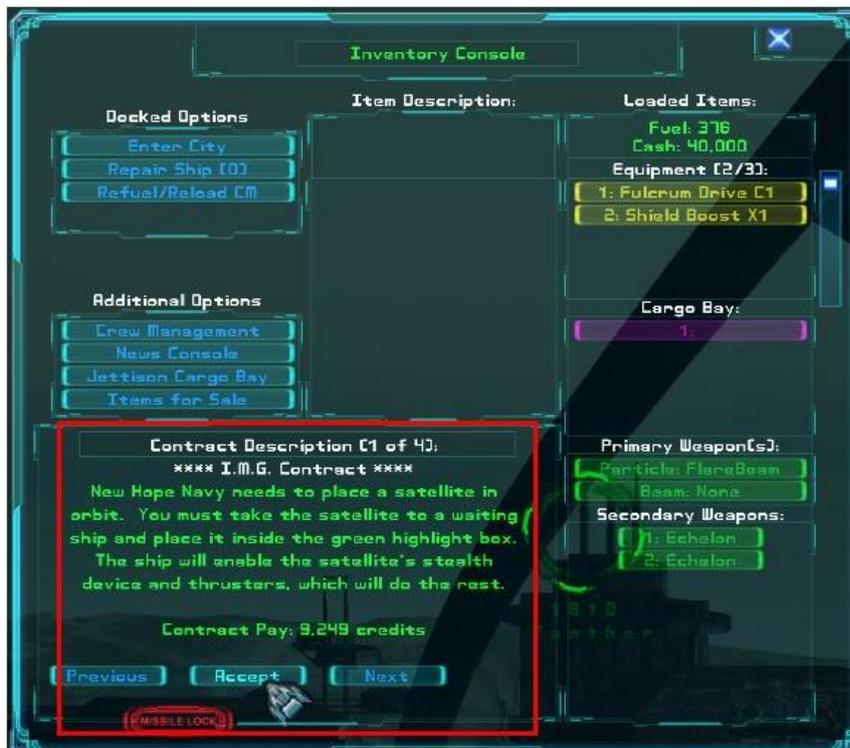
11. Read the new message displayed in the chat box:



12. Select the "Available Contracts" option:



13. Find and accept the one contract with "I.M.G." in its title:



If you have problems completing the first contract ... stand by for the future release of a Mercenary Pilot's Dash-1 Checklist.

Writing a quest

Source Marvin (with later dialogue between Marvin and En4cer)

Editor: The community has a reputation for being one of the friendliest and most generous on the web. Many players create mods and share them freely. Some players write stories to entertain and increase immersion. There are lots of videos, guides, tutorials.

A couple of players have also created quests. To be precise – Marvin who has created two (Quest for Peace (aka Q4P) and The Hitchhikers's Guide to the Evoverse (aka H2GE)) and Seejay whose team of writers, coders, and testers have created Over The Hill (aka OTH)!

Quests have the potential to blend story telling with game play, to increase immersion and provide a fun experience. However the need to code a quest adds a layer of complication. To assist those who want to create a quest (with or without accompanying novel(la)) but have been stymied as to where to begin Marvin (the coding expert of the community) has created one of his renowned Tutorials!

At the moment, at least in EVOCHRON Mercenary, there are several things you can't do:

- create your own contracts
- create your own objects for players to find/retrieve/transport
- create outcome branches to send players in different directions depending on what they do or whether they are successful or not

Whilst this is limiting it can be overcome to some degree with a bit of imagination! And a bit of cooperation from the quest player

Marvin is experimenting with a quest which allows branching. It involves a chunked quest file and each subsequent addition depends on the outcome of the previous one

SeeJay's story writer utilised artifacts in the game to create activities that simulate unique contracts, for example using a 'gate inside an asteroid' as a secret portal to an uncharted secret base or using an uncharted station embedded in an asteroid as a different secret base and so on.

Vice has the task of investigating the implications of expanding the quest scripting code on his To Do list. Branching is already allowed in Arvoch Alliance player generated missions so there is hope!

Now onto ***Marvin's basic instructions:***

Appending the Default Quest in Mercenary

It can be done. And it works both in single-player and multiplayer. Here is a test script ... one you can copy and paste to a text file:

```
' ===== CUSTOM QUEST TEST =====
```

The custom scenario below starts by replacing the final message in the default quest ... allowing the pilot to start the custom quest from anywhere in the galaxy, as long as he has first completed the default quest.

-26

Objective=2

LocationX=1000

LocationY=0

LocationZ=1499

Contract=0

3

For your first contract of the custom quest, dock at the city on Atlas Minor (in the Atlas star system). Read the message and then accept the I.M.G. contract.

-27

Objective=5

LocationX=1000

LocationY=0

LocationZ=1499

Contract=15

15

This test is similar to the original Quest. Its purpose is to illustrate how to append the default Quest so that any pilot who has completed the original Quest can then go on to start any custom Quest.

The contract for this assignment will be indicated by the following label above the contract description ...

**** I.M.G. Contract ****

It's a simple task, so don't try and make it more difficult than it is. Simply meet up with the waiting ship at the waypoint, turn on your HUD, fly into the green docking box below the ship, match speed, then deliver the cargo.

```
' ===== END OF TEST =====
```

Name the text file "questtext" and place it in your main Mercenary folder. It will override the game's "questtext.dat" file.

Keep in mind that you must first complete the original IMG Quest. It's also a good idea to clone your pilot and use the clone to test your custom Quest ... because, once you've saved your profile, your current "Quest Progress" point is also saved. You can confirm your current Quest Progress ... it's listed among Pilot Statistics, in the left-hand corner of the page where you select and load your pilot profile.

What this all means.

The dash (-) and the number that follows the dash specifies where in the quest the next message begins. The default quest ends with number 26 and, once you reach that point, you can no longer view the previous quest message.

Below that is information for where your pilot is to go and what he/she is to do next. You can require the pilot to complete any of the following objectives.

- 1 = requires the player to dock with a space station before the next message is displayed
- 2 = requires a planet city dock
- 3 = requires docking at a constructor station
- 4 = requires docking with a carrier
- 5 = requires completion of an IMG contract.

The 'Location' lines tell the pilot where to go to complete the next objective. They specify the sector coordinates (SX, SY, and SZ). Objectives that require docking can be in any sector with the proper facility; objectives that require completing a contract should be in the same sector as where the pilot has docked.

The code for each type of contract is listed below. If completing a contract isn't the required objective, just leave this value set to 0.

- 1 = Rebel contract to spy on a capital ship (Navy)
- 2 = Rebel contract to destroy capital ship (Navy) and escort
- 3 = Navy contract to patrol and destroy Rebels; multi-waypoint
- 4 = Guild contract to deliver goods to a capital ship (Guild)
- 5 = Navy contract to patrol and destroy Rebels
- 6 = Navy contract to destroy Guild ace and escort
- 7 = Guild contract to destroy a capital ship (Navy) and escort
- 8 = Navy contract to escort capital ship (Navy)
- 9 = Guild contract to deliver goods to a capital ship (Guild)
- 10 = Miner contract to destroy Guild ships
- 11 = Rebel contract to destroy a disabled capital ship (Navy) and escort
- 12 = Guild contract to destroy a capital ship (Navy); need not destroy escort
- 13 = Energy contract to clean a solar array
- 14 = Navy contract to recover an item (cargo, satellite or escape pod)*
- 15 = Energy contract to deliver goods to a capital ship (cargo or satellite)*
- 16 = Navy contract to locate a lost item
- 17 = Miner contract to clear an asteroid field
- 18 = A race against time
- 19 = A race against another pilot (Navy)
- 20 = Energy contract to mine 25 units of a specified item

* Satellite contracts originate at cities; escape pod contracts originate in war zones.

The next number in the file specifies the number of lines of text (your message) that will be displayed in the Chat window. Double spaced lines count as two. And each line of the message must be terminated with the “Enter” key. Be careful of the length of each line; you might want to experiment so that your message doesn’t extend beyond the Chat window.

When the player reaches the designated sector coordinates, the contract is generated automatically. Any required items and/or waypoints are, after the contract is accepted, also generated automatically.

Summary:

Note this is the first objective of the appended quest – The original quest has 25 objectives so this new quest starts at number 26.

Quest contract	What it means
<p>-26 Objective=2 LocationX=1000 LocationY=0 LocationZ=1499 Contract=0 3</p> <p>For your first contract of the custom quest, dock at the city on Atlas Minor (in the Atlas star system). Read the message and then accept the I.M.G. contract.</p>	<ul style="list-style-type: none"> • start point for this message/task • needs to dock at a planetary city dock • [where to go to complete the given objective] • type of contract • number of lines of text that will appear • the text! each line is ended with <Enter> <p>In this case because of the space restriction in the table I have reduced the font size to avoid confusing you with split lines – in this table the message looked like this at font size=11 . . .</p> <p>For your first contract of the custom quest, dock at the city on Atlas Minor (in the Atlas star system). Read the message and then accept the I.M.G. contract.</p>

How this all works.

The first mission in the custom quest starts at number 26, replacing the last mission in the default quest. It is a “docking” mission and, therefore, can be started anywhere ... as long as the pilot has completed the original quest. If he/she has not completed the quest ... well, it’s likely the final message will be overwritten. But that’s easy enough to remedy ... simply take the custom “questtest” file out of the game folder until the default quest has been accomplished.

The trick in creating a working custom quest is to set the first mission number to whatever registers as the last mission number in the pilot's profile, as seen here ...



Then use that number as the first number of your customized quest ... making sure the first mission is for docking.

Before adding the test quest to your files, you can check the current state of the default quest by doing the following:

1. Open the Inventory Console (F3).
2. Select the "News Console" button.
3. Select the "View Last Quest Message" button.

If nothing is displayed in the Chat window, you've probably completed the default quest. Now copy the text from above - what's between the two sets of hashed lines. Then save it as a text file titled "questtext" (without the quotes) and place it in your main game folder.

Note: If you don't want your quest contracts directed by "IMG" ... you can change the "text.dat" file to reflect a different organization. The last time I looked, the line to modify was 1069 ... but that could change with the next update to the game. Depending on the type of quest, you might want to use something more generic ... maybe change it to something like: "Classified Contract Message" ... or not.

Additional Notes

1. For mining and asteroid contracts, there is no error trapping routine to exclude sectors without asteroids or planets. The program will allow a player to accept contract 17 but will crash during game loading if contract 20 is in a sector where it cannot be completed.
2. A mining contract can be scripted for a construct station but cannot be completed at the construct station (items cannot be sold there). But the contract can be completed if a trade station is in the same sector and the mined payload is taken to that station.
3. Quest contracts cannot be assigned to cities or carriers. The only thing available at a city or carrier, after docking, is a message.
4. Contracts not normally associated with either "Good" or "Hostile" areas of space can still be assigned to those areas as part of the quest. Good areas will be given contracts comparable to the difficulty of those in Hostile areas.
5. All capital ships are escorted except those waiting delivery of goods.
6. An unspecified number of enemy ships might attempt to intercept and destroy the pilot during implementation of contracts 13 thru 20.

Editor: So that's the basics – just create your stroyline, work out what type of contracts you want the player to do where and 'code' each section . . . just! To help you get some perspective and get a feel for how all this comes together I've included a discussion between a neophyte quest creator (En4cer) and Marvin the Master!

En4cer starts to write a quest

En4cer:

Quote:

6. An unspecified number of enemy ships might attempt to intercept and destroy the pilot during implementation of contracts 13 thru 20.

Is it possible to clarify this? Are you saying that if I were to set my custom quest to number 20 that it will allow the pilot to be attacked/pursued by enemies warping in? If so then can I specify their faction and number of enemies? Based on what I've read here this is my idea so far:

1. *Custom quest 20 begins: Go to city X to receive a message.*
2. *City x message: You're being hired to smuggle. Go to station Y.*
3. *Station Y: You've been hired to move this contraband from here to there.*
4. *(While player is en route to there he is attacked by enemy fighters)*
5. *Player drops off delivery and the quest is complete.*

Marvin: Specifying faction and number of enemies:

The only method of specifying a faction is to select the applicable contract. See 'What types of contracts are available where?' in the Contracts section above where it lists all the possible contracts, who offers them and who they're against.

Step 4: You can't script being attacked en route from one sector to another. You can script hauling contraband to a waiting capital ship (see the list mentioned above). If it's to either a Rebel or Guild ship, you'll find yourself being attacked ... mostly by Navy fighter pilots. If you do all this in a Moderate star system, you'll get a lot more flack from the Navy than if you do it in a Fair system. But (and this is rather chancy), if you script a Rebel or Guild delivery in a Good star system, you'll actually get even more Navy flack ... because the quest engine sets the number of attacking Navy the same as if it were a Hostile star system. (Cool, huh.)

En4cer:

Is it possible to create a named ship? If the Navy engages that's close enough to smokeys to stand as is. If I could get a wingman or a named ship called 'Snowman' it would absolutely complete the reference. Also what the difference between 4 and 9? Is one of those supposed to be rebel and the other guild but you mistyped? I want to deliver to a rebel capital ship instead of a guild one but I don't see that on the list. Here is my example. Please note if this is correct I'll be modifying the locations for a more dangerous area like you mentioned. Also did I do the contract title correctly or do I need to edit a file like you mentioned in your post?

So this custom quest would kick in after completing the final IMG contract. You get a message to dock at a city. Once you're at the city you get the contract to deliver goods.

-26

Objective=2
LocationX=1000
LocationY=0
LocationZ=1499
Contract=0
7

As you complete your latest contract your navigation panel hums to life. Nav coordinates start to slowly transfer in Morse Code to your terminal with no apparent source or reason for the message.

(X=1000 Y=0 Z=1499)

-27

Objective=5
LocationX=1000
LocationY=0
LocationZ=1499
Contract=4
6

*****A shady character approaches your docking bay.*****
You've flown close enough to catch our eye Mercenary. We have cargo of a 'sensitive nature' that needs to be delivered to a wealthy but fugitive client. Dock at these coordinates to pickup cargo disguised as typical commodities on a routine trade route.

Quote: posted by En4cer

Is it possible to create a named ship? If the Navy engages that's close enough to smokeys to stand as is. If I could get a wingman or a named ship called 'Snowman' it would absolutely complete the reference.

Marvin: You can include a name in the text but it won't show up anywhere on the HUD or target display. Most stations and carriers are already named ... you can use those names if you like. Note: it is possible to have your player build and name a trade station ... but there is no error-checking in the quest script to insure the player actually gives it the name you demand.

Editor: If you've read the intro above about the limitations (at this time) of the scripting system, you'll have seen examples for getting round it. **They all depend on the player being a willing partner.** For example in *Over the Hill*, during the contract I made a player pick up an artefact in an asteroid cave and transport it to another location. This was described as using some ancient technology. The player then continued with the contract to finish the objective. There was nothing to prevent them from skipping the pickup and transfer . . . except it was an unusual task and an integral part of the storyline. After discussion in the team we agreed that if a player wanted to 'cheat' then they probably wouldn't want to do the quest in the first place – and if they did cheat then they were only (sadly) cheating themselves!

Quote: posted by En4cer

Also what the difference between 4 and 9? Is one of those supposed to be rebel and the other guild but you mistyped?

Marvin: I checked all my notes and they all show those two contracts to be as indicated. But I could've made a mistake at the get-go. I suggest you script one of each and see if there is a difference. If so, let me know so I can edit the above post. **Editor:** Even The Master can make mistakes!

Quote: posted by En4cer

I want to deliver to a rebel capital ship instead of a guild one but I don't see that on the list.

Marvin: Try testing both 4 and 9 ... probably, I got one of them wrong.

Quote: posted by En4cer

Here is my example. Please note if this is correct I'll be modifying the locations for a more dangerous area like you mentioned. Also did I do the contract title correctly or do I need to edit a file like you mentioned in your post?

So this custom quest would kick in after completing the final IMG contract. You get a message to dock at a city. Once you're at the city you get the contract to deliver goods.

Marvin: Okay, let's go over your script.

Quote: posted by En4cer

-26

Objective=2

LocationX=1000

LocationY=0

LocationZ=1499

Contract=0

The coordinates should be the sector where you plan to have the player dock. Objective 2 designates a city and the contract number means the player won't be given a contract after docking. (Btw, IIRC, you can't assign a contract to cities ... they can only be used for text messages.)

Quote: : posted by En4cer

7

As you complete your latest contract your navigation panel hums to life. Nav coordinates start to slowly transfer in Morse Code to your terminal with no apparent source or reason for the message.
(X=1000 Y=0 Z=1499)

The "7" is the number of lines, of your text, plus one extra space above and below ... making it easier to tell quest messages from other chat.

Quote: posted by En4cer

-27

Objective=5
LocationX=1000
LocationY=0
LocationZ=1499
Contract=4
10

Objective 5 requires the player to complete an IMG contract. When running this scenario, I'd first test contract 4 and then contract 9 to see if there's any difference. But, as I noted above, you might not be able to script a contract from a city. Ergo, you might instead direct the player (after landing at the city) to head for the nearest trade station.

Now, here's where it gets tricky.

Notice that the coordinates are for where your pilot is to go next? But the text underneath is for right now? That's because the coordinates, objective and contract are one step ahead of the dialogue. Here's an example of how you can direct a player (who is docked at a trade station) to go to a city, where he/she gets a message to return to the trade station, where the player is then assigned a contract (or two), and finally you have the station reply without adding another contract.

Quote: : posted by En4cer

-29

Objective=2

LocationX=-1260

LocationY=-2

LocationZ=-1872

Contract=0

7

Hello, Captain. Welcome. The station is manned and almost fully operational. I'm part of the construction crew and will be departing shortly. Hopefully, by the time you get back from the planet, me and my guys will be long gone. This is a rough neighborhood.

-30

Objective=1

LocationX=-1260

LocationY=-2

LocationZ=-1872

Contract=0

10

So, the Independent Mercenary Guild has found its way into our star system. How interesting. And a brand new trade station in orbit. Probably manned and doing business already. IMG doesn't lose much time, does it?

Well, you can just go back up to that station and let them know how we, down here, feel about IMG taking business away from honest settlers.

-31

Objective=5

LocationX=-1260

LocationY=-2

LocationZ=-1872

Contract=20

12

Ahoy, Captain. Take my word for it: we're happier to see you than those old mud-dwellers on the surface. Especially since we could really use your help. Ships are coming and going but just about all of them are leaving empty-handed. We have almost nothing to trade.

So guess what? We need supplies, is what. Or even raw materials. We're nearly out of everything, from oxygen to diamonds. I hope you have a mining beam aboard that ship of yours.

-32

Objective=5
LocationX=-1260
LocationY=-2
LocationZ=-1872
Contract=13
8

That should give us some breathing room, Captain. What we need now is a little help with the power grid so we can crank up our sub-space transmitters and talk to Headquarters. A navy transport ship dropped off one rather dirty solar array. It can be energized remotely but that won't do us much good until it's cleaned.

-33

Objective=1
LocationX=-1260
LocationY=-2
LocationZ=-1872
Contract=0
3

C'mon back, Captain. We got power. Lots of it. Thanks.

Marvin: The following changes should work ...

-26

Objective=2
LocationX=1000
LocationY=0
LocationZ=1499
Contract=0
7

As you complete your latest contract your navigation panel hums to life. Nav coordinates start to slowly transfer in Morse Code to your terminal with no apparent source or reason for the message.
(X=1000 Y=0 Z=1499)

-27

Objective=1

LocationX=1000

LocationY=0

LocationZ=1499

Contract=0

11

As you come to rest on the landing pad above the city and open your airlock, a shady character approaches and says:

You've flown close enough to catch our eye Mercenary. We have cargo of a 'sensitive nature' that needs to be delivered to a wealthy but fugitive client. Dock at the trade station to pickup cargo disguised as typical commodities on a routine trade route.

-28

Objective=5

LocationX=1000

LocationY=0

LocationZ=1499

Contract=4

3

Here's your cargo, mister. Good luck delivering it.

En4cer: *OK the last detail I am a bit confused by is the coordinate system. So my first block should have a planet city coordinate while the second and last block should each have different space station coordinates right?*

-26

Planet coordinate

-27

Station where contract is offered coordinate

-28

Station/ship where delivery ends and contract is completed

Your example shows all similar coordinates though. Is that just because it's an example or is my above theory incorrect?

Marvin: If the trade station is in the same sector as the planet (with a city), then the coordinates will be the same (they are, after all, sector coordinates). When that happens, it's the "Objective" line which tells the program whether you're to dock (and receive a message) at the city or the station.

En4cer: *OK I believe this final draft is ready for testing. You would fly to Sierra to talk to get the transmission, go to Emerald to land planetside and talk to the smuggler, get and complete the mission in Aries. All three should be combat heavy hostile zones and require a lot of travel. By the time you're done with IMG this will probably be a cakewalk.*

-26

Objective=2

LocationX=-2200

LocationY=0

LocationZ=-3500

Contract=0

7

As you complete your latest contract your navigation panel hums to life. Nav coordinates start to slowly transfer in Morse Code to your terminal with no apparent source or reason for the message.

(X=1000 Y=0 Z=1499)

-27

Objective=1

LocationX=-3200

LocationY=0

LocationZ=-550

Contract=0

11

As you come to rest on the landing pad above the city and open your airlock, a shady character approaches and says:

You've flown close enough to catch our eye Mercenary. We have cargo of a 'sensitive nature' that needs to be delivered to a wealthy but fugitive client. Dock at the trade station to pickup cargo disguised as typical commodities on a routine trade route.

-28

Objective=5

LocationX=-3500

LocationY=0

LocationZ=-2000

Contract=4

5

Here's the contraband. There's a lot of empty space full of Smokeys between us and him. Good luck bandit.

Marvin: Additional info: You might want to append the following text ...

Quote:

You've flown close enough to catch our eye Mercenary. We have cargo of a 'sensitive nature' that needs to be delivered to a wealthy but fugitive client. Dock at the trade station to pickup cargo disguised as typical commodities on a routine trade route.

... by adding the sector coordinates of the station, since it isn't in the same sector as the city.

Section 21: Spoiler Making a fortune quickly Spoiler

Read this section at your peril. It is the equivalent of using "God Mode" in a combat game. All the fun and satisfaction of working your way up the ladder is gone. Once you have made your first billion (yep - 1 000 000 000) in an hour or so and bought the best ship and equipment, then what are you going to do?

Because I'm a good guy and know the power of temptation, the really spoilery bits below are in **Spoiler Text**© - to see the text follow these instructions:

A reminder about reading spoiler text

We're getting to the bits that tell you how to make lots of money very quickly. For some players this is OK – they want to do other things than simulate being the 'wage slaves' they are in real life. For others it spoils it – they want to succeed the hard way, working things out for themselves, finding stuff themselves.

To avoid 'in your face spoilers' I've masked the info with a proprietary **Spoiler Text Protection System STOPP** ©has been developed 'in house'.

To avoid players even glimpsing spoilers by accident the text is masked by colouring it in 5% black, so it's virtually unreadable.

To read it is as easy as one, two, three. Do the following:

1. Select the text
2. Copy the text
3. Paste the text into a blank Word doc or a blank text editor file e.g. Notepad

The text will appear!

First some general hints that won't spoil it for you (too much, anyway) . . .

- Hire a science officer who will give some help by indicating points of interest (even uncharted ones) and improves your mining
- If you really want to make some cash look to trading in equipment, and missiles. With missiles you can fill up your cargo, and missile slots, giving you 13 slots to carry your cargo of missiles and equipment. There's a location where you can buy FTs at around a million with a licence. There's plenty of places where you can sell them at 4 million+ , so that's a 3 million+ profit per FT, with 13 slots to put them in. That's an average profit of a couple of million credits per minute!
- You can increase your cargo capacity by selling some equipment and using the freed up slots. You can buy the equipment again when you've finished the trading session created three extra slots like this
- 16 slots @ 1 - 3 million profit per run gives a potential for 20 - 40 million per run with the occasional peak at 50 million if there are enough of the top earners available. It's sometimes worth flitting between stations you can buy at to allow them to restock. Balance profit per run against average profit per minute!
- very early: mine platinum in Sapphire; Port Rivoch pays the highest prices. Keep the beam moving, it mines faster
- cities on planets tend to pay better than stations

If you want to find out more then read on . . .

the info is set out with hints first and walkthroughs later.

Ideas for money making for newbies – spoilers but you have to work at it.

These are spoilers but you have to work at making them work so they aren't hidden with the *Spoiler Text System STOPP* ©

- very very early: get stuff from the hidden crates in Sapphire, and sell them at a station for ~110k each, it's amazing money at the start of the game. (You find about the location of the crates from the IMG quests, too.)
- You can carry 5 cargo bays and hence 5 items from the crates, so 500k+ per trip. That's why so many players suggest you do the Quest. IMG continually resupplies those crates. They monitor the quantity but not who uses them. It's the IMG honour system. Recent upgrades prevent the (boring container<>station shuffle; there's now a cap on the number of visits **per session**.
- also very early: mine in Sapphire; Port Rivoch pays the highest prices. Keep the beam moving, it mines faster.
- also remember that cities on planets tend to pay better than stations
- my own find: Olympus Prime has 2 constructors; buy materials, go to constructor, build stuff, sell stuff anywhere in the system. Best prices are for fuel converters (500-600k) from anti-matter cells; repair system C3 (130-150k) from machinery components.
- buy Rucker, sell Lost Rucker ?
- some mining in Rucker, diamonds/platinum 2-3k
- Atlas mining: platinum 7-9k, diamonds 2-6k plus gold & silver around 3-4k.
- **Editor: it's probably wise to develop some flying and jumping skills and upgrade your ship a bit and get a reasonable wad of \$\$\$ before you try this one!**

<Spoiler Text Protected>

try hostile gun running - run guns and equipment into the most hostile stations you can find without ever firing a shot (and without dying). I built up a bunch of trade stations in Pices along with a constructor, then I filled my cargo holds and jumped into *Pearl* and made a mad dash for the station with the goal of not dying. You sell off your stash and then run back to the gate. Once I got to the point where I could make the run there and back without taking any hits (and without using my afterburner) then I moved on to more complex challenges. In the end (after about an hour), I got much better at handling my ship, made about 30 million and had a lot of fun.

- maybe Cerulean? I saw that Afterburners and Excalibur packs in the Cerulean system were going for 800k and 2.4M but were 1.3M & 3.9M in the other sector off of Cerulean. I was making 2M a trip. (he probably means either the hidden planet in Cerulean or the Cerulean WZ)
- install four or five cargo spaces, land on a planet near a city, mine for gold, silver, diamonds and that other expensive stuff - filling one cargo bin with each. Then turn around and sell it all at the city station. Others prefer to mine asteroids and sell at stations - but I prefer the scenery planetside. However, you don't make *that* much money from mining, unless, see above, you do it somewhere with crazy prices for metals, like Atlas.

- travel from station to station and buy anything that I can get that is cheap to buy, jump to another station and sell the things that are profitable/buy stock that is cheap at the second station. It is a good way to make money while you are checking the prices for the items and moving to the next station. If the station has antimatter units then I can buy them for next to nothing and convert them to fuel converters. Then it's just a matter of finding the station or city that gives the best price.

These are **SPOILERS** but you have to think and do some work for your money!

- build your own trading station in a high-tech system! - when you build your own trading station you automatically get a license for it. It's better for two reasons: because it's likely **cheaper** to build your own than to buy a license from an existing trade station; licenses depend on how much \$\$\$ you have - at the beginning of the game in Rucker they cost 1.8M-2M+. When you have made a goodly fortune they can cost 750 million (yes . . . million!) but can still be good value on the elite trade routes

Also because it leaves you with more potential places to sell at a high price (if you buy a license at an already existing trade station, you will not want to sell to that station anymore, obviously. If you build your own station, you can still sell at all the other existing stations, which is good because prices vary from station to station and you might make better profit margins for expensive items)

- work a system with a developed economy (Rucker, your reputation is Good there in the beginning). Developed economy means high prices overall, but a station license gives you a 25% discount, and 25% of a 1M gizmo is much better than 25% of the same gizmo that costs 200k in a system with undeveloped economy.
- Note the prices you pay and sell at. You can soon work out the optimum cargo. Remember your secondary weapons slot can carry 8 missiles, your cargo bays another 5 items (including missiles) and you can always lose some bit of installed equipment for a while and free up a few equipment slots. Potentially you can trade a mix of $8+5+4 = 17$ missiles/pieces of equipment

Trading - Best routes and places

- **Pearl:** Pearl has some excellent opportunities but it is a very hostile environment - to be avoided until you have some experience and quite of a lot of "seed" money. Details are given elsewhere
- **Lost Rucker:** Instead of selling in Rucker, why not go just that wee bit further to Lost Rucker - you might find that you get even better selling prices there!! There are no docking fees, and it's a safe zone to get repairs done/let repair unit do its job. There is a (hidden) way of getting there from Rucker. Look in the "Freebies" section for hints and a walkthrough

Buy in Pearl (Port Oasis - buy a license) Then go to Lost Rucker - you get nearly the same prices as at the hidden planet in Pearl, and its faster travel time (5 jumps vs 10 to Pearl's hidden planet) and a heck of a lot safer.

- **Sol:** Trading in Sol System. The run from Jupiter to Saturn to Mars and then return to Earth. I bought station licenses for the three outer planets and that's the fastest, easiest, and safest way to make a fortune and build your civilian rank. There are no hostiles in Sol. All you have to do is get there! And not try to land on Earth at weekends
- Develop an **uncharted system** by building trade, research, energy and deploy station

These are the REAL SPOILERS . . . your final warning!

<Spoiler Text Protected>

Other good trade routes (15 - 35 million per run - average 5.5 million per minute) (Spoiler)

Purchase in the Pearl system, from a couple of different stations at random, take the gate to Novachron station in Lost Rucker. It is a really short, profitable trade run. 15-35 mil so far on a regular run. Not bad for 3-6 minutes of effort.

The biggest money making route:

<Spoiler Text Protected>

To make more than 5 million a minute you don't need to do any of the IMG quest. Just get some cash (ideally at least 2.5 million, anything over 500k will do but will take longer) and go to Port Oasis (in orbit around the planet Oasis) in the Pearl system. Buy whatever high tech items you can afford (fulcrum torpedo, afterburner drive, missiles, anything really) and take them to the hidden planet in the Pearl system (not too hard to find yourself, but if you are lazy I'm sure the coordinates must be on SeeJay's website). Takes just under 2 minutes 30 seconds each way on autopilot.

With the profit you make from that trip you will be able to buy more stuff on the next trip. Soon you will be limited by the amount of stuff you can fit (once your frame is maxed out) or buy at once rather than your cash. At that point (or earlier if you like) buy a license at Port Oasis to increase your profit margin. You can now make more money in an hour (more than half a billion if you are efficient) than you could do by mining (or pretty much anything else except do the same kind of trade run between less profitable points) in a week of solid play.

If your cash is all tied up in your ship just fly directly to Pearl hidden and sell everything to raise capital. Fly back to Oasis in the cheapest frame (even the smallest fuel tank, 400 is plenty for a round trip) and use the cash you raised to start the trade run.

Finishing the IMG Quest is still not a bad idea, it will give you enough cash to begin doing this trade run properly. If you want you can just do the quest until you get the first container location, selling stuff from that gets you enough cash for serious trading pretty quickly.

The best cash per trip can be obtained by reloading several times in Port Oasis so you can get as many auto CM launchers and AM systems as you can carry (more than 7 million profit per piece). If you think reloading is cheating then – firstly why are you even reading this? - you can just wait around a while for new stuff to show up and/or land at the actual planet Oasis or jump out of sector and back in if reloading isn't your style. I find it quicker to just take whatever high priced equipment is there and fill the rest up with fulcrums. What yields more profit per minute is debatable and depends on the luck of the draw.

Build a station in orbit around the hidden planet - it saves having to land and take off each time and the prices are still excellent.

The REALLY REAL SPOILERS - one for newbies - one for more experienced pilots

Use these and you might as well not play the game. Use too many of these and you'll probably stop playing the game because there isn't much left to do!

<Spoiler Text Protected>

Freebie: Once in Rucker head to the Pearl gate, but do not enter it. Travel East from the Pearl jump gate and keep your eye on your screen 1 to 2 sector from Pearl gate you will see a purple blip.

Follow it until to you get to the gate. It's a real gem of a surprise!

buy at Pearl - Port Oasis (anything really expensive), sell Pearl Hidden; very hostile area, so maybe sell Lost Rucker. Best prices: FT (Fulcrum Torpedoes) buy for 1.8M, sell for 5M.

Mega Spoilers: Where are the trade places that are so good? Mega Spoilers

Warning the only text that has been <Spoiler Text Protected> in this part is the specific coordinates of the Hidden Planet

Just get some cash (ideally at least 2.5 million, anything over 500k will do but will take longer) and go to Port Oasis (in orbit around the planet Oasis) in the Pearl system. Buy whatever high tech items you can afford (auto CM launchers, anti-missile systems, fulcrum torpedoes, Excalibur missile systems, & constructors) and take them to the hidden planet in the Pearl

Port Oasis:

X: 18097		3497 :SX
Y: 2240		0 :SY
Z: 980		-802 :SZ

<Spoiler Text Protected>

Hidden Planet - Safe Jump Exit:

X: 67038		3588 :SX
Y: 12979		0 :SY
Z: -47513		-1828 :SZ

Takes just under 2 minutes 30 seconds each way on autopilot. With the profit you make from that trip you will be able to buy more stuff on the next trip. Soon you will be limited by the amount of stuff you can fit (once your frame is maxed out) or buy at once rather than your cash. At that point (or earlier if you like) buy a license at Port Oasis to increase your profit margin. You can now make more than half a billion if you are efficient

Build a station in Hidden's orbit and you can trade without the hassle of landing and taking off

If your cash is all tied up in your ship just fly directly to Pearl hidden and sell everything. Fly back to Oasis in the cheapest frame (even the smallest fuel tank, 400 is plenty for a round trip) and use the cash you raised to start the trade run.

It's a bit quicker to fly to Arvoch WZ from Pearl - the prices are very good - build a station 10 sectors away from the gate and jump to it to sell for a more peaceful entry to the station(give up the licence or you will lose 25% because of your licence discount buying and selling!)

The best cash per trip can be obtained by reloading several times in Port Oasis so you can get as many auto CM launchers and AM systems as you can carry (more than 7 million profit per piece of equipment). You can just wait around a while for new stuff to show up and/or land at the actual planet Oasis if reloading isn't your style. I find it quicker to just take whatever high priced equipment is there and fill the rest up with fulcrums. What yields more profit per minute is debatable and depends on the luck of the draw.

I have yet to find somewhere cheaper to buy the best items than Port Oasis or that buys them at a higher price than Pearl Hidden. Someone else has found a better trade route in terms of profit per minute but has asked that the information is not make public on the Forum or this guide. It's a couple of times more profitable. Worth knowing about since it shows it's worth looking around and doing a bit of research, but it also shows that the detailed route given above is well worth milking if you want quick a savings income.

Section22: Appendices

These appendices are edited version taken from the Mercenary Technical Manual to allow easy reference for basic technical details in the Evoverse

Appendix 1: Ship Frames (Civilian - Alliance)

 <p>Talon</p>	<p>The Talon is a scout class frame that provides a basic platform for new mercenaries. It is inexpensive to build and operate. While the weapon options and defensive capabilities are limited, the Talon frame is the fastest platform and most manoeuvrable. While its design possibilities are limited, it can be optimized effectively for particular advantages.</p>
 <p>Pulsar</p>	<p>The Pulsar frame expands on the original and provides more assembly resources with a minimal reduction in performance and manoeuvrability. It also includes substantially more armour and is a more flexible platform from a design options standpoint.</p>
 <p>Saber</p>	<p>The Saber is a fighter class frame, although it is also used as a scout by many mercenaries. Its reinforced armour and efficient power system provide a high level of protection for such a small frame. Like the Raven, the Saber frame is considered to be the best choice for light and medium combat duties by most mercenaries and is very affordable.</p>
 <p>Raven</p>	<p>The Raven frame expands on the Saber design. With a larger size, it offers more assembly resources and armour at a similar level of performance. Named after the Alliance combat spacecraft that fought in the first Alliance-Federation war, the new Raven provides a solid platform for mercenaries looking for a capable combat frame with amazing performance and manoeuvrability.</p>
 <p>Striker</p>	<p>The Striker frame is a unique compact design that uses blended metallic composites for very effective armour protection and advanced technology to keep its overall size small compared to other frames. Its rounded shape and powerful energy system allow it to have a high level of assembly resources and support for energy hungry shield systems. An excellent multi-role frame.</p>
 <p>Phoenix</p>	<p>The Phoenix class frame is a revised version of the Striker, offering a much larger structure with more assembly resources and armour. These improvements are available with a minimal reduction in agility. Most mercenaries who prefer the advantages of the Striker frame choose the Phoenix as the best version.</p>
 <p>Hunter</p>	<p>Designed to survive intense large scale battles and protect valuable cargo from even the most powerful adversaries, the Hunter class frame boasts triple layer metallic composite armour and plenty of assembly resources for high end components. It's main drawback is limited agility and speed, but it is ideal for mercenaries who require high end offensive and defensive capabilities.</p>

 <p>Renegade</p>	<p>The Renegade class frame was built as a combat oriented upgrade to the Hunter frame. It sacrifices some agility for a larger size with 25 more assembly resource points and another layer of armour. It also features a compression capacitor in its engine management module, which helps to minimize the loss of speed, resulting in a reduction of only 50 MPS base speed compared to the Hunter frame.</p>
 <p>Centurion</p>	<p>Considered the battleship among mercenaries, the Centurion frame commands attention and respect. Only wealthy mercenaries can afford to buy and operate this ship, but the reward is a commanding lead over other frames in most combat situations. It can be designed to also be an effective transport, offering a level of cargo safety far above what other ships are capable of.</p>
 <p>Leviathan</p>	<p>Several private mercenary groups pooled their resources together to develop the Leviathan class frame as an answer to the Centurion which had dominated much of Evochron for a long time. The Leviathan offers an unequalled level of assembly resources and armour. It usually takes a skilled group of pilots to defeat one of these ships.</p>

Appendix 2: Ship Frames (Civilian - Federation)

 <p>Arrow</p>	<p>One of the first Federation frames made available to mercenaries operating in Alliance space, the Arrow frame offers remarkable agility. While not quite as fast as the Alliance built Talon, its powerful thruster system gives it a manoeuvrability level that's over 20% higher.</p>
 <p>Scorpion</p>	<p>The Scorpion offers a robust platform for a light frame. With a higher design capacity than most other light frames coupled with agility that matches the Arrow, it is a very capable platform for light transport and combat duties. This frame is also popular for racing.</p>
 <p>Panther</p>	<p>The Panther is a sleek design offering high speed and moderate assembly capacity. It's not quite as agile as the lighter Federation frames, but can hold its own against the Alliance Talon and Saber frames. With its higher design capacity and high speed for its size, this frame is a popular choice for mercenaries who trade in moderate to hostile space.</p>
 <p>Mirage</p>	<p>The Mirage frame is a very capable medium combat platform. Complementing its thick armour is a high power shield core similar to the design used on the military's Aries fighter. It's not quite as fast as the comparable Alliance Raven frame, but it has an edge in agility and design capacity. This frame is a popular choice among skilled combat pilots.</p>
 <p>Venture</p>	<p>The Venture was designed for moderate transport duties. It has a relatively high assembly capacity for its size along with a multi-coil shield core. While its additional bulk does limit its velocity and acceleration, powerful manoeuvring thrusters help it match the agility of the lighter Mirage frame, even with its heavier hull armour.</p>

 <p>Sentinel</p>	<p>Named after the defensive combat role it was built for, the Sentinel is often used in escort and support duties. It has earned a reputation of being able to take a hit. With its moderate assembly and design capacities, it can also be made into a formidable offensive combat spacecraft. Mercenaries often devote its available resources to weapons and shields.</p>
 <p>Guardian</p>	<p>The Guardian is based on the Sentinel's design, but adds significantly more armour, assembly and design capacity, and shielding. Its ability to carry a much higher payload comes at a price, its speed and agility are significantly less than the lighter Sentinel. However, many pilots consider its additional protection well worth the price.</p>
 <p>Legacy</p>	<p>The Legacy frame is designed to provide a high cargo and weapon capacity in one of the fastest and most agile heavy designs. It features much better agility compared to a similarly configured Renegade frame along with a slight speed and acceleration advantage. Because of its agility, this frame is often used in heavy combat roles.</p>
 <p>Mammoth</p>	<p>Designed to be a heavy transport, the Mammoth offers enough design capacity to carry many of the most advanced equipment upgrades at the same time. While it's slightly slower than a comparable Centurion, it is significantly more manoeuvrable. This ship is often the preferred choice for surviving in hostile space.</p>
 <p>Starmaster</p>	<p>Little is known about this frame. The Starmaster is rumoured to be built in only a few secret locations and is generally only owned by the wealthiest of mercenaries.</p>

Appendix 3: Ship Frames (Military)

 <p>Ferret</p>	<p>The Ferret is a lightweight scout spacecraft designed for high speed reconnaissance. It carries a basic internal missile rail of 4 hardpoints. The Ferret has minimal armour, but its high agility and speed makes it very effective at evading missiles and gunfire.</p>
 <p>Aries</p>	<p>The Aries is categorized as a scout but provides sufficient armour and speed for it to be effective in light fighter roles as well. This spacecraft is often used for training combat fighter pilots. It is also often used for patrols and scout duties that require more range than the Ferret can provide.</p>
 <p>Shadow</p>	<p>The Shadow is the Alliance's primary light attack fighter. For its size and agility, this spacecraft carries a remarkably high payload limit. It also features a shield core with nearly the same output capacity as the Wraith. Its wing design also gives it an advantage in atmosphere manoeuvrability while its composite armour offers good resistance against direct hull impacts.</p>
 <p>Wraith</p>	<p>Considered to be the front line fighter in the Alliance Navy, the Wraith is a multi-purpose medium range strike fighter with extreme speed and agility. With 8 hardpoints and moderate armour, it's a well rounded fighter package capable of filling a variety of combat roles.</p>
 <p>Evoch-C</p>	<p>The Evoch-C is the next generation of Alliance military fighter technology. It includes a manoeuvring system based on reverse engineered Vonari spacecraft and unique ion-pulse engines that together provide the most agile and fast spacecraft known to exist. Its reflective armour offers slightly better protection against particle cannons compared to the Wraith.</p>
 <p>Evoch-E</p>	<p>The Evoch-E is a heavily redesigned version of the C model. This platform essentially takes the original Evoch design and improves it in virtually every area. It is faster, more manoeuvrable, and better armoured than the original. The only drawbacks to this design over the C model are higher fuel use and cost. This new fighter is considered the latest in technology.</p>
 <p>Lamprey</p>	<p>The Lamprey is based on the Evoch-E platform, but is modified to perform a more strike oriented role. What it lacks in speed and agility, it makes up for in armour and shielding. It's unique forward swept wing is combined with a powerful thruster set which provides excellent agility in planet atmospheres and open space.</p>
 <p>Firestar</p>	<p>Considered by many to be the best overall strike spacecraft, the Firestar is an all-new design built to replace the aging Avenger. It offers a significant speed advantage over the Avenger while being barely slower than the Lamprey. It's also much more agile than the Avenger with a minimal reduction in armour. As a result, this design is also capable in a dogfight.</p>

 <p>Avenger</p>	<p>The Avenger is designed to be a heavy interceptor and strike spacecraft. Its thick armour coupled with high speed and agility for its size give it a distinct advantage in many heavy combat roles and strike missions against powerful capital ships. The Avenger is the primary strike and intercept spacecraft of the Alliance Navy.</p>
 <p>Shrike</p>	<p>The Shrike is a major redesign of the Avenger platform. It is a heavy attack spacecraft optimized for capital ship engagements. Its reactive armour and powerful shield core provide an effective defence against flak cannons and particle gun impacts. The Shrike also has the highest speed of its class, allowing it to reach its target quickly.</p>
 <p>Predator</p>	<p>The Predator is generally regarded as the Alliance Navy's most powerful heavy attack spacecraft. It has the heaviest armour of any military spacecraft and provides agility that exceeds even the lighter civilian Centurion and Leviathan frames. It is used sparingly due to its high construction and repair costs, but is the spacecraft of choice when the objective involves high numbers of powerful enemy forces.</p>
 <p>Chimera</p>	<p>The Chimera is the result of numerous experiments and design concepts to produce the ultimate heavy attack spacecraft. Its high fuel burn rate and extreme cost limit its practicality and accessibility. But with its decent agility and speed, immense shield core, and ply-carbon plate armour, it is a force virtually no one wants to go up against on the battlefield.</p>

Appendix 4: Ship Stats

Originally created by Marvin - updated for Expansion by DaveK & Busch

CIVILIAN SHIPS - BASIC CONFIGURATION (Provided By Marvin)					
NOMENCLATURE	ASSEMBLY	CAPACITY	AGILITY	ARMOR	BASE SPEED*
Talon	200	7	80	90	558
Arrow	225	8	100	85	545
Scorpion	225	9	100	105	519
Pulsar	225	8	75	110	525
Saber	250	10	72	130	505
Panther	275	10	74	125	492
Raven	300	11	70	140	479
Mirage	325	12	70	145	459
Striker	350	12	65	180	459
Venture	375	14	70	170	440
Phoenix	400	14	55	190	413
Sentinel	425	15	58	185	413
Hunter	450	18	50	210	361
Renegade	475	19	35	225	328
Guardian	500	18	55	200	374
Centurion	500	21	30	250	262
Legacy	525	20	50	220	348
Mammoth	550	21	45	240	256
Starmaster	550	22	40	280	243
Leviathan	550	22	25	300	262

* Ships speed when fitted with an Illumine MK I Engine.

CIVILIAN SHIPS - STANDARD ASSEMBLY COMPONENTS* (Provided By Marvin)				
NOMENCLATURE	HARD POINTS	CM PACKS	EQUIPMENT SLOTS	CREW SLOTS
Talon	2	1x25	3	1
Arrow	3	1x25	3	1
Scorpion	3	1x25	4	1
Pulsar	2	1x25	4	1
Saber	4	1x25	4	1
Panther	4	1x25	4	1
Raven	4	1x25	5	1
Mirage	4	1x25	5	2
Striker	5	1x25	5	1
Venture	5	2x25	5	2
Phoenix	8	1x25	4	1
Sentinel	5	2x25	5	3
Hunter	8	2x25	5	3
Renegade	8	2x25	5	4
Guardian	8	2x25	5	3
Centurion	8	4x25	5	4
Legacy	8	3x25	5	4
Mammoth	8	4x25	5	4
Starmaster	8	4x25	5	5
Leviathan	8	4x25	5	5

* Assembly components can be modified and adjusted within the ships capacity range.

MILITARY SHIPS* (Provided By Marvin)					
NOMENCLATURE	ASSEMBLY	AGILITY	ARMOR	HARD POINTS	MAX SPEED
Ferret	400	94	120	4	814
Aries	400	90	135	4	788
Shadow	420	95	145	8	821
Wraith	420	95	155	8	821
Evoch-C	440	100	180	8	880
Evoch-E	440	105	200	8	900
Lamprey	470	92	220	8	801
Firestar	470	90	240	8	788
Avenger	500	70	270	8	755
Shrike	500	55	285	8	722
Predator	500	50	310	8	689
Chimera	500	52	375	8	709

* All military ships are fitted with eight equipment slots and 4x25 CM Packs and 1 cargobay.

Appendix 5: Engine data

Originally created by Marvin - updated for Expansion by DaveK & Busch

ENGINES (Provided By Marvin)				
NOMENCLATURE	ASSEMBLY	THRUST	FUEL USAGE	INCREASE*
Illumine MK I	15	150	36	0
Illumine MK II	25	300	60	32
Voyage MK I	45	450	84	65
Voyage MK II	70	600	108	98
Richton Ion	90	750	132	131
Clan Richton Ion	115	900	144	164
Neptune MK I	145	1050	156	197
Neptune MK II	155	1200	168	230
Quantum Ion MK I	170	1350	180	262
Quantum Ion MK II	200	1500	192	295

* Amount of increase (+/-0.5) to a Ships Base Speed.

Engine Class 1 Illumine Mark I Engine While merely an entry level engine, the Illumine is ideal for Scouts that are designed more for shipping, mining, cleaning, trade, and other non-combat objectives. The engine is known for its low cost of operation, being the most fuel efficient type of engine available to mercenaries.

Engine Class 2 Illumine Mark II Engine This upgraded version of the Illumine engine provides adequate performance for light combat duties, but is generally considered to be best for non-combat objectives. It's small design, low fuel consumption, and modest output provides a good first upgrade for rookie mercenaries flying light spacecraft.

Engine Class 3 Voyage Mark I Engine Designed to provide a high level of power with minimal assembly use, the Voyage class engine is the ideal choice for small spacecraft that need assembly resources for other critical components. It also includes twin vertical stabilizers to improve atmospheric control.

Engine Class 4 Voyage Mark II Engine The Mark II offers remarkable power output for its size and assembly resources. It's considered by most mercenaries to be the best choice for light and medium class spacecraft. It also offers close to the power output of a Richton engine with a substantially lower assembly resource requirement.

Engine Class 5 Richton Ion Engine The military research division in the Richton system developed this engine for use in interceptor class combat spacecraft and was soon made available to mercenaries looking for a propulsion system that balances fuel consumption with power output. The Richton is a good overall choice for a variety of combat and non-combat roles.

Engine Class 6 Clan Richton Ion Engine The CR Ion Engine Improves the power capacity of the original Richton version with a very small increase in fuel consumption. Not generally recommended for smaller spacecraft, the Clan Richton engine is a good fit for medium sized spacecraft.

Engine Class 7 Neptune Mark I Engine The Neptune is a well armoured and efficient propulsion system. For its power, the Neptune is relatively fuel efficient. It's generally a better choice for larger ships requiring powerful engines and with a high level of assembly resource needed to accommodate its size.

Engine Class 8 Neptune Mark II Engine The Mark II Neptune is substantially larger and more powerful than the Mark I. It also includes a much larger cooling system with bigger heat vents for improved efficiency and reduced exposure to damage. The Neptune is also well shielded and is a popular choice for mercenaries who frequently engage in heavy combat.

Engine Class 9 Quantum Ion Mark I Engine The Mark I Ion engine is the civilian version of a classified military propulsion system offering far more power than other engine types. It includes 2 compression cells which improves performance for rapid speed changes and 4 sub-outlets for stability.

Engine Class 10 Quantum Ion Mark II Engine The Mark II is essentially two Mark I engines joined together. It includes 4 compression cells and 8 sub-outlets. While not the most fuel efficient engine by any measure, its output is unmatched and provides remarkable speed even for the heaviest spacecraft.

Appendix 6: Wing data:

Please note that in the following descriptions taken from manufacturer's technical sales literature, "thruster coils" is the name for the combination of the plasma acceleration coils and electromagnetic focussing lenses

Wing Class 1 (assembly points: 10) The *StarGlider* is the standard entry level wing system. It provides moderate performance for small ship frames and requires a very low level of assembly resources. Combined with a low cost, its features result in this wing and thruster set being a common choice for pilots who want to compromise on agility. This system includes the weakest thruster set available to mercenaries.

Wing Class 2 (assembly points: 20) The *Archer* wing system is a minor increase in overall performance compared to the StarGlider, but it does offer its improvement at a minimal cost in assembly resources and credits. It works best on smaller frames, but is also useful on larger frames to recover needed assembly resources for pilots who want to reduce manoeuvrability for other options.

Wing Class 3 (assembly points: 35) The *Raptor* wing is unique among small class wings. It provides a much higher level of performance and stability compared to other wings in the same class and even some in higher classes. Its twin pylon design for its 4 tail fins only needs to be attached to a frame at the front two wings, which keeps assembly resource consumption to a minimum.

Wing Class 4 (assembly points: 55) The *Falcon Mark I* wing is ideal for light and medium frames. It provides improved thruster performance needed for heavier frames and doesn't require a lot of assembly resources. Its original application was on Alliance military spacecraft and is now being sold in the free civilian markets of Evochron.

Wing Class 5 (assembly points: 70) The *Falcon Mark II* wing adds a one piece tail section to the original design, further improving agility. A good upgrade for small and medium frames.

Wing Class 6 (assembly points: 80) The *Falcon Mark III* wing adds two middle fins to the Mark II design along with additional thruster coils further improving agility. Recommended for small and medium frames.

Wing Class 7 (assembly points: 95) The *Razor Mark I* wing is a good choice for medium frames as it includes two thruster packs to assist the inertial dampening system for improved manoeuvring performance. Its additional weight and connections for the thruster system do require substantially more assembly resources, but most pilots consider the advantages it offers to be worth it.

Wing Class 8 (assembly points: 110) The *Razor Mark II* wing adds vertical stabilizers to the wings for improved performance. Not an essential upgrade, but a minor improvement for frames with a few assembly resources remaining.

Wing Class 9 (assembly points: 120) The *Razor Mark III* wing adds a tail section, offering additional thruster coil space for improved performance and stability. Another minor improvement to the Razor design.

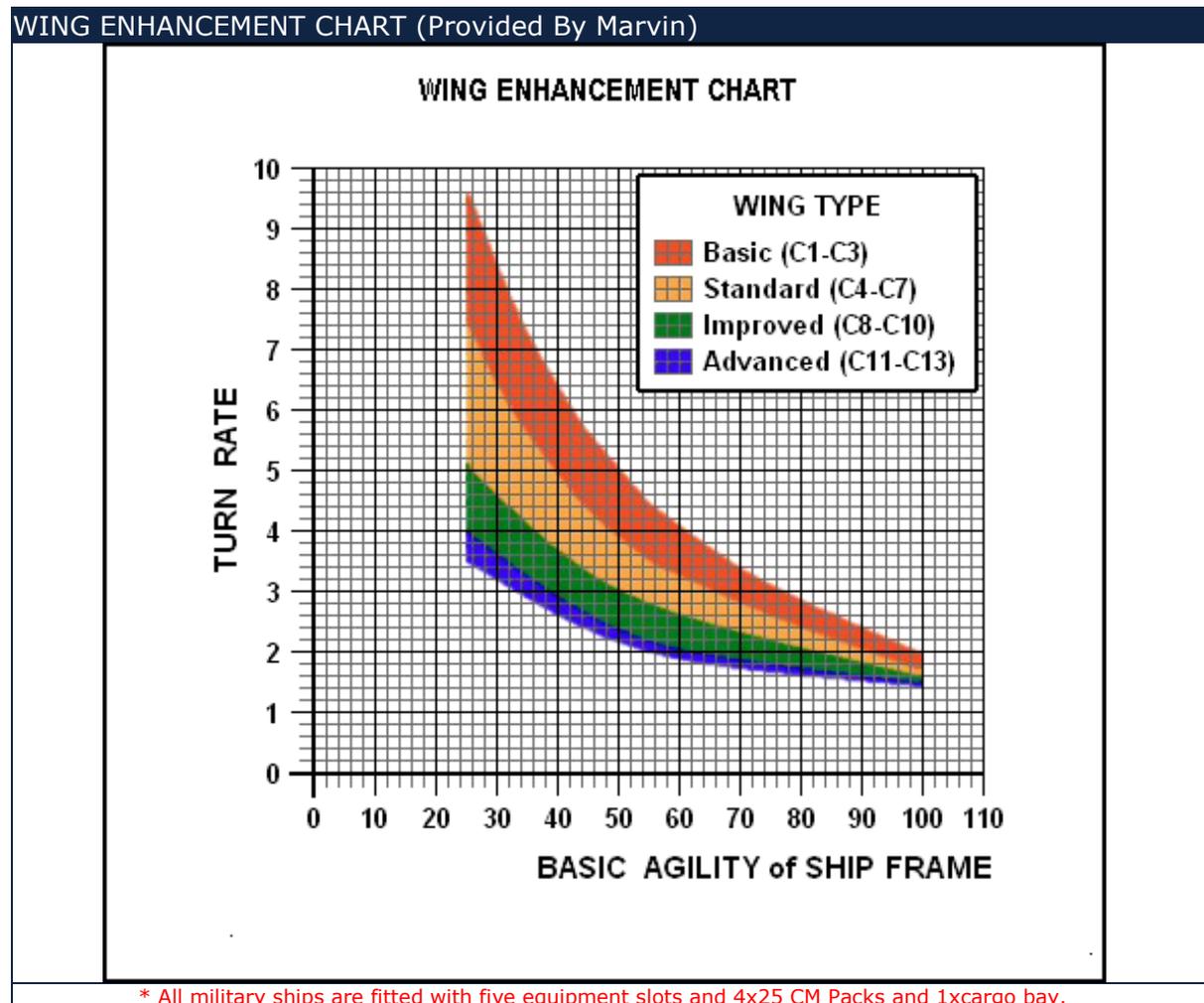
Wing Class 10 (assembly points: 135) The *Razor Mark IV* wing adds two middle stabilizing wings. While the individual enhancements offer minimal improvements, collectively they provide a substantial upgrade compared to the MKI design.

Wing Class 11 (assembly points: 150) The *NightHawk Mark I* wing may look very small in comparison to other wing designs, but it features a revolutionary advancement previously only used in military applications. Mounted on each wing is an anti-gravity pod that is used to generate additional power and agility. It's design provides a higher level of performance than even the bulky Razor.

Wing Class 12 (assembly points: 170) The *NightHawk Mark II* wing adds rear vertical stabilizers to the original design, offering additional stability and anti-gravity emitters. It retains the same low visual profile and overall size as the Mark I design.

Wing Class 13 (assembly points: 180) The *NightHawk Mark III* wing adds middle stabilizer wings to the Mark II design, offering additional stability. It continues to provide a low profile appearance with its stealthy design. This wing is generally considered the best performing model available to mercenaries.

The graph is dates from preExpansion - however, preliminary tests have shown that the basic patterns and shape of the graph will be the same - the actual turning rate could be a little different



Appendix 7: Weapons Data

Originally created by **Marvin** - updated for Expansion by **DaveK & Busch**

With introduction of the universally available Weapon Lab, most pilots create custom cannon combo's. However, custom missiles don't appear to be as popular as yet.

Particle Cannon

Name	Yield	Cycle Rate	Range
C1: The FlareBeam particle cannon is a rapid fire, low energy, low yield weapon used by new mercenaries. It packs a decent punch for its low cost and energy use.	10	12	830
C1: The IceSpear particle cannon offers a higher yield than the FlareBeam and the same firing rate with only a slightly shorter range.	15	12	710
C1: The FireFury particle cannon provides nearly the same level of damage as the StarGuard cannon with a slightly longer range. Although its firing rate is comparable to lower class weapons, it's shorter range is a compromise.	24	14	680
C1: The StarGuard particle cannon is the most powerful class 1 weapon available. It's still a lower powered plasma based weapon, but it offers near class 2 level yield with a longer range.	32	14	650
C2: The Stalker particle cannon is a class 2 weapon designed for efficient energy use in exchange for a lower yield and shorter range.	38	20	630
The Eclipse particle cannon is a kinetic weapon designed to disrupt a target's ability to maintain a consistent orientation, making it more difficult for the target to effectively counter attack. It offers a low yield, so it is best used in conjunction with other weapons or in a defensive role.	25	20	620
C2: The StarForge particle cannon is a moderate class 2 weapon that provides an even balance between yield, energy use, and firing rate.	45	22	660
C2: The Maxim-R particle cannon is a powerful, long range class 2 weapon designed for medium to long range fighter engagements. It features the rapid firing rate of a class 2 design while including the long range of a class 1 design. It has the highest energy use of any class 2 weapon, but also the highest yield.	50	22	780
The SunRail particle cannon is an energy depletion weapon . It's best used with other weapons or in a defensive role to limit the attack capabilities of a target. Several hits from this cannon can deplete the primary energy reserve of a target ship.	20	25	630
C3: The Razor particle cannon is a short range weapon designed for close combat. While it is limited by the shortest range of any particle cannon, it also uses the least energy of any class 3 weapon.	55	25	530
C3: The Predator particle cannon is effectively the same design as the Razor, but optimized for a slightly longer range and higher yield. The only significant drawback to this variant of the design is its higher cost.	58	25	560
The Trebuchet particle cannon is a specialized weapon designed to deplete the shields of a target . This weapon is best used with other support spacecraft nearby ready to attack with other weapon types. It is also most effective when used with a beam weapon.	28	28	630

continued . . .

Particle Cannon (continued)

Name	Yield	Cycle Rate	Range
C3: The Atlas particle cannon is a high yield, short range, class 3 weapon designed to inflict maximum damage with each shot. Its high energy use and low firing rate can limit its effectiveness in certain roles, but with sufficient energy, it is a powerful weapon for capital ship strikes and other larger ship engagements.	70	28	580
C3: The Phantom particle cannon builds on the Atlas design by extending the range and yield. Its only drawbacks are its higher energy use and cost.	75	28	650
The Banshee particle cannon is a high powered kinetic weapon designed to knock a target off course. It is best used in a support or defensive role, although it does also do moderate class 2 level damage.	40	28	600

Beam Cannon

Name	Class	Yield	Range*
C1: The Refractor laser beam cannon is a low power weapon using basic technology. It uses very little power, but also inflicts the least amount of shield damage.	C1	28	Linked
C2: The Metal-Vapor laser beam cannon uses a low level of energy and has a low yield against shields.	C2	35	Linked
C3: The Coil laser beam cannon uses a moderate level of energy and has a moderate yield against shields.	C3	42	Linked
C4: The Neodymium laser beam cannon uses a high level of energy and has a high yield against shields.	C4	49	Linked
C5: The Fusion laser beam cannon offers the highest level of shield damage, but also uses the most energy.	C5	58	Linked
<i>* The range of a beam weapon is linked to its particle weapon counterpart.</i>			

Missiles

Name	Yield	Range	Speed
C1: The Echelon missile is the fastest and longest range individual missile available. It's yield is also the least of any missile, but several of these can inflict significant damage and their cost is minimal.	1000	3800	1400
C2: The Viper missile is a long range, low yield design that inflicts a higher level of damage than the Echelon at a minimal reduction in range & speed.	1200	3500	1200
C3: The Rockeye missile is designed for medium range small craft combat. It offers a balanced mix of range, speed, and yield.	1400	3400	1000
C4: The Starfire missile is a multi-role, medium range, moderate yield design that works well in combat situations ranging from small ship dogfights to large ship escorts and intercepts. It generally commands a higher price for its versatile design.	1800	3000	900
C5: The Exodus missile is a short range, high yield design optimized for capital ship strikes and large ship engagements. They are best used at close range to leave little time for a target to use countermeasures.	2500	2400	700
The Leech EMP missile is designed to knock out a target's weapon and navigation systems . It's electro-magnetic pulse can disrupt a ship's sub-systems for several seconds, but it must detonate on contact with the target to work.	200	3500	1000
The Excalibur Pack is a regenerative missile system that constructs and fires eight missiles at a time. It takes a few minutes to reload after firing each salvo. The missiles themselves are relatively weak, but can be effective when collectively fired on individual targets.	800	4000	1800
Fulcrum Torpedoes are devastating weapons primarily intended for capital ship destruction, although they have also been used for fighter suppression. Due to their indiscriminate destruction, the Mercenary Guild considers the weapons contraband.	110000	2000	250
The Lynx missile targets a ship's engine system . Overall impact damage is relatively low, but the missile can critically damage a ship's engine system.	900	2700	800
The Rage missile targets a ship's weapons system . Overall impact damage is relatively low, but the missile can critically damage a ship's weapon system.	950	2800	850
The Cyclone missile is a medium range, medium yield weapon that also inflicts a kinetic burst on a target.	1500	3100	1000

Other Offensive Weapons

Name
Proximity Mine: Proximity mines explode when a ship approaches them at close range. When activated, a range indicator will be displayed on the HUD of the ship that places it. Data: ~2000 range, ~100,000 yield
Station Detonator: Specifically created to destroy Build Trade Stations and has no other offensive use. Yield - around 8 000 000. The SD's uses are for clearing redundant station clutter from systems and during Clan Wars where clans destroy opponent clan's stations to create space to build their own

Offensive Boosters

Name
The Cannon Heatsink helps keep primary particle cannons cooler during their firing cycles, allowing them to fire at significantly faster rates.
The Cannon Relay System doubles the energy capacity of your primary weapon system and adds two additional gun barrels to an installed particle cannon. It works by storing extra power in a network of capacitors between firing cycles, supplying sufficient energy for firing both sets of barrels per cycle.

Defensive Boosters

Name
The Anti-Missile System is a semi-effective beam weapon that targets an inbound missile as it approaches your ship. It fires an invisible beam of laser energy at the missile in an attempt to heat it up and cause it to explode before it reaches your ship.
The Automatic CM Launcher does exactly what the name implies. It will begin launching CM's as soon as a missile approaches effective countermeasure range. It can be wasteful with CM's, so pilots should train to use this system most effectively to minimize CM loss.
Shield Packs provide a significant charge to a ship's shield system. They can be installed on secondary hardpoints and raise all arrays by about 50%. Two packs should raise the shield reserve to 100%
The Shield Array Recharger works as an energy transfer system and provides additional shield energy to arrays that become critical by routing power from the main energy system to the shield system.

Other Defensive Equipment

Name
Stealth / Cloaking Device cloaks your ship from sensors and visual detection for a brief period of time (around 60 seconds). They are installed on secondary weapon hardpoints and can only be used once.
Sensor Probe provide location data for objects within range of around 25,000 on the NAV console. Once deployed, a circle will be displayed on the nav map indicating the range of the probe.
The Stealth Generator is a reusable piece of equipment that uses a ship's shield arrays to generate a stealth field. The stealth generator cloaks the ship visually and prevents it from being detected by sensors for up to around 180 seconds. They are installed in the equipment points. They are rare and very expensive
Charge Packs provide a full recharge to a ship's energy reserves. They can be installed on secondary hardpoints.

Appendix 8: Charted System Coordinates (four versions)

Table 1 has the known systems in alphabetical order

Table 2 has them arranged alphabetically but divided into quadrants

Table 3 has them arranged scanning left to right (W to E) across the core

Table 4 has them arranged scanning top to bottom (N to S) across the core

Table 1 - alphabetical

Agate	-2200	3620
Agate Hub	-2198	3520
Alpha Centauri	1300	-3700
Andromeda	2000	28000
Aquila	1400	-2700
Aries	-3500	2000
Atlas	1000	1500
AWZ(Pearl)	3500	-1500
Capella	2000	-1000
Cerulean	2400	2100
CWZ	2420	2500
Cygnus	-1700	1250
Deneb	3500	-3500
Emerald	-3200	-550
Fauston	-500	800
Iota	-2500	-1500
Lambda	-1250	-400
Lost Rucker	5500	-1000
Merak	-2000	2500
Olympus Prime	1250	500
Onyx	3500	1000
Orion	-1000	-2400
Pearl	3500	-1800
Pices	1800	-300
RiftSpace	7000	9500
Rigel	-3200	-2500
Rucker	1800	-2000
Sapphire	0	0
Sierra	-2200	3500
Sirius	-2300	-3700
Sol	-1050	-5050
SWZ	-2200	3800
Talison	100	2000
Thuban	0	-500
TWZ	100	2550
Vega	500	-2200
Virgo	700	-1250
Vonari	1000	5000
WolfZone	5550	5550

Table 2 - alphabetical within quadrants

NW	Agate	-2200	3620			
	Agate Hub	-2198	3520			
	SWZ	-2200	3800			
	Sierra	-2200	3500			
	Aries	-3500	2000			
	Talison	100	2000			
	Cygnus	-1700	1250			
	Merak	-2000	2500			
	TWZ	100	2550			
	Talison	100	2000			
NE	Fauston	-500	800	border		
	CWZ	2420	2500			
	Cerulean	2400	2100			
	Olympus Prime	1250	500			
	Atlas	1000	1500			
	Onyx	3500	1000			
	Sapphire	0	0		border	
	SW	Emerald	-3200		-550	border
		Lambda	-1250		-400	
		Iota	-2500		-1500	
Rigel		-3200	-2500			
Orion		-1000	-2400			
Sirius		-2300	-3700			
Thuban		0	-500	border		
SE		AWZ(Pearl)	3500	-1500		
		Pices	1800	-300		
		Vega	500	-2200		
	Capella	2000	-1000			
	Virgo	700	-1250			
	Pearl	3500	-1800			
	Rucker	1800	-2000			
	Aquila	1400	-2700			
	Alpha Centauri	1300	-3700			
	Deneb	3500	-3500			
Misc	RiftSpace	7000	9500			
	WolfZone	5550	5550			
	Vonari	1000	5000			
	Lost Rucker	5500	-1000			
	Andromeda	2000	28000			
	Sol	-1050	-5050			

Table 3 West to East

Aries	-3500	2000
Emerald	-3200	-550
Rigel	-3200	-2500
Iota	-2500	-1500
Sirius	-2300	-3700
Sierra	-2200	3500
Agate	-2200	3620
SWZ	-2200	3800
Agate Hub	-2198	3520
Merak	-2000	2500
Cygnus	-1700	1250
Lambda	-1250	-400
Sol	-1050	-5050
Orion	-1000	-2400
Fauston	-500	800
Sapphire	0	0
Thuban	0	-500
Talison	100	2000
TWZ	100	2550
Vega	500	-2200
Virgo	700	-1250
Atlas	1000	1500
Vonari	1000	5000
Olympus Prime	1250	500
Alpha Centauri	1300	-3700
Aquila	1400	-2700
Pices	1800	-300
Rucker	1800	-2000
Capella	2000	-1000
Andromeda	2000	28000
Cerulean	2400	2100
CWZ	2420	2500
Onyx	3500	1000
Pearl	3500	-1800
Deneb	3500	-3500
AWZ(Pearl)	3500	-1500
Lost Rucker	5500	-1000
WolfZone	5550	5550
RiftSpace	7000	9500

Table 4 North to South

Andromeda	2000	28000
RiftSpace	7000	9500
WolfZone	5550	5550
Vonari	1000	5000
SWZ	-2200	3800
Agate	-2200	3620
Agate Hub	-2198	3520
Sierra	-2200	3500
TWZ	100	2550
Merak	-2000	2500
CWZ	2420	2500
Cerulean	2400	2100
Aries	-3500	2000
Talison	100	2000
Atlas	1000	1500
Cygnus	-1700	1250
Onyx	3500	1000
Fauston	-500	800
Olympus Prime	1250	500
Sapphire	0	0
Pices	1800	-300
Lambda	-1250	-400
Thuban	0	-500
Emerald	-3200	-550
Capella	2000	-1000
Lost Rucker	5500	-1000
Virgo	700	-1250
Iota	-2500	-1500
AWZ(Pearl)	3500	-1500
Pearl	3500	-1800
Rucker	1800	-2000
Vega	500	-2200
Orion	-1000	-2400
Rigel	-3200	-2500
Aquila	1400	-2700
Deneb	3500	-3500
Sirius	-2300	-3700
Alpha Centauri	1300	-3700
Sol	-1050	-5050

Appendix 9: System Descriptions (arranged into alphabetical order)

Agate

The **Agate** system was recently colonized by explorers from the Sierra system. While the economy is barely noteworthy, several powerful Energy companies have diverted their main efforts to Agate recently. The Guild and Rebel colonists in the system are opposing these corporations. Through unknown paths, large amounts of the rare ores Gold and Silver have been appearing on the black market in the system. The Alliance has stationed the carrier Verity in Agate, due to its relative proximity to the Vonarian sectors. There have not been any reports of Vonarian sightings, however, leading to the belief the Vonari are not aware of the Agate system.

Economy Classes: Energy

Faction Details:

Energy Companies - Strong presence, run by Agate Construction Corp.

Navy/Military - Strong presence, defends energy interests and trade lanes.

Rebels - Small presence, native colonists, opposing the ACC.

Guilds/Clans - Unknown presence, scattered, encounters are fairly rare.

Miners - Moderate presence, works with energy companies.

Alpha Centauri

Alpha Centauri has the distinction of being the first system to be colonized outside of Sol. The open trade between this system and Aquila results in it having a strong exchange of energy for technology. The planet AC528 is known for paying slightly more for most items. There are also no docking fees for most mercenaries in this system, giving it a cost advantage over both Aquila and Deneb. Most ships are friendly to outsiders, but occasional trade blocks and attacks do occur.

Economy Classes: Energy

Faction Details:

Energy Companies - Strong presence, primary faction with economic control.

Navy/Military - Strong presence, controlled by energy companies.

Rebels - Uncertain presence.

Guilds/Clans - Uncertain presence.

Miners - Light presence, short trade runs from asteroids to planet.

Aquila

Aquila consists of one planet in orbit around a blue-white star. While it may seem like an empty system, it does provide a high paying trade location with several stations and a relatively strong technology based economy. It is the central trade location between Alpha Centauri, Deneb, and Rucker.

Economy Classes: Technology

Faction Details:

Energy Companies - Moderate presence, devotes production to technology.

Navy/Military - Moderate presence, high ship and weapon technology.

Rebels - Moderate presence, battles outsiders frequently.

Guilds/Clans - Light presence, shares common interests with energy companies.

Miners - No significant presence.

Aries

Aries is a hostile system where battles often rage for the few scarce resources available. Not much trading takes place here due to the system only having one planet with two stations, instead many mercenaries have resorted to fighting each other for the cargo they are carrying. Aries is considered to be one of the most dangerous systems in Evochron and generally best avoided. Why the system is home to so many mercenaries remains a mystery, it's quite possible there are resources available here that aren't in the charted part of the system.

Economy Classes: Unknown

Faction Details:

Energy Companies - Unknown presence.

Navy/Military - Unknown presence, likely scattered patrols.

Rebels - Unknown presence, likely a powerful local faction.

Guilds/Clans - Unknown presence, likely a powerful local faction.

Miners - Unknown presence.

Atlas

Atlas has a very small population and is generally a quiet system. It's often a destination for mercenaries looking to escape for a while to enjoy some scenery and peaceful contracts. Due to its proximity to Cerulean and relatively stable economy, pay here is decent. Some mercenaries refer to this system as the vacation spot of Evochron.

Economy Classes: Unknown

Faction Details:

Energy Companies - Moderate presence, mostly solar/photon collection.

Navy/Military - Moderate presence, popular location for training.

Rebels - No significant presence.

Guilds/Clans - No significant presence.

Miners - Moderate presence, works with energy companies.

Capella

Capella: Although a known solar system for many years, Capella wasn't colonized until recently due to an apparent lack of resources. In their efforts to expand, Clan colonies from nearby Rucker decided to terraform the nearby planet and establish a base of operations in the system. Since then, security issues have resulted as attacks by clan forces from Capella to Rucker increased. This has resulted in an almost constant state of conflict in the system with Navy forces from Rucker trying to eliminate the Clan threat. Mercenaries are advised to avoid this system unless they are well equipped and trained to survive in such hostile space.

Economy Classes: Unknown

Faction Details:

Energy Companies - Light presence, primarily independent operations.

Navy/Military - Moderate presence, forces from Rucker.

Rebels - Strong presence, support clan efforts to attack Rucker.

Guilds/Clans - Strong presence, uses system as base of operations.

Miners - Moderate presence, often works for Clan forces.

Cerulean

Cerulean is known for its beautiful blue starscapes and planets. Trade between the two planets in this system is popular for quick credits with a short trip. Cerulean is currently under Alliance control and does not generally charge docking fees for mercenaries. Strong markets with high demand for commodities along with a relatively high technology level provide several unique qualities in this region of Evochron. High radiation conditions have resulted in a strong biological research division that is frequently attacked by local rebel/guild groups interested in acquiring important medicine and technology. This system is also part of the frontline region of the war.

Economy Classes: Agricultural, Biological

Faction Details:

Energy Companies - Moderate presence, primarily focuses on local production.

Navy/Military - Moderate presence, protects bio-research interests.

Rebels - Light presence, occasional reports of trade interference.

Guilds/Clans - Light presence, often tries to steal biological resources.

Miners - Light presence, owned by energy companies.

Cygnus

Cygnus is the primary refueling location for traders travelling between Fauston and Aries. Its low prices for fuel and equipment make it one of the most popular stops for travelling mercenaries in the entire upper region of EVOChron. Docking fees generally apply here, except for Federation citizens and their allies. Cygnus is known for its strong industrial economy and interest in forming a single government with Fauston.

Economy Classes: Industrial

Faction Details:

Energy Companies - Strong presence, works to provide resources to industry.
Navy/Military - Moderate presence, well equipped, generally against Alliance.
Rebels - Moderate presence, fights for unification with Fauston.
Guilds/Clans - Light presence, joins with Rebels only to share resources.
Miners - Light presence, generally work for energy companies.

Deneb

Deneb is a remote system that has only one gate exchange with Alpha Centauri. Resources are scarce, so premium prices are paid for commodities, but the system has very advanced technology. Deneb has admitted to having an advanced weapon research facility, but refuses to reveal the location. They've likely constructed it well outside the range of most navigation sensors and long range scanners. Political and faction disputes have resulted in frequent conflicts throughout the system. Outsiders are generally treated poorly.

Economy Classes: Agricultural, Industrial

Faction Details:

Energy Companies - Light presence, provides resources to agriculture.
Navy/Military - Moderate presence, advanced technology, monitors outsiders.
Rebels - Moderate presence, fights Federation control, rejects local laws.
Guilds/Clans - Light presence, shares isolation interests with Rebels.
Miners - No significant presence.

Emerald

Emerald is arguably one of the most beautiful systems in Evochron. A bright green planet orbits a warm yellow star with a soft blue-green nebula backdrop. It's a peaceful setting for a system with a moderate level of conflict. Emerald offers good opportunities for independent ship owners, but reports continue to come in about attacks from rogue groups ambushing traders in the area. Emerald is also subject to high Federation taxes for local residents, which frequently drives away trade to nearby systems and has created a somewhat low end market for such a distant system. Emerald was one of the staging areas for the Alliance during the last war with the Federation. As a result, some military weaponry and technology occasionally makes its way into the market here.

Economy Classes: Technology, Agricultural

Faction Details:

Energy Companies - Strong presence and influence, involved in government.

Navy/Military - Light presence, little protection/defense capability.

Rebels - Moderate presence, occasionally attack local traders for cargo.

Guilds/Clans - Moderate presence, active in smuggling and attacking traders.

Miners - No significant presence.

Fauston

Fauston borders on being a hostile system, but most ships generally leave each other alone. It's low economy makes it an unpopular trade stop for selling, but a common one for buying and refueling. Many new mercenaries visit this system first once they leave Sapphire and try some of their first combat contracts here. The level of technology is very similar to Sapphire, so most ships have limited capabilities and don't pose much of a threat to rookie mercenaries with entry level ships. Fauston is known for its amazing scenery, especially its icy blue world with liquid methane lakes, and is a significant supplier of medical supplies with a vast bio-research network.

Economy Classes: Biological, Agricultural

Faction Details: Energy Companies -

Light presence, primarily supplies military and research.

Navy/Military - Moderate presence, low level technology and lightly armed.

Rebels - Moderate presence, strongly against Alliance control and influence.

Guilds/Clans - Moderate presence, shares anti-Alliance interests with Rebels.

Miners - Minimal presence, mostly remain neutral.

Iota

Iota: Even though it is considered a Richton territory, Iota citizens consider themselves to be independent from any major government or military faction. Shortly after the system was colonized, the colonies asked for independence. Richton leadership initially denied the request, but due to their inability to enforce their rule as a result of the ongoing Federation war at the time, Iota was allowed to govern itself and has remained an independent system since that time. A strong economy and an advanced industrial manufacturing system provides one of the most high paying systems in the region where even raw metal ore is a valuable commodity.

Economy Classes: Unknown

Faction Details:

Energy Companies - Strong presence, supports manufacturing.

Navy/Military - Strong presence, well equipped.

Rebels - Unknown presence, scattered, encounters are fairly rare.

Guilds/Clans - Unknown presence, scattered, encounters are fairly rare.

Miners - Moderate presence, metal ore is generally in high demand.

lambda

Lambda is a lightly populated system, but was once the home of the Federation Military Command Center. Most of the system's population departed in the late 24th century due to increasing living costs, high Federation taxes and the resulting decrease of opportunities for freelance mercenaries. By the turn of the century, most Federation companies departed the system and Lambda now primarily consists of just a few scattered independent colonies. While not a particularly hostile system, the quest for survival does lead to several small scale conflicts. A good buy can sometimes be found here, but Lambda is not considered a good place to make a profit. Although in Richton space, a division of Federation territory, Lambda is now mostly independent.

Economy Classes: Technology, Agricultural

Faction Details:

Energy Companies - Moderate presence and influence, main economic factor.

Navy/Military - Moderate presence, scattered and not well organized.

Rebels - Light presence, mostly lone groups that reject local leadership.

Guilds/Clans - Light presence, occasionally engage local forces for resources.

Miners - Unknown presence, likely a few scattered ships, not significant.

Merak

Merak is a system of devastation and desperation. It is the site of one of the largest battles against the Vonari where victory came at an immense cost. Countless lives were lost when the Vonari invasion reached this system and a massive battle unfolded to stop them here. As the battle began to favor the Vonari, a controversial decision was made to unleash numerous Fulcrum weapons. The counter-attack worked, but the destruction was vast, leaving the system shattered. Now only a handful of the population remains, often fighting each other for the few scraps of resources left. Those lucky enough to find passage on a ship often escape to other systems. But a few remain here, calling this system home, determined to restore it to its former powerful status.

Economy Classes: Unknown

Faction Details: Energy Companies -

Light presence, resourceful, but limited.

Navy/Military - Light presence, generally temporary operations.

Rebels - Strong presence, opportunistic hunters and salvage experts.

Guilds/Clans - Strong presence, working with Rebels who unite to work together.

Miners - Light presence, few mining operations.

Olympus Prime

Olympus Prime is often considered an extension of Sapphire. It is a large system that is used for repairing, reloading, and refueling by many mercenaries who are travel to the upper Evochron systems. While not a particularly wealthy or advanced system, it is a good second system for new mercenaries looking for a mostly safe system with low level threats and plenty of job opportunities. Olympus has a strong industrial and energy production economy that exports many needed resources to nearby systems and is generally considered a safe system for mercenaries interested in mining, racing, equipment cleaning, and trade.

Economy Classes: Industrial, Energy

Faction Details:

Energy Companies - Strong presence, competition helps keep prices low.

Navy/Military - Strong presence, defends energy interests and trade lanes.

Rebels - Unknown presence, likely rare and avoids high traffic areas.

Guilds/Clans - Unknown presence, scattered, encounters are fairly rare.

Miners - Moderate presence, works with energy companies.

Onyx

Onyx: As its name implies, Onyx is a dark system with a blank backdrop and cold rocky planets. It remains a mysterious system where frequent conflicts break out between local government supported energy companies and Rebels trying to take over the local asteroid sector. Military intervention has kept the Rebels from succeeding in their efforts, but the continuing battle has drained the local economy and created a lot of uncertainty for local colonies. Protecting the valuable asteroid clusters has become a top priority for the local government.

Economy Classes: Industrial

Faction Details:

Energy Companies - Strong presence, often hires mercenaries for protection.

Navy/Military - Moderate presence, fights to defend local asteroid clusters.

Rebels - Moderate presence, fights to take control of asteroid clusters.

Guilds/Clans - Moderate presence, occasionally joins with Rebels.

Miners - Moderate presence, struggles to continue harvesting resources.

Orion

Orion was one of the earliest Federation controlled systems, dating back as far as the late 23rd century. It has several well established colonies and companies that support its local economy. Orion is largely self-sufficient with most local mercenaries working for one of the energy companies, so there isn't much demand for outside assistance in trade. On the positive side, this means low prices for available items and ship construction is similarly affordable. This makes Orion a good location for buying and it's a fairly safe system for new mercenaries who may not be ready for more hostile systems with more advanced technology.

Economy Classes: Biological

Faction Details: Energy Companies - Strong presence, dominate political and economic force.

Navy/Military - Moderate presence, primarily protects energy interests.

Rebels - Light presence, mostly opportunistic explorers who remain reclusive.

Guilds/Clans - Uncertain presence, rumored to patrol low traffic areas.

Miners - Moderate presence, works with energy companies.

Pearl

Pearl is a large system consisting of several planets and is the site of the Arvoch Conflict that took place a few years ago. Abundant resources and numerous opportunities make Pearl a system with some of the wealthiest and best equipped mercenaries in all of Evochron. Even though resources are readily available, shipping them in this system is extremely risky, so premium prices are paid for even the most basic supplies and equipment. Survival here depends on skill, wealth, and a powerful ship. Rumors suggest there is a remote research facility in this system that provides the advanced and experimental technology.

Economy Classes: Biological, Technology, Energy, Agricultural

Faction Details:

Energy Companies - Strong presence, dominate political and economic force.

Navy/Military - Moderate presence, primarily protects energy interests.

Rebels - Light presence, mostly opportunistic explorers who remain reclusive.

Guilds/Clans - Uncertain presence, rumored to patrol low traffic areas.

Miners - Moderate presence, works with energy companies.

Pices

Pices is a neutral system that is often used as a trade center between Thuban and Pearl. Mercenaries looking for a central meeting point without the risks of attack common to both Thuban and Pearl often use Pices as the location to meet in. The economy is low here, but there are no docking fees for most mercenaries and expenses are equally low, including some of the lowest prices for fuel in the lower region of Evochron. It's industrial economy is one of the leading suppliers of low cost ship components and weapons in central Evochron.

Economy Classes: Industrial

Faction Details:

Energy Companies - Light presence, primarily serves industrial energy needs.

Navy/Military - Moderate presence, maintains peace between trade factions.

Rebels - Moderate presence, unaffiliated mercenaries, unpredictable.

Guilds/Clans - Light presence, mostly independent mercenary groups.

Miners - No significant presence.

Rigel

The **Rigel** system is the primary trading center between Sirius and Emerald. It is free of most Federation regulation, so many mercenaries from Emerald enjoy travelling to Rigel for tax free trade with local companies and other mercenaries from Sirius. Rigel is fiercely independent and does not identify itself as an Alliance or a Federation territory, so stations and planets here often charge docking fees and other fines to any outside mercenary regardless of where they came from. Most mercenaries agree that the minor cost in fees is largely offset by the higher market values found here.

Economy Classes: Industrial

Faction Details:

Energy Companies - Moderate presence, controlled by industrial factions.

Navy/Military - Moderate presence, defends local interests and traders.

Rebels - Moderate presence, hostile, well equipped, against Energy companies.

Guilds/Clans - Moderate presence, generally united with Rebels, oppose navy.

Miners - Limited presence, works with energy companies.

Rucker

Rucker is named for the admiral of the Alliance fleet in the first Alliance-Federation war. It is a large system filled with asteroids, making jump drive navigation dangerous. While not a common stop for mercenaries due to the difficult navigation conditions, it does offer a moderate economy with no docking fees and low prices. It is considered a potential gold mine for well equipped mercenaries interested in mining due to its vast asteroid fields and its close proximity to the high paying Pearl system.

Economy Classes: Industrial

Faction Details:

Energy Companies - Strong presence, includes Miners for harvesting ore.

Navy/Military - Moderate presence, primarily protects energy interests.

Rebels - Light presence, occasionally seen joining with Guilds/Clans.

Guilds/Clans - Light presence, primarily opportunistic explorers.

Miners - Joined with energy companies for common energy supply goals.

Sapphire

Sapphire: This is the main trading center in Evochron and is firmly in Alliance control. It has jump gates to all four quadrants of the Evochron quadrant. Sapphire is considered the launching point for new mercenaries due to its strong Alliance presence resulting in a well protected system with a positive reputation level. Few major conflicts ever occur in this system, mostly minor fighting between individual mercenary ships. Because of a saturated market, commodity values and contract pay is generally very low, but the safety of the system makes it a good starting point for new mercenaries to learn basic skills in trade, ship control, racing, equipment cleaning, mining, and other activities.

Economy Classes: Energy, Agricultural, Industrial

Faction Details:

Energy Companies - Strong presence and influence, main economic factor.

Navy/Military - Strong presence, central system of Alliance military.

Rebels - No significant presence.

Guilds/Clans - No significant presence.

Miners - Moderate presence, works with energy companies.

Sierra

Sierra is another hostile system. It was recently reclaimed by the Federation, but the local leadership has fiercely fought for independence. Very little organized trading takes place here, although some traders travel from Talison for the higher selling values. It is one of the most recent systems to be colonized and as a result, doesn't have an established government or economy. The two planets in this system are also known for their bad weather, Sierra in particular has extremely windy conditions making atmosphere descents much more challenging.

Economy Classes: Limited Industrial

Faction Details: Energy Companies -

Light presence, mostly scattered after the last war.

Navy/Military - Light presence, no longer a single, well organized force.

Rebels - Strong presence, fights against Federation control.

Guilds/Clans - Strong presence, shares isolation interests with Rebels.

Miners - No significant presence.

Sirius

Sirius is a distant system with a good economy similar to Rigel's. A few key difference between Sirius and Rigel are the low cost of operations (typically no docking fees) and high paying contracts with relatively easy objectives. The gate system between Sirius and Sol was destroyed in the last war and has not yet been rebuilt, cutting off the main supply line to this system. So supplies are somewhat scarce resulting in fairly high prices paid for needed commodities and equipment. The planet Sirius B is generally considered a very good trade location for selling.

Economy Classes: Energy

Faction Details:

Energy Companies - Strong presence, dominate political and economic force.

Navy/Military - Moderate presence, primarily protects energy interests.

Rebels - Light presence, mostly opportunistic explorers who remain reclusive.

Guilds/Clans - Uncertain presence, rumored to patrol low traffic areas.

Miners - No significant presence

Talison

Talison has a moderate economy and technology level without docking fees for most mercenaries. This is an active trading location with ships coming from Fauston and Cerulean on a regular basis. Although the government of Talison considers itself independent, they were part of the Federation until just recently. Now without Federation supply deliveries, Talison offers good prices for most items and equipment. This is a popular location for mercenaries heading to Cerulean and Onyx for high value sales. Talison is also on the frontlines of the war against the Vonari. The system is used as a base of operations for Alliance military ships moving up to the nearby war zone.

Economy Classes: Industrial

Faction Details:

Energy Companies - Moderate presence, provides resources to military.

Navy/Military - Strong presence, supports war effort, escorts Alliance ships.

Rebels - Light presence, unknown interests.

Guilds/Clans - Light presence, unknown interests.

Miners - Moderate presence, frequently harvests ore from local asteroids

Thuban

Thuban is the home of the Federation and although the war has ended, tensions remain high between the Alliance controlled system of Sapphire and Thuban. Local mercenaries here are known to attack ships from the Alliance without provocation. As a result, Alliance command continues to warn against travelling to this system. Thuban is often in conflict with various companies and military factions battling for control of the system's abundant resources. For well equipped mercenaries interested in combat roles, this system offers some of the most attack, patrol, and spy contracts.

Economy Classes: Energy, Biological

Faction Details:

Energy Companies - Strong presence, owned by military and government.

Navy/Military - Strong presence, aggressively attacks Alliance ships.

Rebels - Moderate presence, frequently attacks many civilian Thuban ships.

Guilds/Clans - Moderate presence, disrupts energy shipping, wants territory.

Miners - Limited presence, mostly independent ships.

Vega

Vega is one of the closest systems to Earth, being only 25 light years away. It remained an independent colony for many years, consisting mostly of scientific research teams. However, Rebel forces from Virgo recently invaded the system in an attempt to control its resources. While they failed in their efforts in Virgo, they achieved significant gains in Vega since the local population was not equipped to defend themselves from attack. Distress calls were sent to the Alliance and Navy forces were dispatched to fight off the Rebels and protect the system. The future of this system remains uncertain, it's currently still considered an undefined territory.

Economy Classes: Unknown

Faction Details:

Energy Companies - Light presence, primarily independent operations.

Navy/Military - Moderate presence, defending against Rebels.

Rebels - Strong presence, attempting to conquer the system.

Guilds/Clans - Moderate presence, united with Rebels.

Miners - Light presence, a few mining operations do occur.

Virgo

Virgo is a lightly populated system of mostly colonists. While the system is technically in Federation controlled space, it was given independence in 2374 and has been almost entirely self-sufficient since that time. Its inhabitants pride themselves in their abilities to live off their own resources and typically discourage outside trade. As a result, they offer very little for most items and commodities. How this system has remained to survive for so long without outside assistance and do so well has been a continuing mystery. Rumors suggest they control a hidden world somewhere nearby that supplies resources they would otherwise not have access to.

Economy Classes: Agricultural

Faction Details:

Energy Companies - Light presence, serves agricultural industry.

Navy/Military - Moderate presence, limited ship and weapon resources.

Rebels - Light presence, elusive, mostly remain outside of traffic areas.

Guilds/Clans - Light presence, mostly remain outside of traffic areas.

Miners - No significant presence.

Vonarion

Vonarion - The Enemy!: The Vonari system is home to the aggressive race that is responsible for several wars and continues to attack randomly. Mercenaries are advised to avoid this system entirely as the technology level of the Vonari is very advanced. The hidden Alliance outpost is still being operated, although a cloaking field protects it from detection. It has been a stop for a few brave mercenaries who have travelled to this system in their efforts to explore the area and test Vonari capabilities.