

# General Players Guide By DrSuperEvil (WIP)

This is a players guide intended for players of all skill levels to cover every aspect of the game which is not related to the plots, which are covered in their own dedicated guides (Missions).

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## Choice of starting scenario

What starting scenario the player chooses will impact the starting difficulty of the game and in some cases have long term benefits that cannot be obtained by playing other starting scenarios. Going **Terran Commander** or **Aldrin Adventurer** gives the player access to the Terran PHQ which can dock more ships and hold more wares than the Commonwealth PHQ while the **Tormented Teladi** and **Unholy Traitor** starting scenarios give the player unique ships to reverse engineer. Starting scenarios can generally be grouped by the class of the starting ship.

- **M6:** Terran Commander is the only starting scenario to begin with a corvette allowing for a mix of missions, trade and piracy to be used to get started while the starting ship has enough fire power to engage multiple opponents.
- **M3:** Argon Peacekeeper, Bankrupt Assassin, Aldrin Adventurer, Goner Witness and Unholy Traitor starting scenarios begin with fighters which have enough cargo space to do taxi and military transport missions and with the exception of the Goner Witness have enough fire power to engage single targets with ease.
- **M4:** Argon Patriot and Nostalgic Argon starting scenarios begin with interceptors meaning only smaller targets can be easily engaged while ships with a rear turret will have to be approached with greater caution.
- **M5:** Tormented Teladi, Savage Split, Anonymous Argon, Boring Boron, Humble Merchant and Suicidal Squid begin with scouts which are good for exploration but the small cargo bays limit mission and trading opportunities while the weak shielding and fire power mean targets must be engaged with caution.
- **TS:** Humble Merchant, Poisoned Paranid, Teladi Trafficker and Pious Paranid begin with small transports allowing the rapid accumulation of wealth through trading
- **TP:** Lost Lar is the only starting scenario to begin with a personnel transport allowing for early spacewalk boarding or taxi and personnel transport missions

## How the X-Universe operates (A general overview)

The X-Universe of X3: AP is a busy place even without player intervention or direct observation with several hundred NPC ships being active at any given time and the layout of sectors changing as game time progresses. Here is a list of the primary factors which govern the NPCs and the X-Universe layout.

When a new game is started 1 Kha'ak Corvette (M6), 8 Kha'ak M4/M5s, 2 Kha'ak Fighters (M3) and 4 M4/M3s of random race (Argon, Boron, Kha'ak, Paranid, Split or Teladi) abandoned ships are spawned within 1-3 sectors of Argon Prime, Seizewell, Trinity Sanctum, Great Reef, Cardinals Domain, Avarice, Omicron Lyrae, Family Pride, Home Of Opportunity, Bluish Snout Grand Exchange, Megnir, Queens Retribution and Belt Of Aguilar while an abandoned ship is always found in Freedom's Reach and the Xenon HUB Unknown Sector. 8 Crates of 2-5 Pandora Engine Tunings or Rudder Optimisations also spawn in random Pirate owned sectors. All spawns occur within a sphere at 1.05-1.33x sector radius.

The sectors Jupiter, Asteroid Belt, Heretics End, Omicron Lyrae, Treasure Chest and Elysium Of Light are designated as war sectors from the start of a new game until the option to end the war at the end of the Shady Business plot. In the war sectors if either the Argon or the Terran are <-1 Race Rank ships belonging to that race will attack the player owned ships. Even with both Argon and Terran Race Rank being positive NPC ships from the faction with less rank will go rogue and attack player owned assets Out Of Sector even if they are placed in remote locations. Everytime the player ship enters a war sector some ships belonging to both Terran and Argon will spawn in the sector at opposite ends and head towards each other to engage. Periodically there will be a build up of ships in two adjacent war sectors with one fleet jumping to the other sector when the player ship enters the sector shortly after the war announcement (activated with plots). These large battles leave large amounts of wares to salvage. In war sectors normal generic mission spawns are suppressed and special War Missions can spawn at stations in the current front line sector. The front line slowly oscillates back and forth without player intervention but player kills add or subtract war points based on the max hull of the player ship and class of ship killed helping shift the frontline in one direction or the other. Kills made in the warzone affect race rank by 1/1000th of the normal value.

The major races have predefined alliances with the Argon liking the Boron and hating the Terrans and Paranid, the Boron like the Argon and hate the Split and later in the main plots the Terrans as well, Paranid like the Split and hate the Argon, the Split like the Paranid and hate the Boron and the Terrans hate the Argon and later in the main plots also the Boron. The Teladi are neutral and the Xenon hate everyone. All major races dislike the Pirates and Yaki. This means the player will gain race rank when killing the enemies of the sector owner (Xenon excepted) and lose race rank if attacking the sector owner race or their allies. Local police ships will even ignore acts of piracy if performed on an enemy of the race eg. attacking Paranid TS ships in Argon space. Attacks against a major race have an additional race rank penalty if carried out in sectors owned by the race while doing them in Pirate owned sectors has a reduced race rank penalty compared to other sectors. Military patrols ordered to invade a core sector owned by an enemy race will begin attacking fight ships belonging to the sector owner which will then fight back setting those ships to see all ships and stations belonging to that race as hostile resulting in the military ships going on a rampage killing stations and traders until they are eventually destroyed by ships belonging to the invaded race. This means player and pirate attacks against traders of a race that is an enemy of the sector owner can cause escalations which are advantageous for salvage. These escalations are more likely to occur In Sector due to NPC ships being hit by splash damage from missiles and stray laser bullets.

On starting a new game some stations are set to always spawn while others only have a chance of spawning. This randomisation of starting stations is further increased by the GOD engine issuing rebuild orders to the 6 Supply TLs owned by each major race. As generic missions cannot spawn in the war sectors it is impossible to improve Goner race rank until after completing the Shady Business plot unless one of the two Goner owned stations spawn in Harmony of Perpetuity.

Trading Stations, Military Outposts and Equipment Docks start half full of all traded wares while other station types spawn with a random amount of resource and product wares tending towards either full or empty. After the first 6 game hours Trading Stations, Military Outposts and Equipment Docks will begin to periodically deplete 6% RelVal of missile/shield/laser/tech wares and 12% RelVal of other wares every 5 minutes removing them from the economy which equates to a rate of 0.72x productivity for missile/shield/laser/tech wares and 1.44x for other wares per hour. This means that some wares like Mobile Drilling Systems and Tractor Beams will be common at the game start but are prone to complete exhaustion as game time progresses. Every 5-20 minutes if a Military Outpost or Pirate Base has no shields or Boarding pods for sale a trade ship belonging to a random race is spawned which replenishes 1 of each shield type and 1-3 Boarding Pods (!station.shieldstock.PCK).

NPC spawned or constructed Solar Power Plants do not need Crystals to operate imputting a constant supply of Energy Cells into the economy. Other factories operate like player owned ones consuming primary resources to produce products except NPC owned ones also have an optional demand for secondary resources consumed every 10 minutes at a rate of 6% RelVal for tech wares and 12% RelVal for other wares (0.36x and 0.72x productivity per hour for an M size factory respectively) which decrease the time taken to complete production cycles by up to 20%.

NPC ships that are not spawned by missions have their numbers, ship type, tasks, equipment quality, placement, starting wares and respawn time determined by the Jobs.pck file. This means that the major races will always aim to have 6 Supply TLs, 4-10 civilian TLs, 5 Jump Beacons, 2 RR M2s, 1-2 RR M1s, 6 RR M6s, 2 RR M7/M7Ms and 2 RR M8s while NPC owned rare ships like the Scorpion Prototype and Hyperion Vanguard will only have up to two existing at once. As Drone Hauler M4s are only part of a long list of possible M4 escorts able to spawn for military patrols they only have a low chance of spawning making them very rare. Since default morale is predetermined by the job this means that some ships are easier to obtain if the player targets ships doing specific jobs eg. Water Purification TSs. The Xenon attacks observed are also determined by the jobs and are the result of long patrols trying to reach other xenon owned sectors with up to 17 Xenon M6/M7, 3 M3/M4, 3 M5 and 1 M1 (which spawns in Xenon Sector next to Segaris) and their escorts being active at once and respawning every 4.3, 9.3, 11.3 and 110 minutes respectively. Some jobs are inactive by default being toggled by the plots.

Every 72 game hours the GOD engine issues global rebuild orders to the 6 Supply TLs owned by each major race (and Terran Ice Miners) to replace destroyed stations. This results in the Supply TL moving to the nearest Shipyard and generating a station construction kit in the cargo of the TL before moving to within 30km of the station placement location and building the station before returning to the nearest sector with a shipyard owned by the TL owner race. Race specific rebuild orders are issued to the Supply TLs if over 9% of the station number spawned at game start owned by the race have been destroyed. Sector specific rebuild orders occur if over 16.6% of stations are destroyed and the race still has assets in the sector. These construction frenzies can be exploited for piracy. If the sector owner race has no assets in the target sector it will rebuild stations in a sector midway between the target sector and a random sector owned by the race within 15 jumps of the target sector at the initial target position +/- 5km on the x and z axis and +2.5km on the y axis otherwise it will take the size of sector and randomly place the station on the x and z axes and +/-10km on the y axis. If a station is unable to be rebuilt by conventional means it will eventually jump spawn when the player is not looking.

When NPC TS ships are attacked they send a signal to the nearest Military Outpost owned by the race of the ship being attacked which orders the ships and escorts owned by the Military Outpost to invade the sector the signal was sent from. The number of ships sent is determined by the number of ships that are enemy to the race in the target sector with the presence of 1 M1/M2/M2+/M7/M7C/M7M/TL/M6/M8/TM/TP/TS or 5 M5/M4/M4+/M3/M3+ ships being enough to trigger an invasion and 2 M1/M2/M2+/M7/M7C/M7M/TL, 5 M6/M8/TM/TP/TS or 25 M5/M4/M4+/M3/M3+ ships being the cutoff for sending all owned ships that are not already invading a sector to the destination sector. The Military Outposts only can issue a sector invasion order every 9500 seconds (2.6 hours) which last for 2 hours or until there are no more hostiles in the sector. Invading ships use their scanner range for target identification and will destroy any illegals producing factories they encounter regardless of the race rank of the owner.

Rapid Response ships jump to sectors owned by their owning race in response to distress signals sent by ships and stations. The number of RR ships sent depends on the number and ship class of hostiles in the sector prioritising core sectors over border sectors. RR ships spawn extremely well equipped with spare guns and multiple types of missiles including Mosquito Missiles, a Jump Drive, Cargo Life Support System and maximum capacity Marines with 65-100 Fight skill and 45-100 points in every other skill. When a RR ship takes enough shield damage it will try to jump away to safety (destination able to be seen under the target Info if the player ship is at under 4km range) and return when it is back to >20% shielding. The shield fractions that trigger a retreat are <5% for M1/M2/M7/M7M and <10% for M6/M6 ships. The jumping of RR ships requires energy cells but not a Jump Drive and can target the center of a sector. M1/M2/M7/M7M RR ships have a 5% chance to spawn with with a Jump Beacon in their cargo but can only drop them if killed by player owned ships and not destroyed by mines or torpedoes in the cargo. RR M7Ms that spawn with Boarding Pods in their cargo will try to board ships when the target shielding is low enough to be boardable using their defence marines to do so. These boarding attempts can be exploited for easy high stat Marines. If an RR ship runs out of Energy Cells it will fly normally to new destinations cutting through the sectors of other races if necessary until able to restock at a shipyard, equipment dock or military outpost owned by the owner race. As the RR fleets of both the Argon and Terran engage with fleets in the war sectors, the RR ships of these two races have a considerably higher turnover than other races making them better for finding Jump Beacons. If the player has a Race Rank of <-2 with the owner of a RR ship it will engage the player irrespective of which race owns the sector it is in.

Military and RR M1/M7C ships will replenish their fighter escorts if depleted by drafting all available M5/M4/M3 ships in a sector including civilian ships and traders. Doing this removes wares from the economy and helps recycle old ships.

Dock Traders and Free Traders fly around looking for chances to make profit and will buy from NPC and player owned stations if there is a place that will buy the ware for a markup with Dock Traders being limited to selling at Trading Docks and Equipment Docks while Free Traders can sell to any station. Military Supply Transporters are tasked with resupplying lasers, shields, missiles and jump fuel to docked RR and Military ships removing the required wares from nearby factories, Equipment Docks and other Military Outposts. If these traders die in transit the wares carried are removed from the economy however when they respawn a random ware from the list of traded wares for the job is created in the cargo of the new ship potentially introducing depleted wares back into the economy.

Pirate and Yaki ships use the !job.pirate.plunderships script to identify targets to attack when the player is in the sector. This means they prioritise ships within 30km range carrying wares that are illegal to the Teladi, Crystals, Quantum Tubes and Nividium followed by player Sector Traders on standby or will attack a random ship. The script used is bugged in that the !move.collectware script used to pickup the tech ware plunder also targets rare Pandora Engine Tunings and Rudder Optimisations. This means that traders will become less of a target if they are not the player ship, working out of sector and if they are trading in ware types that do not attract pirates. If the player sees any pirates diverting from the ecliptic it is recommended to either immediately leave the sector and find the Pandora Tuning remotely or to intercept them with great haste. All pirates spawn hostile to the player and are then subsequently pacified OOS by the player having a positive Race Rank meaning that they will always trip the Satellite Early Warning Network and appear hostile if entering the system from a Jump Gate. Pirate Bases are created in random Pirate, border and unknown sectors by a Mobile Pirate Base Hauler jumping into the destination sector at 1.05-1.33x sector radius and moving to within 30km of the destination before dropping the station and jumping out of existence. These Pirate Bases usually have 1-4 Lasertowers deployed around them and periodically spawn patrols of 1-5 M5/M4/M3 ships which go looking for trouble. As major pirate patrols have to respawn in a new sector and the game prefers to spawn in sectors where the race has at least one asset it is common that most TM/M6/M7/M2/M1 pirate patrols end up being stuck patrolling the sectors around Mercenaries Rift within a few days of play time leaving the rest of pirate space completely safe. Unless Yaki owned stations are constructed elsewhere, the Yaki tend not to leave Senators Badlands/Weavers Tempest making them only a minor threat to trade.

Roughly every 120 game hours the sectors assigned for short patrols and idle TLs get reassigned resulting in numerous ships changing regions and often going through sectors belonging to other races. Ships with a Jump Drive will try to jump to the new patrol sector but if they lack enough energy cells they will jump to the closest sector to the destination and patrol the rest of the way. This reassignment causes the Xenon migrations

and jump attacks that are occasionally observed and opens up some rare ships for piracy with reduced risk. The downside of these migrations is that border sectors with usually low traffic may suddenly see several powerful fight ships moving through them which might not always be friendly.

Each major race has wares that are considered illegal in their territory. Police and Border Control ships will scan the player ship for illegal wares if within 10km but not other player assets. If the player is caught carrying illegal goods there is a 60 second period to drop the illegal wares losing the cargo or have all police and military ships of the race go hostile for several minutes. Military ships will attack stations that produce illegals even if outside the territory of the major race that finds them illegal. If an illegals producing station is built within the territory of a major race but outside of scanner range (>30km from anywhere) there is a 5% chance that any Recon M5s of that race entering the sector will make a beeline for it and order a military strike. With major races having 30-52 Recon M5s it is an inevitability that illegals stations will quickly be found in sectors owned by a major race.

Stations that are attacked will remain hostile to the attacker faction for 5 game hours irrespective of diplomatic relations with the attacker (player included).

Asteroids that are destroyed will respawn within 72 game hours and NPC mines can be rebuilt without an asteroid and have an assumed yield of 40 but player owned mines if destroyed will permanently remove the asteroid they were placed on. This means it is imperative that the player successfully defends any mines they build.

Only attacks by the player ship can cause NPC pilots to bail or dump their freight.

## General Game Controls And Commands (WIP)

### Personal

#### My Missions

- The list of currently active missions showing the current objective for each mission, difficulty, reward and time remaining to complete the mission. Left click individual missions to view the full mission briefing, toggle guidance or abort the mission.

#### My Property

- A list of player owned assets that can be used to send commands to specific assets. This will be used frequently once the player owns multiple ships.
- **All:** Shows all player owned assets in alphabetical order grouped by sector
- **Stations:** Only shows player owned stations and complexes in alphabetical order grouped by sector
- **Ships:** Only shows player owned ships in alphabetical order grouped by sector
- **Wings:** Only shows player owned ships that have been assigned to a wing
- **Sectors:** Lists all sectors that the player has assets in. Once the player has a satellite network established this menu becomes meaningless.
- **Personnel:** All Marines, Mercenaries and Pilots owned by the player, where they are and what they are currently doing. Personnel performing boarding operations appear at the top of the list. Use this menu to know if a boarding operation is going badly and the previous save needs to be loaded.
- **Statistics:** A condensed list of player owned assets by categories.
- **Options:** Shows or hides ships based on wing/fleet leader/escort roles and stats shown

Shows or hides specific ship classes

Has options to show ships by assigned tasks

Determines what warnings are shown

Has filters for personnel shown

At the bottom is the toggle for grouping ships by sector. It is recommended to keep this on.

#### My Pilot Status

- Lists current Credits owned by the player, player Trade and Fight ranks, Race Ranks with encountered races, player kill counts, owned police licences and salvage insurance and miscellaneous statistics done by the player

#### My Wings

- Opens the Wing Management menu which shows all player owned ships
- **Filter Options:** Allows filtering by class or current wing
- **Sorting Options:** Sorts the list by current Wing or ship Class
- **Ships:** Left click to add ships to one of 8 wings or 4 SEWN Sector signal connected wings

#### Stock Exchanges

- **View Local Stock Exchanges:** Opens the menu for selecting local Stock Exchanges for trading natural product and other ware shares. Stock Exchanges only appear if the player ship has docked at the stock exchange and met the criteria for trading at that Stock Exchange and the player has an asset in the sector with the Stock Exchange station. Useful for seeing what wares are available in a group of

sectors.

- **Corporate/Company indexes:** Opens the menu for trading corporate and company shares.
- **Detailed Summary Of Shares Owned:** List of shares owned and in what stock market region.
- **View Commodities Transaction Report:** Log of share transactions done in the local Stock Exchanges.
- **View Corporate Transaction Report:** Log of corporate share transactions
- **View Company Transaction Report:** Log of company share transactions
- **Broker Settings:** Options for adjusting the stock exchange UI. In general the player does not need to alter this.

## My Message Log

- **View message Log:** Views all past messages received from plots, missions, ships and Marine/Mercenary training sessions (unless deleted).
- **New Entry:** Adds a custom log message for role playing or reminder purposes.
- **Clear Logs:** Deletes all previous messages

## My Achievements

- List of Steam achievements
- How to obtain is covered under the Achievements section

## Advanced

- **Global Commands:** Adjusts the settings of all player owned ships
  - **Global Friend-Foe:** Sets the Friend-Foe settings of each race for all ships. Affects if player ships will begin combat with NPC ships or ignore them.
  - **Transmit To:** Sends commands to all player owned ships. This becomes less useful if the player has a diverse range of ship roles.
  - **Wing Control:** Opens the same menu as My Wings.
  - **Global Missile Resupply:** Sets the missile resupply amounts for all ships. This is only useful when the player does not have several different classes of missile using ships.
- **Encyclopaedia**
  - Database of stations, ships and wares encountered by the player ship. The location of wares and stations for sale only appear if the player ship has docked at the station selling them. Other player owned ships used for exploration will not contribute to the encyclopaedia. Useful for finding what stations sell stuff.
- **Change Name**
  - Allows the player to change the name of their avatar from the Starting Scenario default name.
  - Enter Thereshallbewings to enable the script editor
- **All Tips**
  - Allows the player to look over tips given early on in the game. Only useful for forgetful players.
- **Export Statistics**
  - Exports the statistics for the playthrough as an xml file for posting on the Egosoft Player Rankings page ([https://www.egosoft.com/games/x3ap/statistics\\_en.php](https://www.egosoft.com/games/x3ap/statistics_en.php)) at [https://www.egosoft.com/games/x3ap/uplink\\_en.php](https://www.egosoft.com/games/x3ap/uplink_en.php) .
  - Only do this if you have a playthrough you are proud of.
- **Graphs**
  - Displays one of several graphs showing player progress and assets over time.

## Navigation

### Sector Map

- Opens the map of the sector with a list of discovered stations and assets in the scanner range of player owned ships listed to the right.
- Default view is from the +Y axis.
- Areas within scanner range are a paler colour (2D view of maximum diameter), friendly NPC and abandoned assets are blue, player owned assets are green and hostile assets are red.
- Press the Insert key to swap to a view from the -Z axis (useful for station and satellite placement).
- Does not show missiles.
- If there is an Advanced Satellite in the sector the camera icon at the top right of the map to the left of the zoom buttons can be used to give a 3D rendition of the sector if in sector.
- The default zoom is the sector diameter.

### Universe Map

- Map of the explored X-universe. Left clicking a sector will go to the sector map for that sector.
- Pressing a letter key will open the search filter (although it is equally fast to navigate manually).
- Typing in "Do a barrel roll" spins the universe map a few times.

### Jumpdrive

- Requires a Jump Drive equipment ware to be installed on the ship to show.
- Left clicking or using the hotkey (Shift + J) will go to the universe map showing sectors able to be jumped to as flashing white brackets and the jump cost in Energy Cells shown in the upper right of the screen. Left clicking a sector will go to the sector map of the sector and the player can select a Jump Gate or Jump Beacon to jump to. If the ship lacks enough Energy Cells the ship will not be able to jump. After selecting a jump target there is a 10 second delay before jumping to the target sector.

## Unfocussed Jump

- Requires the Unfocussed Jump Drive obtained from the plots (starting scenario dependent). Uses Energy Cells to jump to the randomly generated Unknown Sector. Useful for obtaining the Aran, PALCs and Pandora Tunings.
- All assets left in the Unknown Sector are destroyed when returning to the known universe.

## Best Buys Locator

- Requires the Best Buys Locator equipment ware.
- Sets the autopilot to go to the cheapest selling station for the selected ware within a selected jump range.
- Only useful in the early game before the player gets Trade Command Softwares for automating TS ships.

## Best Selling Price Locator

- Requires the Best Selling Price Locator equipment ware.
- Sets the autopilot to go to the most expensive buying selling station for the selected ware within a selected jump range.
- Only useful in the early game before the player gets Trade Command Softwares for automating TS ships.

## Current Ship

### Info

- Lists the encyclopaedia information of the current player ship. Useful for remembering laser and missile compatibilities

### Autopilot

- **Command Console**
  - **Navigation**
    - **Standby:** Cancels current commands and gets the ship to come to a stop. Will engage attacking ships.
    - **Idle:** Ship will wander aimlessly around the sector when the player ship is In Sector. Will not respond to attacks.
    - **Dock At My Target:** Orders the commanded player owned ship to dock at the ship/station currently selected by left mouse click of the player ship.
    - **Dock At:** Orders the ship to fly to and dock at a designated ship/station. Opens the Universe Map centred on the sector the ship is currently in.
    - **Fly To Sector:** Orders the ship to fly to the designated sector on the Universe Map. The ship will enter Standby once it is a short distance from the jump gate in the designated sector.
    - **Follow:** Orders the ship to follow the designated ship.
    - **Follow Me:** Orders the ship to follow the player ship.
    - **Return Home:** Makes the ship return to the assigned Home Base if it has one.
    - **Move To Position:** Orders the ship to fly to the designated position in the Sector Map. Use the num pad (2, 4, 6 or 8) or left mouse click the map to move the destination position. Opens the Universe Map centred on the sector the ship is currently in.
    - **Move To Coordinates:** (WIP)
    - **Fly Through Gate:** (WIP)
    - **Map Sector:** (WIP)
    - **Scan Asteroids:** (WIP)
    - **Jump To Sector** (Jumpdrive required): Orders the ship to jump to the designated sector on the Universe Map. The ship will enter Standby once it is a short distance from the jump gate in the designated sector. If the ship does not have enough Energy Cells to jump the complete distance it will jump to the sector closest to the destination and fly the rest of the way.
    - **Jump and Fly To Station:** (WIP)
    - **Jump and Fly To Pos:** (WIP)
    - **Jump To Me** (other player owned ships): (WIP)
  - **Combat**
    - **Attack:** Orders the ship to attack the designated target
    - **Attack All Enemies:** Systematically attacks all ships set to Foe under the Adjust Friend-Foe setting in the sector until there are no more targets in the sector.
    - **Protect:** Orders the ship to protect the designated ship/station and attack ships attacking it. Weapon System: Missile Defence Mosquito (C) will use Mosquito Missiles to intercept missiles heading towards the protected ship. Turrets of the protecting ship set to Missile Defence or Missiles Only will try to intercept missiles targeting the ship it is trying to protect.
    - **Protect Me** (Other ships only): (WIP)
    - **Attack My Target:** Orders the ship to attack the ship/station currently selected by left mouse click of the player ship.

- **Attack Nearest Enemy Of:** Orders the ship to attack the nearest ship/station that is hostile to the designated ship/station
- **Defend Position:** Orders the ship to attack any hostile ships that approach within 10km of the designated point. Ships with this command will patrol the sphere of space around the point. Opens the Universe Map centred on the sector the ship is currently in.
- **Defend Station:** Orders the ship to attack any hostile ships that approach within 10km of the designated station. Ships with this command will patrol a 10km radius sphere of space around the station. Opens the Universe Map centered on the sector the ship is currently in.
- **Defend Sector:** Orders the ship to attack any hostile ships that are in or enter the designated sector. Opens the Universe Map centered on the sector the ship is currently in. This command is not advisable for lone ships as they will attack ships that they cannot handle. This order is continuous until cancelled.
- **Attack Target Of:** Orders the ship to attack the targets of the designated ship.
- **Attack Shields Of:** Orders the ship to attack the designated target but stop once the shields are down. A useful command for preparing ships to board. As the ship given this command will only stop shooting when the target shields are down there still will be some hull damage.
- **Attack enemy and land:** (WIP)
- **Attack All enemies, land:** (WIP)
- **Attack Fighters:** Systematically attacks all fighter ships set to Foe under the Adjust Friend-Foe setting in the sector.
- **Attack Capital Ships:** Systematically attacks all capital ships set to Foe under the Adjust Friend-Foe setting in the sector.
- **Launch Fighter Attack:** (WIP)
- **Patrol Sectors:** Orders the ship to patrol between the designated sectors using **Attack All Enemies** in each sector visited and moving to the next sector if no more enemies are present.
- **Retreat:** (WIP)
- **Trade**
  - **Manual Trade Run:** Opens the Universe Map allowing the player to select a station and ware to buy before opening the universe map again to select a station to sell at. There is then a final yes/no window to order the ship to repeat the run indefinitely or not.
  - **Remote Best Buy:** (WIP)
  - **Remote Best Sell:** (WIP)
  - **Manual Trade Buy:** Opens the Universe Map allowing the player to select a station and ware to buy before opening a window to input a number to buy
  - **Manual trade Sell:** Opens the Universe Map allowing the player to select a station and ware to sell before opening a window to input a number to sell
  - **Mine and Trade Minerals:** (WIP)
  - **Buy Ware For Best Price:** Buys as many units of the selected ware for the best price within ? (WIP) sectors
  - **Buy Ware:** Buys the inputted amount of the specified ware from the specified station
  - **Sell Ware For Best Price:** Sells as many units of the selected ware for the best price within ? (WIP) sectors
  - **Sell Ware:** Sells the inputted amount of the specified ware at the specified station
  - **Transfer Freight via Drones:** Requires at least one Freight Drone in the cargo hold. Transfers or buys/sells the specified number of ware from the target/ship cargo. Able to be used to obtain PBCs from deploying laser towers and for some dupe methods.
    - (WIP)
  - **Start commercial representation:** (WIP)
  - **Start external commodity logistics:** (WIP)
  - **Start external Commodity Logistics:** (WIP)
- **Special**
  - **Collect Wares In Sector:** Orders the ship to continually search for wares to collect in the designated sector. Opens the Universe Map centred on the sector the ship is currently in.
  - **Collect Ware:** Orders the ship to collect a specific ware. Opens the Universe Map centered on the sector the ship is currently in.
  - **Collect Astronaut:** Orders the ship to collect a specific Astronaut which can be a bailed passenger or a Marine/Mercenary from a boarding operation.
  - **Drop Station:** Requires a TL with a station in the freight and Special Command Software. Must be In Sector for the command to appear. Opens the sector map to allow placement/rotation of the selected station using the num pad. Hit the Return key to confirm placement.
  - **Collect Rocks In Sector:** Orders the ship to collect the smallest rocks from debris in the designated sector.
  - **Resupply Ships:** (WIP)
  - **Rearm Ships:** (WIP)
  - **Refuel Ships:** (WIP)
  - **Equip Ships Like:** (WIP)
  - **Mine Minerals:** Orders the ship to break up and collect the specified mineral from rocks and debris in the designated sector and deliver them to the specified station (if any).
    - Require player owned stations to be set as the Home Base to unload free of charge.
    - TS ships given a laser will break up larger rocks while those with a Mobile Mining System will destroy unclaimed asteroids for resources
    - A TS using this order is equivalent to 0.18x Ore and 0.79x Silicon Wafer productivity if travel time to the destination station is excluded
- **Piracy**
  - **Board Ship:** (WIP)
  - **Select Ship:** (WIP)
- **General**

- **Administration Commercial Agent:** (WIP)
  - **Administration:** (WIP)
    - **Sector production overview:** (WIP)
    - **Sector production overview including standalone factories:** (WIP)
    - **Global Configuration:** (WIP)
  - **Station Settings**
    - **Station Status:** Allows the factory production to be toggled on or off
    - **Money Transfer:** (WIP)
    - **Pricing:** (WIP)
      - **Pricing Disabled:** (WIP)
      - **Restore Pricing:** (WIP)
    - **Wares:** (WIP)
  - **Complex Settings**
    - **Products:** Shows production vs consumption of products.
      - Toggles the ware classification as a product or intermediate product
    - **Intermediate Products:** Shows production vs consumption of intermediate products
      - Toggles the ware classification as a product or intermediate product
    - **Resources:** Shows production vs consumption of resources
    - **Factories:** Shows all factories in the complex and allows the factory production to be toggled on or off
- **Administration Commodity Logistics**
  - **Administration global configuration internal Commodity Logistics:** (WIP)
    - **Data storage:** (WIP)
      - **Select Data:** (WIP)
      - **Move Data:** (WIP)
      - **Delete Data:** (WIP)
    - **Send Configuration:** (WIP)
      - **Send to sector colleagues:** (WIP)
      - **Send to all colleagues:** (WIP)
      - **Send filter:** (WIP)
        - **Send Filter:** (WIP)
          - **Ship type:** (WIP)
          - **Ship class:** (WIP)
          - **Ship name:** (WIP)
        - **New homebase:** (WIP)
        - **Data selection:** (WIP)
          - **Supplier:** (WIP)
          - **Consumer:** (WIP)
          - **Homebase products:** (WIP)
          - **Price of product:** (WIP)
          - **Minimum storage space filled - supplier:** (WIP)
          - **Minimum storage space filled - consumer:** (WIP)
          - **Freighter cargo bay:** (WIP)
          - **Fly to supplier only:** (WIP)
          - **Dock with ship only in the same sector:** (WIP)
          - **Wait for request signal:** (WIP)
          - **Quit working in home base:** (WIP)
          - **Take training:** (WIP)
          - **Trader salary:** (WIP)
          - **Jump Drive Energy:** (WIP)
          - **Configure automatic naming:** (WIP)
          - **Ship number:** (WIP)
          - **Configure reports:** (WIP)
          - **Acoustic signals at messages:** (WIP)
          - **Trade log:** (WIP)
      - **Send filter:** (WIP)
        - **Reset:** (WIP)
- **Administration global configuration external Commodity Logistics:** Same options as internal
- **List of ships with CLS**
  - **Trader Settings**
    - **Delete Account Information:** (WIP)
    - **Take Training:** Toggles if the pilot levels up or not
    - **Trader Salary:** Toggles if the trader uses the player or home base account to pay the pilot
    - **Fire trader:** Resets the pilot level. Only do this if very short on credits
    - **Reassign Trader:** Swaps the pilot to another ship
  - **Waypoints**
    - **List of waypoints**
    - **Waypoints**
      - **Add station:** Opens the Universe Map to select a sector and station before opening a window to Buy/Sell/Load/Unload/Refuel jump energy/Fly to station. Clicking one of the first 4 options opens a window of possible wares to perform the action on.
        - **Buy**



- **Manual price setting:** (WIP)
    - **Minimum product price:** (WIP)
    - **Average product price:** (WIP)
    - **Maximum product price:** (WIP)
  - **Sell**
    - **Manual price setting:** (WIP)
    - **Minimum product price:** (WIP)
    - **Average product price:** (WIP)
    - **Maximum product price:** (WIP)
  - **Load**
    - **Manual input:** (WIP)
    - **Manual input up to:** (WIP)
    - **Maximum cargo space:** (WIP)
    - **Half cargo space:** (WIP)
    - **Half cargo space up to:** (WIP)
  - **Unload:** (WIP)
  - **Refuel jump energy:** (WIP)
  - **Fly to station:** (WIP)
  - **Add ship:** (WIP)
  - **Delete all waypoints:** (WIP)
  - **Restore Defaults:** (WIP)
- **Generate Waypoints:** Opens a window to input a number before selecting a ware category and specific ware followed by Buy/Sell/Load/Unload and amount before automatically generating waypoints.
  - Avoid this generally
- **Supply Conditions**
  - **Minimum transfer amount on collection:** (WIP)
  - **Minimum transfer amount on delivery:** (WIP)
  - **Dock with ship only in the same sector:** (WIP)
  - **Wait for request signal:** (WIP)
  - **Quit working at station:** (WIP)
  - **Restore defaults:** (WIP)
- **Jump Drive settings**
  - **Use Jump Drive:** Toggles if the ship using CLS will use the jump drive to get between sectors if equipped
  - **Jump Drive Energy:** Sets the amount of freight reserved for Energy Cells as jump fuel
  - **Minimum Jump Range:** Minimum number of sectors needing to be traversed to trigger a jump
  - **Restore defaults:** (WIP)
- **Automatic naming:** (WIP)
  - **Configure automatic naming:** (WIP)
  - **Ship number:** (WIP)
  - **Factory number:** (WIP)
  - **Restore defaults:** (WIP)
- **Data storage:** (WIP)
  - **Load data:** (WIP)
  - **Save data:** (WIP)
  - **Delete data:** (WIP)
- **Restore defaults:** (WIP)
- **Broadcast to my ships in the sector:** Sends a command to all ships of the specified type in the player sector. If no ships of that type are present in the sector the option will be unable to be selected
  - **Broadcast: Sector: Wingmen:** Commands all ships in a wing
  - **Broadcast: Sector: M5/M4/M3 Ships:** Commands smaller fight ship types
  - **Broadcast: Sector: M6/M7 Ships:** Commands larger fight ship types
  - **Broadcast: Sector: M5/M4/M3/M6/M7 Ships:** Commands most fight ship types
  - **Broadcast: Sector: TS/TP Ships:** Commands most trader ship types
  - **Broadcast: Sector: M5/M4/M3/M6/M7/TS/TP Ships:** Commands most ship types
  - **Broadcast: Sector: Fighter Drones:** Commands all fighter drones
    - Useful if several have been manually ejected
- **Turret Control**
  - **None:** Sets the turret to do nothing
    - Not recommended
  - **Turret: Attack Enemies:** Attacks any enemies in range of the turret lasers. Has a problem of drawing additional enemies into fights and depleting laser energy without finishing off single targets
  - **Turret: Protect Ship:** Only attacks ships that attack the ship.
  - **Turret: Attack My Target:** Only attacks ships selected by the player left clicking.
    - Useful for forward facing turrets
  - **Turret: Missiles Only:** Only fires at missiles aiming for the ship or ships being protected.
  - **Turret: Missile Defence:** Prioritises missiles aiming for the ship or ships being protected but will also shoot at ships which attack the ship.
    - Recommended for general use.
  - **Turret: Attack Fighters:** Prioritises attacking hostile fighters and bombers.
  - **Turret: Attack Capitals:** Prioritises attacking hostile corvettes and capital ships

- **Additional Ship Commands**
  - **None**
  - **Launch All Marines:** Launches all Marine/Mercenary personnel in the freight. Ignores the current target shields.
  - **Weapon System: Missile Defence Mosquito:** Automatically uses Mosquito Missiles in the freight to intercept missiles targeting the ship
  - **Weapon System: Missile Defence Mosquito (C):** Automatically uses Mosquito Missiles in the freight to intercept missiles targeting the ship, ships that are set to use the ship as a homebase and other ships being protected by the ship
- **Configuration**
  - **Wingman:** (WIP)
  - **Hide From Property Menu:** Toggles if the ship appears in the Property menu
    - Useful for decluttering universal traders and fleet escort ships from the menu
  - **Notify Me When Order Completed:** Toggles if a message is sent to the message log when the current order for the ship is completed
    - It is recommended to toggle this on by default
  - **Formation:** Determines if ships set to follow or protect this ship follow in a V or X formation behind it
  - **Missile Fire Probability:** Probability of the ship using a missile every 10 seconds against a target In Sector when ordered to attack on autopilot
    - Set to either 0 or 100 depending if you want to use missiles or not since numbers in between can be too unpredictable
  - **Home Base:** Sets the player owned ship/station to act as a homebase for the ship. The ship uses the credits of the home base station instead of the player account for any transactions performed when ordered to act as a CAG or Sector/Universal Trader
  - **Clear Homebase Setting:** Sets the home base to the default of none
- **Fleet Control:** (WIP)
  - Become A Fleet Commander: (WIP)
  - View N ship in fleet: (WIP)
  - Assign new fleet commander: (WIP)
  - Disband fleet: (WIP)
- **Wing Control**
  - **Add To Wing:** Add the ship to one of the 12 wings
  - **Flight Wing:** Toggles the wing the ship is in
  - **Flight Wing Management**
    - **Filter Options**
      - Display only ships already in this wing: (WIP)
      - Display only ships of this class: (WIP)
    - **Sorting Options**
      - Sort ships by: (WIP)
    - **Ships:** The ships in the wing
- **Advanced Jumpdrive Configuration**
  - **Autojump:** Toggles automatic use of the Jump Drive when the ship is given orders for another sector
  - **Autojump Minimum Jump Range:** If the ship is given an order to move to another sector this is the minimum jump distance before the ship will automatically try to jump to the destination sector instead of just flying there
  - **Emergency Jump:** Toggles if the ship will try to perform an emergency jump if attacked. Not able to be relied on.
  - **Emergency Jump Shield Threshold:** The Shield % that will trigger an emergency jump if attacks cause the ship to fall below the threshold
  - **Fuel Resupply Quantity (jumps):** How many jumps the ship is willing to jump to refuel on Energy Cells (0-?)
- **Adjust Friend-Foe**
  - Set from global settings: Sets the friend foe settings of the ship to those under Global Commands
  - Show as enemy if enemy to me: Shows ships as foe (red) if they see the player as a foe
- **Attack all enemies:** Tells the player ship to attack all enemies in the sector using autopilot. Should not be used by any player able to fly or aim.

## Freight

- Lists all freight and equipment on the player ship. Left clicking specific freight wares allows them to be ejected (eg. drones, Lasertowers and satellites).

## Advanced

- **Weapons:** Allows manipulation of what slot has what Laser equipped
  - **Info:** Lists the encyclopaedia information of the selected laser.
  - **Uninstall Laser:** Removes the lasers from the selected laser slot back into the freight hold
  - **Install Laser:** Installs a laser from the freight hold into the selected laser slot
  - **Add/Remove from Group 1-4:** Links specific groups of lasers in the Main laser battery to a hotkey. Useful for swapping between specialised lasers like Mass Drivers and Ion Disrupters.
  - **Remove from all Groups:** Removes the laser slot from all hotkey groups
- **Change Ship:** Swaps the player ship with another player owned ship. Requires both the player ship and the new ship to be docked at the same ship/station or the new ship to be docked at the player ship. Only able to be performed in space within 4.5km of the new ship if the player has a Transporter Device on one of the ships. Changing to a docked ship immediately launches it.
- **Freight Exchange:** Exchanges wares and equipment with the selected ship. Requires both the player ship and the other ship to be docked at the same ship/station or one ship to be docked at the other ship. Only able to be performed in space within 4.5km of the other

- ship if the player has a Transporter Device on one of the ships.
- **Best Buys Locator:** See Navigation section Best Buys Locator
- **Best Selling Price Locator:** See Navigation section Best Selling Price Locator
- **Rename:** Renames the player ship
  - Useful if the player owns multiple ships of the same type.
- **Self Destruct:** Sets the player ship to self destruct. Complete waste of resources since ships can be sold for credits at shipyards or recycled at the PHQ if unwanted.
- **Graphs:** (WIP) ???

## Landed Ships

- Ships landed at the player ship

## Locate In Sector Map

- Opens the sector map and selects the player ship

## Display On Monitor

- Displays the ship on the left or right monitor.

## Target

Commands for the selected ship, station, ware, asteroid, debris or other selectable object

Adjust Station Parameters

See Station>Adjust Station Parameters

Orders

Comms

Tries to communicate with the selected ship or station if the player ship is within 25km. Useful for accepting missions and "apologising for friendly fire" with hostile ships but otherwise limited outside of plots.

Claim Ship

Gives the player ownership of the abandoned ship

Requires the player ship to be within 40m of the target ship

Only able to be performed by the player Astronaut ship type Space Suit and ships with the System Override Software

Enter Ship

Makes the target player owned ship the player ship

Only able to be performed when ejected and in control of the player Astronaut ship type Space Suit

Scan

Requires the Freight Scanner or Mineral Scanner equipment ware and the player ship to be within 4.5km of the target ship or 10km of the target asteroid. Freight Scanner reveals the freight of the target NPC ship to the player along with Laser installations and current commands when within scan range. Use of a Freight Scanner in a sector owned by a major race without the appropriate police license will cost 1% Race Rank. Mineral Scanner reveals the mineral type and yield of the target asteroid.

Freight

Lists all freight and equipment on the selected ship. NPC ships require to be scanned first to show their freight. Left clicking specific freight wares on player owned ship allows them to be ejected (eg. drones, Lasertowers and satellites).

Advanced

Weapons

Allows manipulation of what slot has what Laser equipped

Info

Lists the encyclopedia information of the selected laser.

Uninstall Laser

Removes the lasers from the selected laser slot back into the freight hold

Install Laser

Installs a laser from the freight hold into the selected laser slot

Add/Remove from Group 1-4

Links specific groups of lasers in the Main laser battery to a hotkey. Useful for swapping between specialised lasers like Mass Drivers and Ion Disrupters.

Remove from all Groups

Removes the laser slot from all hotkey groups

Change Ship

Swaps the player ship with another player owned ship. Requires both the player ship and the new ship to be docked at the same station. Only able to be performed in space within 4.5km of the new ship if the player has a Transporter Device on one of the ships.

Freight Exchange

Tells a player owned ship which is not the player ship to exchange wares with the player ship. Requires the other ship to be docked at the same station or one ship to be docked at the other ship. Only able to be performed in space within 4.5km of the other ship if the player has a Transporter Device on one of the ships.

Freight Exchange With

Tells a player owned ship which is not the player ship to exchange wares with another player owned ship. Requires the other ship to be docked at the same station or one ship to be docked at the other ship. Only able to be performed in space within 4.5km of the other ship if the player has

a Transporter Device on one of the ships.

Best Buys Locator

See Navigation section Best Buys Locator

Best Selling Price Locator

See Navigation section Best Selling Price Locator

Rename

Allows the target player owned ship to be renamed. Useful if the player owns multiple ships of the same type or is using them to follow a ship of interest.

Graphs

???

Connected Stations

Complexes only

Shows all connected stations in the complex and their status

Info

Advanced

Display On Monitor

Landed Ships

Ships landed at a ship or station

Owned Ships

NPC ships designated as escorts for the ship or ships that have the ship set as their Home Base.

Autopilot: Command Console

Command console for the target player owned ship. See Comamnd Console section for the Current Ship

Autopilot: Dock At

Tells the player ship to dock at the target station. Docking at a player owned ship immediately changes ship. Should not be used by players with a Docking Computer or if the station has docking clamps.

Autopilot: Fly To

Tells the player ship to fly closer to the target.

Autopilot: Fly Through

Tells the player ship to fly through the selected Jump Gate

Autopilot: Follow

Tells the player ship to follow the target ship using autopilot.

Autopilot: Attack

Tells the player ship to attack the target ship using autopilot. Should not be used by any player able to fly or aim.

Attack: Launch Marines (TP/M6/M7M with Marine/Mercenary in freight only)

TP, M6 and M7M only. Launches all carried marines at the target ship even if more are launched than can board the target ship.

Launch Marines

TP, M6 and M7M only. Launches all Marine/Mercenary personnel in the freight of the player ship for a boarding operation. Requires the target shields to be low enough for boarding.

Locate In Sector Map

Opens the sector map and selects the target ship

Display On Monitor

Displays the target on the left or right monitor.

## Station

Info

Lists the encyclopedia information of the station docked at.

Adjust Station Parameters

Player owned stations and complexes only.

Products

Intermediate Products

Resources

Product Selling Price Setting

Slider to set the price any products are sold at. Clamped between the min and max price for the ware.

Intermediate Resource Buying Price Limit

Slider to set the price any intermediate products are brought/sold at. Clamped between the min and max price for the ware.

Primary Resource Buying Price Limit

Slider to set the price any resources are brought at. Clamped between the min and max price for the ware.

Add to Production Queue (PHQ only)

Remove from Production Queue (PHQ only)

Add to Reverse Engineering Queue (PHQ only)

Remove from Engineering Queue (PHQ only)

Add to Repair Queue (PHQ only)

Remove from Queue (PHQ only)

Add to Recycle Queue (PHQ only)

Remove from Queue (PHQ only)

Spray Shop (PHQ only)

Save Loadouts (PHQ only)

Fund Transfer

Allows the manual transfer of credits between the player account and the station/complex account

Advanced Parameters

## Maximum Jumps

Maximum number of sectors away from the station/complex sector commercial agents working for the station/complex will trade in  
Other races can trade with this station

Toggles if NPC traders can buy/sell wares at the station

Default is Yes

Should be set to No if the station/complex is not there to sell wares to NPC traders for reputation or is an equipment or trading dock

## Intermediate Product Trading

Toggles if the complex will trade intermediate products.

As well designed complexes have intermediates in equilibrium this should be set to No.

## Trade

NPC stations only

Opens the menu for buying and selling wares traded at the station. Resources will only be brought and products will only be sold

## Batering

Allows batering with NPC traders docked at the station. Potentially allows good deals early on if there are any NPC ships docked.

Some deals are locked by Race Rank requirements.

Wildfire Missiles are commonly requested

## Comms

See Comms of the station

## Landed Ships

List of ships landed at the station. Commands can be given to player owned ships from this menu

## Owned Ships

Ships that have the stations et as their home base. Useful for locating Atmospheric Lifters and ships belonging to Military Outposts and Corporate Headquarters. Requires an Advanced Satellite in the sector to get details of the ship locations.

## Gate Realignment (Xenon HUB only)

Requirements to link gates

Needed Energy Cells

Time Unit Next Realignment

Gates Available

## Advanced

Command Console

Report Inbound Ships

Player owned stations only

Creates a log message listing all ships with the station/complex as the target destination

Useful if a military strike is suspected

Auto money transfer to player account

Player owned stations only

Sets the threshold to automatically transfer excess funds from the station account into the player account

300-500k is a good number

Trade barrier (Commercial Agent)

Administration (Commercial Agent)

Station Settings

Station Status

Money Transfer

Pricing

Pricing (Activated/Disabled)

Restore Pricing

Wares

Complex Settings

Products

Intermediate Products

Resources

Factories

Dock Ware Manager

Add ware

Wares

Rename

Renames the station/complex

Useful if the player has trouble remembering what a complex makes

Graphs

Stock

Shows a graph of how the station stock of resources, intermediates and products has changed over time since construction

Station Profitability

Shows how much profit the station has made over time since construction

Locate In Sector Map

Opens the sector map and selects the station docked at.

Display On Monitor

Displays the ship on the left or right monitor.

## Undock

Only available if docked at a station. Undocks from the station.

## Eject From Ship

Ejects the player controlled Astronaut ship type Space Suit from the ship being currently flown. Used for claiming abandoned ships without a System Override Software, changing ships in space without a Transporter Device and repairing ships with the Repair Laser built into the space suit.

Has a limited oxygen supply of 120 minutes after which it self destructs.

Only use if there are no hostiles nearby

## Incoming Message

Latest unread message from plots, missions, ships and Marine/Mercenary training sessions.

## Options

Graphics

Fast Menu Control

Gamma

Field Of View

Postprocess Filter

View Distance

Audio

Volume: Effects

Volume: Music

Volume: Voice

Subtitles

Verbose Ship Computer

Disable Station Announcements

Gameplay

Seta Factor

Gravidar View Range

Default External View Mode

Full Screen

Left Monitor

Watch

Auto Target

Auto Missile

Right Monitor

Watch

Auto Target

Auto Missile

Autosave In Station

Show Warp Tunnel

Confirmation On Eject

Disable War Reports

Numerical shield/hull display

Hide Sidebar in Cursor Follow Mode

Run Game In Background

Turret Command Configuration

Turret: Attack My Enemies

Turret: Attack Enemies

Turret: Protect Ship

Turret: Attack My Target

Turret: Missiles Only

Turret: Missile Defence

Turret: Attack Fighters

Turret: Attack Capitals

Turret Command: Alpha

Turret Command: Beta

Turret Command: Gamma

reset to default values

Target Selection Priorities

Available priorities

Attack my cockpit target (personal ship)

Attack my cockpit target (all ships)

Attack any enemies

Attack any enemies while the ship is using an attack command

Attack capital ships (M6 and bigger)

Attack capital ships (M7 and bigger)

Attack Fighters

- Protect ship. Attack anything that attacks it.
- Missile Defence
- Automatic Laser Switching
  - Capital ships may switch lasers
  - All ships may switch lasers
  - Disabled
  - Ship equipment required
- Satellite Early Warning Network
- Detect Ships
  - Disabled
  - All ships
  - Fighters only
  - Fighters and Capital Ships
  - Capital Ships Only
  - Capital Ships Only, excluding M6
- Message Type
  - Vocal
  - Message
  - Vocal + Log
- Warning Time in minutes
- Detect Claimable Ships
- Wing Protection
- SEWN Enabled satellites
  - Remove all satellites From Network
  - list of satellites
  - Add satellites
  - Add All satellites to Network
  - list of satellites
- Controls
  - Profiles
  - Controls
  - Game
  - Interface
  - (WIP)
- Pause Game
  - Pauses the game. Pressing any button/key resumes play
- Save Game
  - Saves the current playthrough to slot 1-10. Only able to be performed when docked unless Salvage Insurance is purchased. Saving in space will consume 1 Salvage Insurance.
  - Saves are stored under Documents>Egosoft>X3AP>save by default
- Load Game
  - Loads from a previous save. All unsaved progress is lost.
- Quit Game
  - Exits to the main menu. All unsaved progress is lost.
- Save & Quit Game (Dead Is Dead mode only)
  - Requires connection to Steam. Saves the game to the DID slot before exiting even if in space.

## Exchanging Ships and Wares

How to exchange ships and wares is one of the common questions new players have. Early on the player will not yet own a Transporter Device so will have click the Eject From Ship button and fly close to the other player owned ship in the Astronaut ship type Space Suit before targeting it and selecting Enter Ship. Alternatively both the player ship and other player owned ship can be docked at the same station and the player ship changed under Station>Landed Ships>(name of the other player owned ship)>Advanced>Change Ship. The exchange of wares can also be performed when two player owned ships are docked at the same station using Station>Landed Ships>(name of the other player owned ship)>Advanced>Freight Exchange to exchange with the player ship or Station>Landed Ships>(name of the other player owned ship)>Advanced>Freight Exchange With>(name of another player owned ship) to exchange between two player owned ships which are not the player ship. Once a Freight Drone has been purchased wares can be exchanged in space by either ejecting the Freight Drone and ordering it to (WIP) or keeping it in the freight and using the Autopilot>Command Console>Trade>Transfer Freight via Drones command (requires Trade Command Software MKII). If a Transporter Device is installed on one of the two ship the two ships need to fly within 4.5km of each other before the Change Ship and Freight Exchange or Freight Exchange With options appear under the Advanced menu of the Autopilot or Target menus. If one of the ships has a hanger able to dock the other ship, freight and the player ship can be changed under the Landed Ships menu while if the player ship is the one docking the ship is automatically changed to the player owned ship docked at.

**CLS**

**CAG**

# Satellite Early Warning Network

## In Sector vs Out Of Sector

To conserve computational resources the game operates very differently for the sector the player ship is in compared to other sectors offering some advantages and some disadvantages.

**In Sector (IS):** Objects have a collision radius resulting in mutual speed dependent damage (amount?) when impacting with each other. This includes stations and debris which overlap and wares which are unable to be picked up. The pathing of ships and missiles are calculated in real time meaning that mobile objects will try to move around obstacles and ships require a Rudder Optimisation based time to change direction. Stations are only able to be docked at from specific angles at the docking clamps or hanger of the model with the automated docking sequence involving a slow approach over a long distance. Ships that are the target of missiles will respond to the owner of the ship that fired the missile on impact. Missiles that are in flight will continue traveling until they expire if they do not hit a target and can be intercepted. Boarding operations can be initiated and player stations can be ordered to be built allowing specific placement within the sector. Ships can have their freight scanned revealing information about the ship as long as it is in the sector. Lasers require energy to shoot and have a range specified by the laser type installed while ammo consuming lasers will use one ammo per shot. Some laser types can hit multiple targets per shot or the same target multiple times per shot. Having Advanced Satellites in the sector enables the Sector Map to show a full 3D rendition of the sector. Many job scripts will run making NPC ships perform special tasks like police/border control ships scanning for illegals.

**Out Of Sector (OOS):** Collision is disabled allowing ships to overlap and pass through obstacles (like the Aldrin planetoid). Ships can change direction instantly. Missiles in flight are removed. Missiles launched impact instantly and cannot be intercepted. Stations, ships and gates are docked at on 3D point contact without any change of speed on approach and can be approached from any direction. Ship positions and status are updated every 10 seconds unless the player is viewing the sector using the Sector Map from the Universe Map menu in which case ships are updated every 3 seconds. Combat rounds are run each time ships update using different laser damage values for shield and hull damage compared to in sector and assume all lasers have 10km range and require no energy but ammo consuming lasers will use a full crate of ammo each round of combat. Splash and multi-hit effects of lasers and missiles are not applied. This means ships have a higher chance of surviving if ordered to jump to another sector via the My Property menu than if ordered via the Sector Map view of the Universe Map. Some scripts for ship jobs are not run like pirate attacks on traders or spacefly hunters making them perform other actions or to sit idle until the player enters the sector again. Ships and stations at the default position of X=3,000,000 Y=3,000,000 Z=3,000,000 gain infinite scanner radius giving them and Advanced Satellites sight and combat range of the whole sector.

On player entry into a sector: Overlapping ships are offset based on the bounding geometry of the objects being overlapped. The priorities for offsetting ships are small ships>big ships>huge ships>Lasertowers>stations/asteroids/debris. This means jumping into a sector can be used to scatter NPC wings/fleets around stations and objects (NPC Terran stations and the Aldrin planetoid are especially bad for this). Ships and stations including Orbital Weapon Platforms at the default position of X=3,000,000 Y=3,000,000 Z=3,000,000 are warped to their default sector map position or are randomly scattered along with all wares within the sector radius.

Due to the differences between In Sector and Out Of Sector handling it means that: Ships traverse sectors and dock at stations faster if left out of sector. Lasers like the PSG, CFA, EBC, PBG and Gauss Cannon are more effective in sector. Ships that have poor laser energy regeneration but good laser compatibilities (like the Xenon Q and J) can pose a greater threat Out Of Sector while they quickly run out of energy and pose a minimal threat during In Sector combat. Lasers and missiles with splash are more lethal if used In Sector. If a ship is going to spend most of the time Out Of Sector there is no advantage setting turrets to missile defence so they should rather be set offensively. NPC ships belonging to hostile races tend to be more aggressive towards player assets In Sector.

## The temptation of the stock market

Albion Prelude introduced Stock Exchanges and stock market mechanics giving players the option to quickly query large chunks of the universe for available ship equipment or to earn incredible amounts of credits with minimal risk and assets. The amounts able to be earned by manipulating the stock market are so much that it can equivalently remove any limitations to player expansion caused by cost allowing them to skip straight to the middle game however many players view this as gamebreaking and equivalent to cheating so voluntarily choose to avoid using it.

To unlock stock exchanges requires the player ship to dock at the regional Stock Exchange station and press the corresponding button in the message received under the Incoming Message menu once the access requirements are met. Stock exchanges can be remotely accessed if the player has an asset in the sector with the Stock Exchange station and the player ship has a Trading System Extension installed. If the Stock Exchange station is hostile to the player access to the stock market of the region is disabled until hostilities with the owning race/station have been resolved. Gambling spare credits on the Natural Wares and the Corporate or Company Indexes easily generate 50-100k credit returns and can be performed remotely in the background as soon as the player has a second asset or a ship able to use M size cargo for deploying satellites. Doing this can easily triple early player wealth every 30 minutes while the player ship is left available for gaining Race Rank and other tasks. If the player goes into full stock market manipulations multiple hundred millions of credits can be generated per minute. Player trade rank can be quickly raised using the stock market as shares bought and sold count as transactions made by the player ship. This means stock market manipulation can easily earn >3% per transaction towards the final Trade Rank level.

### Stock Exchange Unlock Requirements

Argon/Terran: one or more player owned space stations in Argon/Terran owned sectors

Boron: Trade Rank of Trader (+7)

Paranid: Race Rank of Friend Of Priest (+2)



Pirate/Yaki: 7 Slaves, 14 Space Fuel or 4 Space Weed  
Split: Fight Rank of Novice (+4)  
Teladi: 10,000 credits

Energy Bolt Chainguns are the best ware to use for manipulation since the player can start as soon as 453,432 credits and access to the Grand Exchange stock exchange has been obtained while there is rapid potential for early income growth from all the Teladi NPC Space Equipment Docks, Military Outposts, Light Weapons Production Complexes and Energy Bolt Chaingun Forges across Teladi territory. The compact freight size of EBCs means a single heavily shielded ship (like a TM or Shrike) can be used for full manipulation even in the presence of hostile ships. Each player owned EBC Forge produces enough wares per hour to increase income of a two way journey in and out of a Teladi stock exchange region by 86,332 credits which easily equates to over 5 million credits increased earnings per hour if full stock price manipulation is obtained.

## Reputation manipulation

The X-universe is populated by 6 major races (Argon, Boron, Paranid, Split, Teladi and Terran) and 4 minor races (Goner, Pirate, Yaki and Xenon). With the exception of the Xenon all races can have their Race Rank changed by player actions. Certain plot missions require the player to be friendly with specific races to progress (or in the case of the first mission of the Albion Prelude Main Plot not friendly with the Terrans) or make certain missions easier even if that race is currently hostile due to the Starting Scenario chosen or player actions against that race. This means that the player must be able to efficiently manipulate their reputation as required. If the player has a Race Rank that is less than -3 performing missions for the race will not contribute to Race Rank meaning alternative combat or trade methods are required to get them friendly enough to accept reputation increases from completing random missions. In general having a Space Weed and Space Fuel producing complex in Hatikvah's Faith is highly effective at generating reputation for all races except the Terran and Yaki. Killing ships belonging to the enemies of the sector owner race will increase Race Rank for the sector owner but can also decrease the Race Rank of the race being killed. This means it is possible to use missions to increase the Race Rank of one race and then trade it for that of one of their enemies. As Xenon are unable to be friendly towards the player there is no reason to not kill them. The selling of wares at hacked stations using the player ship also can generate Race Rank points however the amounts are minimal unless it is missiles at an equipment dock.

Race Requiring plot missions -5 to >-3 -1 to +10 **(insert table)**

Argon: WIP Kill Xenon patrols at the North gate and do Fight missions from the Equipment Docks belonging to other races in Getsu Fune Cruise near Home Of Light or Belt Of Aguilar doing missions

Boron: WIP Kill Xenon patrols at the East gate in Menelaus' Paradise Cruise near Reservoir Of Tranquility doing missions

Goner: WIP Build stations in Harmony Of Perpetuity and sell alot of wares like Energy Cells/Use to HUB to connect Xenon patrols through Elysium Of Light End the war at the end of Shady Business or rely on a Goner station spawning in Harmony Of Perpetuity and do missions in the two Goner sectors

Paranid: WIP Kill Pirates in Heaven's Assertion or plunder Argon TS ships in Sacred Relic/Use the HUB to send Xenon patrols through Paranid space Cruise near Cardinal's Domain/Friar's Retreat doing missions

Split: WIP Kill Xenon in Zyarth's Dominion Kill Xenon in Zyarth's Dominion or Cruise near Rhonkar's Fire doing missions

Teladi: WIP Kill Xenon patrols at the North gate of Grand Exchange Cruise near Grand Exchange or PTNI Headquarters doing missions

Terran: WIP Kill Xenon patrols at the East gate in Segaris Cruise near Oort Cloud doing missions

Pirate: Build an illegals complex in Hatikvah's Faith/Board or bail cap ships in Pirate owned sectors Cruise near Danna's Chance or Mercenaries Rift doing missions

Yaki: WIP Kill Paranid military patrols in Ocracoke's Storm/Build an illegals complex in the far north of Ocracoke's Storm/Use the HUB to send Xenon patrols through Yaki space Complete Build missions in Ocracoke's Storm and then patrol between Ocracoke's Storm and Senators Badlands doing missions

## To befriend or befoe

Having a high Race Rank with a race allows a wider variety of ships and wares to be purchased at stations owned by the race and for the player to buy or sell ships at the shipyards of that race for a better price however committing acts of piracy against the race can obtain free ships, wares and stations including some that are not sold at shipyards. Although it is possible to reap the benefits of committing single acts of piracy against a race and then grinding random missions to restore the lost Race Rank, it may be preferable to keep that race as an enemy for continual plunder. Going against one or more major races also adds an extra element of difficulty to the game however the player still requires NPC docks for ship equipment and tunings so going against more than two major races at once is not advisable (usually combinations with Argon and Teladi). As races attack all player assets at -5 Race Rank the use of Universal Traders for income becomes less reliable with an increasing number of hostile races making the player more dependent on remote stations and plunder for income. The advantages and disadvantages of having each race as a nemesis is listed below.

Argon: Omicron Lyrae is safe to salvage in/Early access to Firestorm Torpedoes, PRGs and Mass Drivers/Early access to Space Fuel

Distilleries/Argon corporation headquarters and research stations have a broad variety of equipment for ships/Home Of Light is a good sector to train Universal Traders

Often have civilian TLs in poorly defended sectors/The large number of Argon corporations mean an equally large number of traders to plunder/Albion sectors have a poor RR response and isolated ships to cap/High density of equipment docks to loot

Boron: Early access to Ion Disrupters and Recon Drone Construction Facility/Cheap stations for converting Silicon into Energy Cells

TS and most TP ships are unarmed and have a 1.5% higher bail chance than other races/Capital ships have blind spots/Only have 1 RR M1

Goner: Hard to regain Race Rank if very hostile/Have very little worth taking

Completely defenceless

Paranid: Have the monopoly on Tractor Beams and Hurricane Missiles/PSGs are lethal to use but make boarding harder/TS ships are cheap

Paranid ships often traverse across Pirate owned sectors like Desecrated Skies and Hatikvah's Faith/Boarded Hyperion Vanguard are good ships to own and sell for alot/Perpetual Sin has constant RR ships but no other military presence/All Paranid sectors are close to a neutral sector from which to operate

Split: Have the monopoly on Turbo Booster equipment/Early access to Mass Drivers, ISRs, PBEs, Thunderbolt Missiles and Tornado

Missiles/Ships are low cost, high speed and deal good damage/The constant Xenon activity in Zyarth's Dominion makes reputation manipulation easy  
Ships have low shielding and hull/Strongarms has alot of weapons dealer TMs to board/Pteranodons are poorly equipped and isolated/RR fleet is usually busy in Zyarth's Dominion  
Teladi: Early access to Bliss Places/Early Access to EBCs, Gauss Cannon, FAA and Typhoon Missiles/Teladi Stock Exchanges are easy to unlock and the most profitable/One of the two suppliers of Trade Command Software MK3, Explorer Command Software and Carrier Command Software  
Ships have poor mobility, carry alot of freight and many have poor laser regeneration/RR fleet is usually busy in Grand Exchange or Ceo's Wellspring/Few Military Outposts to launch counter attacks  
Terran: Springblossom and Hayabusas are very effective traders/Large M7M fleets patrolling keep trouble out/Economy is highly dependent on the player  
Poor RR response/Most Terran lasers have a slow projectile speed making them easy to dodge in the player ship/Water Purification civilian TS ships have extremely low morale/Easier access to Aldrin laser factories/Valhallas sell for over 160 million credits and other Terran capital ships are also high value  
Pirate: Have the monopoly on Software Signature Scrambler and System Override Software equipment/Generate alot of salvage when following patrols/Buy alot of illegals/Early Access to IBLs and PBGs/Avoid having player owned Universal Traders being harassed/Cheaper station hacks  
Ships are usually poorly equipped and have inferior stats/Outside Mercenaries Rift wings are seperated and in small numbers/Often distracted by other opponents/Often the target of Fight type random missions/Most races consider Pirates their enemy/Offer minimal retaliation  
Yaki: Economy is highly dependent on the player/Early Access to IBLs/Have the monopoly on IBL and PBG Forges and sell other illegals stations if sided with during Shady Business/Sectors are rich in resources  
Lots of weak and overpriced boardable ships that are poorly defended over a span of 3 sectors/Ships are usually poorly equipped and have inferior stats/Offer minimal retaliation

## Early game

### Exploration

The X-Universe is a big place consisting of 241 sectors. What sector the game starts in is starting scenario dependent and in the case of the Lost Lar, Poisoned Paranid and Unholy Traitor may not be friendly. The starting sector will have a defined number of stations of a limited variety which will not sell certain wares and pieces of equipment and only may present a limited number of periodic trade opportunities. As the player begins with low Race Ranks (Argon Peacekeeper excepted) there is only a low spawn chance for random missions. These factors mean the player will need to visit other sectors to find safety, increase the number of trade and shopping opportunities and to spawn new random missions. Some sectors may even offer opportunities for construction, salvage and piracy. The Universe Map under the Navigation menu will only show sectors that have been previously visited. To go to a new sector requires the player ship to fly through a Jump Gate or Transorbital Accelerator or order another player owned ship to do so using the Fly Through Gate command of the Explorer Command Software. When in a new sector fly within scanner range of any stations and Jump Gates that look interesting to get them on the map. Once the player has additional ships with the Explorer Command Software this process can be automated using the Map Sector command.

In the starting sector or the first friendly sector entered will be a Flight Instructor M5 with a tutorial think mission. It is entirely up to the player if they do the tutorial mission. For default key configurations Tab and X accelerate, Z and Backspace brake, the arrow keys and left mouse button steer, the Ctrl button and right mouse button shoots (requires installed lasers), the WASD keys strafe, the Q and R keys roll the ship and the D key orders the ship to try and dock at the selected target. To pick up wares in space requires the player ship to have a cargo class greater than or equal to that of the ware and enough free space in the Freight for the ware before flying into them or to use the Collect Ware/Collect Wares In Sector commands (requires the Special Commands Software MK1). Passengers and Space Suits require a Cargo Lifesupport System to be installed to be collected while Marines and Mercenaries also require to be picked up by TP/TL/M6/M6+/M7/M7M/M7C/M2/M2+/M1 ships. It is advisable to dock at a trading dock/port, equipment dock or military outpost to upgrade the Engine Tunings and Rudder Optimisations of the starting ship to make navigation easier and to later pick up other useful ship equipment like a Cargo Lifesupport System, Jump Drive, Triplex Scanner and Trading System Extension as soon as the player has the spare credits. How players go about increasing their credits and assets usually involves a combination of tactics (unless deliberately avoided for role playing purposes) so the following paths represent extremes of each approach with steps that may be skipped if the player is confident in their skills or uncommon opportunities arise. Where the different paths can feed into each other will be stated.

### Path of salvage

When NPC ships die they have a Fight Rank based chance to drop some of their freight. Usually this is some kind of missiles. This means Pirate sectors with heavy traffic, sectors bordering Xenon sectors and the war zone sectors which have alot of ship deaths are good places to gather missiles and other wares dropped from the conflict which can be sold nearby.

With the exceptions of the Argon Peacekeeper Lost Lar, Savage Split and Terran Commander most starting scenarios begin as neutral to both the Argon and the Terran meaning it is relatively safe for the player ship to enter the war sectors where several hundred thousands of credits worth of missiles can drop after a large battle. For starts hostile to either the Argon or Terrans more care must be taken where the playership has to hang back and only move in to salvage after the battle has ended in defeat for the hostile race. The Humble Merchant (the M5 only), Tormented Teladi, Unholy Traitor, Teladi Trafficker, Savage Split, Anonymous Argon, Boring Boron and Nostalgic Argon all need to traverse through Pirate owned sectors to get to the war zones where Pirate owned capital ships have a high chance to be patrolling early on. The pirate capital ships will attack anything that gets within 4km but tend not to deviate from their course to the next Jump Gate so the player ship needs to be flown around them before tailing the patrol and collecting any valuable wares left by ships killed by the pirate patrol. Save before entering Xenon Sector 347. When flying through Xenon Sector 347 fly in a straight line to the north gate and do not hang around to salvage unless the ware is directly in front of the player ship since it is only a matter of time before an M6 or M7 tries to kill the player ship with a heavy missile (usually successful at this stage). Once in Omicron Lyrae dock at the equipment dock and use all credits upgrading the speed and cargo of the

player ship. If the player went the Humble Merchant starting scenario now is a good time to get a Trading System Extension if one has not already been purchased. Fly between Circle of Labour and Omicron Lyrae collecting missiles. If hostile to the argon fly between Heretics End and Asteroid Belt.

The starting ships of the Boring Boron, Savage Split, Suicidal Squid and Tormented Teladi starting scenarios are only able to salvage S class wares limiting them to Remote Guided Warheads (26,952 credits each) and Banshee Missiles (13,476 credits each) along with other low value missiles. A Docking Computer (18,952 credits) can be purchased in nearby Albion Alpha or The Moon to allow for faster docking using Ctrl + D. The profits from selling the missiles at the equipment dock in Omicron Lyrae or Terran Orbital Defence Stations can be used to arm the player ship (path of piracy), saved up for getting a TS with Trade Command Software MK3 or Dragonfly Missile Factory (path of trade) or buying a Discoverer Raider which can salvage M class wares enabling Beluga Missiles (26,952 credits each), Cyclone Missiles (20,216 credits each), Firestorm Torpedos (80,856 credits each), Hammerhead Missiles (80,056 credits each), Tornado Missiles (16,844 credits each), and Typhoon Missiles (33,692 credits each) to be salvaged. Salvaging in a Discoverer/Discoverer Raider can earn about 1 million credits per hour and will quickly boost Argon/Terran race rank to +6 enabling the purchase of TS+, TL and M6 ships and starting the commonwealth main plot for commonwealth starting scenarios (requires low Terran Race rank). Spare ThunderBolt and Tornado Missiles can be hoarded for cheap kills to increase Fight Rank for better drops, cap ships (path of piracy) and manipulate Race Rank eg. killing Terran/Xenon ships in Argon sectors to get Argon friendly (Lost Lar and Savage Split starting scenarios).

Ships compatible with PBCs or PALCs can be used to obtain free marines in Circle of Labour by setting the PBC/PALC compatible turrets to Missile Only and uninstalling lasers from all other weapon slots before using the Protect command on Terran capital ships that are at low shield. Rapid Response Minotaur M7Ms that have spawned with boarding pods will launch their marines at the Terran ship only to be intercepted by the PBC/PALC fire leaving several high skill marines floating around to be collected by player owned ships. Each of these marines can be sold for over 300k credits each or used for boarding operations (path of piracy).

Once access to the Xenon HUB has been obtained from the plots it can be converted into a wrecking yard by linking the Aldrin 2, Gaian Star and Aladna's Hill>Hatikhvah's Faith gates. This causes the Terran traders going to/from Aldrin 1 and a Terran fleet that patrols between Aldrin 2 and Segaris to engage with the Argon traders and the frequent military patrols passing through Aladna's Hill with the Pirate ships attacking everyone else. If the player is neutral with all three factions it is safe to have TS+ ships with the Collect Wares In Sector command collecting the plentiful ware drops which can be worth several million per hour at higher Fight Ranks and include lasers that are in short supply.

The path of salvage is advantageous early on because it can be done with small ships, can generate a good income with no investment and is comparatively low risk however it is limited to In Sector meaning the presence of the player is required when other activities might be more profitable and there is no option to continually expand the source of income.

## Path of piracy

Why spend time grinding reputation and paying eye watering prices for stuff when you can just steal it? The player ship and player owned ships can attack NPC ships and stations to destroy them leaving behind a Fight Rank influenced proportion of their freight (path of salvage). When the player ship does the attacking it can force the pilots of TS/TP/TM ships to eject a Fight Rank determined portion of their freight or even get the pilots of small ships bail leaving the ship abandoned and available to be claimed by the player along with a portion of the equipment and remaining freight. Once the player has trained a boarding crew even high value TL/M6/M7/M2/M1 ships can be forcefully acquired for use or sold for multiple million credits each. Piracy also allows the player to obtain ship types and even some stations which are not available for purchase at any shipyard. Understandably the owning races of the plundered ships will be displeased resulting in a loss of Race Rank points meaning the player will need to balance acts of piracy with reputation building activities like missions and killing the enemies of the race in their sectors or face the consequences of the race becoming hostile by losing trade opportunities (affects the path of trade), being unable to progress certain plots and having all their fight ships after the head of the player (which might not be a bad thing). One trick to reduce the Race Rank loss is to alternate pirating ships of similar notoreity value owned by races that are hostile to each other (eg. Argon and Paranid or Boron and Split) in sectors owned by their enemy so a small portion of the lost race rank is gained with the other race. When trying to avoid hostilities with a race, boarding should only be attempted at >+6 Race Rank and reputation rebuilt before the next boarding operation. If the player ship has Cargo Lifesupport System equipment installed it is recommended to collect the Space Suit from bailed ships since the passenger can then be delivered to trading stations of the same race for a small reputation refund or converted into Slaves at a Pirate dock and sold for credits. An easy way to keep tabs on ships the player wants to board but is unable to do so immediately, due to Race Rank or available assets, is to order an M5 to use the Follow command on the target and rename the ship after the target/sector it resides in. This is especially useful for identifying friendly TLs going to build stations by them leaving their home sector.

The starting ship of the Goner Witness starting scenario is unable to be armed forcing the player to choose other paths until they can afford an M5 or other combat capable ship. The Humble Merchant, Teladi Trafficker, Anonymous Argon, Boring Boron, Pious Paranid and Suicidal Squid (not recommended due to being unable to reload for favourable outcomes) starting scenarios begin unarmed meaning other paths need to be followed until they can afford at least one IRE or salvage some Dragonfly/Firelance and Mosquito missiles.

For starting scenarios beginning with only a TS (Pious Paranid, Teladi Trafficker and Poisoned Paranid), the starting ship lacks the mobility for dog fighting meaning the first target of piracy will probably be an M5 acting as a recon/courier/parcel service for major races, a pirate Harrier/Kestrel that has gotten seperated from their wing or is engaging other targets, a Xenon N that comes into a sector bordering a xenon sector (not Xenon Sector 101) or a Pirate/Yaki/Xenon M5 spawned by a fight random mission at low Fight Rank. Alternatively unarmed M4 civilian ships and Boron TS ships can be targeted however care must be taken to avoid police patrols. It is advisable to invest 560 credits in buying a Salvage Insurance so that the player can save before knocking down the shields of the target so that they can reload until the target bails. Rely on the comparatively long range of the missiles to have the element of surprise and knock down most of the target shield/hull before the target gets within weapon range. With a TS all the player can really do is try to turn so that the frontal guns or rear turret is facing the target and hope that hull damage does not destroy any hard earned equipment. Once the target has bailed eject from the player ship and claim it before repairing it as much as possible with the Repair Laser before ordering the slower ship and flying the faster ship to a safer location/sector. Once in a safe location eject again and use the Repair Laser to patch up both ships to max hull. The player then has a choice of transferring useful wares off and selling

the new ship or swapping to it as the new player ship. It is advisable to cap 2 ships using the starting ship and use the funds raised by selling one to buy at least one shield, 1-2 IRE weapons and tunings for the other. Once a Trading System Extension is purchased/obtained from a bailed ship the starting TS can be used to trade remotely (path of trade).

Some M5s are limited to using IREs (Humble Merchant, Anonymous Argon, Boring Boron and Suicidal Squid starts) and dumbfire missiles or may only be able to collect S class freight (Tormented Teladi, Savage Split, Boring Boron and Suicidal Squid starts) meaning the player will need to cap a better ship which has M class freight (Discoverer series) or PAC compatibility (Jaguar and Harrier series or N) or ideally both (Fujin or Kestrel series). When engaging with a M5 it is a priority to use the high speed to fly into any blind spots of the target ship (usually the rear for M5/M4 ships) while using WASD in a circular pattern to avoid as much fire as possible before using the Ctrl+F hotkey to equalise speed with the target while the player ship opens fire while following them. When engaging multiple opponents rely on the high speed of the player ship to segregate the following opponents based on ship speed until there is a significant distance between the closest ship and the one behind it before attacking and hopefully destroying the closest ship. Without missile use a good player can engage up to two M5s and an M4 at once without taking hull damage. It is recommended to aim for a ship with PAC compatibility first since they will provide a large boost to the damage output of the player ship making capping other M5s easier. Again recon/courier/parcel service ships belonging to major races, ships spawned by low rank fight missions, occupied pirate patrols and civilian ships offer the best targets. If the Race Rank of the former ship owner is >-2 the police will become neutral again on exiting the sector however if they are outright hostile the player ship will need to be used to distract them while the new ship is evacuated through the nearest gate to safety. Sell spare ships to max out the player ship and if M class freight compatible buy 1-2 Fighter Drone Mk1 along with collecting at least 2 Dragonfly and Mosquito Missiles in preparation for capping a Pirate Kestrel.

The Pirate Kestrel has an extremely fast top speed of 635.3 m/s allowing it to avoid most missiles (Mosquito and Rapier missiles are the only threats) while the 2 slot rear turret allows it to intercept most missiles that do come close and damage hostile ships even when retreating (especially with long range PRGs installed). Combined with 5MJ of shielding the Pirate Kestrel is by far the most safe M5 to fly and the missile compatibilities make it best equipped for capping M4 or even M3 ships. There are two Pirate Kestrels which fly solo in Pirate owned sectors but the majority spawn as part of the escorts of other pirate ships meaning the safest tactic to cap one is to launch mosquito missiles to get its attention and fly away so that it separates from the rest of the wing before engaging. When at close range use a Dragonfly Missile to remove the shields and maybe some hull before attacking it with lasers. Again saving before dropping the shields is advised to manipulate the bailing. Once the ship is claimed and repaired using the Repair laser both ships can make their escape before the rest of the pirate wing even catches up. The compatibility with Hurricane, Silkworm and Wasp missiles will make it possible to periodically engage M3 and TS ships however for now the player should focus on bail capping M4s to prepare for the next player ship (unless they want to skip straight to M3). As soon as the player has 100k credits spare it is advisable to purchase a Jump Drive from Albion Beta, Elysium Of Light, Home Of Light, Queen's Harbour or Saturn to increase mobility and allow the player ship to flee battles if hopelessly outpowered (always keep enough energy cells to jump to the next sector).

M4 interceptors have approximately double the laser energy reload rate allowing for sustained fire with more lasers, have multiple times the shielding of M5 scouts and can use fighter tier lasers unique to the manufacturing race. For bail capping the PBE laser of the Split is a weapon of choice making the Scorpion, Pirate Scorpion, Asp, Raijin, Tonbo, M and Drone Hauler (Boron) good options. The Boron Drone Hauler is the best choice due to having the second highest laser energy reload rate in the class however it is extremely rare and seldomly found alone meaning it needs to be forced to bail before returning to the sector later once the accompanying forces have moved on. The Pirate Scorpion or Yaki Tonbo is easier to obtain as it is commonly found leading or as an escort of Pirate/Yaki fighter wings. The Pirate Scorpion is preferable as it also has HEPT compatibility to deal decent hull damage once shields are down. As usual divide the wings up based on ship speed and attack from the rear until it bails and the escorts are no longer a problem. Due to the energy cost per second of PBEs, M4s can only use two of them in bursts for 5-10 seconds dealing 90-180k shield damage per volley (more than enough for M3 and TS ships). If the player has not reached the Fight Rank of 17 (Specialist) at which weapons and shields begin to drop as loot, the only sources of PBEs will be bailed ships (usually Split, Xenon and Yaki) or to purchase them from the Split if the player has enough race rank (path of trade), otherwise shoot Xenon M/L ships until some drop. An alternative ship is the Scorpion Prototype found flying as Split Hi-Tech Traders (the - is important) which exchanges PBE compatibility for the ability to use high damage Medium missiles such as Tempest, Thunderbolt and Tornado missiles. One disadvantage is that most M4s lack a rear turret making them very vulnerable to missile attacks from the rear meaning missiles must be manually intercepted using the main laser battery or Mosquito Missile Defence must be activated and kept supplied with missiles.

With an M4 the player can tackle civilian and unescorted TS/TP ships with ease by keeping in front of them and overpowering any deployed fighter drones (using nearby objects to break up their formation if needed). If the player does not intend to make peace with the Pirates race then Duke's Dangerous Goods/Materials ships in the south of Merchant Haven make good targets. Smaller police patrols avenging capped civilian ship should be able to be outright defeated if the player does not care about the loss of Race Rank with the major race. Corporate TMs should be engaged with caution since they can have multiple PBG equipped M3s as escorts. As TMs do not bail it is recommended to only engage them if the freight scan shows they are carrying a valuable cargo. The starting ships of the Argon Patriot and Nostalgic Argon starting scenarios will be slightly less efficient at bail capping however they can rely on the long range of PRGs to stay out of the range of the targets. It is recommended to start using a second ship to place Advanced Satellites 7 squares above high traffic sectors so the player can remotely spot good targets. Spare capped ships can be sold to improve the player ship, buy missiles, repair and equip capped TS ships for use as UTs or CAGs (path of trade) or to build capital in preparation for boarding. Once the player has just over 1.5 million credits spare it is recommended to purchase a hack for Duke's Headquarters in Lasting Vengeance and purchase the Software Signature Scrambler (932,996 credits) and System Override Software (601,596 credits) to enable the player ship to claim abandoned ships without ejecting (useful in hostile sectors). It is recommended to keep a supply of fighter drones (2-5) obtained from bailed TS ships in case the player get surprised by a large hostile wing. It is advisable to set aside one TS to act a store for spare missiles and lasers that are looted for later use. When engaging M3s that are not civilian, care must be taken to avoid the the main laser battery which will often contain very high damage PBGs or long range HEPTs (which are easier to dodge by strafing) and to keep strafing when behind the ship since many M3s also have a rear turret capable of dealing moderate damage. The player should aim for capping the Split Chimera (or Mamba Raider as an alternative) which can be found acting as Freight Transporters (most commonly Split) since those have PBE compatibility with a good laser energy reload rate and PAC compatible front and rear turrets for missile interception.

An M3 Fighter has enough laser energy to be able to use two high damage lasers almost continuously while the turrets found on many offer good automatic protection from missiles and fighter drones. With this much fire power and multiple 25MJ shields, lone ships can be sequentially engaged with minimal breaks and even heavy police patrols engaged head on. The Bankrupt Assassin and Unholy Traitor starting scenarios are able to begin pillaging civilian ships and trade lanes from one of their hostile races as soon as the starting scenario specific hostile ship spawns finish. The starting ship of the Unholy Traitor starting scenario has the additional advantage of being able to use salvaged Firestorm Torpedoes and Typhoon Missiles to easily destroy entire wings and even M6 corvettes. The Aldrin Adventurer starting scenario will have difficulties going into

piracy immediately since the slow projectile speed of the starting weapons will make intercepting fighter drones hard while additional weapons are only obtainable by pirating the few small Aldrin ships which are deep in Terran territory or the player will have to gain >+5? Terran Race Rank and pay high prices for the compatible lasers (path of trade). Once the laser shortage has been overcome the Spitfire is good for raiding using PM/A-MLs which have both long range and high damage and a top speed that is faster than many M5s allowing it to take down much larger opponents however frequent trips will need to be made back to Terran space for additional ammo until a dedicated supply TS can be organised. The Argon Peacekeeper starting ship begins well equipped allowing for immediate piracy of ships (probably Terran) even though yields will be less efficient than PBE compatible ships however the Ion Disrupter compatibility and immediate entry into the Commonwealth main plot (path of missions) make aiming directly for an M6 corvette preferable over obtaining a better bail capping ship.

The player should start preparing a team of Marines/Mercenaries for boarding. If the player does not already have some TP class ships they can easily be obtained by forcing traders and civilian ships (Casino, Cruise and Hospital ships are the most common) to bail. Aim to obtain 2-3 TPs and a Geochen or Ocelot from Passenger Shuttles. Purchase a Bioscanner for the player ship from Home Of Light, Albion Alpha, Albion Beta or Saturn and order a TP to start purchasing Marines and Mercenaries from military outposts, pirate docks, rehabilitation facilities, marine training barracks and the Pirate and Yaki stock exchanges. Hire 8 Marines/Mercenaries based on their Fight skill with 26 as a minimum and >40 being preferable. Marines/Mercenaries with just over 26 Fight skill can be brought for <50k credits each however up to 3 casualties can be expected when boarding with a team of them while for 75-100k credits (less than double) each ones with over 40 Fight skill can be brought which will be able to have casualty free boardings. Take the boarding team to an NPC dock (preferably in a sector beginning with the letter A) and invest some credits in training them picking those with the highest starting value in the skill to train. Train 4 of the Marines/Mercenaries in Mechanical, 2 in Hacking and the rest in Engineering. Keep training the marines in the same skills until Mechanical and Hacking are 13 (2-3 courses) after which all marines should be trained in Engineering until the player is ready to start boarding (or runs low on credits). Note this skill level is only good for boarding Commonwealth M6s so do not try TMs or Terran and Xenon M6s. Have one TP docked at the station being used for training to hold those that finish training, one to hold marines that need no more training and the third to hire new recruits. While the boarding crew is training the player can obtain a ship to prepare target M6 corvettes for boarding.

Look for an Argon Eclipse acting as an Argon Freight Transporter and force it to bail. The Eclipse is good because it has the highest shielding of a fight ship that can bail, a large amount of freight space and is compatible with Ion Disrupters. Equip the Eclipse with a 200MJ shield, 2-4 IDs, 2 PBGs 2-4 HEPTs and 2 PRGs for the turrets along with several Tempest/Thunderbolt/Tornado missiles (from the path of salvage). IDs and PRGs are commonly dropped by Argon/Boron TMs and their escorts while HEPTs are commonly used by Split/Xenon ships. Purchase a Turbo Booster Mk1 (1,845,524 credits) from a Split Equipment Dock to allow for quick approaches and retreats and set the hotkey for it under the Controls menu and a Transporter Device (56,152 credits) if the player does not already have one. Set the front turret to Missile Only, the laser group of the IDs to group 1, HEPTs to group 2, PBGs to Group 3 and a single HEPT to Group 4. Once the boarding preparation ship is ready the player must first find a good target. The player should aim for an Argon Centaur, Pirate Centaur or Boron Hydra since those are compatible with Ion Disrupters. Argon Centaurs can be found patrolling Getsu Fune with only two escorts and occasionally lone Military Centaurs will pass through Ghinn's Escape, a Hydra patrols Bluish Snout and occasionally are found as escorts for boron traders and Pirate Centaurs can be found patrolling random Pirate owned sectors with up to 4 escorts (if they have not already died). Buy at least 4 Salvage Insurances before transferring the boarding crew onto the Ocelot/Geochen, maxing the freight with Energy Cells and jumping it to a safe sector near the target.

Jump into the sector with the target M6 and engage the escorts using the turbo booster to lure them a safe distance from the target before destroying them, alternatively open the battle with several missiles to eliminate the escorts. Try to lure the target closer to a Jump Gate in the process. M6s have slow but heavy long range frontal fire power so the player should strafe in a circle to dodge most of the projectiles before using the turbo booster to rush underneath the target and attack from the underbelly or the less heavily armed rear before equalizing speed and maintaining the assault. The rear turret(s) will usually have a HEPT or PRG so will need to be avoided as much as possible with strafe while lowering the shields using missiles (recommended), the HEPTs or PBGs of the player ship. When the shields are nearly down get closer and switch to using the Ion Disrupters and keep firing. Ion disrupters are very efficient at destroying lasers and equipment of target ships including antiboarding equipment which the current boarding crew would not be able to handle. With luck the IDs will destroy the laser used in the turret(s) of the target creating a safe blind spot to keep attacking from. If the player ship shield starts to get low turn around and use the turbo booster to retreat and hang out of range until shields are at a high percentage again before going in for another run. If rapid response ships jump in or other large military fleets interrupt the attack jump to a nearby safe sector, restock and continue again in a few minutes when the threat is gone since the target ship will not regenerate destroyed equipment. Save every few minutes incase human error makes things go badly. Keep attacking until all lasers on the target ship are destroyed (use the Freight Scanner to tell) before jumping in the TP with the boarding crew and ordering it to use the Follow Me command. Switch to a single HEPT and give periodic shots to the target to keep the shield down. Once the TP is within 5Km, save, select the TP and give it the Launch Marines command at the target M6 using all marines. Keep hitting the shield while the marines begin boarding until they have finished cutting through the hull. Use the Personnel tab of the Property menu to monitor the progress of the boarding operation. At the end of deck 3 save so that the player can reload to maximise the freight kept. As the player has stripped most of the stuff off the target the best loot will probably be just the 200MJ shield (still worth 155,816 credits). Once the ship is under player control use the Transporter Device to transfer the Jump Drive to the new M6 and then the Transporter Device to the TP before transferring a lot of energy cells to the M6 before jumping both the M6 and the TP to the nearest safe sector and ordering them to dock at a station. The player ship can then fly to safety using the turbo booster if needed. Once at the same station as the M6 save again.

Compared to previous targets of piracy the M6 will have a lot of hull meaning it will take a long time to repair using the repair laser or cost an amount which the player probably cannot afford to repair at a shipyard. It is recommended to transfer the equipment off the old boarding preparation ship onto the new M6 before using it as a player ship. Breaks in plundering can be used to repair the ship with the repair laser while bailed Eclipses and TS+ ships equipped with 200MJ shields can be used to increase the shielding. Once at maximum hull and the ship has been fully upgraded it is time to start boarding M6s for equipment and profit.

As the M6 of the player (Terran Commander starting ship included) is not fully equipped it is recommended to carry 2-10 Fighter Drone Mk1 from capped TS ships to help keep the shields of target M6s low if the shields of the player ship take too much damage. Avoid engaging large military patrols with M8s for now and preferably pick targets with only 4-6 escorts. At 4km range use the Freight Scanner on the target ship to look for any anti-boarding equipment before engaging the escort ships and retreating when they begin to follow the player ship using the turbo booster to outspeed them. As usual segregate the opponents by their speed and then pick off the closest. As M6s have superior laser energy reload rates and shield power generators compared to M4 and M3 ships the player will be at an advantage. When engaging the target M6 strafe with WASD to avoid fire before using the turbo booster to slip below it and start shooting the shield, preferably with PBGs. Once the shield is low switch to IDs and keep attacking until the anti-boarding equipment is destroyed before retreating to 4km range using the turbo booster. If the target has no

anti-boarding equipment to begin with the IDs do not need to be used. Save and then turn around and fly towards the target using the Hepts to keep the shields low while strafing before using the turbo booster at 1km range to fly underneath it. Select the Launch Marines command on the target just as it passes out of view overhead and then eject 2-3 fighter drones from the freight. Try to keep on the rear of the target however if shields are low the player will have to pull back to a safe distance and rely on the fighter drones to keep the shields down. Once the marines have breached the hull withdraw to 4km range using the turbo booster and fly away from the target. At the end of deck 3 save again so that the loot can be rerolled if needed. If the target ship belongs to a major race and is in one of their sectors it is recommended to reload until you obtain the ship with a Jumpdrive (if the player has not destroyed it using Ion Disrupters) or keep reloading until the ship is obtained with many weapons or shields. 200MJ shields followed by CIGs and IPGs have priority since the player ship probably needs the extra shields to increase durability, CIGs can be worth over half the value of the ship and IPGs are useful for future boarding operations. Once wares and equipment have been transferred off the captured ship the player can sell it for 2-4 million credits (it is optional if the player wants to repair the hull using the repair laser for extra profit).

Once the boarding team has an average Fight skill of >56 it is possible to board TMs safely. As usual scan the target before killing the M3 escorts first. As TMs have minimal combat capabilities the player ship just needs to knock down the shields, strip off any anti-boarding equipment with Ion Disrupters, retreat and then launch the marines as it flies overhead while keeping the shields low and then tail the target giving the occasional shot until the boarding crew has breached the hull. At the end of Deck 2 save using a Salvage Insurance to roll for the Shields, Jump Drive and any valuable freight. This is an easy way to train the Fight skill of the boarding crew and to obtain 8 IDs for more difficult boarding operations along with other useful weapons. Using wares and equipment obtained from other boarded TMs the player should fully equip a Zephyrus TM obtained from Argon OTAS Weapon Dealers and dock 4 M5-M3 ships with M class freight before jumping the TM to the nearest friendly station that sells Jump Drives. Use the Freight Exchange With command to move the Jump Drive to one of the landed ships before buying a new one and repeating until all landed ships have a jump drive. Keep this TM loaded with a large surplus of Energy Cells and give it a Transporter Device.

With the credits coming in from the boarded M6 and TM ships the player should train up a second generation of Marines/Mercenaries with 4 having 24 Mechanical, 2 having 21 Hacking and all having >50 Engineering which are capable of boarding Terran M6s and general boarding with less hull damage. Swap out the first generation boarding crew in stages so the high Fight skill first generation members can compensate for the lower second generation members until a few boarding operations have been completed. Start training the first generation to 40-55 Mechanical and 31 Hacking along with as much Engineering as possible. While this is happening the player centaur should have been outfitted with 4 CIGs, 4IPGs and 3 HEPT/PRGs for the turrets with 8 IDs as spares. Set the weapon groups to all main weapons, CIGs only and IPGs only. The IPGs have long range and terrific shield damage meaning the shields of target M6s can be knocked down and the marines launched in a single flyby if the ship does not have anti-boarding equipment. If it does have anti-boarding equipment swap the CIGs for IDs while behind it and use them to remove the offending equipment. Keep a few Tornado/Typhoon missiles in preparation for boarding an Argon Heavy Centaur Prototype. The Heavy Centaur Prototype is usually found patrolling Argon owned sectors and very seldomly leaves Argon territory to swap between Argon sector clusters. This means that it will probably have to be obtained in potentially hostile territory. When one is located and there are not alot of other Argon combat ships nearby engage it with missiles to reduce the 800MJ shield to a more manageable amount before knocking the shield down with the long range CIG and IPGs. If the Heavy Centaur Prototype has anti-boarding equipment several runs with all 8 IDs will be needed since it has turrets with good coverage which can mount high damage lasers limiting the amount of time the player can stay at close range before having to retreat and regenerate the shields of the player ship. It is advisable to launch 3-5 fighter drones to help keep the shields down if the player ship is having problems with shields while the marines are boarding. As usual save before launching the marines and when they reach the end of deck 3. When the marines begin hacking the target, order the Zephyrus TM to use the Jump To Me command followed by Follow Me once it arrives in the sector. Once ownership of the Heavy Centaur Prototype is obtained transfer the Jump Drive and some Energy Cells off the player ship and jump the new ship to safety before going to the TM to obtain another Jump Drive and spare Energy Cells if needed while the TM shifts a Jump Drive using Freight Exchange With from one of the docked ships. Both the player ship and TM should then jump to safety.

The Heavy Centaur Prototype is not only fast at 156m/s and has 800MJ shielding but can equip PBGs, CIGs, IPGs, HEPTs, PRGs and PBEs on all Laser slots. This makes it extremely versatile for bail capping smaller ships, boarding similar size ships and dueling capital ships. For bail capping have PBEs on the main with PRGs/HEPTs on the turrets, for boarding TM, M6 and M7M have 3 CIG and 3 IPG on main with PRGs/HEPTs on the turrets and 6 spare IDs for anti-boarding equipment and Flail Barrage missiles and for engaging capital ships have 2 IPGs on the rear and one of the side turrets, 2 CIGs on the other side turret and 6 IDs on the main weapons with 6 spare HEPTs for clearing escorts/missiles if needed. With this ship the player can easily take on entire military patrols. Use Advanced Satellites set to use the Satellite Early Warning Network to detect when a hostile capital ship containing military patrol is approaching a Jump Gate. When the lead target ship has gone through jump to the sector it was previously in and focus on the trailing M8 escorts. Focus on the missiles they launch until the M8 is in weapon range before attacking it. With luck the M8 will shoot a missile that will be hit by the incoming fire wiping it and nearby escort ships out. The player can then eliminate any remaining escorts in the sector before pursuing the target ship as has been done with previous targets. Once the first generation of boarding crew have finished their retraining swap them back in letting the second generation train to 80 Mechanical and 66 Hacking skill and start looking for an M7M to board. Make sure the boarding crew has at least 525-710 combined Fight skill (trained by boarding more TMs and M6s). Any M7M is better than having none however the Split Cobra is preferable due to it having a rear turret and good speed. Good sectors to find Cobras are Contorted Dominion, Ghinn's Escape and Rhonkar's Might. When capping M7Ms there are two strategies where the player uses a Kestrel series ship to outspeed the missiles fired until they expire (slow) or to use an M6 to intercept them head on (requires skill). Using a Heavy Centaur prototype go with 3 Cigs and 3 IPGs in the main laser slots and IDs in the turrets. Approach the target and if hostile it will start barraging missiles at the player ship when within 30km range, otherwise use missiles to get it to go hostile, and keep at maximum range with a Jump Gate to the rear of the player ship. Stop moving and focus on intercepting the Hammer Heavy Torpedoes with the main lasers until it runs out and starts spamming Flail Barrage Missiles. Turn around and use the turbo booster to head to the nearest Jump Gate but wait before going through until the incoming missiles are nearly hitting the player ship. When the player ship passes through the jump gate any Flail Barrage Missiles in flight will despawn allowing the player to go back in to trick the M7M into wasting more missiles. Once the M7M has run out of missiles go in close and start shooting the shields while avoiding the rear turret. As usual use IDs to remove any anti-boarding equipment, save before launching the marines (especially if the 4 have <55 Mechanical and save again to roll for the 1GJ shields (worth 299,168 credits each) and the Jump Drive (if possible) before jumping it to safety and getting a spare Jump Drive and Energy Cells from the supporting TM if necessary. If targeting a military M7M the procedure is the same except it is recommended to cut it off from escorting M8s or the player will have to spend more time intercepting their missiles as well before the escorts can be taken out and boarding can begin. Launching Marines/Mercenaries from an M7M using Boarding Pods doubles their effective Mechanical skill making Hull Polarization Devices less problematic and allowing them to board larger ships with less skill. Once the M7M is repaired and operational transfer the boarding crew back to it if necessary and give it at least 2 Boarding Pods (a stock of 20 is recommended) and 1.5k Energy Cells. With the M7M as a support ship and >40 Mechanical skill the player can now board TL ships.

Each major race and the Yaki have 6 Supply TLs which usually are found in sectors with a shipyard while the Yaki ones patrol Yaki owned sectors. There are also 4-10 unarmed civilian TLs acting as Casinos, Hospital Ships and Arenas belonging to each major race. Supply TLs usually have 2 IBLs as side turrets which are easy to dodge with strafing while IPGs of the player ship can make short work of the shields. Scan the target and save before applying IDs if it has anti-boarding equipment so that the player can reload if they destroy the Jump Drive. Once the target is ready for boarding jump in the M7M at the nearest jump gate and order it to Board Ship>Select My Target via selecting the M7M using the Sector Map. As usual jump out the supporting ship when hull contact is established, keep the shields low without doing too much hull damage and save on the final deck (deck 5) to roll for the jump drive and hopefully some free shields or IBLs before using the Transporter Device to remove the boarding crew and give the new ship enough Energy Cells to get to the nearest safe sector. Once a boarding crew with 4x80 Mechanical skill has been trained it is possible to space walk board commonwealth TLs by knocking the shield down and then using the turbo booster from the nose of the TL in the direction it is flying before launching the marines at 2km and turning around to keep the shield down. Each TL sells for 15-20 million credits each meaning over 100 million credits can be earned per hour just by boarding TLs or they can be recycled in the PHQ for large amounts of ship construction materials. Like other boarding operations each TL stolen has a very strong negative effect on notoreity meaning the owning race will become hostile fast if the player is not careful (or does not care). It is advisable to use this new found wealth to repair and equip the occasional TL for construction (path of trade and path of missions) and for storage of spare lasers, shields and missiles. Some of the income should be used to hire 44 additional Marines/Mercenaries and start training them in preparation for Xenon capital ships. If a Supply TL is encountered outside a sector with a shipyard it is advisable to use the Freight Scanner on it to check if it is carrying a station construction kit.

Once the player has around 50 million credits spare build an equipment dock (purchased from a super shipyard owned by a friendly major race) in a safe sector 4.5 km from the Jump Gate (the Unknown Sector next to Legends Home is good). NPC TLs ordered to build stations by the GOD engine have a bug where they will continually try to complete their construction task even when ownership changes from boarding resulting in a build up of conflicting orders if the player gives it any commands which can result in a game crash when the TL and player are in the same sector. To avoid this bug and prevent the TL placing an NPC station when the player is not looking, the player must transfer a Jump Drive, Energy Cells, a Docking Computer and preferably a Trading System Extension from the supporting TM before using Change Ship to manually fly the TL to a player owned equipment dock, dock using the Docking Computer and then unload the station construction kit onto the equipment dock before undocking, docking at a different station and then changing ship. The TL will then be purged of aberrant commands and can be processed like any other after the transferred equipment has been recovered. The station construction kit can then be picked up by any other player owned TL for use. When the player has gained access to the Xenon HUB it is possible to insert the HUB sector along all the paths TLs going to replace stations in a sector or group of sectors will travel (especially if the player has destroyed a some shipyards) making it easier to detect hostile TLs with a SEWN Advanced Satellite. This also renders ships that seldomly leave the territory of their owners vulnerable to capping without interference from the rapid response fleet.

Although these rare free stations are nice, to have a higher chance of getting them will require active participation in station destruction by the player. When destroying stations of a race the player will find they will go into the negative Race Ranks very fast and major races will start sending the rapid response fleet to interfere with the player's marauding. As the RR fleet contains M1s filled with fighters that shoot Hammerhead missiles, M7Ms and M8s that continually missile barrage and M2s that are highly durable it is recommended to use ships that are compatible with PBCs, PALCs or PSGs. This makes the Astraeus Hauler, Carrack, Panther Raider, Pteranodon, Agamemnon and Odysseus good choices.

To board commonwealth M2s requires a boarding crew with >729 combined Fight skill, 49 Mechanical and 38 Hacking. When engaging lone capital ships using the Heavy Centaur Prototype circle the target while dodging GC/IBL/IC/PPC/PSP fire by strafing and adjusting the pitch of the ship and try and maintain a range of 3.8-3.9km from the target so that the IPGs from the side and rear turret wear down the shields of the target. Once the shields are down save and if there is anti-boarding equipment rush in for 5-10 seconds ID use on the weakest flank of the target before retreating to let the shields of the player ship recover. The rest is standard procedure using the supporting M7M to launch the marines and TM to supply a Jump Drive and Energy Cells for escaping. Try to reroll the loot to obtain the anti-capital lasers since those can be worth half the value of the ship. It is recommended to board a Griffon Sentinel first since that makes an even better boarding preparation ship than the Heavy Centaur Prototype. The Griffon Sentinel can only be found in Heretics End during a few of the 14 war states and is usually accompanied by an M8 and another M7 while a Terran fleet slowly crushes all Argon ships in the sector. As time is against the player, to obtain this ship will require the use of high damage missiles like Firestorm Torpedoes, Tornado Missiles, Hammerhead Missiles and Hammer Heavy Torpedoes (from the supporting M7M) to clear out the escorting ships quickly and to remove a large chunk of shields from the target. As the boarding crew should have a high Engineering skill by this stage in the game it might be preferable to cause some hull damage to the target if it helps bring the boarding operation to a quick conclusion. The Griffon Sentinel has 4GJ shielding which is 5 times that of the Heavy Centaur Prototype, has 4,000 XL class freight for spare lasers, Energy Cells and missiles and can dock 7 M5-M3 ships for holding Jump Drives, Docking Computers, Trading System Extensions and other useful equipment. Laser wise it is recommended to have 10 IPGs, 4 CIGs, 8 IDs and 6 FAAs with the top and bottom turrets always using FAAs. The rear turret should use FAAs for general combat but can have IPGs installed so that damage to shields can be done when traveling in both directions. The front turret should have CIGs installed for general combat and switched to IPGs for boarding and then Ion Disrupters for anti-boarding equipment. On the main laser battery use IPGs and install IDs as needed for anti-boarding equipment. The extra shields mean that the Griffon Sentinel can spend considerably longer blasting targets with Ion Disrupters if needed before having to retreat and regenerate shields.

An expensive method for destroying NPC stations without incurring the large reputation loss normally associated with destroying a station is to use a TL to place a cheap Medium size Bio station (usually Argon or Terran) with a model which has a large radius from the center so that one of the protrusions overlaps with the NPC station to be destroyed. The player then uses a Tractor beam to twist the player owned station so that it does massive collision damage with the target NPC station but stops just before the NPC station dies and docks with the player owned station before ordering it to self destruct and undocking. The player must then hang around In Sector so that the debris left by the self destructed station finish off the NPC station. If the player does not care about reputation loss with the owner race there is always the old fashioned method of shooting the target station full of holes. The M7M is highly effective at this task if the player has taken the time to construct self sustaining complexes for Hammer Heavy Torpedo missile production however it is probably simpler to obtain a decent capital ship capable of destroying stations with just lasers.

When attacking stations try to position the player ship so that PBCs, PALCs or PSGs are facing any RR ships while other high damage laser batteries are able to target the station and try to position the target station between the player ship and RR ships so that any missiles and PPC shots will cause friendly fire to the station. Weapon and shield factories will only drop products when near full capacity while the Energy Cells

should quickly cover those used to jump into the sector. When engaging RR ships always focus on the M7M and M8 ships first before using long range weapons to knock down their shields to force them to retreat. It is advisable to scan the RR capital ships before they retreat to check if they have a Jump Beacon on them. If they do have a Jump Beacon use the Info panel for the target at <4km to find where they are fleeing to and jump after them before using the Jump To me command on the player owned the Griffon Sentinel and changing over to it. Keep attacking the RR ship and following it (do not forget about the other ship the player was flying) until it runs out of Energy cells before boarding it using the methods described previously. If the rest of the fleet is following it is recommended to use heavy missiles to eliminate ships that are getting too close to the ship being boarded.

An alternative source of Jump Beacons are a Terran M1 Odin and Woden which spawn as a pair in Jupiter at x="32.1km" y="6.2km" z="5.6km" and x="37km" y="5.2km" z="7.8km" (east of the sector and above the x axis line when looked at from either view) during the Jupiter\_01 war state (out of 14 possible states). To board Terran M1s requires a boarding team with 920 combined Fight skill (this means at least 10 marines are needed), 100 Mechanical and 86 hacking. Although Jump Beacons cannot be sold directly, it is possible to obtain half their value (140 million credits) by selling a ship with one in the freight however players will probably gain more benefit by deploying them near player complexes or in sectors without a jump gate.

The player should start to frequently visit Asteroid Belt to check if there is a poorly guarded Valhalla in the east of the sector and the east gate of Omicron Lyrae for a Sirokos M7M. If the player is not hostile with the Terrans it is recommended to only board Valhallas with a single M6 escort since the escort can be lured away by the player ship while the boarding takes place and the target ship jumped to safety before the escort can return. The Valhalla is a poor ship for general use due to the bulky size which cannot fit through a jump gate, inability to jump to anything that is not a Jump Beacon, slow speed and many blind spots however it is able to dock 10 TS, M8 or M6 ships along with 50 M5-M3 ships and has a good shield power generator making it a good base ship for use in the UFJD sector. Valhallas also can be sold for 160 million credits each if they have a high hull percentage. The Sirokos is the only M7M able to launch 21 marines at once and is needed for boarding Xenon capital ships so should be obtained before the third generation boarding crews finish training.

The path of piracy is high risk and high reward offering ships and station types that are not obtainable by other means and at a five finger discount. The conflict and hostility of this path can be a welcome challenge early on but long term it is very demanding on direct player attention and is likely to exclude at least one race as a potential trading partner and increase the risks of UTs being attacked (affects path of trade) so the rewards of piracy vs lost trade income need to be considered when going this route.

## Path of missions

All starting scenarios except for custom starts have story based plots which offer credits and other rewards for their completion while there are also random missions. Random missions may also offer the player a source of free ships by capping mission spawned hostiles or stealing the mission objective and deliberately failing the mission. Each sector can have up to 4 available random missions at once with the mission spawn chance being determined by the Race Rank the player has with the mission giver. Available random missions are stored for the last 3 sectors visited so can be reset by going in a 4 sector large circle with small and quickly traversed sectors being preferable. It is possible to force random missions to spawn in two sectors by repeatedly going across the same jump gate. The credit rewards for completing missions are based on the Trade Rank of the player which is increased by selling ships (path of piracy), trading wares for a profit (path of trade) and manufacturing wares (path of trade). The number and ship class of opponents spawned is dependent on the Fight Rank of the player meaning at low ranks local NPC forces can win some fight missions for the player while at higher ranks enough enemies will spawn to clear entire sectors unless the player has a very large fleet.

With Commonwealth starting scenarios the player should focus on beginning the main plot and progressing it until they get the free Centaur M6. The fastest way to begin it is to fly between Belt Of Aguilar and Grand Exchange (potentially doing stock market exploitation in the process) accepting protect station missions. As the player will have minimal Fight rank the RR ships that come to defend Grand Exchange from the Xenon and the Jonferco military ships will have no problem winning the missions for the player. This tactic can also be used in other sectors with a Corporate Headquarters. Once a ship with M or better class cargo (probably a Kestrel brought from the nearby Teladi shipyard) is owned the player should buy a Cargo Lifesupport System from the Teladi Stock Exchange in Grand Exchange (the pirate base in Atraeus' Clouds or Royal Boron Research Station in Great Trench are also good) enabling Taxi and Personnel Transport missions to be completed. Terran starting scenarios should focus on getting a Cargo Life Support and doing Taxi/Personnel Transport missions near Oort Cloud since the sectors there are smaller and near jump gates/beacons until Terran Race Rank is +6 before exploring and doing missions for other races. Once a cheap spare ship is owned the player should park it at a Goner owned station in Harmony Of Perpetuity to prevent the station being removed by the GOD engine due to the war zone killing ships that would trade with it.

Once a combat capable player ship is owned the player should consider actively participating in killing the targets of fight missions for additional credits (more when they get a police licence) and Race Rank. It is recommended to save before accepting fight missions since the opponent race (usually Pirate, Yaki or Xenon) may be one that the player wishes to trade with so does not want to lose Race Rank by destroying their ships. Pirate and Yaki mission givers will usually offer fight missions with ships of one of the major races as the opponents while the Argon and Terran will occasionally give missions out against each other. As the Xenon cannot be befriended there is no reason not to accept missions against them until the player Fight Rank gets high enough to start spawning opposition that the player cannot handle.

Always be on the lookout for Buy Ship missions (trade type) since those can be a way to obtain new ships cheaply or to make a large sum of quick credits at a low Trade Rank. Buy Ship missions will trade player credits for a ship that is between 50-99% hull for 35-75% of the ship value (cargo included). The ship types offered are only those that the player has enough Race Rank to purchase unless the mission giver is a Pirate/Yaki and only those at shipyards will offer TM and M6 ships. Some of these deals would result in a loss of credits if the ship is sold (eg. 900k for a superfreighter TS) while some will be profitable if the ship is immediately sold. The trick is to buy low hull ships and eject from the player ship to use the Repair Laser to patch up the hulls of the new ship to maximum before selling. If the mission giver is asking a suspiciously high price it is recommended to use the Freight Scanner to see if the ship has any useful freight which the player might not have enough Race Rank to purchase. It is possible to buy a battered M6 for <250k credits which can immediately be sold for over 2 million (more if repaired).

Early on Deliver Ship type missions should only be performed if the mission giver is in the same sector as the shipyard or is requesting a fast M5/M4 and the player has an asset in the shipyard sector. These missions are good for Trade Rank since it is boosted by the ship purchase. The down side is that the mission does not factor in the poor purchase prices at low Race Ranks meaning early on these missions can even lose the



player credits. Once the player has a ship capable of acting as a carrier for TS ships (some M7Cs and the Kyoto) these missions become an easy source of credits and Race Rank.

It is advisable to save before accepting any Return Ship type missions because the mission ship can spawn up to 3 sectors away from the mission giver which itself may be even further from the nearest sector able to be jumped to. Only accept these missions if the player is in a fast ship like an M5. With M5 and M4 ships it is recommended that the player takes the time after claiming them to use the Repair Laser to get them up to maximum hull so that they have the best chance of making it to their destination station on time. Once the player has spare TMs it is possible to transfer a Jump Drive and spare Energy Cells off the player ship to jump the mission ship to the sector closest to the destination station and have another TM waiting at the destination station to reclaim the Jump Drive. For badly damaged TS ships the only option is to transfer a Docking Computer onto the ship and dock it onto an M7C capable of freighting it near the destination station while Out Of Sector. Late game the player can use an overtuned Kyoto to also carry M6 and M8 ships. If the player fails to return the ship on time (not hard in large Terran sectors that are unable to be jumped to) it is advisable cut any additional losses and to dock the mission ship at the nearest station and forget about it until the police ships spawned to destroy it have been reallocated (72-120 game hours later). At higher Race Ranks M6, M7 and M7M ships may spawn which can be worth more than the mission reward. With these ships the player may wish to intentionally fail the mission and steal the ship for their own use (especially for an early M7M) by giving it a Jump Drive and Energy Cells before docking it at a station in a sector which is hostile to the race of the mission giver. If the player is not hostile with the Yaki, the simplest solution is to have a player owned equipment dock near the north gate of Senators Badlands. Alternatively dock it at the Teladi equipment dock in Getsu Fune, Argon equipment dock in Blackhole Sun, the shipyard in Clarity's End or Pirate anarchy port in Loomankstrat's Legacy which have a lot of Xenon or Pirate traffic.

The second piece of equipment the Player should aim for is the Freight Scanner since it allows Pirate Freight Scan mission to be performed (only found in Pirate owned sectors) for 3-10% of the value of all TS/TS+ and TM ships scanned. If performed in a traffic rich sector like Hatikvah's Faith using an M5 the player can easily make multiple million credits if they are lucky and some of the ships are carrying high value cargo or are TS+ ships.

When the player has a Mineral Scanner avoid scanning any asteroids that are not part of a Scan Asteroids missions since those are fast to perform and give some additional credits and Race Rank on top of knowledge about the asteroid yields.

If the player sees a station that is selling Bio or Food wares at the minimum price use spare TS ships to buy and store it since delivery missions not only pay maximum price but also give credits and race rank as a reward although it may take 4 ships worth to complete the mission. Pirate mission givers are especially easy to please since they will only request up to 160 units of the ware (usually illegals or Majaglit) unless it is Slaves.

Once the player has 4.5 million credits focus on doing Terran missions until +6 Race Rank. Head to a shipyard in Aldrin 1 and purchase a Springblossom. These ships have both the speed and cargo capacity to complete courier type trade missions (although some will also require a Turbo Booster MK1 brought from a Split equipment dock). This ship is also good at cruising around sectors to spawn random missions and completing many other types of mission.

Build type missions can be performed early on by hiring NPC Supply TLs via comms the captain and selecting "I want to transport something" and accepting before using the comms again to get the ship to dock at the correct shipyard before buying the mission station type and then using the comm to get the TL to move to position in the correct sector. The downside is the TL will not jump to the destination and need protection until it can be used to build the station at the target beacon and at 500-2,000 credits per sector traveled can quickly eat into the reward credits. Alternatively the Xai Corp plugin can be used but that requires the player to have at least 1 million credits spare. When the player finally has a TL of their own (path of piracy or trade) it is possible to do these missions quickly and efficiently (especially with a Split Elephant). These missions are not only excellent for boosting Trade Rank due to the large amounts of credits spent and refunded for the stations but also create additional NPC stations to trade at (path of trade) and for missions to spawn at which is especially useful in sectors which have no NPC stations by default (eg. Ocracokes Storm) or they have been destroyed by military patrols (Pirate sectors).

When the player reaches the Fight Rank of Fighter Chief fight type missions start to spawn M7 ships which can contain rare PALC lasers and be boarded if they are not Xenon as an extra bonus (path of piracy). It is advisable to scan mission spawned M7s before killing them so that their drops can be manipulated by saving just before the lethal shot impacts and reloading until the desired ware(s) drop.

At high trade ranks it is possible for hard/very hard missions to reward 15-20 million credits each making them an extremely efficient way for the player to earn credits especially with how fast taxi/personnel transport missions can be completed.

The path of missions has no disadvantages if the player is careful about what missions are accepted and is a fast way to build Race Rank with the NPCs. As the magnitude of the reward credits is highly dependent on the Trade Rank of the player it may be preferable to rely on other paths for income until a decent Trade Rank is obtained.

## Path of trade

The prices of wares at NPC stations follow simple principles of supply and demand with the price being proportional to the number of units of the ware the station has in stock compared to the capacity. This means credits can be earned by buying low at stations that are nearly full and selling high at stations that have nearly run out of the ware. Docks will always buy wares at a fixed price (usually average) and will buy infinite amounts of lasers, missiles and shields if traded directly by the player or the Manual Trade Run command at 1 credit less than average. NPC ships docked at stations and randomly generated merchants may be willing to exchange their freight if the player can provide the wares they require which may be worth less than what they are offering. Player owned stations are able to manufacture wares that are worth more than the resources required for the process and sold to NPC traders that dock at the station giving reputation or directly to stations or docks that buy the ware using player owned ships acting as commercial agents. Manufactured wares can also be used internally to equip new ships or to supply munitions for combat. The trade and manufacture of wares has the potential to be the largest source of credits in the game. From the starting point fly towards the nearest station, select it and use Info to see the bars indicating how close to capacity the station is for products and resources. If the bar for a product is over 50% (preferably by a large amount) and there are stations nearby that buy the ware, the player should consider docking and purchasing as much as the freight space of the player ship or player starting credits allow before looking for a station to sell them at which has a bar for the ware as a resource which is under 50% (preferably by a large amount). With wares that are not purchased by many stations it is advisable to do the opposite approach and check if the destination station is low on the ware before going in search of a supply.

The Boring Boron, Savage Split, Suicidal Squid and Tormented Teladi starting scenarios begin with starting ships only able to carry S class freight limiting them to trading 1MJ Shields, 5MJ Shields, Chelts Meat, Cloth Rimes Computer Components, Soja Husk, Swamp Plant, Terran MRE, Microchips, illegals and low value/high volume wares until the player has gained enough Race rank to buy lasers and missiles. The low capacity of freight able to be carried each journey (Harrier Hauler excepted) will limit profits to the lower thousands per trip (especially with the small cargobay of the Octopus) however the player may be able to purchase and sell Bio and Food wares at the same stations multiple times before enough has been shifted to change the prices. The low initial profits may make other paths a better use of the player time at this point. It is advisable to invest the profits from these early trades in maxing the cargobay followed by speed of the starting ship. Save before transporting illegals since the player can not afford the reputation loss early on if the police scan the player ship or destination Pirate Bases spawn a raiding party. Always check what NPC pilots and merchants are willing to barter when docked especially if they are offering high value but low volume lasers, shields or missiles. Priority sectors to visit early on are Spaceweed Grove, Nyana's Hideout, Profit Share, Thyn's Excavation, Weaver's Tempest (requires work on Yaki Race Rank), Teladi Gain, Acquisition Repository, Greater Profit, Sanctity of Corruption, Scaleplate Green, Herron's Nebula, President's End, Elena's Fortune, Light of Heart, Red Light, Cloudbase South East, Legend's Home, Rolk's Fate, Hila's Joy, Lucky Planets, Menelaus' Oasis, Paranid Prime, Emperor's Ridge, Preacher's Refuge, Duke's Citadel, Family Pride, Rhonkar's Fire, Home of Opportunity, Ceo's Sprite, Two Grand, Ministry of Finance, Cloudbase South West, Kingdom End, Rolk's Drift, Thuruk's Beard, PTNI Headquarters, Homily of Perpetuity, Albion Beta, Interworlds, Priest's Pity, Depths of Silence, Barren Shores and Argon Sector M148 since they can have multiple good internal trading opportunities while Rhy's Desire, Uranus 2, Saturn 3, Unknown Sector (8,5), Rhonkar's Trial, Patriarch's Keep, Eighteen Billion, Grand Exchange, Bad Debt, Bright Profit, Spaceweed Drift, Brennan's Triumph, Company Strength, Nathan's Voyage, Bala Gi's Joy, Cardinal's Domain, Profit Center Alpha, Ore Belt and Merchant Haven can have high profit wares at a low price which can be sold nearby. Once the NPC traders have brought regional supply and demand into equilibrium it will be less common to see fully stocked Chip Plants meaning players will need to rely on more common Bio and Food factories such as those in Empire's Edge, Family Rhy and Wretched Skies. Once the player has 50k credits spare it is advisable to purchase a Fujin from the Yaki shipyard for the 87 M class freight cargobay.

Having a ship able to trade in M class wares will open up more trade opportunities with 25MJ Shields, Crystals, Nostrop Oil, Rastar Oil and a larger selection of weapons and missiles (once the player has enough Race Rank) becoming available. The Anonymouse Argon, Nostalgic Argon and Unholy Traitor starting ships are able to immediately enter into these markets while the Argon Peacekeeper, Bankrupt Assassin, Aldrin Adventurer, Goner Witness and Argon Patriot have the additional advantage of also being able to trade L class wares. Investing in a Trading System Extension (8,984 credits) for the player ship will allow the player to remotely control other player owned ships to do additional trading. Start spending credits earned on the occasional Navigational Relay Satellite that is ejected 7 squared above the center of sectors that the player frequently trades in to be able to remotely view when prices are favourable. The player should focus on trading with the Paranid to increase their Race Rank to +3 so that TS ships become available for purchase in the shipyards. Once the player has enough Race Rank they will hopefully also have the approximately 180k credits needed to purchase and upgrade a Demeter TS. If the player is having problems with liquidity it is possible to fly the TS without maximum shielding until it has earned enough credits to sequentially purchase them.

Ships able to carry XL class wares have the widest choice of wares for finding profitable trade runs. Although M6 ships (Terran Commander starting scenario) can act as heavily shielded traders using TS ships (Humble Merchant, Poisoned Paranid, Teladi Trafficker and Pious Paranid starting scenarios) is more profitable due to the larger cargobays. The Angel TP from the Lost Lar starting scenario can trade XL wares but is better suited for doing taxi/personnel transport missions (path of missions) and should be made redundant with a TS as soon as possible. Start looking for Silicon Mines that are selling at the lowest price and buy as much as can be afforded or until the hold is full before systematically checking every silicon consuming station known for one that is buying at near the maximum price. Selling a full payload will net the player around 100k credits profit which is enough to buy a cheap M5 with a Trading System Extension, if the player does not already have one, and an IRE (4,676 credits), Ore Collector (30,844 credits), Navigational Command Software MK1 (2,948 credits) and Special Command Software MK1 (4,212 credits) for the TS.

Use the Autopilot>Command Console>Special>Mine Minerals command to order the TS to mine Silicon Wafers in a sector with small rocks (eg. Cloudbase Southwest or Oort Cloud) while Out Of Sector. This will start the TS collecting free Silicon Wafers over a period of 4 hours which can be sold at stations paying the maximum price (Boron, Terran or Split are preferable for the Race Rank) for 150k pure profit. Invest these profits in more TS ships to act as mobile miners until the player has three. Currently the player should be earning over 113k credits per hour.

The player now has a choice of starting to set up Sector Traders (602k+ship cost each) or rushing a Dragonfly Missile Factory (954,275 from Split or 1,045,158 from Boron + 2 other TS ships). To help make the decision it should be considered that Sector Traders when upgraded to Universal Traders can earn 300k per hour but require many hours to train up to a high pilot level and the player needs to have explored most sectors for them able to frequently make such deals. There is also the risk that UTs will jump to a gate with hostile ships and get attacked meaning that durable but expensive ships should be used or risk losing the investment. The Dragonfly Missile Factory only makes 131k profit per hour but has guaranteed sales at any nearby NPC dock (or at those of specific races for Race Rank) and the profit margin can be increased by 16k/h by having 3 TS ships acting as mobile ore miners for it. The station will pay for itself in under 8 hours and can still run at a profit if up to 130 Dragonfly Missiles per hour are used by the player for combat (path of piracy). The negative aspects of building the factory early are that the player will need to hire an NPC owned Supply TL to place it and that the player will need to defend the immobile station in the unlikely event that it is attacked by a hostile race (if the player is careful with their reputation and aims to befriend all races except the Xenon this should not be an issue).

To set up a Sector Trader the player needs a spare TS ship with shields (preferably a Hayabusa although any TS will do early on), Trade Command Software MK3 (501,340 credits) and a Jump Drive (101,072). Both pieces of equipment are available from Terracorp HQ in Light Of Heart although the Trade Command Software MK3 is available from most Teladi equipment docks. Jump Drives are also available from the Military Base in Saturn, Jonferco Research Station in Albion Beta and Astraeus Headquarters in Queen's Harbour. On the ship going to be an ST use Autopilot>Command Console>Trade>Start Sector Trader when the ship is in a sector with many internal trade opportunities (usually Energy Cells to Bio to Food to Tech or weapons). Recommended sectors are Uranus 2, Profit Share, Neptune, Uranus, Menelaus' Paradise (risky), Atreus' Clouds, Patriarch's Retreat, Cathedral of Xaar, Hila's Joy, Ocean of Fantasy, Twisted Skies, Home of Light, Cloudbase South West, Company Pride, Thuruk's Beard, Priest's Pity, Nyana's Hideout, Nathan's Voyage, Grand Exchange (moderate risk), Ianamus Zura, Shore of Infinity, Lucky Planets, Ceo's Doubt, Aldrin 1, Ministry of Finance, Sanctity of Corruption, Shining Currents, Consecrated Fire and Queen's Harbour. When looked at in the Property menu the ship will start having orders to buy and sell wares. When the ship is seen as having the Standby order it means that there are currently no trade opportunities in the sector or at higher pilot levels (pilot level >11) there are hostiles in the sector so the ship is hiding at a station until it is safe again. As the pilot levels up they will gain additional abilities making them more efficient at making profit. At level 4 pilots begin to purchase wares above the average price if they can still sell at a profit, at level 6 the lease range of STs can be extended (by giving the ship the command again) to also trade at stations in neighbouring sectors (1 jump range), at level 7 the ware

purchase price will be compared to the current selling price at the destination station and a new destination selected if it is no longer profitable enough. At pilot level 8 the Start Universal Trader command becomes available where the ship will trade with any discovered station in any explored sector, the leash range of STs is increased to 2 jumps, the ship starts to use the Jump Drive if use is enabled, the ship will purchase fighter drones for defence and check for trade deals across sectors within the leash range. At level 9 the ship will automatically repair itself at a shipyard if damaged, at 10 ST leash range is increased to 3 jumps, at level 12 to 4 jumps, at level 13 enemy sectors will automatically be avoided, at level 16 the leash range is increased to 5 jumps, at level 18 to 8 jumps and at level 20 to 10 jumps. At level 23 the trader will coordinate with other STs and UTs and at the maximum level of 25 it will lock deals with the target station preventing NPC traders from selling wares to the station before the ST/UT. (Table???)

Sector Traders when upgraded to Universal Traders provide an incremental income until there are 30 operating before giving diminishing returns until just over 50. Even then due to a bias in the deals chosen there will still be stations left unserved meaning it is advisable to also have dedicated sector traders servicing a 3-5 jump area that intersects with other STs. Once the player has about 3 UTs in operation it is recommended to focus on Terran Race Rank until +6 so that the Hayabusa TS+ can be purchased. The Hayabusa has 400MJ shields meaning it can survive brief encounters with larger hostile forces up to M7 ships when any other TS would be instantly destroyed meaning losses are a very rare occurrence but due to the approximately 2.5 million price tag it takes a long time to start making a return on the investment. It is recommended to use the Autopilot>Command Console>Additional Ship Commands>Blacklist Manager??? on the first ST to add all hostile sectors, the war sectors, all sectors near to a war sector which have the nearest jumpable gate/beacon requiring a war sector to be traversed (Jupiter/2/3 and sectors past Mars can be bad for this) and sectors next to Xenon sectors so that the UTs do not commit suicide.

To set up a Dragonfly Missile Factory requires +5 Race Rank with the Boron or Split and the player to fly to Rhonkar's Trial or Lucky Planets. Once the shipyard in the sector has been located the player can either activate the Xai Corp plugin (hotkey needs to be set) or hire the NPC Supply TL in the sector. If going the Split factory, place it in Wreched Skies for access to the Energy Cells from Rhy's Crusade, The Shallows, Dark Waters, Ministry of Finance and Priest Refuge, Ore from Barren Shores, Rhy's Desire, Rhonkar's Trial and Spring of Belief and Rastar Oil from Wretched Skies and Family Rhy while products can be sold in Family Rhy, Great Reef or Cardinal's Domain. If going the Boron factory, place it in the south of the same sector as the shipyard for access to Energy Cells from Shore of Infinity, Light Water, Third Redemption, Avarice and Ceo's Doubt, Ore from Lucky Planets, Montalaar, Rolk's Legacy and Great Trench and BoFu from Shore of Infinity. Going Split is 89-86k credits cheaper (which counts early on) meaning the factory will pay for itself 42 minutes faster however the factory in Lucky Planets can be expanded into a complex that can be made self sufficient removing overheads. Once the factory is placed order the two spare TS ships to dock at it and make it their homebase. Order them to use Autopilot>Command Console>Trade>Start commercial representation. Set ????(WIP) Select the station and use Adjust Station Parameters to set the Primary Resource Buying Price Limit to 1 credit above the lowest, Maximum Jumps to 3, transfer 100k credits to the station funds and the Auto money transfer to player account amount to 3,159,000 credits (enough to keep the factory running to fill a 15,000 cargobay which is 75 hours worth of production). Once the player has the spare credits it is recommended to purchase a TS/TS+ ship with 15,000 cargobay space and set the homebase to the station and use Autopilot>Command Console>Trade>Start external commodity logistics command. Add the Dragonfly Missile Factory station as a waypoint, Load>Maximum Cargo Space for Dragonfly Missiles and set Supply Conditions>Minimum transfer amount on collection to 0% before starting the CLS. This will make the ship automatically accumulate Dragonfly Missiles so they do not block the capacity of the station allowing the player to sell the product at the leisure of the player or when the ship is starting to approach capacity after 75 hours while the credits earned by manually ordering the ship to sell the product will be transferred to the station to keep the CAGs purchasing resources. Alternatively use the Manual Trade Run command to sell the product at an equipment dock for 1 credit less than average and select the Yes option when prompted to ??? While the CAGs are a low pilot level it is recommended to personally oversee the supply of the first resource shipments to start the station producing products.

Although the Dragonfly Missiles can be sold locally it is possible to sell them to other neutral races at the same price to gain Race Rank. Once the station has recovered the investment it is recommended to build a second Dragonfly Missile Factory and a Complex Construction Kit to make the first factory into a complex to increase utilisation of the CAGs followed by adding a medium Food and then Bio factory so that the complex only needs Ore and Energy Cells to operate. Allocating 3 mobile miners to collect Ore for each factory in the complex then will make it dependent only on Energy Cells to operate. Wreched Skies can source enough NPC supplied Energy Cells and Ore for 28?(WIP) missile factories however Rastar Oil can quickly become a limiting factor and if the player is only interested in profit, the construction of Terran Shadow Missile Factories will provide more benefit in the long term. A complex in Lucky Planets can continue to be expanded to have 9 self sufficient missile factories generating over 1.8 million credits per hour and have several (WIP) more operating off resources provided by local NPC stations.

It is advisable to invest in a Tractor Beam laser as soon as the player has 779,088 spare credits since the GOD engine has a nasty habit of removing all producing factories which forces the player to build their own factory when only one laser is needed.

Invest in a TM and some Kestrels to shuttle equipment to new ships and use the Explorer Command Software to discover and map new sectors. Continue expanding the number of UTs and missile factories until the player has +6 Race Rank with the Split or Argon and about 10-17 million credits spare before purchasing a TL. The Split Elephant is cheap and has a fast movement speed for a TL but can only transport 1-2 stations at a time while the Argon Mammoth is slow but can carry 4-5 stations per trip. With a TL the player can more efficiently complete Build random missions (path of missions) and assemble complexes with less hassle and overheads. Start looking for sectors where stations are constantly running out of primary or secondary resources but have sufficient Energy Cells nearby and build stations or small complexes to fulfill the local demand.

If the player has races that are hostile then it is advisable to set up a trading dock in Hatikvah's Faith or the Xenon HUB to purchase wares that are only sold by the hostile race. Set the purchase price to the maximum value and enable NPC ships to trade at the station before giving it several million credits to spend. A CLS using ship can then be used to redistribute the wares as needed.

When the player has obtained the Xenon HUB it is recommended to connect Neptune, the East jump gate of Barren Shores and the south gate of Mines Of Fortune to reduce the number of jumps required to reach any point in the X-universe which will result in player owned ships saving Energy Cells when ordered to jump.

Once the player has obtained the PHQ it is recommended to construct it in Savage Spur due to the large manufacturing potential the sector has or in Getsu Fune for new ships to access a large variety of equipment from the NPC equipment docks. As soon as the player has built the PHQ consider reverse engineering a Hayabusa so that they can be produced at the PHQ for a discounted price.

The advantage of the path of trade is that once the UTs and stations have been set up there is not a need for direct player attention unless they

are attacked meaning the player is free to focus on exploration, reputation and combat. Through having large numbers of traders and factories this path gives a steady income that can eventually surpass the profits obtainable by salvage, piracy and missions. The disadvantage is that this path is very vulnerable and slow paced early on which may not suit the preferred play style of the player and traders will require protection against military patrols of hostile races (especially In Sector) should the player decide not to befriend all major races.

#### Path of stockmarket manipulation (potential spoilers)

To gain access to the stock markets of the various races will require other paths to be followed with the Teladi Stock Exchange in PTNI Headquarters being preferable since it only costs 10k credits. Save before investing all remaining credits in a Natural product stock such as Micro-organisms, Construction Equipment or Artifacts that have an index of 100 and use SETA to accelerate time until the stock index drops. If the player sees another stock that had an index of 100 drops sooner it is advisable to reload and invest in the other stock instead. Continue the saving followed by buying at 100 and selling when the index reaches 50-70 until the player has about 114k credits before undocking and purchasing a Trading System Extension and a Navigational Relay Satellite and ejecting the satellite 7 squares above the ecliptic. This allows the player to now buy and sell from the stock exchange remotely allowing them to follow other paths in between trading stocks. Once the player has a spare Navigational Relay Satellite and at least 463,432 credits, fly to Grand Exchange and dock at the Stock Exchange to activate the stock market for the Grand Exchange region before ejecting the satellite 7 squares above the West jump gate. Fly south to Merchants haven and purchase 2 EBCs from the Teladi military outpost or if there is a light weapons complex station that has spawned near the military outpost which spawned with >4 EBCs before remotely purchasing 1-2 EBC stocks and flying to Maelstrom or Belt Of Aguilar and selling it before turning around and passing through the jump gate back into the Grand Exchange stock market region. Repeat buying EBC stocks in the Grand Exchange stock market region before flying through the jump gate out of it and selling the stocks at a profit. Continue doing this until all available EBC stocks are being purchased and sold. Once the player has >151,144 credits after purchasing all EBC stocks fly back to the military outpost and purchase another EBC or two to increase the leverage on the stock price. Repeat until all EBCs in the military outpost and nearby light weapons complex (if it spawned) are owned by the player.

Keep going through the jump gates with the playership while trading EBC stocks and use the credits earned to purchase a Kestrel with Explorer Command Software at the PTNI Headquarters shipyard. Use the Explorer Command Software to order the Kestrel to explore the two Teladi owned sectors to the west of PTNI Headquarters. In Profit Center Alpha there may be an EBC forge 19.75km,0km ,32.44km while there is an equipment dock and light weapons complex in Two Grand which also sell EBCs. Purchase all of the EBCs even if the price is not favourable and move the Kestrel back to PTNI Headquarters. If the player has not already purchased a Jump Drive they should so now from Queen's Harbour or Albion Beta before jumping to PTNI Headquarters to obtain the EBCs held on the other kestrel before returning to Grand Exchange for continued stock market manipulation. If the player has already crossed Xenon Sector 347 give the Jump Drive to the Kestrel so that it can jump to Eighteen Billion, otherwise order it to remotely explore across the sector and hope a xenon ship does not shoot it. Once in Eighteen Billion collect more EBCs from the military outpost and light weapons complex before going to the equipment dock and EBC Forge in the east of Ianamus Zura for more EBCs. Fly west to Montallar before north to Aladna's Hill and then go east and south to Legends Home to purchase a Zephyrus TM and jump drive for it.

Use the 600MJ shielded TM to Jump the EBCs to the player ship before moving all EBCs to the TM. The TM has enough shielding that it will not instantly die if attacked so can safely be used OOS to manipulate the stock market freeing the player ship to do other tasks (like spending lots of credits). Use the kestrel to backtrack to Aladna's Hill and then go northwest to Company Pride for some EBCs at the equipment dock before going north to Ceo's Sprite for a military outpost and light weapons complex for more EBCs. Continue north to the Siezewell equipment dock for yet more EBCs and then head east at Teladi Gain to Shareholder's Fortune. Go north to the equipment dock in The Vault before backtracking and continuing southeast to Home of Opportunity for a light weapons complex for a final load of EBCs. Jump the TM to the Kestrel to transfer the remaining EBCs before jumping the TM back to Grand Exchange for stock market manipulation at even larger profit margins.

Start using the Kestrel to place Advanced Satellites in all Teladi sectors with a stock exchange, EBC forge or light weapons complex so that spare ships can be sent around to purchase new ones as they are produced. It is also advisable to set two Advanced Satellites set to SEWN up over the gates that the TM holding the EBCs flies through so that the player can be warned if any hostile ships are getting close.

The player should already be earning >2.8 million profit per stock transaction cycle with at least 2 transaction cycles per minute equating to over 330 million earned per hour if the player focuses on making profit. Using this near infinite wealth the player should buy a TL (Argon or Split recommended) and start making a large complex to produce EBCs using a TS+ with CLS to collect the product of the complex (see path of trade). Once the quantity of EBCs carried outgrows the TM switch to a Terran Aegir M7. The Aegir has 6GJ shielding meaning it is unlikely to die before being able to jump to safety and is fast enough to keep a reasonable number of stock transactions per minute. When the player has 1,378 EBCs each stock sale will bring in a massive 100 million credits which will quickly boost the Trade Rank of the player to X-Treme.

The path of stockmarket manipulation grants near unlimited credits with minimal input and is by far the fastest way to accumulate assets however it is as good as cheating.

## Middle game

### First Complexes

If the player has followed the path of trade they may already have a few small complexes however once the player has a TL of their own (path of piracy or trade) it is recommended to start setting up additional complexes. TLs with Navigational Command Software MK1 and Special Command Software MK1 gain access to the Autopilot>Command Console>Special>Drop Station command when carrying a station construction kit enabling the station to be placed and rotated with the num pab. Use the (k) hotkey in sectors with an Advanced Satellite or the F3 hotkey on a selected neighbouring station to get a good view of the outline for the station going to be placed so that it does not overlap with other objects (usually other stations). Complex Construction Kits can be used to link two stations together within 20km of each other prompting the placement of a Complex Hub. It is recommended to position the docking clamps of the complex hub in the direction most traffic to the station comes from (only important In Sector). Additional stations can be linked to the complex hub or one complex hub linked to another (click the complex hub to be kept first) using additional Complex Construction Kits.

Mines need to be placed on asteroids which may be inconveniently placed in the sector meaning a Tractor Beam will need to be used to haul

them to a more desirable location or to increase the density of the stations (easier to defend and less of a collision hazard when In Sector). A split Dragon M6 is recommended since it has a fast top speed allowing the player to move to the station quickly before the slow return journey which is capped at 80m/s.

Set up a small illegals complex in Hatikvah's Faith 40km above the north or east gate consisting of a large wheat farm, space fuel distillery, dream farm and bliss place. Have 3 TS ships acting as CAGs with a 5 jump leash range and let it trade with NPC traders. This will source Energy Cells from Aladna's Hill, Avarice, Akeela's Beacon, Trinity Sanctum, Priest's Refuge, Bala Gi's Joy, Company Pride, Blue Profit, Tharka's Sun and Family Rhonkar meaning the complex will be well supplied even if 1-2 major races are hostile. If the Space Weed is sold slightly below average price it is possible to sell Space Fuel at a premium (1 below max price). This complex is very efficient at generating reputation for the Pirates, Argon, Teladi, Paranid and Split and even gives some for the Boron making it a good way of getting hostile races friendly enough that they will accept Race Rank increments from random missions. It also earns a few hundred thousand credits per hour if the player still needs the funds.

Start to set up self sufficient complexes that produce wares that the player commonly uses/needs. The first complex should be built in an isolated sector that has minimal hostile traffic like Harmony of Perpetuity, Unknown Sector (16,0), Freedom's Reach, Unknown Sector (9,7), Unknown Sector (5,11), Unknown Sector (17,11) or Unknown Sector (8,16) that produces a mix of wares used by new ships (path of trade) or missiles for use by the player ship and for boarding (path of piracy). Having a 200MJ shield factory and 1-2 EMPC factories is recommended for equipping Hayabusa TS+ ships for acting as UTs and CAGs, 1-2 Flail Barrage Missile, 2-4 hammer Heavy Torpedo factories and a fighter drone/keris factory can keep an M7M supplied for solo boarding operations and Wasp, Thunderbolt, Tornado, Typhoon, Firestorm Torpedo, Wraith or Spectre missile factories are always good for general combat. Having an ISR forge and HEPT/PRG forge can be useful for equipping the occasional M6 for defence.

With the second self sufficient complex the player will want 10 lasertower factories to supply Lasertowers to dump in clusters of 10 at 5km intervals around the perimeter of player stations and complexes. Groups of 10 laser towers are enough to stop an M6 without taking any damage and by overlapping the firing ranges of the clusters it is possible to defend against M7s and even the occasional M2 which gives enough time for the player to organise reinforcements. As most early complexes will be built in safe sectors this will be an overkill however when the player reaches the corporate reprisal attacks of the Shady Business plot these are a necessity to prevent heavy damage to mines. Spare Lasertowers can be placed in 4 clusters of 30 around jump gates to stop all hostile traffic going through it. Additional factories on the complex should make FAAs and PPCs (1:2 ratio) in preparation for equipping capital ships.

Start building mines in Savage Spur and hauling them to the west of the sector in preparation for constructing a huge complex to supply ships built at the PHQ. This complex should be dedicated to making shields and lasers for the ship types that the player uses most. A template for the complex can be found here: <https://www.egosoft.com:8444/confluence/display/X3WIKI/Self-sustaining+Complex+Templates> .

Additional complexes should be used to produce missiles for large battles and sector clearance such as Tornado, Shadow, Firestorm Torpedoes, Wraith and Hammer Heavy Torpedoes.

## Establishing bases of operation

The player will find themselves frequenting sectors which may be many jumps apart for plot progression, construction or combat and may expend large quantities of missiles while in those sectors. Freshly capped ships will also be in need of shields, Jump Drives and Energy Cells. This means having convenient caches of Energy Cells, shields, missiles and Jump Drives are vital to efficient operations. Early on a dedicated TL (usually an Elephant) can be used by loading it up manually using TS ships and a Transporter Device and jumping it near the closest safe Jump Gate. The problem is that the TL is relatively fragile if it encounters a hostile patrol and will have to jump after the player consuming large quantities of Energy Cells in the process meaning multiple permanent bases are preferable in the long term.

Start by setting up an equipment dock near the complex hub for a self sustaining complex that produces a large excess of Energy Cells per hour and ideally also produces missiles. Purchase Commodity Logistics Software MK1 and MK2 from Argon equipment docks or the Paranid Communication Facility in Priest's Pity and equip it on a TS with Trade Command Software MK2. Use the Autopilot>Command Console>Navigation>Dock At command to fly the TS from the complex hub to the equipment dock and look at the Info panel to get an estimate of how many minutes it would take to fly there and back. Use the Autopilot>Command Console>Trade>Start External Commodity Logistics command to open up a menu. Under Waypoints click Add station and then select the complex hub followed by Load>Energy Cells>Manual input and input a number equal to the number of spare Energy Cells produced by the complex per hour divided by the number of trips the ship can make per hour. If the complex also produces missiles repeat the process with the missile type as the selected ware and Maximum cargo space as the amount to load. Use the Add station button to add the equipment dock and to Unload>Energy Cells>Maximum cargo space. If the ship will also be carrying missiles repeat this for the missile ware types. Go to the Supply Conditions menu and set Minimum transfer amount on collection and Minimum transfer amount on delivery both to 0% so that the ship will make the trip irrespective of whether it is carrying wares. Go to the Jump Drive settings and toggle Use Jump Drive to Yes, set Jump Drive Energy to 600-800 (enough to jump across the universe and back) and Minimum Jump Range to 1. Finally click the Start External Commodity Logistics button. This setup will supply the equipment dock with energy cells and missiles so that the player supply TL can dock and reload with fewer clicks while the CLS pilot trains up.

Begin placing equipment docks in hostile free sectors that the player frequently travels through or near within 4.5km of a jump gate and place a cluster of 30 lasertowers near the side facing the gate and use the TL to stock it with Energy Cells and missiles. Have a TM filled with Jump Drive equipped ships dock at the equipment dock in preparation for supplying new ships sent from nearby. Good sectors are Savage Spur, Unknown Sector (9,7), Bala Gi's Joy, Freedom's Reach, Spaceweed Drift, Unknown Sector (5,11), Maelstrom, Harmony Of Perpetuity, Veil Of Delusion, Spires of Elusion, Patriarch's Retreat, Albion Gamma, The Vault, Light Water, Hollow Infinity, Unknown Sector (8,16), Vestibule Of Creation, Silent Currents, Spaceweed Grove, Oort Cloud and Venus depending on what races are hostile. For bases of operation that encounter hostile traffic place the Equipment dock 40km above one of the jump gates (usually the one into hostile territory) and place the lasertower cluster 35km above the gate.

Once the CLS pilot is over level 5 it is possible to get the TS using CLS to automatically supply TLs and multiple equipment docks. By the maximum pilot level all bases of operations can be supplied using only 1-3 TS ships.

Even the best players at combat with a fleet of multiple heavily shielded ships will eventually find the shields of individual ships wearing thin or

running out of missiles meaning they will need to swap it out with a different ship to continue engaging in hostile sectors while the shields of the other ship regenerates and giving it a chance to safely resupply. This is especially problematic for capital ships which can take several minutes to fully regenerate shields while hostile missile barrages can be very effective at reducing the shields of individual player owned ships. Equipment docks can only store two capital ships each so there is a need to expand the number of equipment docks near regions of intense combat (like core sectors belonging to hostile races) for exchanging capital ships. Care must be taken when placing the equipment docks so that there is enough room for ships on autopilot to safely undock in Sector without colliding with capital ships docked at other equipment docks. With careful tag teaming it is possible to continually occupy a hostile sector without casualties.

## Boarding Xenon Ships

Xenon M6/M6+/M7/M2/M2+/M1 ships are by far the toughest ships in their class to board but are, with the exception of the Q, extremely economical to mass produce in the PHQ making them good long term assets to acquire. When boarding Xenon ships using Marines/Mercenaries with 100 Fight skill and 1 more marine than the carrying capacity of the ship, casualties can still be expected. This is why players should aim to get 60 marines in training to be able to capture at least one copy of each Xenon ship.

Boarding a P/PX can be carried out like other boarding operations using 9 marines with 100 Fight skill, 4 with 13 Mechanical skill and 3 with 23 Hacking. A good place to find them is in Zyarth's Dominion. It is advisable to save once hull contact has been established to reroll the combat outcomes since there is a 33% chance of having no losses and a 66% chance of losing 1-3 marines. Both the P and PX have the same construction time in the PHQ as the Split Dragon making them good for mass production and deployment around complexes.

To board Xenon capital ships (Q/K/I/J) requires 10 marines with 29/51/51/56 Mechanical skill and >2 (due to possible casualties) with 65/88/88/100 Hacking skill respectively. The Q, K, I and J only have a 1/221, 1/137, 1/137 and 1/228 chance respectively of having a casualty free boarding using 21 marines with 100 fight skill and the chance of even succeeding in capturing the ship with just 21 marines and <=5 casualties would take 60-80 reloads. The Q is the hardest to board due to having fewer decks which means higher possible casualties per deck. This makes boarding with two waves of marines and 5-9 casualties the preferred tactic. The player flies a Cobra with a Sirokos as a support ship and uses a mix of Hammer Heavy Torpedoes and Flail Barrage Missiles to kill all enemies which are not the target ship before knocking the shields down with Hammer Heavy Torpedoes and launching 15-20 fighter drones and ordering them to attack the target using Autopilot>Command Console>Broadcast to my ships in the sector>Broadcast: Sector: Fighter Drones. The player ship then launches a Flail Barrage Missile at the target every second to create a missile defence turret saturating tunnel before ordering the supporting ship to launch the first 21 marines before the player ship keeps launching periodic Flail Barrage Missiles while turning to move away from the target. Once hull contact is established the supporting ship is ordered to jump to the nearest safe sector and a save is made. The fighter drones should keep the shields of the target down and depending on the distance between the target and the player ship a second wave of 9 marines should be launched from the player ship between deck 3 and deck 4 so that the spare marines join the fighting to replace losses meaning 15 living marines can make it to the bridge to prevent instant failure. Once hacking begins save again to ensure victory and reroll the loot. As with other boarding operations supply the new ship with a Jump Drive and Energy Cells before jumping it to safety and using a TM to supply the player ship with a new Jump Drive. Immediate reverse engineering at the PHQ is then advised.

It is best to board Qs in Getsu Fune or Menelaus' Paradise since there are often Xenon patrols led by a Q which pass through these sectors and the rapid response fleets of the Argon and Boron are slow to respond to threats in that corner of the universe. The Q has an average build time in the PHQ for an M7 and poor laser energy regeneration meaning it can only use the large number of IBLs and PPCs it can equip OOS. There is a Xenon J which spawns in the Xenon Sector bordering Segaris which has a long patrol leading it through the Grand Exchange and Segaris gates which makes the Segaris East gate a good place to board the J due to the poor rapid response fleet response in Segaris. Other good sectors to look for Js are Xenon Sector 534 and Xenon Sector 597. Like most M1s the Xenon J has poor laser energy regeneration meaning it is weak in Sector without a fighter wing however OOS it can make full use of the 48 lasers it can equip (of which 24 are PPCs) making it able to take on M2s OOS. This OOS firepower is combined with a large hanger and an impressively fast build time in the PHQ of 6.5 hours (which is comparable to M6+s) allowing the player to outnumber enemy capital ships 6 to 1. Isolated Ks are best found in Xenon Sector 534, Xenon Sector 597 and Xenon Sector 596 and are mediocre M2s but can be built in the PHQ three times faster than other M2s making them a good meat shield for other ships. The Xenon I is best boarded in Xenon Sector 598 (guaranteed spawn and patrols around the xenon core sectors but 598 has the least reinforcements) and occasionally in Xenon Sector 597 (chance to replace a K on spawn). The Xenon I is the most powerful M2+ ship in the game making it a good long term player ship and is able to be built in the PHQ at a rate comparable to the Split Python making it a fleet ship of choice.

## Plot progression

If this guide has been followed, the player should have a thriving business empire with numerous traders and complexes and several capital ships along with cash reserves of multiple mission credits meaning that most plot missions (see other plot specific guides) should be trivial to complete. There are however some potential bottlenecks which can be avoided if the player makes preparations in advance. During the main plots the 3x Lasertowers (Commonwealth) and 100x Squash Mines (Terran) will be in short supply meaning reserves need to be started early on or a few factories built (Yaki sectors are good for selling Squash Mines). Aim to obtain the PHQ as fast as possible since reverse engineering takes an entire production cycle worth of time (several game days for some capital ships) so should be started early to avoid a large queue building up. When the player reaches the Shady Business plot there are three decisions which have a long term impact on the game. If the player sides with Beryll, the Yaki shipyard gets upgraded to sell stations including otherwise hard to obtain IBL and PBG forges while the other choices only give a small credit reward and a ship blueprint which can be obtained by reverse engineering. There is an option to hand the Xenon code over to the Yaki for an Advanced Chokaro (not needed if the player sided with Beryll) or to refuse for no reward/consequence. Finally the player can choose to end the war allowing the player to safely trade and build complexes in the war sectors or to keep the war going for an Ozias (possible to end the war and board the Ozias with good timing) and the periodic Jump Beacon, Valhalla, Colossus Hauler, Griffon Sentinel and Sirokos spawns associated with the war states.

The biggest potential bottleneck however is the corporate reprisal attacks in the middle of the Shady Business plot where random complexes of the player will be attacked by 5-14 enemy fleets of up to 7 ships. As a fleet this size can do considerable damage to mines which cannot be replaced it is strongly advised to prepare before starting that part of the plot by surrounding all complexes that have mines with 10x clusters of lasertowers and have 3 M2s defending the perimeter along with 4-6 M6+s. An alternative strategy is to avoid building any mines (or even any

station) and rely on purchasing Ore and Silicon Wafers from NPC mines to keep complexes running until after the attacks are over. Once the final wave is dealt with there are no major obstacles preventing the player from finishing the remaining plot missions.

## Late Game

### Overtuning the player ship

With enough use the player will have identified their favourite ship and good ships which would be even better if they were not so slow. It is possible to overtune the speed and turning of ships past maximum using Pandora Engine Tunings and Rudder Optimisations however these tunings are rare so only should be dedicated to a few important ships.

There are 8 Crates of 2-5 Pandora tunings spawned in random Pirate owned sectors at the start of the game but some may have already been picked up accidentally by pirates while IS or spawned in the atmosphere of planets where they cannot be collected (Split Fire). The remaining crates will require placing a large Advanced Satellite network in all Pirate owned sectors covering everything within the 1.05-1.3x sector radius region (vertical included) to find which can be time consuming for large sectors like Maelstrom.

A renewable source of Pandora tunings is the UFJD sector which has a 3% chance of spawning a Pandora Engine Tuning and a 1% chance of spawning a Pandora Rudder Optimisation within a 15-80km radius from the middle of the sector. This means to efficiently find them an expeditionary force of Kestrels is needed to deploy and collect a 4x4x4 cube of Advanced Satellites spaced 40km apart and a ship to carry both the Kestrels and the ship to be overtuned. It is recommended to use a Kyoto, Aran or Valhalla as the base ship and to bring along some M6s and M8s to swat any xenon encountered if the ship to be overtuned is insufficient. With enough tunings it is possible to make M2s that can outrun M5s and outmaneuver smaller ships/missiles.

### Gotta Reverse Engineer Them All

Once the player has obtained the PHQ station it is possible to start reverse engineering obtained ships for blueprints with the exception of the Acinonyx Prototype and X-perimental Shuttle (only copy must be given away before obtaining the PHQ) and for the sake of completion the player may wish to collect all available ship blueprints. Vanilla X3: AP has 313 ships which the player can fly (out of 318 encountered) however only 306 are guaranteed to be obtained in a single playthrough as 4 only have a random chance to spawn on game start as abandoned ships and 3 are linked to the starting scenario chosen (X-perimental Shuttle, Medusa Prototype and Enhanced Kea). When the PHQ has been built Buy Blueprints think type missions start appearing as random mission which can sell blueprints for M5, M4, M3 and M6 ships belonging to the race of the mission giver including the raider, vanguard and sentinel variants. These are convenient because it allows some blueprints to be obtained without taking up space in the reverse engineering queue of the PHQ. The Buy Used Ship trade type missions also offer a passive way to obtain some ship variants which are not for sale at the shipyard.

There are however 65 ships which must be obtained by force through either bailing or boarding of which 2 are only found in the war sectors until the war ends at the end of Shady Business (Colossus Hauler and Valhalla). The Advanced and Enhanced variants of some ship types are included as part of large pools of ship types able to be spawned by certain jobs (eg. Gourmet Direct) making them very rare if the player does not actively kill ships performing that job. The Drone Hauler M4s are similar that they can only spawn as part of military escorts or orbital weapon platforms making them extremely rare. With these infrequently encountered ship types it is recommended to immediately save and cap them on sight, reloading if necessary, irrespective of notoreity or the numbers of nearby reinforcements (once abandoned the player can retreat and claim it once there are fewer hostiles).

When reverse engineering ships it is advisable to process ships which the player wants to build at the PHQ as a priority and only add new ships to the queue once the previous ship has been processed since capital ships take numerous hours to reverse engineer (especially the Valhalla and Aran).

## Nemesis

At the start of the game the player would have had to fight for survival against hostile races (especially major races), being persecuted across space, and slowly build up their power to take on isolated targets and eventually entire military patrols. Now that the player has constructed a large manufacturing base for shields, lasers, missiles and ships and amassed a substantial fleet it is time for revenge. It is not possible to fully eradicate a race since some ships and docks will periodically respawn but it is possible to keep them fully suppressed and occupy their sectors. Of the lesser races the Pirates and Yaki are relatively easy to suppress due to the small number of sectors they control and the limited number of capital ships they possess along with a lack of M7Ms while the Xenon are tougher due to large numbers of decoying fighters potentially allowing Xenon Is to get off 1-3 Firestorm missile barrages if not killed quickly. Major races have rapid response fleets of 2 M2s, 2 M1s (Boron only have one but the wings tend to be full of M3s with Hammerhead Missiles), 2 M7s (usually spawn as M7Ms) and 6 M6s which can jump to any gate, orbital accelerator or the centre of the sector and like to attack together. The Terrans are the hardest race to conquer because they have multiple wings of Skirnirs patrolling their sectors.

The general strategy is to build up enough capital ships to be able to assign 6-12 set to defend position at each gate, orbital accelerator and sector centre owned by the hostile race and to have 2-3 patrols to clean up any spawning ships. Rapid response ships have a 60 minute respawn time for M6, 90 minutes for M7s and 120 minutes for M1/M2s as long as the race owns a shipyard. This means it is advisable to invade Cathedral Of Xaar, Guiding Star, The Vault, Rhy's Crusade, Quiet Tides or Segaris first to lure the RR fleet a few ships at a time while the player uses a Hyperion (M6) or M7M to snipe RR capital ships in other sectors using a large store of missiles. Once the RR fleet is no longer synchronised jump into the sectors with the shipyards of the enemy race and destroy them with missiles to prevent RR fleets respawning before occupying the sectors. Next focus on sectors with military outposts of the race to disable military patrols spawning or responding to distress signals. With those key stations destroyed and the sectors fortified, the race will no longer be able to mount an effective offensive against the player and quickly fall to the player ship clusters. Most respawning ships not tied to shipyards of the race will spawn at gates (where the player has 6+ permanently

positioned capital ships ships) or randomly in the sectors where they can be outnumbered and picked off by patrols reducing any resistance to isolated ship easily able to be handled by groups of 3 capital ships.

The only potential threat is M7Ms which spawn with a full cargo of Hammer Heavy Torpedoes and can instantly deal heavy shield damage before being destroyed however this can be negated by swapping out ships with reserves. It is recommended to use Xenon Js for OOS sector enforcers due to their rapid production at the PHQ and the high number of PPCs able to be equipped.

Congratulations you have conquered the X-Universe.

## **Achievements (WIP)**