



X4: Foundations Manual

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X4: Foundations Manual



Wiki Manual contents

- Capturing Ships And Sectors
- Combat And Weapons
- Joystick and Controller Configuration and Options
- Missions And Collectable Loot
- NPC Behaviours
- Online Login

- Piloting And Travel
- Purchasing And Upgrading Ships
- Resupply Ships
- 6 more ...

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Dom "Snafu_X3" Hughes

DrSuperEvil

Euclid

YorrickVander

Egosoft staff

Capturing Ships And Sectors

i Updated for version 5.10

- [Claiming Smaller Ships](#)
- [Boarding Larger Ships](#)
 - [Choosing Behaviour for boarding ships:](#)
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Claiming Smaller Ships

i **Note**

In general, ships created for cutscenes and plot missions will not bail and cannot be claimed (ships that are created already un-owned can still be claimed as normal).

During combat S and M size ships have a chance to bail leaving the ship abandoned and able to be claimed by other faction or the player. To claim bailed ships the player can either claim it from their Spacesuit or order a Marine to do it. To personally claim an abandoned ship the player must [spacewalk](#) to it and then locate and scan a signal leak. After the ship becomes player property, the player can dock with the ship and fly it away.

Alternatively select the abandoned ship and then right click it to order a Marine on board the playership to go and claim the craft using a Boarding Pod (playership crew must have at least 1 marine assigned to use this option); the Marine will become the Pilot of the new ship once ownership has been transferred. If you intend to keep the ship, finding at least a one-star pilot is recommended to replace that random marine. Alternatively, setting them to 'explore' for several hours or making them join an active combat fleet will increase their piloting skill..

Marines will cause damage to onboard systems while boarding, so expect losses of weapons, shields, etc on the target ship once claimed via marine. Personal player boarding via 'hacking' the signal leak will not cause damage.

Boarding Larger Ships

i **Note**

In general, ships created for cutscenes and plot missions are not boardable (there are some exceptions to this rule but they are in a small minority of cases).

Large and XL ships need to be boarded to be captured. Boarding requires sufficient Marine crew across the player-owned ships participating in the action. Boarding involves **Scanning the target** to gain intel, **planning** (using the intel), choosing a **Behaviour** for your boarding ship(s) and initiating the **3-stage operation**.

Either before or during the Op (via **Behaviour**), the target needs to be nullified (taking out the engines, turrets and shields; reducing crew levels through hull damage). To initiate boarding, select the desired player-owned ship(s) and then right click the target and order Marines to **Board** the target.

Within the Boarding Menu (see below), plan:

- Select each boarding ship (top of screen) to set the numbers of Marines on each to be used (lower left of screen)
- Scanning allowed your ship's computer to provide feedback on chance of success across stages (bottom of screen)

Choosing Behaviour for boarding ships:

1. Attack escorts
2. Target engines
3. Target turrets
4. Disable Target
5. Maintain distance

Boarding stages:

1. Approach (getting Boarding Pods safely to the target)
2. Infiltration (breaching the hull)
3. Assault (defeating the crew)

Stages 1 options instruct their boarding ship(s) how weakly-defended the target should be before launching Boarding Pods. **Stages 2 options** instruct their Marines how strong the target hull should be before breaching (weaken hulls reduce risk to marines but increase risk of destroying the target). Finally during **Stage 3**, your surviving Marines will attempt to defeat the target's crew.

Try to keep the subsystems destroyed, and work on reducing hull levels but not to the extent that the boarding marines will destroy the ship. Once the target hull is sufficiency low to reduce boarding resistance below the boarding strength of the players forces (20 or more is good) the ship is as good as captured. If successful, a Marine can be assigned as the captain for the ship or the player can move to the ship personally.



Sector Control

(main page [Sector Ownership](#))

Administrative Centre modules, when completed at a player station, grant ownership of an unowned sector on a first come first served basis, revealing all ships and stations in the sector and imposing the illegal wares list of the owning faction.

If the Administrative Centre module is destroyed, sector ownership will change over to the next faction with an Administrative Centre. Warring NPC factions are constantly playing a turf war to replace the Defence Platforms of their enemy with one of their own. Once the player has acquired Blueprints for an Administrative Centre, they too can conquer entire sectors if they are willing to defend it.

Combat And Weapons

i Updated for version 5.10

- [Fight](#)
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 - [Semicircle \(0 star\)](#)
 - [Triangle \(1 star\)](#)
 - [Twin \(4 stars\)](#)
 - [V-shape \(1 star\)](#)
 - [Vertical Dart \(5 stars\)](#)
 - [Vulcan \(5 stars\)](#)

- W-shape (4 stars).
- X-shape (2 stars).

Fight

History has always been written by the victor and great treasures await those willing to take them by force. Whether it is defending player owned traders from marauding pirates or galactic conquest there will always be plenty of reasons to be armed and dangerous. Some fights end in destruction, others lead to capturing ships or conquering sectors.

Combat

Ships armed with frontal weapons, turrets and Defense Drones can attack other ships to deal damage to them. Shields will absorb damage taken until they are depleted, but will start to recharge after not having taken damage for a period of time. Some shields protect ship hulls, whilst others can protect nearby ship systems on larger ships.

Individual surface elements on Large and Extra Large ships can be targeted to disable them, however these may also have their own independent shielding. Once shields are depleted the ship or surface element will start taking hull damage from landed hits. If the hull 'hitpoints' of a surface element reaches 0 it is disabled until repaired; if the ship's hull HP reaches 0 it will blow up, destroying the ship (and if the player was on-board it will result in a Game Over).

The player is free to customise the turret loadouts of all ships, and the main weapons of Small and Medium Ships (see the Weapon Configuration part of the Ship Interactions Menu). This allows the player to tailor the roles of ships, or sub-sections of ships, for specific roles (e.g. high damage and long range, or accurate short range weapons). Most ships have blind spots from which they can not attack making ideal spots for their enemies to manoeuvre into. Although an individual ship can be good at duelling opponents, superior numbers are another way to win battles.

Weapon Types

Weapons fall into 5 general categories

- **Main** weapons:
 - **Primary Guns** (forward-facing weapons on S, M,L ships and some battleships)
 - **Secondary Launchers** (forward-facing weapons on S and M ships)
- **Gun Turrets** (available on M, L and XL ships)
- **Missile Turrets** (available on L and XL ships)
- **Defence Drones** (deployable from some M, L and XL ships)

Main weapons are controlled by the player when captaining their ship, and Defence Drones will deploy automatically to protect their mothership if piloted by an NPC.

Main Weapon Aiming (Guns)

The game settings contain an option called **player-assist 'target target' mode** (enabled by default). When enabled, player-controlled primary guns will automatically fire at a leading point to intercept the position the target is flying towards. The same approach is taken automatically by ship-controlled gun turrets. When 'target target' mode is not enabled, or when manually aiming, main guns will fire at the cursor's position.

Main Weapon Aiming (Missiles)

Player-controlled (forward-facing), secondary launchers equipped with dumbfire missiles will fire at the cursor's position. When equipped with homing missiles, secondary launchers use a missile lock HUD marker to automatically try and lock on to the playership's target. Secondary launchers are fired with the "L" key.

Main Weapon Firegroups

Under Ship Information, "**Weapon Configuration**", Weapon (i.e. S Pulse Laser Mk1), there are 2 sets of 4 boxes. These are labeled Primary and Secondary (see above).

Those four boxes are where you can setup the main weapon's Primary and Secondary Firegroups. You can put a weapon into all 8 firegroups if you wish.

The firegroups are toggled using **Hotkeys**:

- Change Primary Firegroup: **1/2/3/4**
- Change Secondary Firegroup **5/6/7/8**

Main Weapon Heat

When primary guns are fired they generate heat, which the ship must dissipate in order maintain combat efficiency. When multiple weapons are fitted and used simultaneously, larger amounts of heat are accumulated and it takes the ship longer to dissipate it. The impact of firing multiple guns is visualised by the heat bar to the right of each weapon icon on the HUD (see images below).

When shooting for short periods of time, heat build-up usually isn't an issue, and primary guns DPS is the "Burst Weapon Output" listed in the [ship purchase/upgrade menus](#). When fired for longer, especially when several are fired together, heat can force primary guns to shutdown temporarily. When firing over long periods leading to overheating (and weapon shutdowns), primary guns DPS is reduced to the "Sustained Weapon Output" (*please note that at this time, the [ship purchase/upgrade menus](#) lists incorrect sustained MW values*).

Minor heat buildup (bar the on right is short)



Heavy Heat buildup (bar is long, and orange)










Overheated (bar is red, and weapons have shutdown)



Turret Settings

Turret Rules of Engagement:

- Turret offline : Will not take any action
- Turret online : Will take the actions below:
 - Attack Enemies : Attack any hostiles
 - Target Target : Will only attack the selected target if it is hostile
 - Defend Ship : Returns fire on things that attacks the ship (not missiles)
 - Missile Defence : Will only try to intercept incoming missiles (not ships) - [X3 'Missiles Only' mode]
 - Break Asteroids : Supports mining solid materials ?

HUD Controls for Turrets on Medium ships:

- Depending on ship model, there may be 2-4 turrets
- Their per-turret settings icons are found at the top-middle of the screen:



Full Controls for All Ships:

- Customisable turret controls for all ships
- Each Turret, or Turret Group (pairs of Mediums), have settings:
 - Each setting offers the same options as the HUD Controls above
 - Additionally, there is a setting that to **apply an option to all turrets**
- Available on two places via drop-down menus:

- **Piloted ship: Ship Menu** (click on the chevron in top-centre of screen):



- **All owned ships: Ship Info Menu** (locate Turret Behaviour settings are near the bottom):



Defence Drones

These small craft can be equipped to, and operated by, ships with Small Docks (Frigates, Large and XL Ships).

Summary of capabilities:

- Cheap (~15,000 Cr)
- Equipped with a Pulse Laser Mk1
- Scout-level hull integrity (1,900 MJ)
- Do not have shields
- Auto-repaired by their motherships after docking

Attacking specific station modules

It is possible to order ships on the Playership's Wing to attack specific modules. For example, Storage, Defence or Administrative modules.

Process for doing this:

1. Open the Map
2. Expand the station's info so that you can see specific modules (see image below)
3. Left click on the module you wish to attack
4. Right-click on the Playership (or specific ship in Wing) and select "Wing: Attack My Target"
 - If this order is not available, re-select the module, press "T", and try again

Loot

Hacking or destroying ships and station storage modules will cause them to drop a proportion of their cargo for other ships to collect. Collecting wares dropped from a station is considered theft, so the station may turn hostile with any ships that do. NPC ships also have a chance to drop wares for the player inventory dependent on the type and faction of ship killed.

Fleet Management

Ships can form hierarchical groups. A leader followed by several "wingmen", often referred to as a squad(ron), but also multiple levels deep as soon as a leader of one group itself follows instructions of another leader.

Setting up such a fleet can be done the easiest by selecting one or multiple ships which are supposed to be the followers on the map, then right clicking on the new leader. The context menu will now show ASSIGNMENT options such as the new behaviour to DEFEND this leader. Selecting this option will move all these ships into the hierarchy of this leader. A plus + symbol now appear in front of the leader ship in the OBJECT LIST as well as the PROPERTY OWNED menus at the side of the map.

Ships which are in such a squad or fleet can still receive and execute explicit player orders. These orders would overwrite their current behaviour to follow their "boss" for their duration. This way a player can use any ship for a trade run or overwrite their targets during a battle.

When ships are in a squad or fleet, they can also fly in formations. The command order menu of the leader, does allow selection of the currently used formation.

Fleet subordinates

Subordinate group modes:

Attack - Ships will attack their commander's target.

Intercept - Ships will attack any hostile non-capital ships that come into their operational range*.

Defend - Prior escort behavior before new modes were implemented. Think of this as automatic mode.

Subordinate behavior depends a lot on what their commander is doing at the time.

Docked - Orders all subordinates in the specified group to dock and ignore all targets *including their commanders' attackers*. Does not affect ships that are unable to dock at their commander.

Launched - Orders all subordinates in the specified group to act on their specified behavior. (Note that for fighters subordinate to a carrier, this may mean that they stay docked at their commander.)

On those last two, please note the bug acknowledged in the post right above this one. You should get the fix for that bug in a future update.

* Operational range is always their commander's radar range. This was implemented this way for clarity since this is what you see as what your ship is aware of.

Taken from here: <https://forum.egosoft.com/viewtopic.php?f=192&t=421644&start=15#p4908844>

Formations

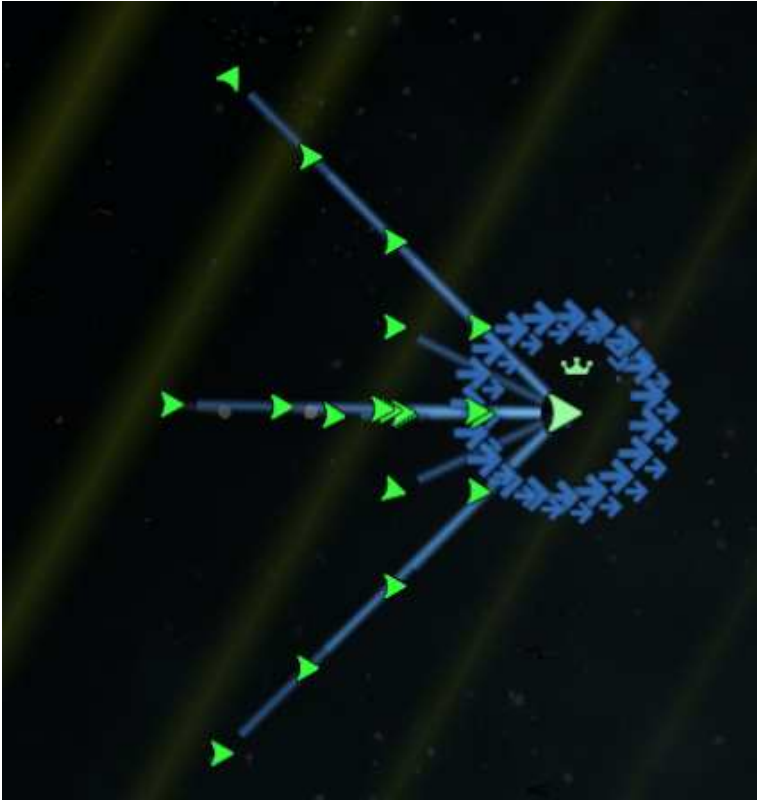
Breakdown of each formation as of version 4.00.

First screenshot is from the top (default map view) and the second is a perspective trying to show space usage.

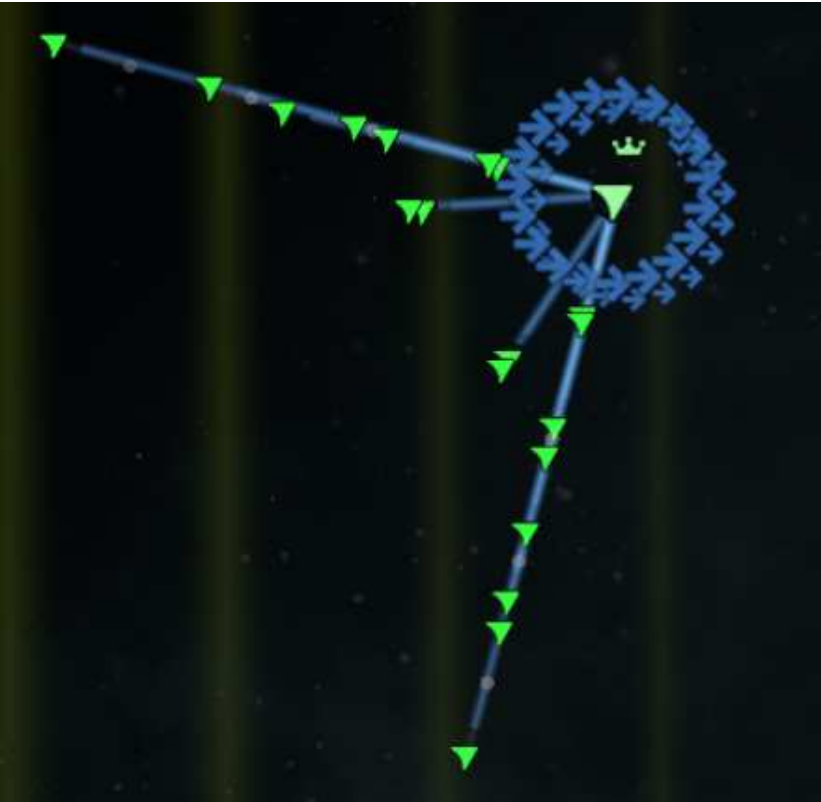
Most of those screenshots are with a fleet of 20 ships.

Each formation requires a skill level, indicated in parenthesis after the name.

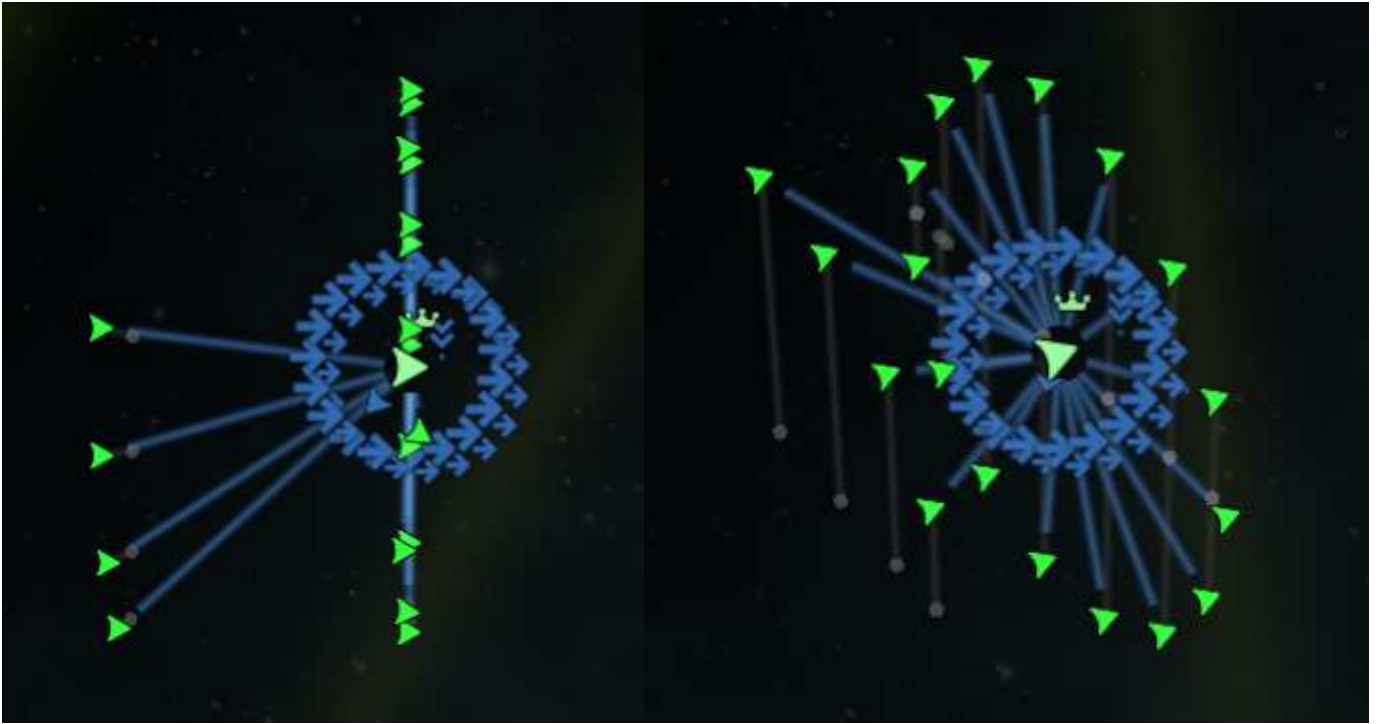
Backward Cross (2 stars)



Backward X-shape (2 stars)



Circle (0 star)

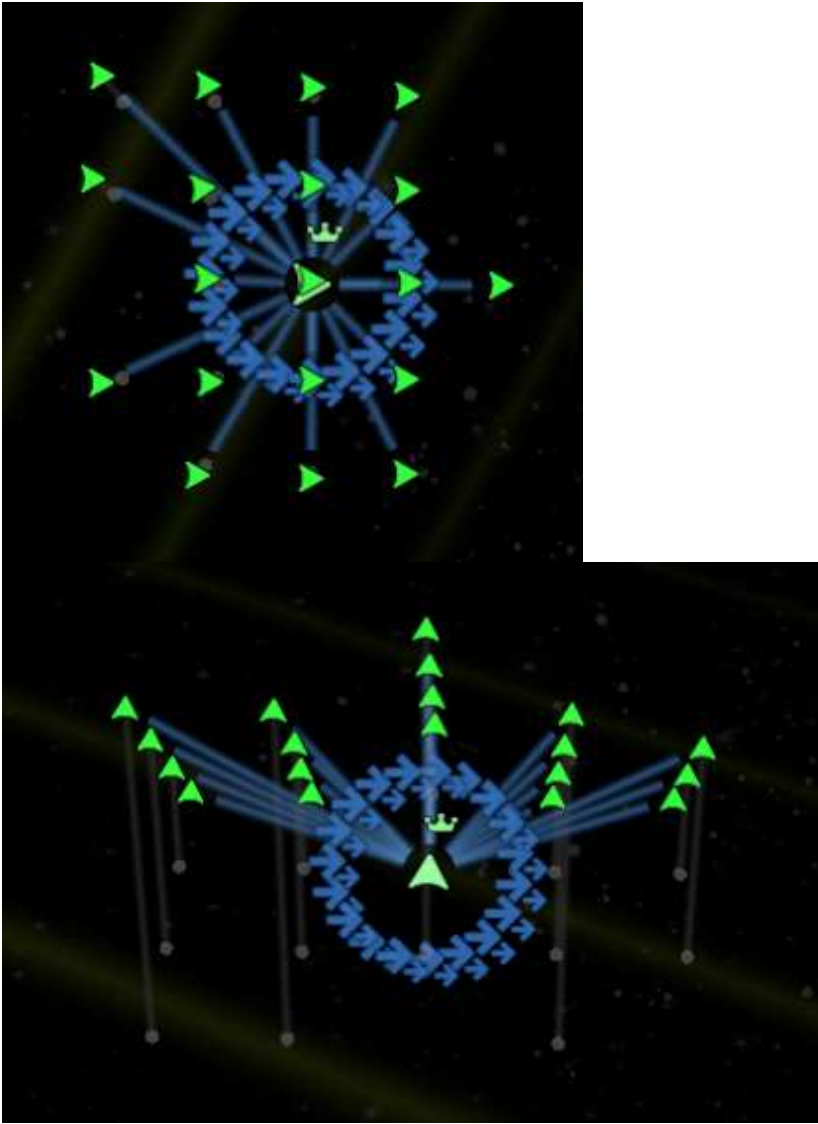


Cross (2 stars)

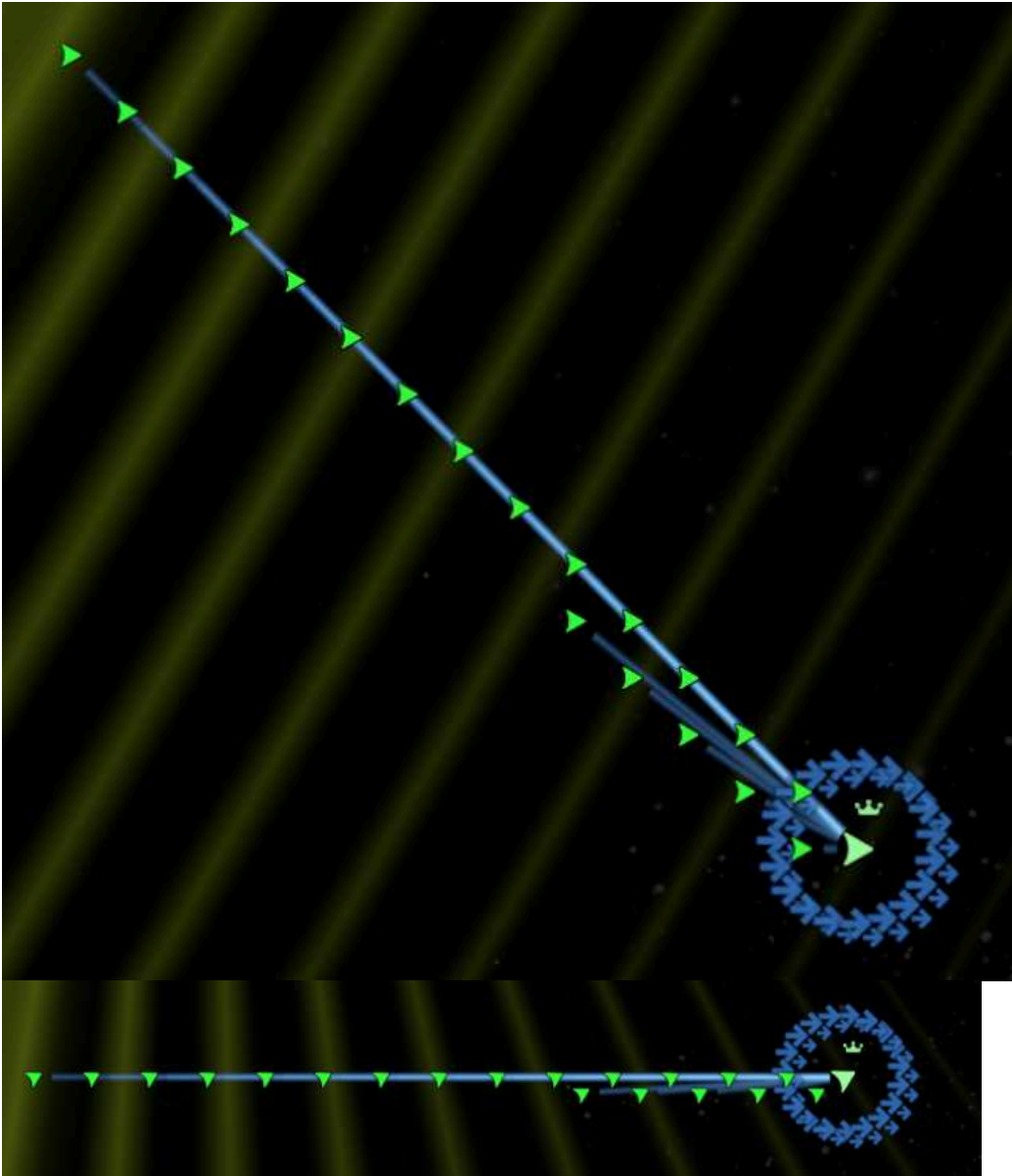




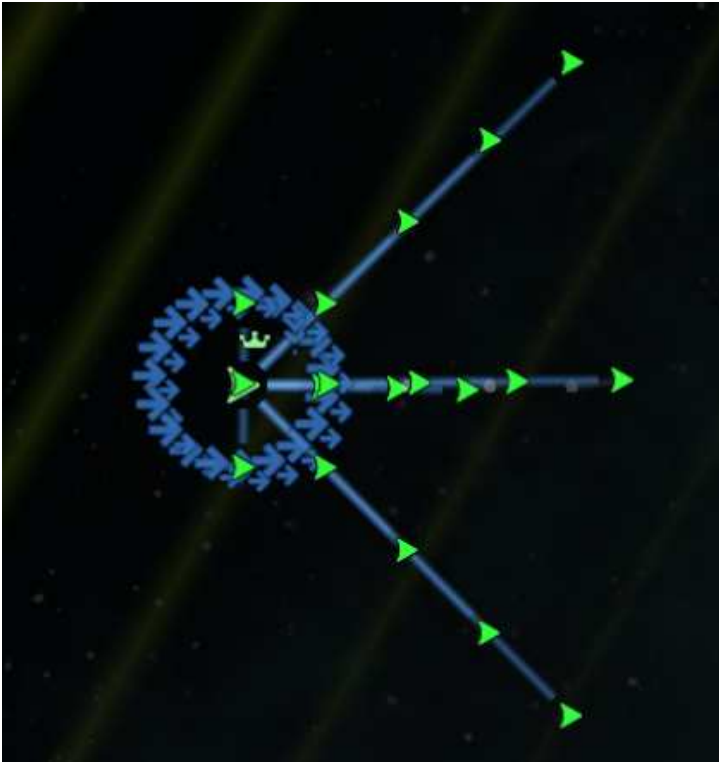
Eagle (4 stars)



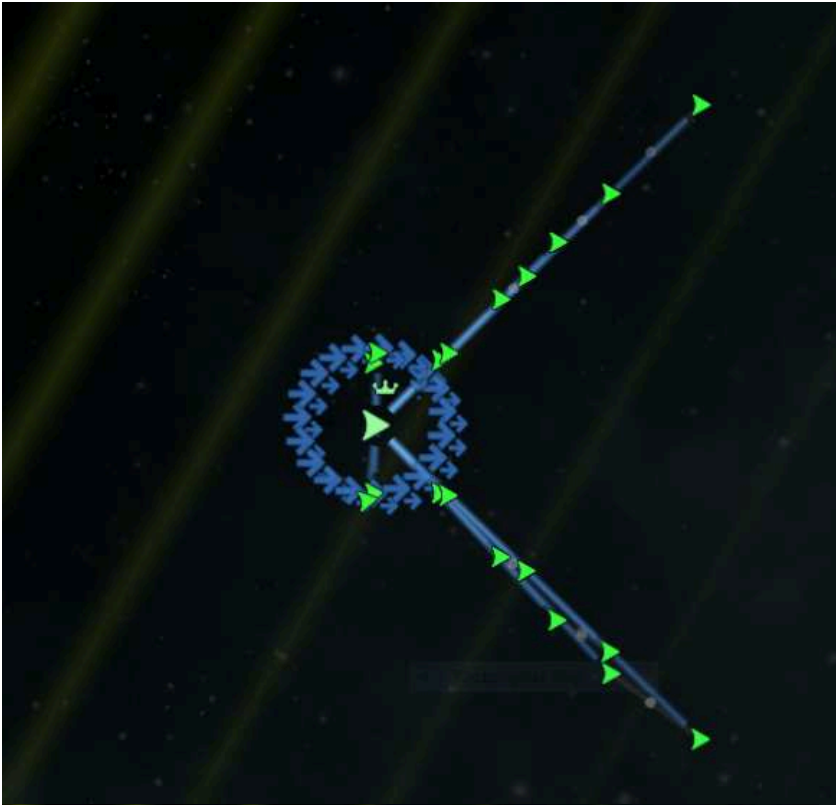
Echelon (5 stars)



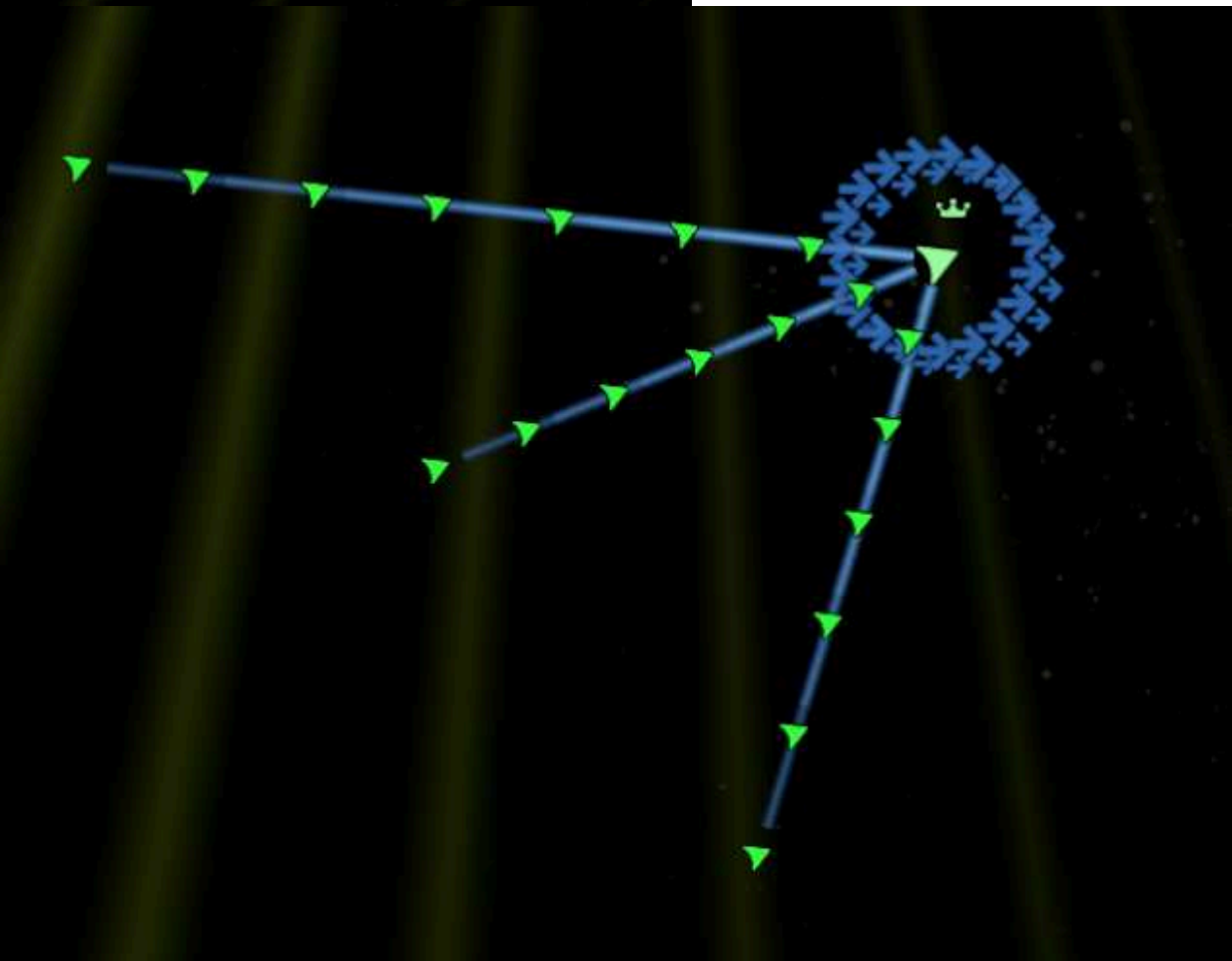
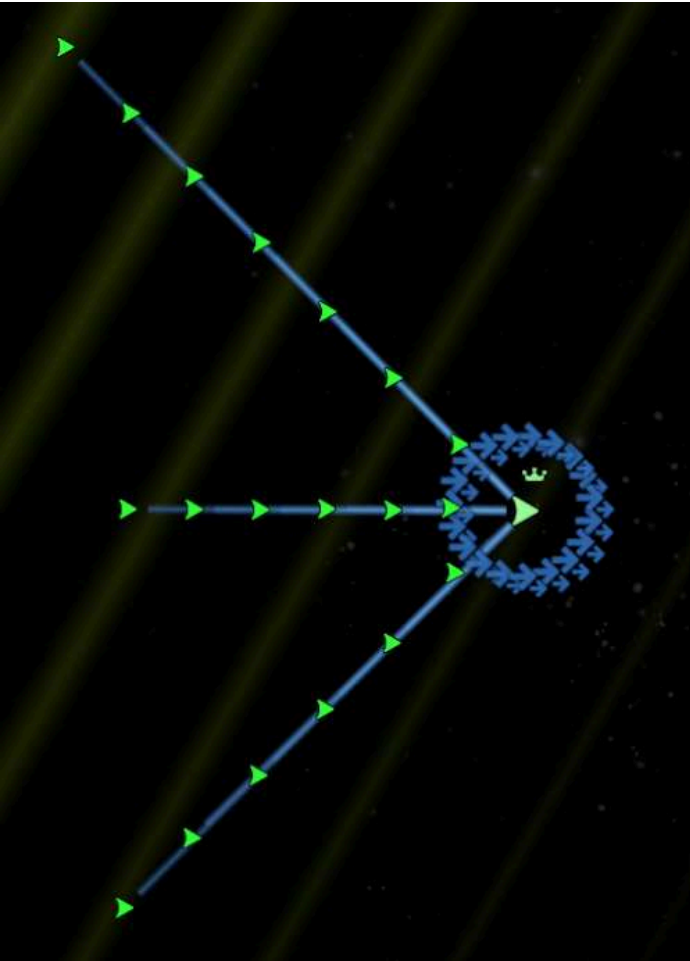
Forward Cross (2 stars)



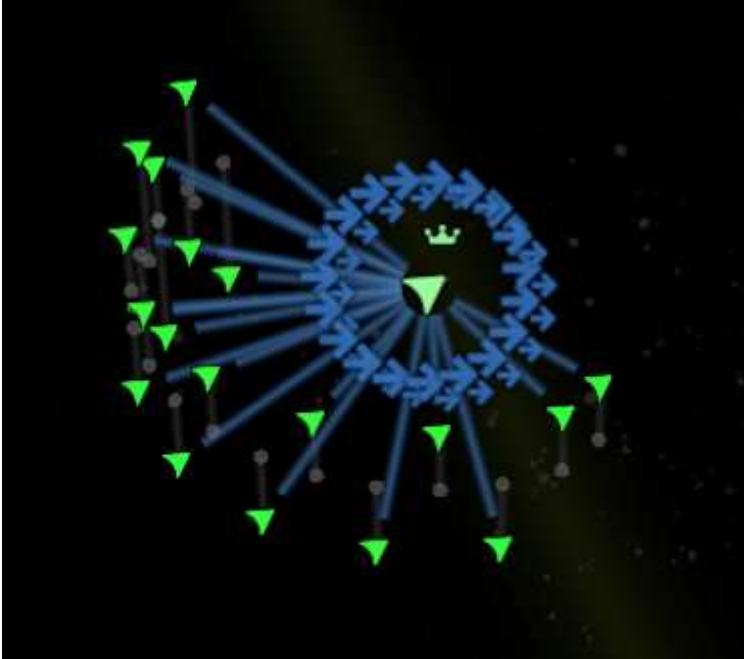
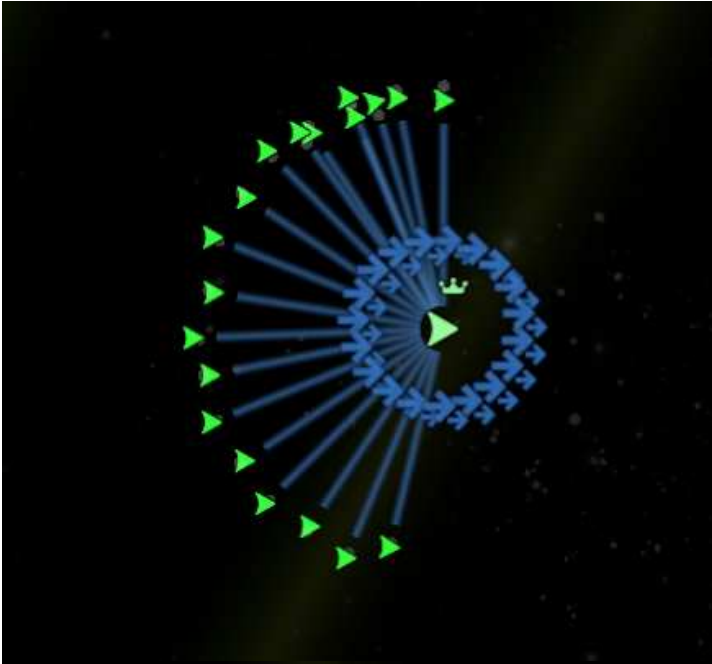
Forward X-shape (2 stars)



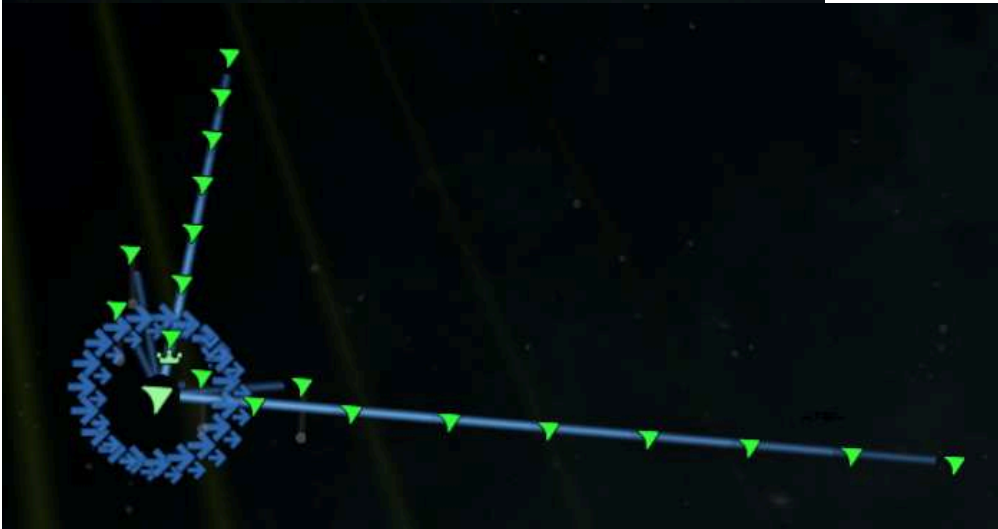
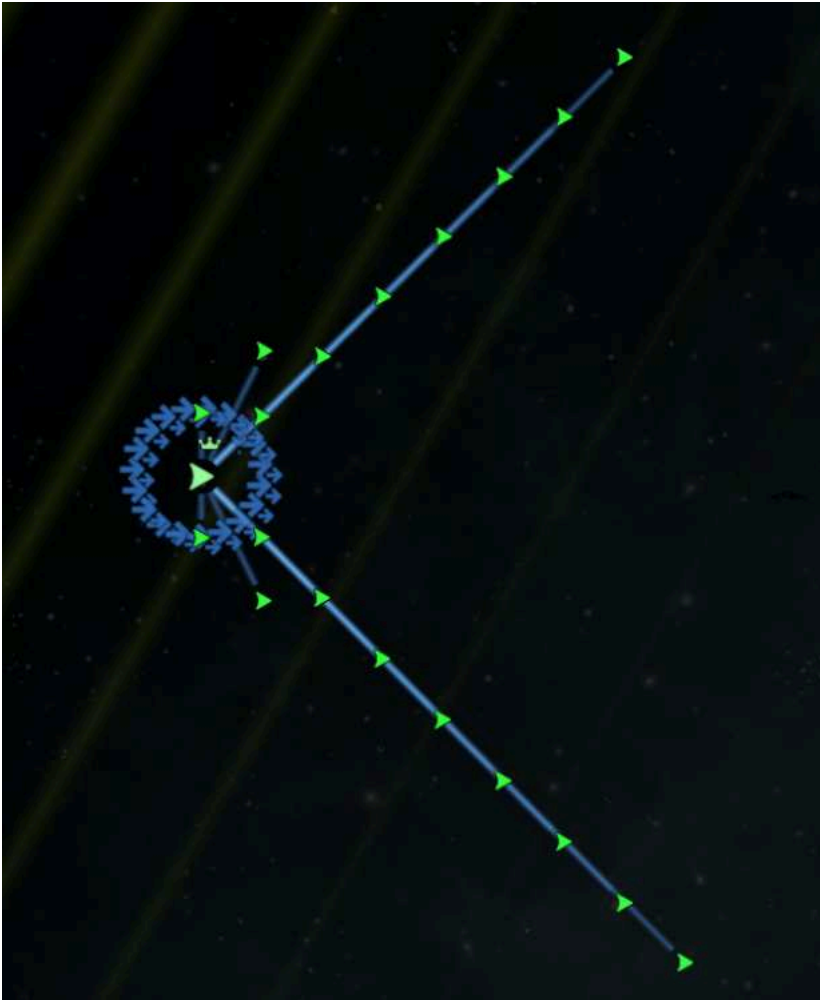
Horizontal Dart (5 stars)



Inverse Point Guard (3 stars)

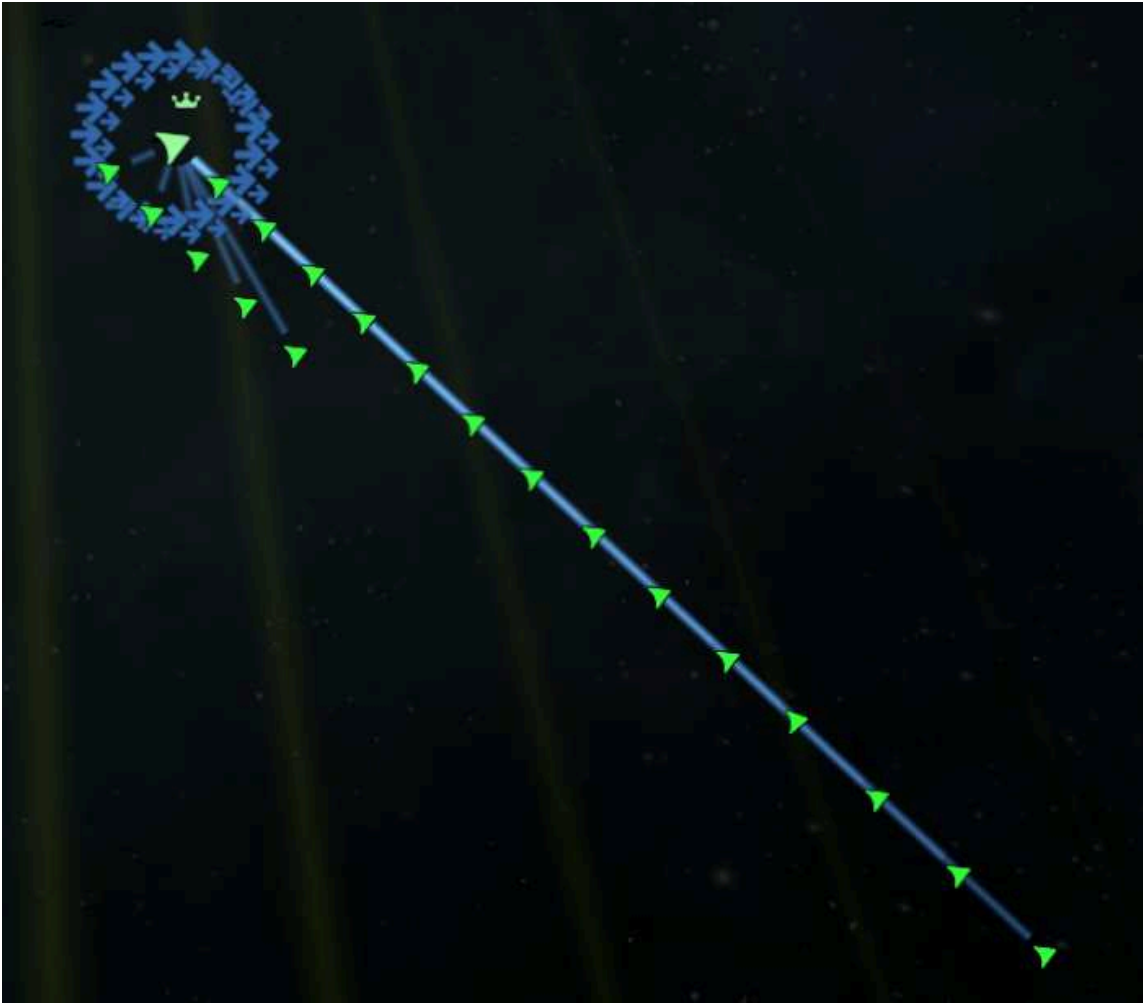


Inverse V-shape (1 star)

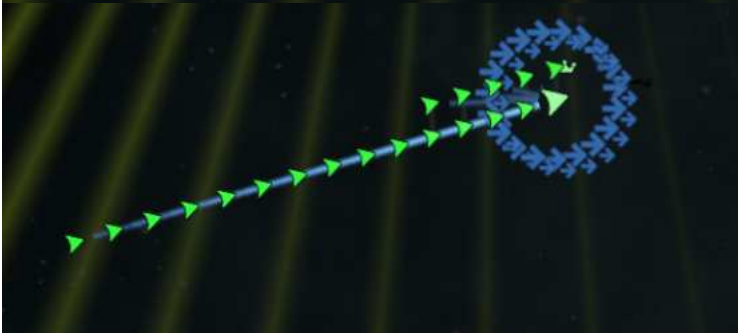
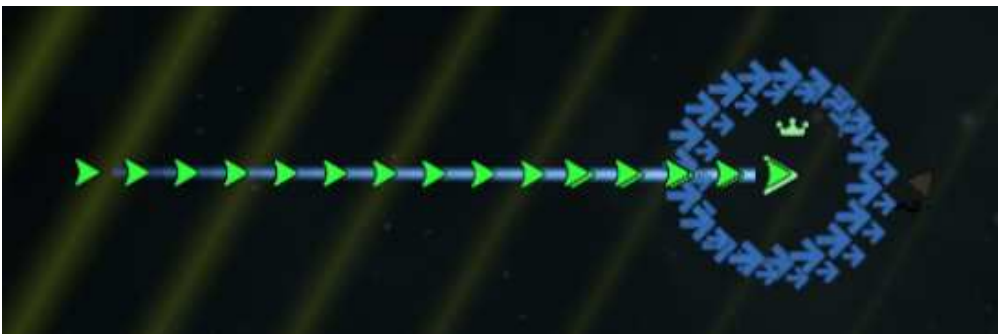


Line Abreast (0 star)

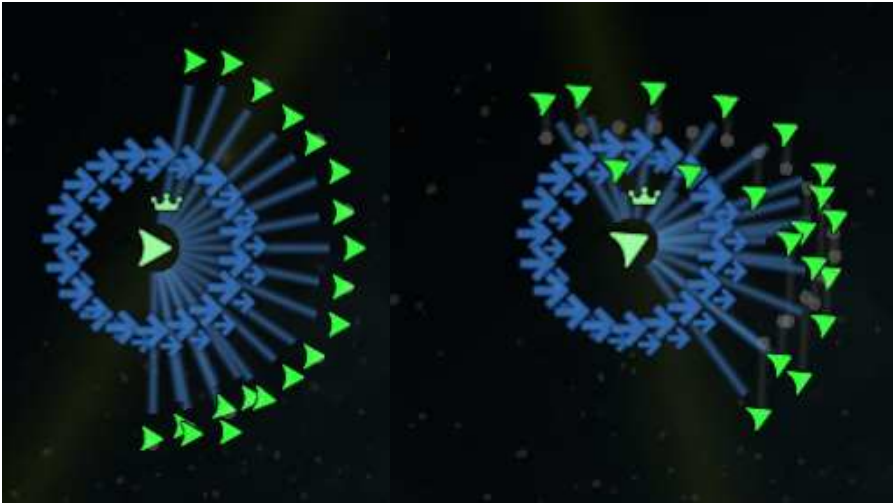




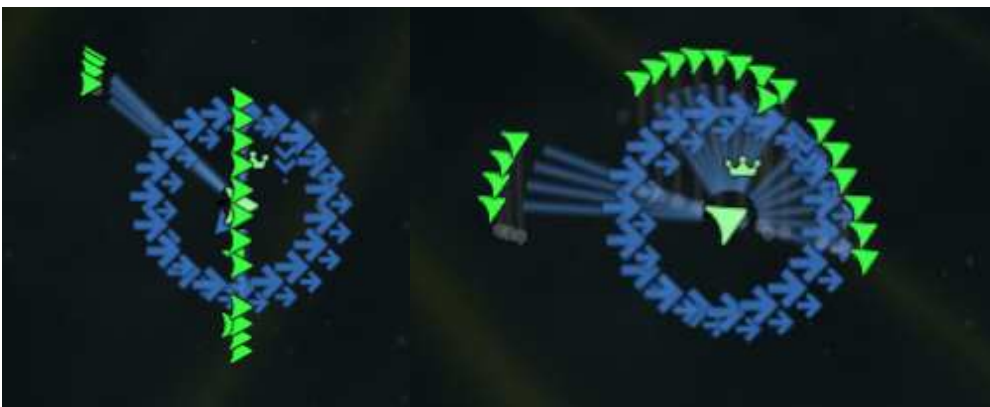
Line Astern (0 star)



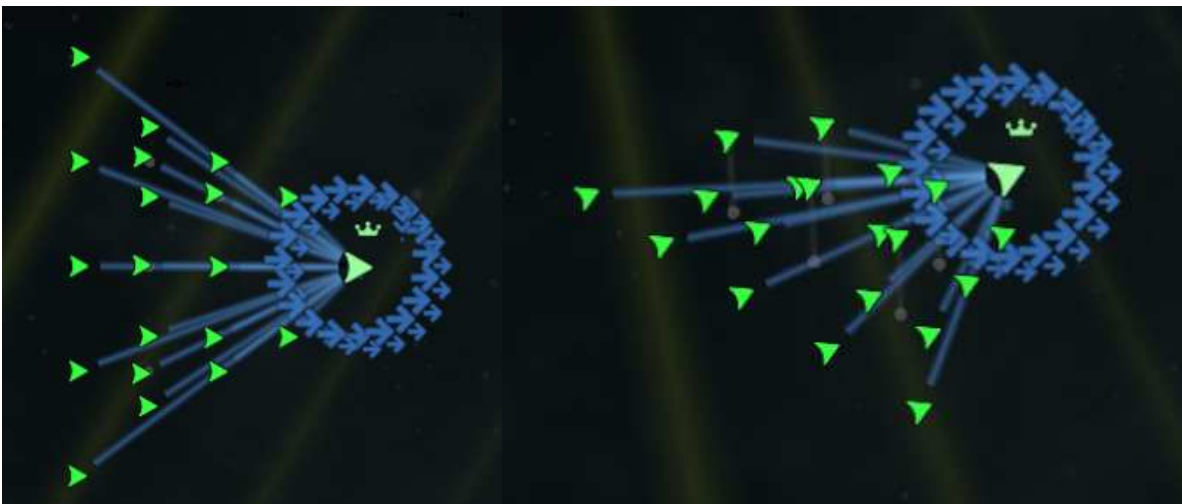
Point Guard (3 stars)



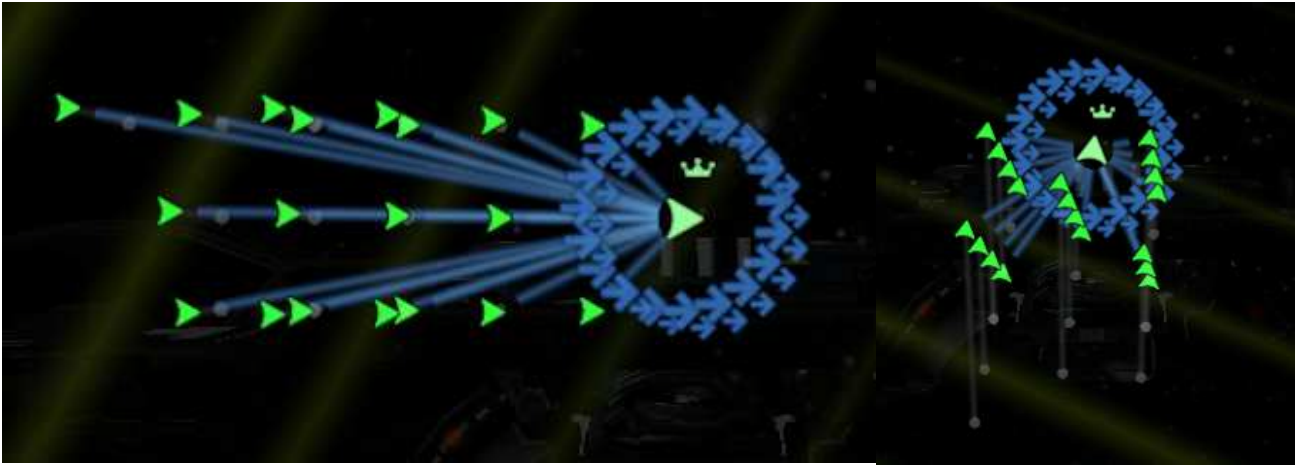
Semicircle (0 star)



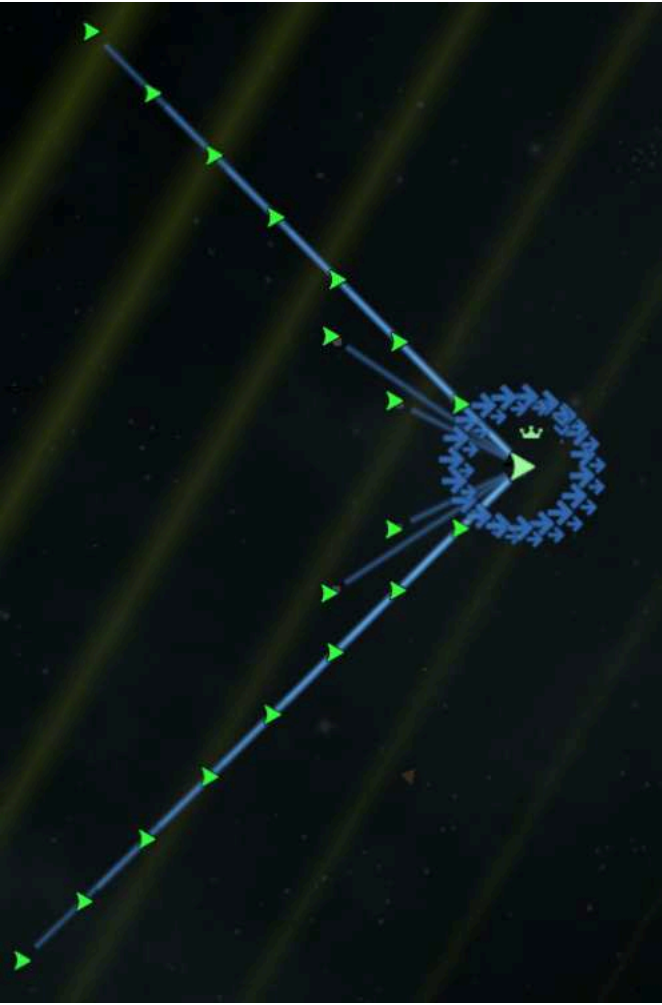
Triangle (1 star)

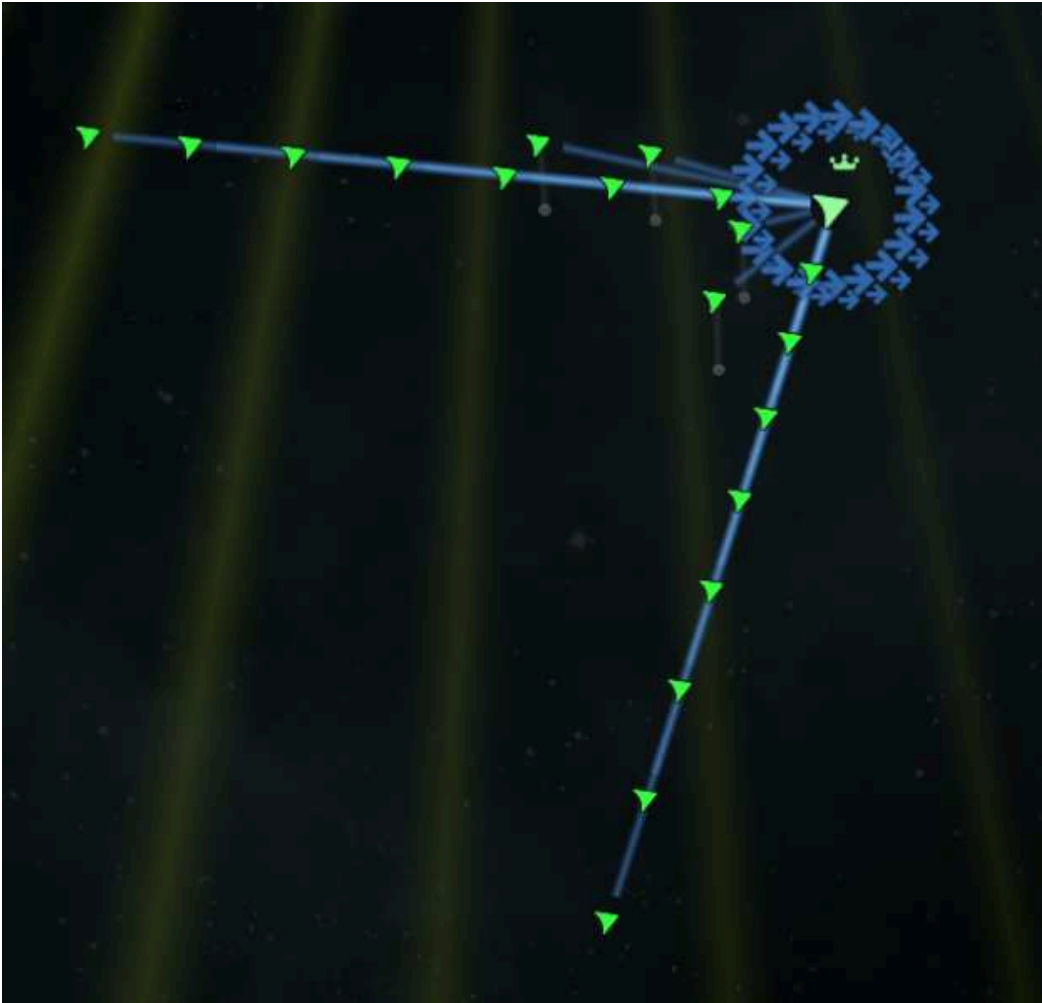


Twin (4 stars)

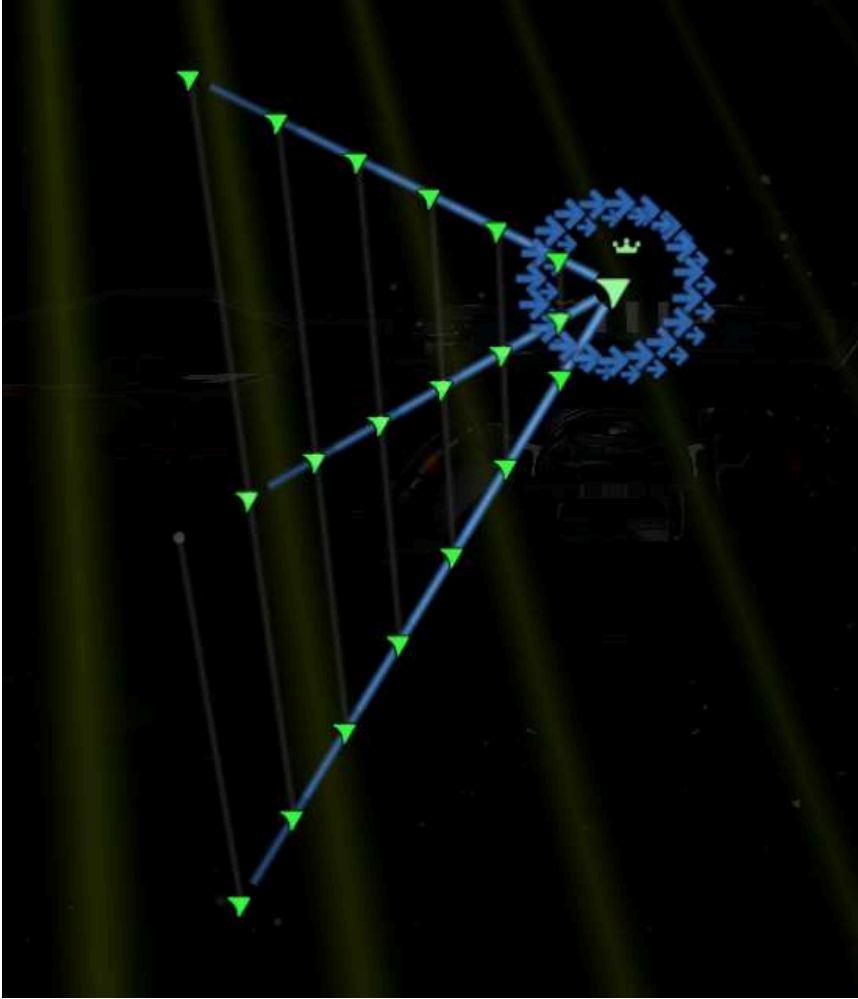
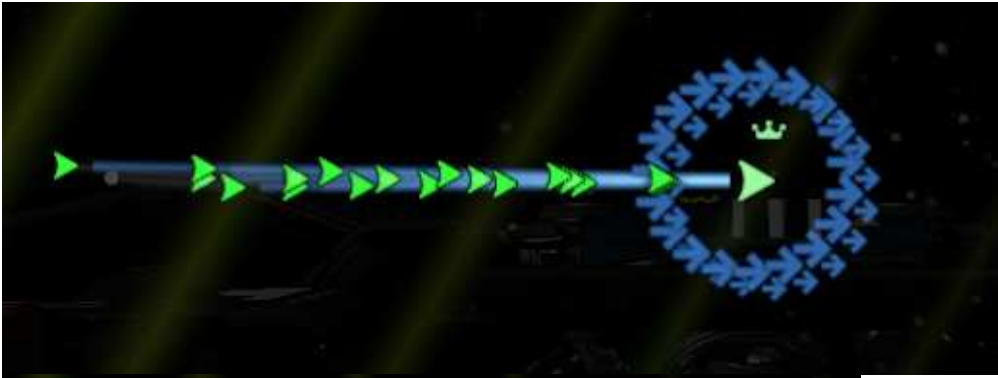


V-shape (1 star)

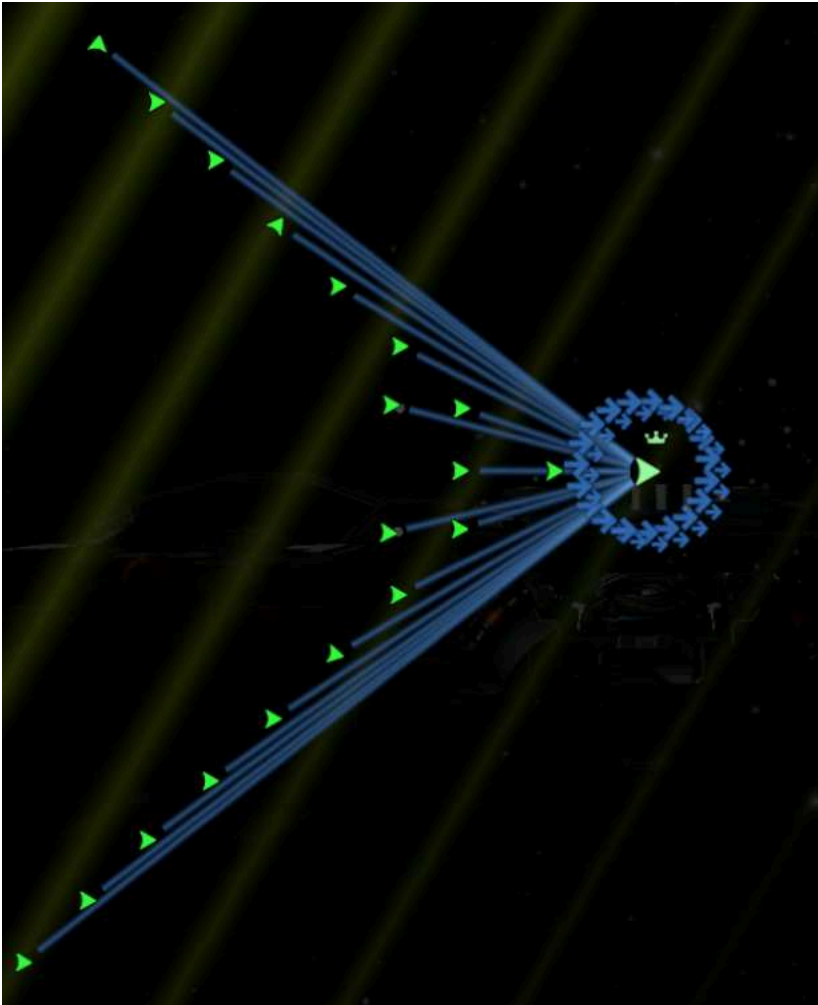


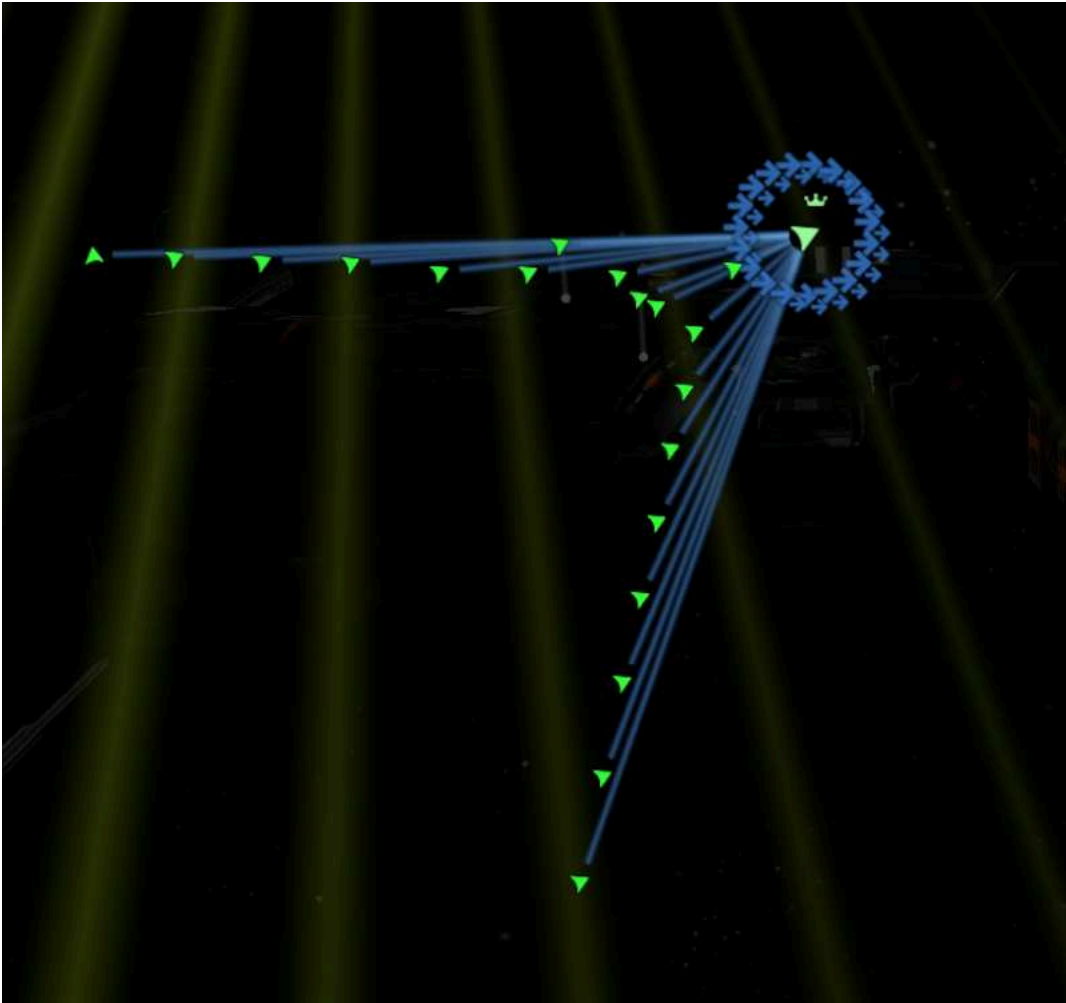


Vertical Dart (5 stars)

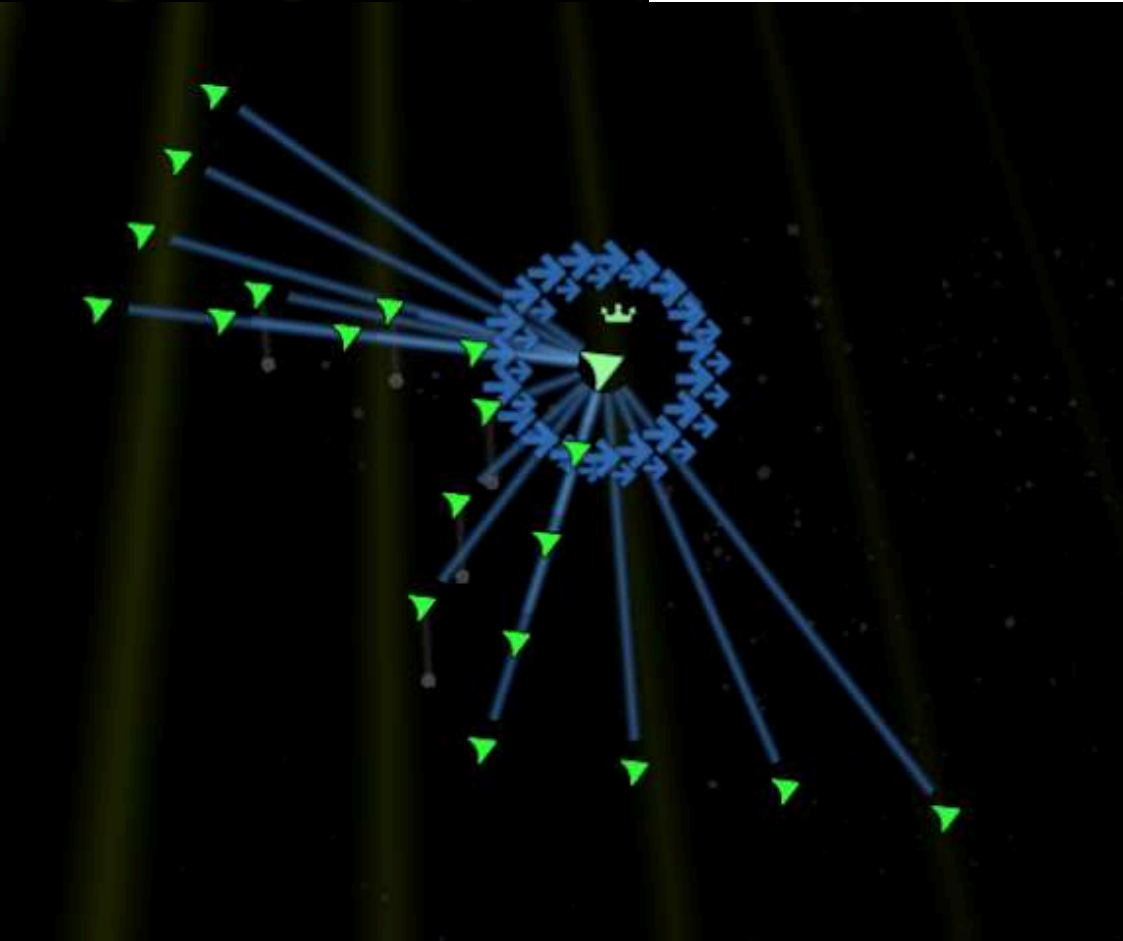
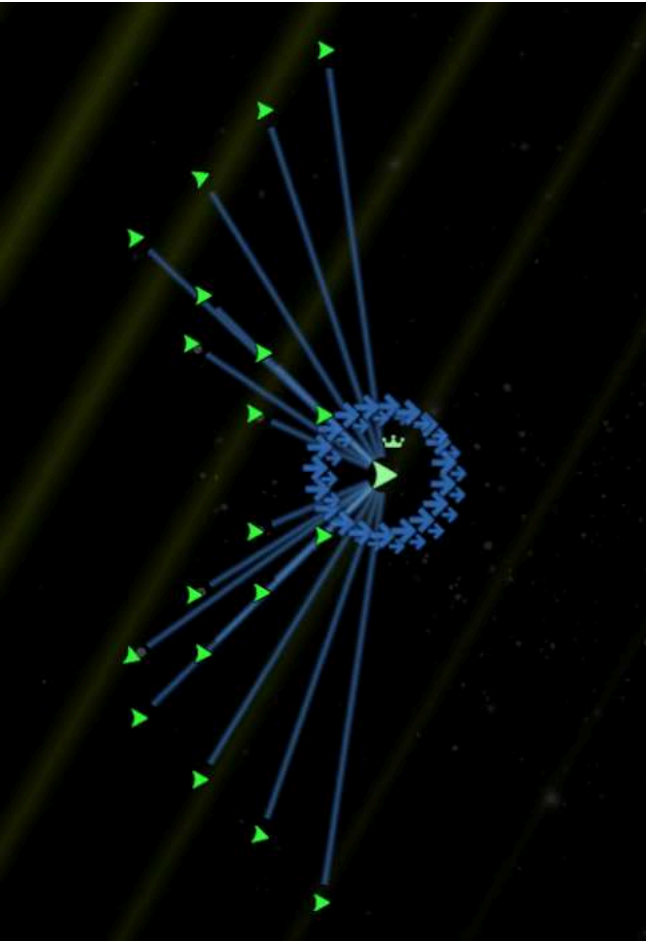


Vulcan (5 stars)

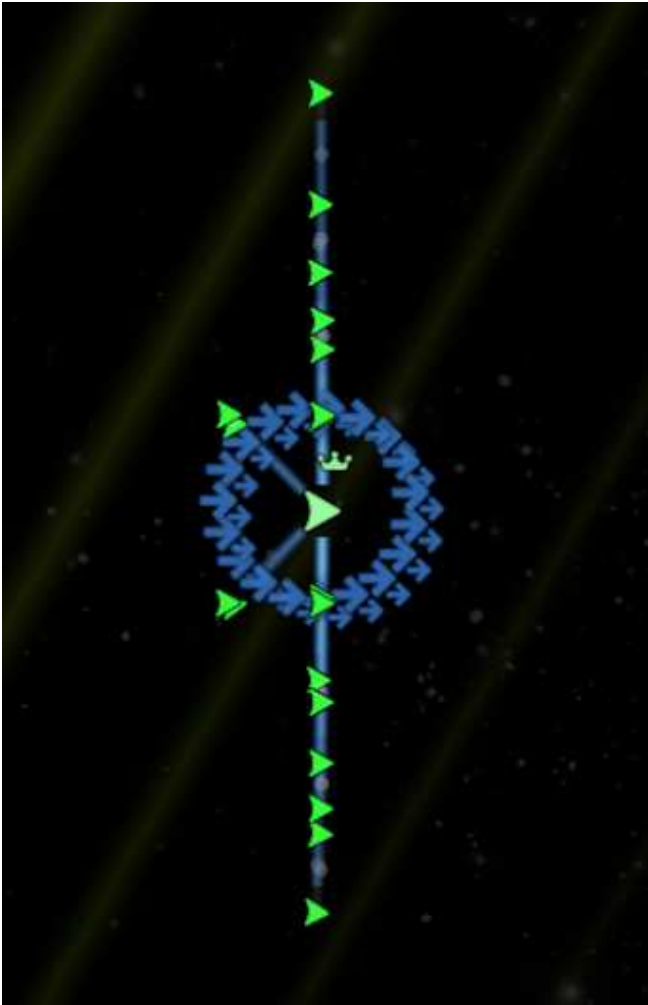


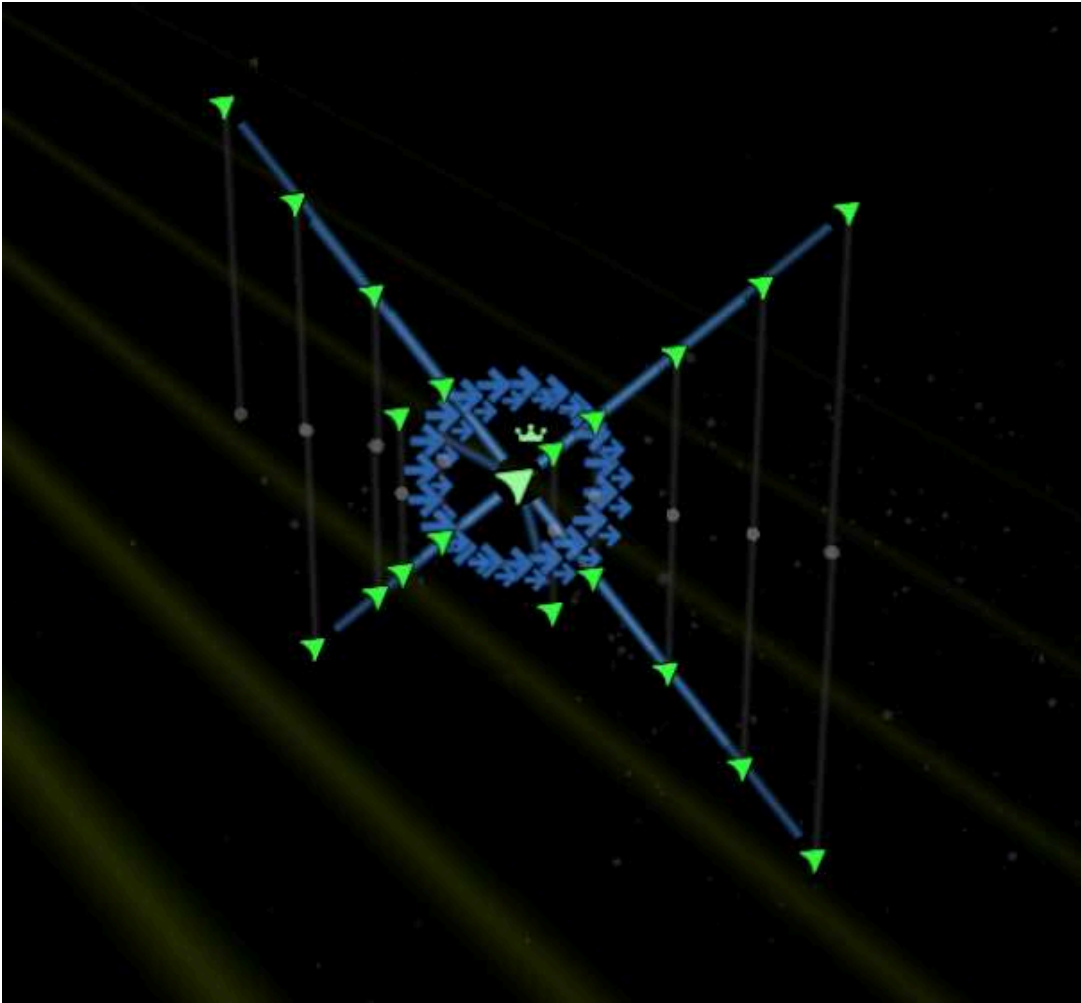


W-shape (4 stars)



X-shape (2 stars)





Joystick and Controller Configuration and Options

i Updated for version 5.10

- [Default Profiles](#)
- [Setting up your own profile](#)
- [Button/Axis configuration](#)

Default Profiles

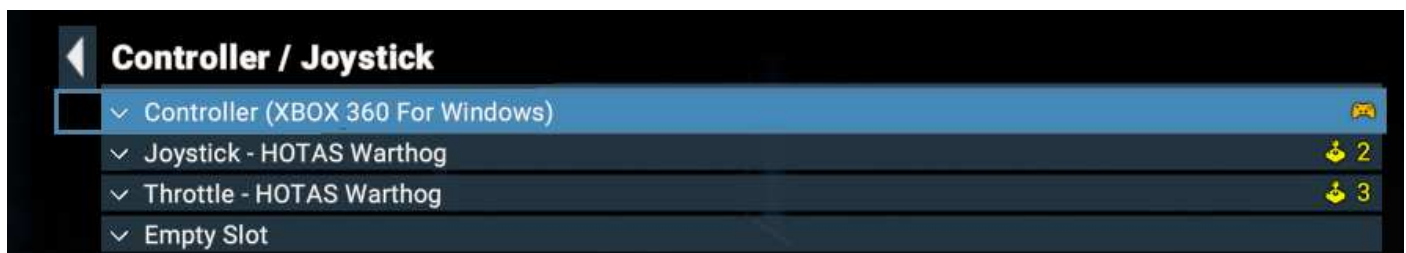
There are several profiles included for joysticks. To load a default profile, go to **Settings->Controls->Load Profile**.

Included profiles at this time are:

- Controller (based on Xbox360 Controller)
- Saitek X52 Pro
- Thrustmaster T16000m FCS HOTAS
- Thrustmaster HOTAS Warthog

Before loading a default profile, make sure you back up any existing profile using the option **Settings->Controls->Save Profile**. These profiles will then be listed in the Custom section of the load profile menu.

Important: You need make sure your devices are listed in the right order under **Settings->Controls->Manage Controllers/Joysticks**. If not, the default profile might not work correctly. If you want to use i.e. a Hotas Warthog, the order below will NOT work, due to the fact the XBOX 360 controller is listed at the top.

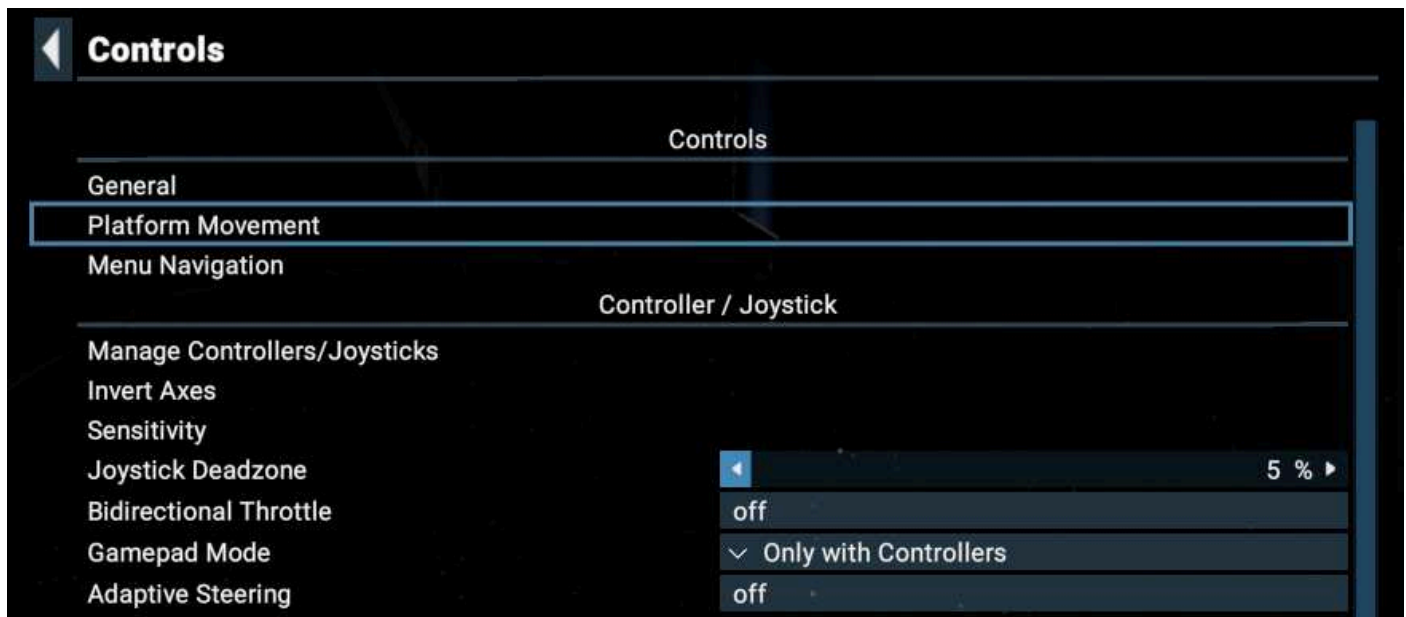


Instead, the order must as shown below.



Setting up your own profile

Most options related to Joystick/Controller input can be found in this section of the Controls menu:



To set up your own profile, start by checking whether your device(s) are listed in the menu accessed via **Settings->Controls->Manage Controllers/Joysticks**.

In this menu you can assign input devices to slots, check the current device number, or disable devices. Multiple Input devices will be indicated by a small icon with a number next to it.



Settings->Controls->Invert Axes This option allows you to invert the axes of many axis-controlled inputs such as steering, throttle, strafe, first person controls, etc

Settings->Controls->Joystick Deadzone This controls the size of the area in the centre of the axes for which no reaction to input is given.

Settings->Controls->Bidirectional Throttle Some devices have the throttle axis in the centre. If your throttle has its zero acceleration position in the centre and you want to change it, set this option to "off".

Settings->Controls->Gamepad Mode This option changes several interface behaviours related to automatic targeting and mouse usage while using a controller/joystick, etc.

Settings->Controls->Adaptive Steering If this option is enabled, your input will change automatically to the primary steering axes of your ship. For example, if roll is faster on the current ship, it will be mapped to the horizontal axis; if yaw is faster then that will be mapped to the horizontal axis. For full manual control over your

ships' steering axes, disable this option.

Button/Axis configuration

To map individual functions to your device, go to one of the following sections:

- General
- Platform Movement
- Menu Navigation



In each sub-menu, you will find individual functions that can be mapped in various sub-sections. each functional area can be mapped to two different keys/buttons/axes.

A small symbol next to the mapped input will tell you which device it is on, or whether it is mapped to mouse or keyboard.

In **Settings->Controls->General** you can map the basic flight operations for your ship. Be aware that many steering-related inputs can be mapped in either the **Steering: Analog** or the **Steering: Digital** section. On any device using an axis for steering, make sure that you map them in the Steering: Analog section in order to be able to use fine control.

Using the available options, you can also set up mixed steering where you can control your ship via joystick in some situations while still using mouse/keyboard input in others.

Remember to save your profile after editing it!

Missions And Collectable Loot

i Updated for version 5.10

- [Introduction](#)
- [Guidance missions](#)
- [Generic missions](#)
- [Upkeep Missions](#)
- [Guild Missions](#)
- [Playing Multiple Missions At Once](#)
- [Crystal Clusters](#)
- [Lockboxes](#)
- [Data Vaults](#)

Introduction

The X-universe is filled with people needing help in the form of missions. Missions can be accepted to earn reputation with the giving faction, along with credits and occasionally other rewards.

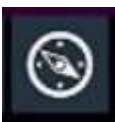
Available missions are listed in the Mission Offers tab on the map:



Accepted missions are listed in the Mission Manager tab on the map:



Guidance missions



These are player-determined and only apply to the playership. Objects such as ships, stations, gates and lockboxes may be selected as destinations via the HUD, radar or Map and guidance will show the way to them. It is also possible to set a position in empty space as a destination via the map.

Generic missions



'Making your way in the world today takes everything you've got!' Until, or even after, you've found your place in galactic society, "generic" missions let you swap effort for hard cash, or occasionally for other random looted goodies.

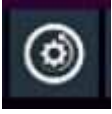
There are a multitude of them:

- Assassination
- Clearing military objects
- Criminal termination
- Delivering crew (Looking for Pilots, Deliver specialist to the front)
- Deliver ship (Assemble Fleet)
- Deploying objects (Static Defense Placement, Deploy Static Defense, Laser Tower Placement, Observations Required, Improve Satellite Coverage, Sensor gap needs plugging, Satellites Required in hostile Space, Imperative satellite placement, Behind Enemy Lines, Satellite Order)
- Espionage
- Item delivery (An Open Request)
- Lost item recovery (Item Recovery)
- Mining missions (Marketplace of Ideas, Seek Out High-Yield Resources, Source Local Regions)
- Mining ship escort
- Passenger transport
- Repairing satellites
- Rescuing trapped ships
- **Secret missions**
- Station construction (Build Military Base)
- Supply station (Station Supply, Food Shortages, Gathering Material)
- Theft recovery
- Trading ship escort

There are multiple ways of finding and accepting these missions. When the player passes within radar range of stations, any generic missions offered by their population will be visible through icons on the HUD, radar and map, and will be listed in the **Available Missions tab**. Mission details are available from the "Open briefing" menu that is offered via the Available Missions tab or a right-click on the Map icon. The instant a mission is added to the Mission Offers tab and map, these icons also blink for a moment.

In contrast to most generic, publicly-available missions, some are **secret** and often illegal missions. The nefarious Individuals offering these missions do not post them openly: instead they try to contact potential pilots using disguised audio transmissions. Use the SCAN MODE (SHIFT + 2) near stations to find signal leaks that may offer secret missions: often the rewards for these types of missions are significantly higher than those of normal missions.. but of course the risk is higher too!

Upkeep Missions



The upkeep mission category holds small tasks related to player property. A ship that does not have a pilot, a station in urgent need of a manager and similar tasks to regain or improve functionality in the players empire. Completing these missions do not give rewards but help keep things running smoothly throughout your empire

Guild Missions



Faction missions are the highest and most important tier. A player must first gain a very good standing with a faction and be invited to the faction representative to get access. During the visit to the faction representative (i.e. at level +10 reputation) an offer to join a faction mission may be given. The most prominent but also most dangerous such examples are the war effort missions: several large wars are happening in the universe and the player can join either side.

After joining a War Effort Faction its path works as a subscription for many further missions. The player can choose which to pick from a list of offers.

Playing Multiple Missions At Once

There is no limit as to how many missions can be accepted at the same time with the exception of guild missions where only one can be accepted per guild at one time. While there can only be one mission active, many more can be accepted. Failing or aborting missions usually has no consequence, however in some cases failing a mission may be punished, especially during faction missions or if the mission is time-critical.

Crystal Clusters

In the depths of space there are treasures to be found and collected. When traveling through asteroid fields the player may spot small glints of light coming from asteroids. These glints are reflected from asteroid-placed Crystal Clusters which can be specifically targeted and shot at until they release their contents (if you shoot the asteroid itself it's unlikely to release the valuable crystals). The sale value of collected crystals can range from 1,000-250,000 credits each depending on their type, and also provide crafting materials.

Lockboxes

Use of the long range scanner or flying in the right place at the right time may reveal Lockboxes floating in space. Lockboxes require the player to accurately shoot between 1-16 glowing red locks off the spinning box to open without dealing enough damage to destroy the box along with the contents. Lockboxes usually drop items

for the *player* inventory, with the number of dropped wares being proportional to the number of locks. It's recommended to use a low power weapon to do this, as some boxes can be very dangerous if destroyed at close range

Tips: The Lockboxes can spin quite fast sometimes. By carefully nudging the Lockbox with a ship the rotation speed of the Lockbox can decrease, making it easier to aim correctly at the locks: the locks don't appear to (currently) react to collision damage: only the entire structure is affected, if at all

Data Vaults

Occasionally the player will encounter large satellite shaped Data Vaults floating in space. These puzzles require the player to use a combination of techniques to open, including damage, repair and scanning. In order to open these all pressure valves & power relays on the outside must be repaired (red illuminated displays). To do this you'll have to approach the display in a space suit, then use its repair laser to repair the displays at a target distance of 25 meters or less

NPC Behaviours

i Updated for 5.10

- [Introduction](#)
- [Impact of "Remove all orders" Command](#)
- [Setting Behaviours](#)
- [Available Behaviours](#)
- [Images Showing the Location of Common Confirmation Buttons](#)
- [Training and skill increase](#)

Introduction

Behaviours represent the **default actions** of **NPC Captains** employed by the player. In other words, if a ship has no current orders, or has just completed an order, they will follow their Behaviour until told otherwise.

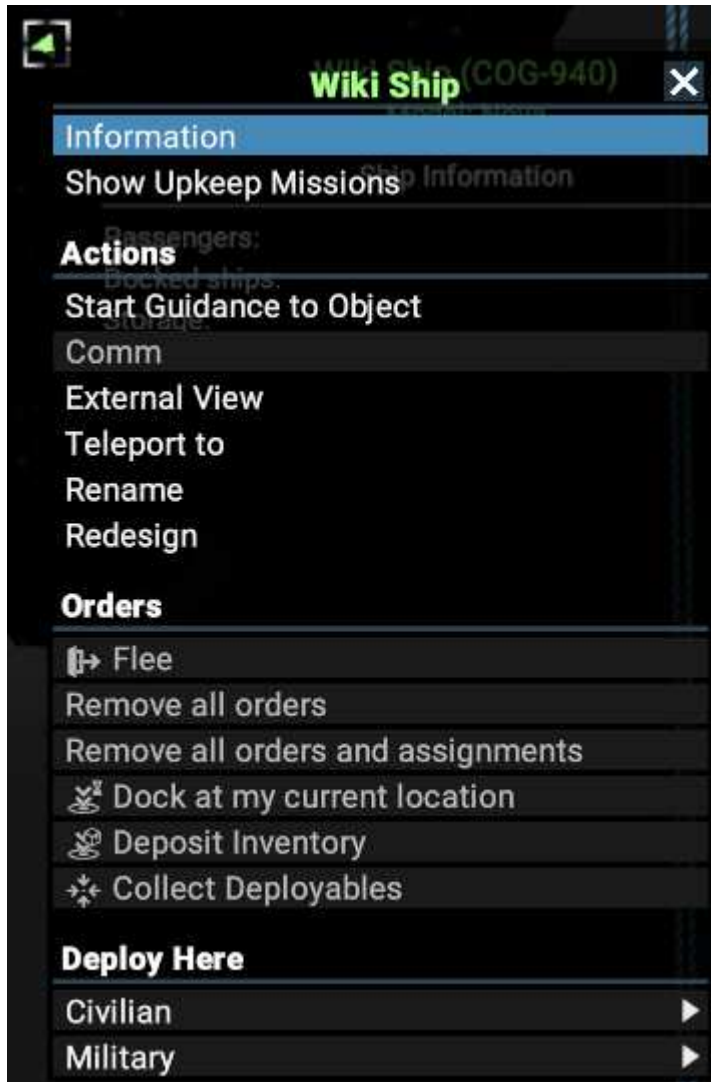
Please note that if a player takes control of a ship mid-order, the Captain will re-initiate the previous order after the player relinquishes control (instead of reverting to their default Behaviour). This allows the player to take control of any ships fluidly without having to repetitively reset orders after they leave. This can become especially helpful in the mid-to-late game after player teleportation has been realized.


Impact of "Remove all orders" Command

- **Remove all orders** - removes only the orders in the ship's order queue but retains the ship's behavior
- **Remove all orders and assignments** - removes all orders in the order queue, resets the ship's behavior, and removes the ship from any command hierarchies

Setting Behaviours

1. Open the Map and locate the Ship you wish to adjust the Behaviour of its Captain
2. Right-Click on the Ship in the Map to bring up the context menu, and left-click on the "**Information**" option:



3. Stay on the Map and, looking at the top-left area, change the view to the Behaviours tab  by left-clicking the icon:

The screenshot displays the NPC Behaviours interface for the ship 'Wiki Ship' (COG-940). The interface is organized into several sections:

- Information:** Contains icons for information, crew, tools, and other functions.
- Behaviour:** This section is highlighted and shows:
 - Ship Name: Wiki Ship (COG-940)
 - Captain: Addy Teller
 - Skill: 5 stars
 - Commander: -
 - Command: Wait
 - State: Flying
 - Subordinates: 0
 - Select Formation: None
- Order Queue:** Shows the default behaviour as 'Hold Position' and includes buttons for 'Delete All' and 'Start Queue'.
- Default Behaviour:** Allows setting the default behaviour to 'Hold Position' (5 stars) and includes a 'Hold fire' checkbox.

4. Within the highlighted section below, left-click on "**Hold Position**" to view and chose from default Behaviours (listed in the table below). Within the highlighted section above there are also to additional checkbox options.
 - "Stay docked" (Only if the ship is already docked)
 - "Hold fire"
5. Below the highlighted section above we can adjust how the Captain responds to scenarios (and chose if we want notifications or not):
 - **Police Interdiction** (where a Police scan found illegal goods):
 - Attack
 - Comply (dropping requested wares; default setting)
 - Escape
 - Wait
 - **Pirate Harassment:**
 - Attack (default setting)
 - Comply (dropping requested wares)
 - Escape
 - Wait
 - **Finding abandoned ships:**
 - Claim if possible (a Marine will be sent to board the ship)

- Ignore (default setting)
- Mark
- Protect

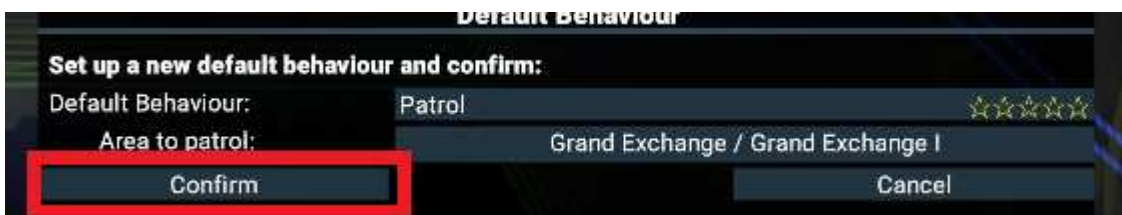
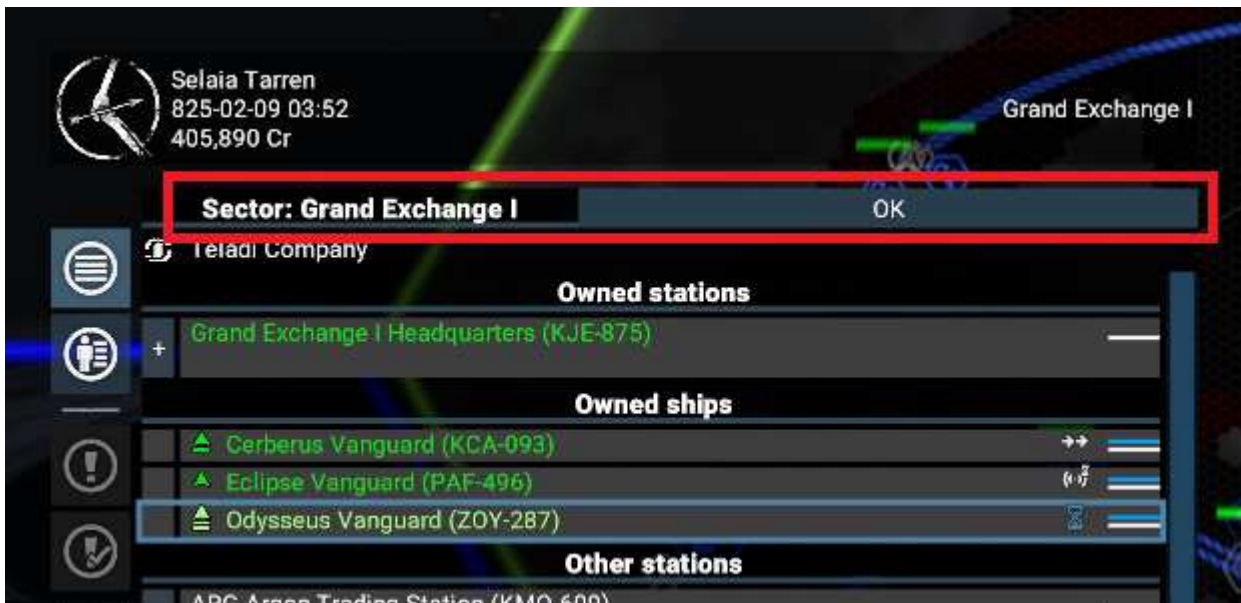
Available Behaviours

Behaviour type	Behaviour	Skill requirement	Setup steps for the Default Behaviours menu in the Map
Combat	Patrol	0	<ol style="list-style-type: none"> 1. Left-click on the area to the right of "Area to patrol". 2. Left-click on the Sector you wish the Captain to Patrol. 3. Left-click on the "OK" button at the top of the Default Behaviours menu (see images below). 4. Left-click on the "Confirm" button in the Default Behaviours menu (see images below).
Combat	Protect Position	0	<ol style="list-style-type: none"> 1. Left-click on the area to the right of "Area to protect". 2. Left-click on the Position in a Sector you wish the Captain to Protect. 3. Left-click on the "Confirm" button in the Default Behaviours menu.
Combat	Protect Ship	0	<ol style="list-style-type: none"> 1. Left-click on the area to the right of "Ship to protect". 2. Right-click on the Ship you wish to be Protected (can belong to another Faction). 3. Left-click on the contextual "Select" option. 4. Left-click on the "Confirm" button in the Default Behaviours menu.
Combat	Protect Station	0	<ol style="list-style-type: none"> 1. Left-click on the area to the right of "Station to protect". 2. Right-click on the Station you wish to be Protected (can belong to another Faction). 3. Left-click on the contextual "Select" option. 4. Left-click on the "Confirm" button in the Default Behaviours menu.
Mining	AutoMine	1	Mining Ship-specific; only available via station assignment
Mining	Advanced AutoMine	3	Mining Ship-specific
Mining	Expert		

	AutoMine	4	Mining Ship-specific
Mining	Sector AutoMine	0	Mining Ship-specific
Miscellaneous	<u>Repeat Orders</u>	0	
Navigation	Dock and Wait	0	
Navigation	Explore	3	
Navigation	Follow Ship	0	
Navigation	Fly to Object	0	
Navigation	Fly and Wait	0	
Navigation	Hold Position	0	
Scrap	Auto Salvage	2	Restricted to tug-class ships
Scrap	Auto Recycle	2	Restricted to salvage-class ships
Trade	Revisit known stations	1	1. Left-click on a ship in the Map. 2. Right-click on empty space in the map and select "Update Trade Offers".
Trade	Find Build Tasks	0	Builder Ship-specific
Trade	<u>Fill Shortages</u>	2	
Trade	Local AutoTrade	0	

Trade	Advanced	3
	AutoTrade	

Images Showing the Location of Common Confirmation Buttons



Training and skill increase

(see also [Crew](#))

Each NPC can have their skills in each area (piloting, engineering, management, boarding and morale) increase from 0 to 5 stars. NPC can increase skills by either doing tasks, the player using training seminars or the use of the terraforming projects. From typical activity service crew will reach 2 stars relatively quickly, from there progression slows and it is unlikely that they will ever reach 5 stars from regular activity, instead they must be inflated artificially using training seminars. Marine's skill increases from successful boarding operations and they can become quite proficient quite quickly, marines do not benefit from seminars.

Online Login

i Online Features are Currently Disabled

Information on this page is not relevant until online features are re-enabled. Information on planned features is available [here](#)

- [Egosoft Community Account](#)
- [How To Register](#)
- [Paint Mods](#)
 - [Foundation X Paint Mod](#)
 - [Obsidian X Paint Mod \(pre-ordered Collectors Edition\)](#)
- [How To Apply A Paint Mod](#)
- [Can Not Find Paint Mods In-Game?](#)

Egosoft Community Account

To use any of the games online features, like the bonus paintmod that any customer gets for free for just registering their game and the [Venture Feature released as beta in v1.50](#) [?](#), you need to set up an account on www.egosoft.com for the online community (same as your forum account!).

How To Register

- Start the game
- Open the **Online Features** menu:

Online Features

Username

Password

I have read and agree to the terms of the Privacy Policy.

Remember me

Log In

Don't have an account yet? [Register a new Egosoft account at egosoft.com](#)

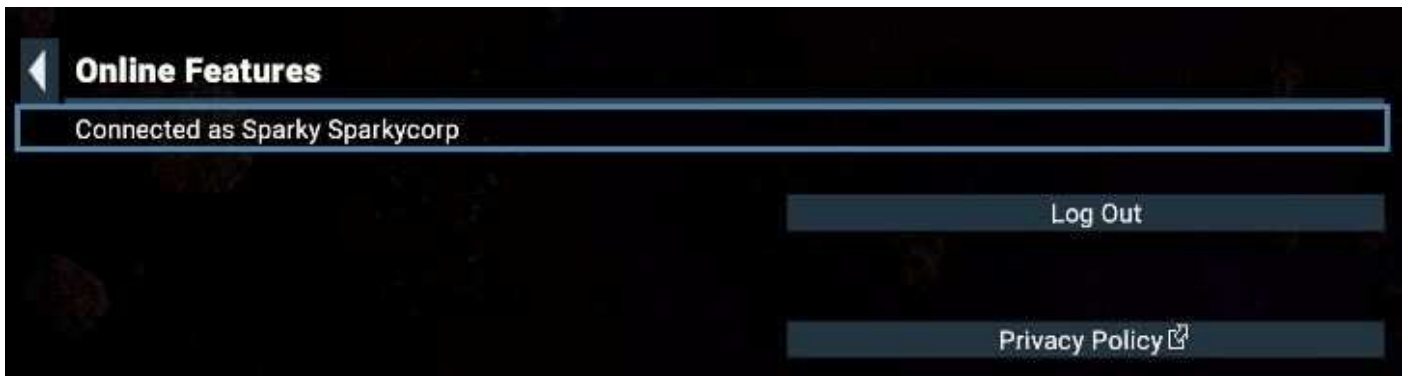
[Register](#) [Privacy Policy](#)

Log in with your Egosoft account here. If you have registered your copy of X4 you will have access to additional features and rewards.
 Registering your game enables a unique new feature allowing you to send your ships on ventures into the multiverse where they just might encounter other players. Additionally you will get a special paint modification for your ships and can earn more rewards through ventures.

- Log in with your Egosoft Forum's account name and password
 - It is necessary agree to [Egosoft's Privacy Policy](#)

- You can ask the menu to remember you for convenience
- Click on the Register button, which opens your [Egosoft Forum User Control Panel](#)
 - **Steam:**
 - On the [Egosoft Forum User Control Panel](#)
 - Click on "Update Via Steam"
 - Close and restart the game
 - **Non-Steam:**
 - On the [Egosoft Forum User Control Panel](#)
 - Enter your GOG serial key
 - You can find the GOG serial key from GOG Account -> Library -> X4 -> More -> Serial keys

Once you are logged in and registered, the Online Features menu should look like this:



The additional options at the bottom of the Online Features Menu (not visible in the above images) relate to the [Online Ventures Feature](#) [?]. Those additional options are explained on the Venture Feature page.

Paint Mods

Paint mods available in every restarted game:

- 50 Foundation X (bonus from registering as above)
- 10 Obsidian X (part of the [Collectors Edition](#) when it was pre-ordered)

Foundation X Paint Mod



Obsidian X Paint Mod (pre-ordered Collectors Edition)



How To Apply A Paint Mod

Right click on any of the ships you want to apply the paint mod to and select "REDESIGN" from the list of actions (or select the "REDESIGN" option at the computer panel in front of docked ships). There will be three tabs with the rarity categories of mods. The Foundation X paint mod is in the ENHANCED tab, and the rarer Obsidian X paint mod is in the EXCEPTIONAL tab.

Can Not Find Paint Mods In-Game?

If you do not see your mods listed in game in the REDESIGN action of one of your ships, after activating the game in the online community, try logging off and on again (or just restart the game, same effect).

If you have purchased the "Foundations Collector's Edition Content" upgrade, it will need to install before the Obsidian X paint mod appears in-game.

Unknown macro: sv-translation. Click on this message for details.

Unknown macro: sv-translation. Click on this message for details.

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Piloting And Travel



- Piloting
 - Boosting
 - Travel Mode
 - Mixed Mode
 - Actions that are difficult when attempted while steering the ship
 - Autopilot
 - Flight Assist OFF mode
 - Docking
 - Going For A Spacewalk
- Travel Infrastructure
 - Highways
 - Superhighways, Orbital Accelerators, Jump Gates And Anomalies
- Navigational Hazards And Minefields

Piloting

Ships have 4 ways to travel around within a system or sector (also known as a Hex):

- **Standard (sometimes referred to as 'cruise')**, which has good agility for dog fighting and docking
- **Boosting**, which drains shields into engines to provide a rapid speed increase
- **Travel Mode**, which has modest acceleration and lowers agility but offers sustained very high speeds
- **Mixed Mode**, which is a manual way to use the booster to reach high Travel Mode speeds quickly

Spacesuits may be equipped with a modest form of a booster.

Boosting

Ships can boost giving them a temporary burst of speed enabling them to escape the enemy firing range or to manoeuvre into blind spots. While boosting, the shields of the ship are drained meaning that persistent use can leave the ship vulnerable to hull damage. It is not possible to use weapons while boosting but on the other hand, it is very difficult for other ships to knock down the shields a boosting ship enough to prevent it boosting.

Travel Mode

Travel Mode (or Travel Drive) is the most efficient way to move between distant objects within the a sector. The choice of engines determines the charge time and maximum speed of Travel Mode. **Travel Engines** have the highest Travel Mode top speed and acceleration but need to charge for 3 seconds before those strengths can be

utilised (Large and Extra Large engines have longer spool-up times). **Combat Engines** on the other hand have lower Travel Mode top speeds and acceleration but do not need to charge-up before starting. **All-Round Engines** offer a compromise between the two extremes and are cheaper but are often worse overall.

Whilst moving in Travel Mode, the ship will steer like a brick if used by medium or larger sized ships but it is possible to reach speeds of several thousand m/s. It comes with a vulnerability though as receiving weapon fire overloads the drive, allowing ships to be interdicted and/or prevented from activating Travel Mode for 5 seconds (see **Mixed Mode** for ways to counter those situations). As it is possible to still shoot while moving in Travel Mode it is possible for the player to engage targets using Travel Mode (or are boosting) to slow them down to allow other ships to catch up.

Mixed Mode

Although not a mode which can be activated it is possible to utilise **Boosting** to accelerate into **Travel Mode**. With **Travel Engines** active it is possible to Boost while Travel Mode charges up to reach high Travel Mode speed quickly. Whereas with a **Combat Engine** we can Boost before activating Travel Mode to reach high Travel Mode speed quickly. Ships that are out of shield are unable to perform Boost+Flee+Travel Mode jousting.

Actions that are difficult when attempted while steering the ship

The 'Pause' key can be configured in the Controls/General menu. It allows us to access in-game menus while the game is paused.

Autopilot

Flies the player ship to the guidance marker. Autopilot can be toggled under the Ship Interactions Menu or by hotkey (SHIFT+A). It is worth noting that when guidance is set to a ship or station that autopilot will not dock at the target and instead will disengage close by (usually a couple of km from the target).

Flight Assist OFF mode

Thanks to the "flight assist computer", the normal behaviour of all ships in X4: Foundations, behave very much like planes in an atmosphere. This flight assist is constantly correcting the ships path. For advanced gameplay and maneuvers however, you can turn flight assist OFF by pressing the mappable hotkey (CTRL+SPACE by default). The most notable effect of this, is that your ship will continue to fly in its current direction after turning around. You can basically fly backwards at very high speeds.

Flight assist mode is also turned off temporarily when coming out of travel drive.

Docking

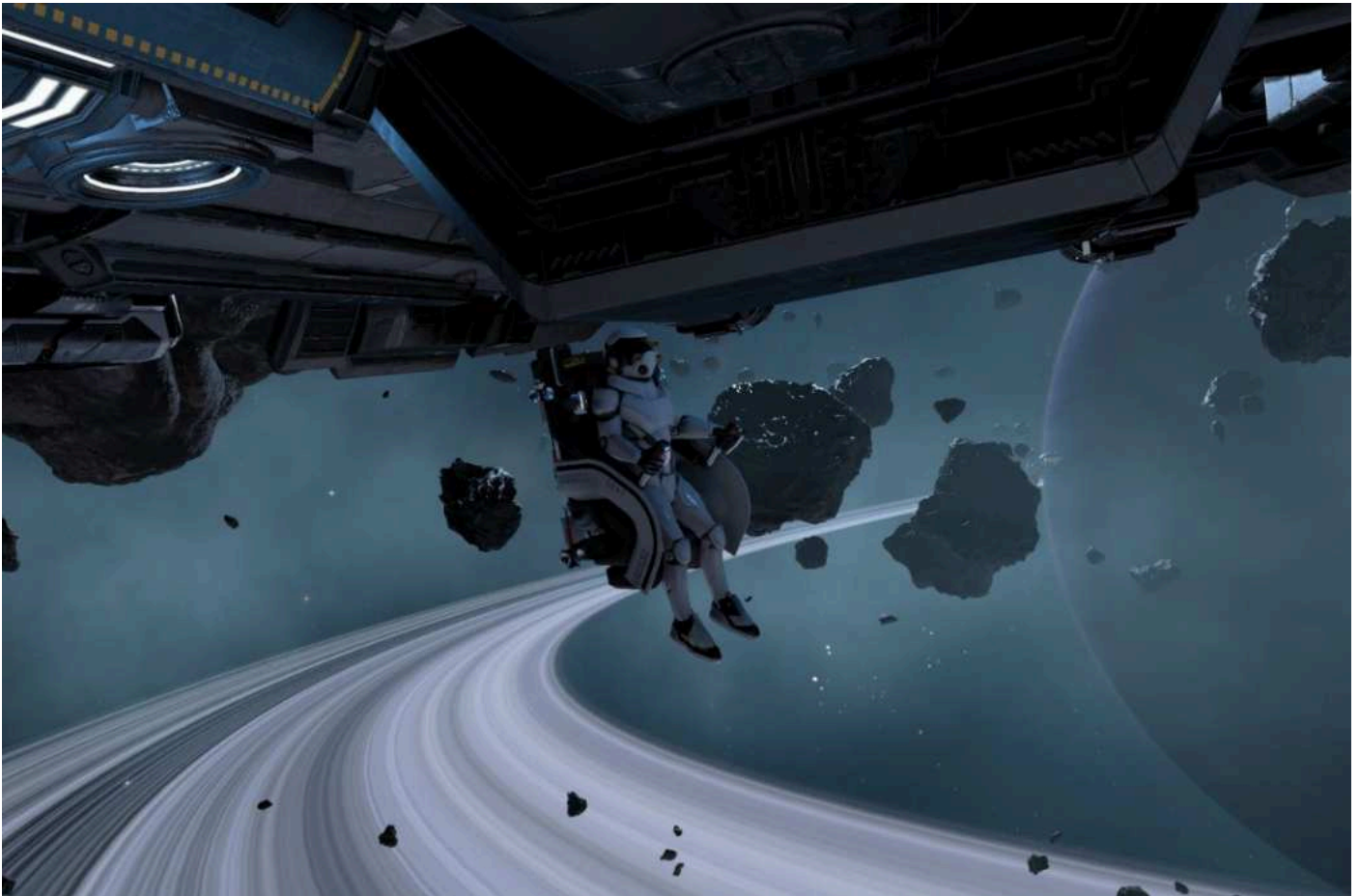
When the player ship is within 5km of a friendly dockable ship or station and Dock Permission is requested (SHIFT+D), a trail of green landing lights will appear guiding the player to a docking pad. As the playership approaches the allocated landing pad, the HUD will indicate which it is with a hologram of the playership above

it. Helpfully, the holographic ship will be facing in the direction that the playership should face as they land.

When closer-still, the HUD displays a 4-part alignment indicator to illustrate the location and orientation of the playership relative to the pad. The aim is to position the ship so that all four elements of the docking screen are green to land the ship. The HUD elements of this overall process for approaching and landing are illustrated on the [How to dock your ship](#) page. Once landed, the Ship Interactions Menu can be used to trade or Get Up (CTRL+D) and explore the station platforms.

Going For A Spacewalk

While flying through space it is possible to use the Get Up command of the Ship Interactions Menu (CTRL+D) to leave the pilot seat and explore the ship if the player is not already playing passenger. Interact with the **Use Transporter Room** panel at the back of the ship (insert picture) and select "**Use Space Suit**" to go for a space walk. Just remember to park a ship nearby to go back to. To re-enter your ship, request docking permission (SHIFT+D) in order to get open the airlock you'll need to manoeuvre into.



Travel Infrastructure

See also: [Travel Infrastructure](#)

There exists a variety of infrastructure to enable even faster travel in the x-universe from the rapid highways and superhighways to the instantaneous gates and accelerators.

Highways

Populated sectors have constructed highways (often referred to as local highways to distinguish from superhighways) to make travelling around the sector faster for small and medium sized ships. Highway lanes have gates at their start and end and only flow in one direction. When a ship flies into a highway lane at any point of the route it will be instantly rotated and accelerated to high speeds along the route of the highway. To exit a highway press the Brake-to-Stop hotkey (Backspace) or strafe up/down to leave the lane. Strafing into the sides of a highway lane will slow the ship down allowing for more controlled exits. The route a highway takes can be seen using the Map. The positions of highways do not vary with different game starts.



Highway Entrance

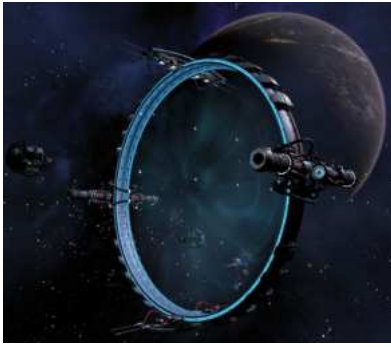


Highway Exit

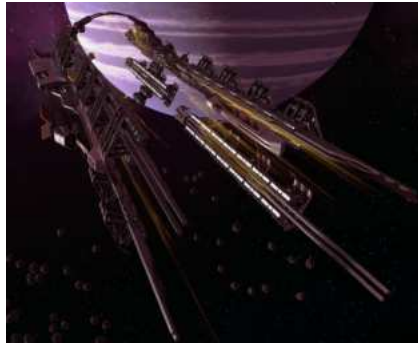
Superhighways, Orbital Accelerators, Jump Gates And Anomalies

The sector, or Hex, the player starts in may go on for vast distances in each direction but it is just one of many. To travel to other sectors and systems requires ship to fly through a **Superhighway, Trans-Orbital Accelerator, Jump Gate** or **Anomaly**. **Superhighways** are used to travel between nearby sectors within the same system and have unidirectional entrances and exits. The diameter of **Superhighway** gates means that care must be taken when flying larger ships through them. **Trans-Orbital Accelerators** and **Jump Gates** are wide bidirectional gates linking sectors together allowing for the rapid traversal of multiple ships at once.

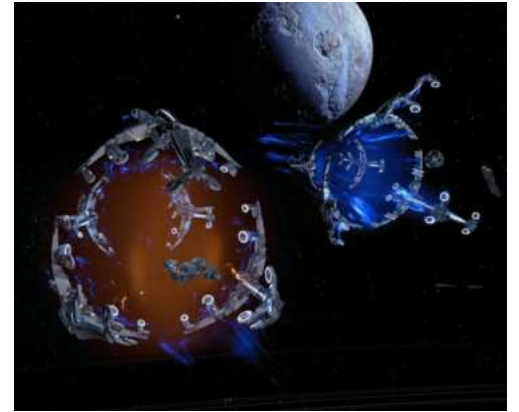
Anomalies are one way wormholes connecting distant systems and do not show up on the map. Anomalies have an anti-gravitational field around them preventing slow moving ships from entry, meaning they need to be approached at high speed using Boost or Travel Mode. Be warned that using anomalies may leave the ship deep in hostile territory and may require an alternative route to be found back to known space.



Jump Gate



Trans-Orbital Accelerator



Superhighway pair

Navigational Hazards And Minefields

Not all of space is empty and safe, some sectors are littered with natural hazards or the remnants of past conflicts. Vast electromagnetic storms will tear through unshielded ships while fields of radioactive asteroids will cause constant damage to both shields and hull. Dense asteroid and wreckage fields provide plenty of obstacles to collide into when traveling at high speeds while some sectors are littered with minefields where one wrong move could destroy a ship.

Purchasing And Upgrading Ships

i Updated for version 5.10

- [Ship-Related Stations](#)
 - [Ship construction locations:](#)
 - [Ship upgrade/repair locations:](#)
- [General Ship Capabilities By Size Class](#)
- [The "Buy Ships" / "Upgrade/Repair" Menu](#)
- [The Buy/Upgrade/Repair process](#)
- [Understanding Delays and Ware Shortages](#)
 - [Wares Shortages](#)
 - [Available Construction Slots](#)
- [Cancelling a Buy/Upgrade/Repair](#)
- [Loadout Options](#)
- [Missile Ammo](#)
- [Crafting](#)
- [Personnel](#)

Ship-Related Stations

[Ships](#) are manufactured to order and sold by Ship Traders, who can be found on Wharfs and Shipyards. The Ship Trader can be contacted by right-clicking on the Wharf/Shipyards in the Map (Buy Ship option), or in person at the Maintenance Bay on Fabrication modules (their offices also have Transporter Rooms for fast-travel). Equipment Docks are the other ship-related station.

wharfs, shipyards, equipment docks, as well as **resupply ships** can support ships in several ways:

Station/Resupply Ship	Sel l	Bu y	Repai r	Upgrade ¹⁻ 2	Restock <u>Consumables</u>	Supported Ship Classes
Wharf	✓	✓	✓	✓	✓	Small and Medium
Shipyards	✓	✓	✓	✓	✓	Large and Extra Large
Equipment Dock	✗	✓	✓	✓	✓	Any ³
Resupply Ship	✗	✗	✓	✓	✓	Any

1. *Software, crew and equipment*
2. *It is not possible to directly add a Captain to an existing ship via the Buy/Upgrade/Repair Menu when it is being piloted by the player*
3. *There is also a Pirate Equipment Dock that can only service Large and Extra Large ships*

To initiate non-buy tasks, select the relevant ship (left mouse click), open the context menu for an above station (right mouse click), and select "Upgrade / Repair at..." option.

Ship construction locations:

- Small and Medium Ships are constructed on their landing pads
- Large and Extra Large Ships are constructed in huge docking cradles on the sides of stations

Ship upgrade/repair locations:

- Small and Medium Ships are upgraded/repared on their landing pads
- Large and Extra Large Ships:
 - Captains ordered to upgrade/repair use the docking cradles
 - Player-controlled ships docked manually will be upgraded/repared at their Pier

General Ship Capabilities By Size Class

Ship role	Ship Type	Ship Size	Forward Weapons ¹⁻²	Gun Turrets ³	Missile Turrets	Landing Pad ⁴
All	Fighter/Scout/Interceptor/Trader/Miner	Small	✓	✗	✗	✗
All	Corvette/Bomber/Trader/Miner	Medium	✓	✓	✗	✗
Fight	Frigate	Medium	✓	✓	✗	✓
Fight	Destroyer	Large	✓	✓	✓	✓
Trade/Miner	Trader/Miner	Large	✗	✓	✓	✓
Fight	Carrier	XL	✗	✓	✓	✓

1. *Some Small Trade Ships (and Xenon Capitals) do not have Forward Weapons.*
2. *Small and Medium Mining Ships may mount Mining Lasers.*
3. *Medium and Large Mining Ships may mount Mining Turrets.*
4. *Capable of supporting a range of Drones, and 1 or more Ships of smaller sizes classes.*

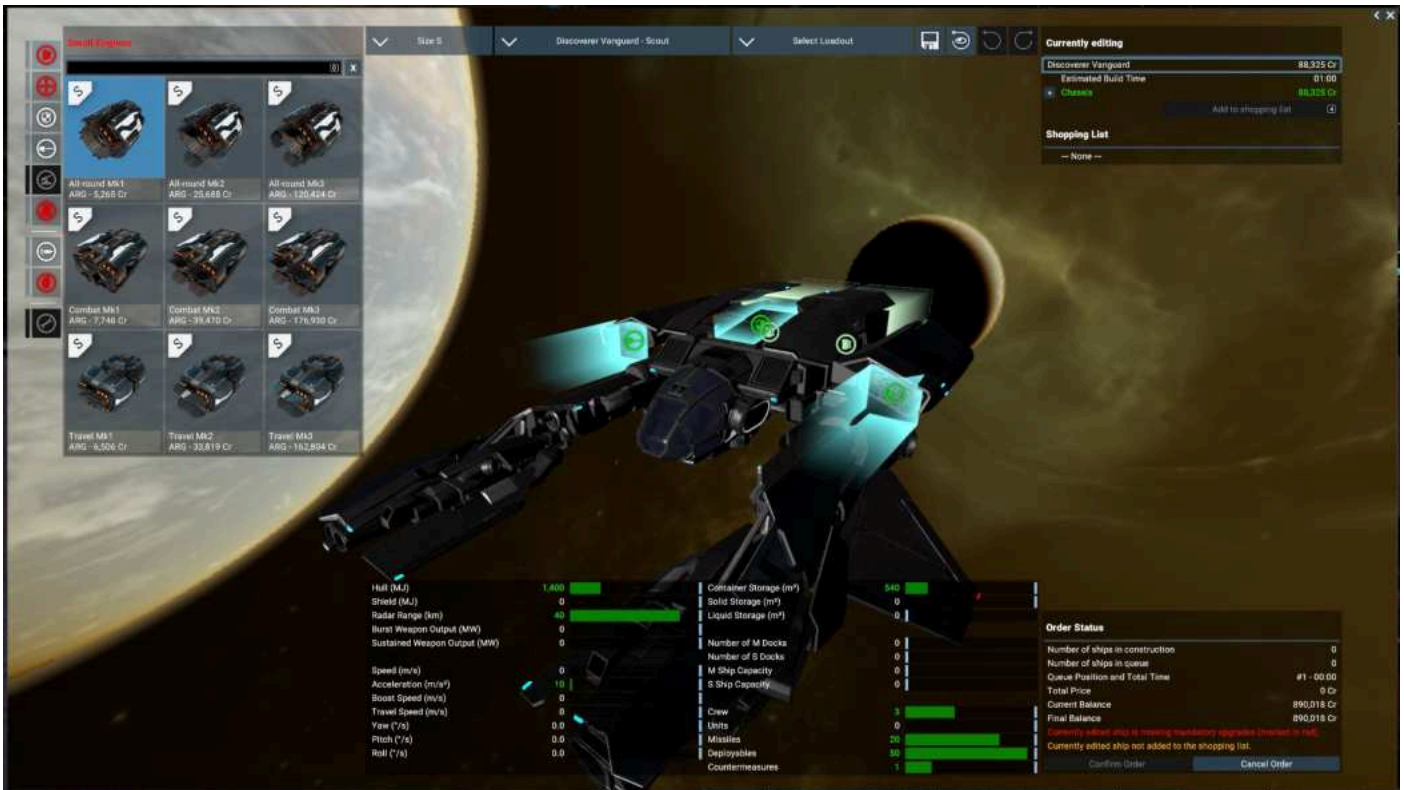
The "Buy Ships" / "Upgrade/Repair" Menu

A single, all-purpose menu is used for this, which is described below. After creating a Ship Design, it is possible to order single or multiple copies of the ship to be built. Ship Designs can be saved for future use. Certain advanced ships and equipment require appropriate Faction Licences to be purchased.

This menu is shown In the image below.

Within the Menu you can see:

- Model of the selected **Ship** (central area):
 - This can be **rotated** and **zoomed** in and out
 - Selectable Main Equipment / Surface Elements slots:
 - White filling = empty
 - Green filling = currently selected item in Tab menu on the left (see below)
 - Yellow border = fullTop-middle area options:
 - **Ship Class**
 - **Ship Type**
 - Semi-random **Default Loadouts**
 - **Save** option for player-defined Loadouts
 - A **Reset** button for cancelling any rotation applied to the Ship model
 - **Undo** and **Redo** buttons
- Tab-based menu down the left for purchase options:
 - **Main Equipment** (Small / Medium Ships) / **Surface Elements (Large/XL Ships)**:
 - **Engines** (few and large):
 - Performance in straight lines (all ships)
 - Some Small Ships (Nova, Falcon and Guillemot) can articulate them to aid maneuverability
 - **Shields**
 - **Forward-mounted weapons**
 - **Turrets**
 - **Thrusters** (many and small):
 - Maneuverability (yaw, pitch, roll and strafe performance)
 - **Software**
 - **Consumables** (missiles, drones, deployables and countermeasures)
 - **Crew** (Captain and Service Personnel, which improve ship efficiency)
 - **Repair** (if damaged)
 - If a tab has a **red icon**, it contains **compulsory items** (marked red within)
- A shopping list of selected purchase options in the top-right
- Ship stats, based on selected purchase options in the bottom middle
- Info on your existing wallet balance and on missing components in the bottom-right



The Buy/Upgrade/Repair process

Steps taken to buy, repair or upgrade ships:


- If **Buying** a new Ship, select a Ship Size first, and then a Ship to display it in the main screen
- If **upgrading multiple ships** be sure to select "Ship class x(no. to be upgraded)" from the dropdown menu
- Select desired Equipment, Software, Consumables, Crew and Repair options:
 - From **Tabs** down the left (all equipping options)
 - Via **Context Menus** on the Ship model (Main Equipment / Surface Elements, only)
- **Red Tabs** contain one or more **compulsory items** (marked red within)
- Available equipping options are **context-dependent**:
 - Missile Turrets and Mining weapons will only be listed for ships that can mount them
 - Missiles will only be listed for ships that have a Missile Launcher added to the design
 - Drones will only be listed for ships capable of supporting them
- Some listed ships and equipment require a **Faction Licence**:
 - If the Licence is not owned, the item is greyed out and marked with a star
 - **Advanced weapons** require a Military Equipment License (available at rank 10)
 - **Large / Extra Large Military ships** require a Capital Ship License (available at rank 20)
- Currently-selected items (All-Round Mk1 in image above) are **highlighted**:
 - In pale blue within related **Tab** (Engines in image above; also highlighted pale blue)
 - On the **Ship model** (Engines, shields and weapons, only; see above)
- Some Ships can fit **multiple** versions of things within tabs

Once happy with the ship design:

- Select "**Add to shopping list**" (top-right shopping list)
- To **order multiple ships** of this design, adjust the **-/+ icons** (top-right shopping list)

- To purchase, click "**Confirm Order**" (bottom-left area)
- The ship(s) will then be built over the next few minutes if the station has enough resources.

Understanding Delays and Ware Shortages

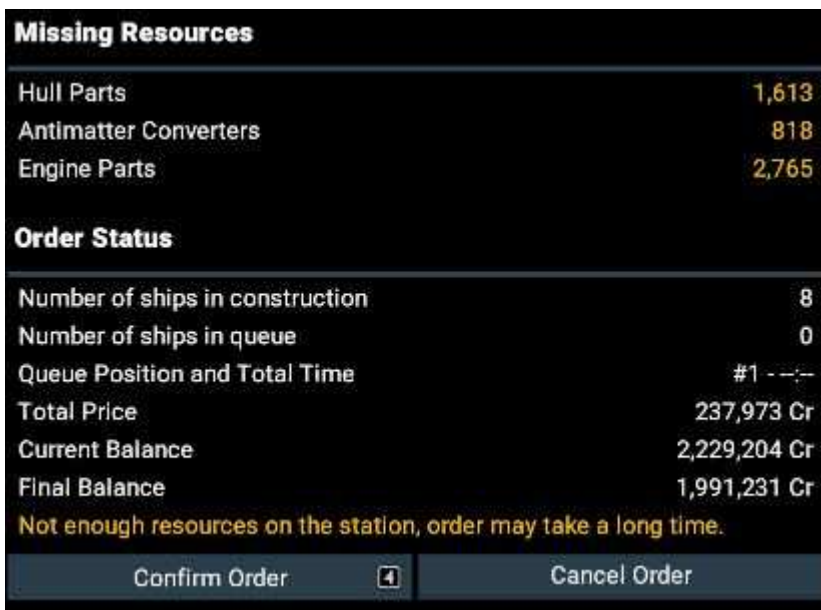
Wharfs, Shipyards and Equipment Docks are operated by the main Factions. They produce Ships and equipment out of Wares produced at manufacturing stations. The production processes take place **in the Slots where ships dock**, which means that the player can watch the claytronic -based construction process if they wish (the same visual process can be seen with station module construction).

Delays to ship building/modification can arise when:

- The station suffers relevant wares shortages
- All construction slots are busy, S/M fabrication facilities are limited to building/upgrading 8 vessels at a time, L/XL fabricators are limited to 1 at a time

Wares Shortages

If one of these stations is **already missing some Wares** needed to build/modify a Ship, those missing Wares will be listed on the lower-right side of the Menu. If your build/modify plan needs some Wares **that the station doesn't have enough of**, they will be **added** to the existing list, or the list **will be displayed before** you are able to select "Confirm Order". In the following image shortages for 3 Wares can be seen:



As also seen in the image above, the warning "**Not enough resources on the station, order may take a long time**" is displayed.

Available Construction Slots

Wharfs, Shipyards and Equipment Docks have **finite** Construction Slots:

- Small and Medium Ship Slots:
 - 8 on Wharfs
 - 8 on Equipment Docks
- Large Ship Slots:
 - 2 on most Shipyards

- None on the Alliance of Worlds Shipyard
 - 2 on most Equipment Docks
 - None on a Pirate Equipment Dock
- Extra Large Slots:
 - 1 on Shipyards
 - 2 on Equipment Docks

If all Construction Slots are **full**, new Ship build/modification orders will be added to a **Waiting List**. To determine if the Slots are full, expand the station's "**Ships in construction**" info within the Map. This is illustrated in the following image where only one Large ship listed (player-owned), which means the Shipyard could make/modify one additional Large Ship and an Extra Large Ship.



The next image illustrates how the above image would look with both **Ware Shortages** (two NPC Faction Destroyers block the Large Slots) and an active **Waiting List** (a player-ordered Magnetar is #1 in the list).



Cancelling a Buy/Upgrade/Repair

Ship purchases:

- If a Ship is already under construction **it is not possible** to stop the process
- If a construction of a Ship has not started yet (e.g. due to Ware shortages or being in a Waiting List), **it is possible** to stop the process and recoup the credits:

- Open the station's "Ships under construction" info (see images above), right-click on the listed Ship in question, and select the available option

Ship upgrades:

- If any ship has started being upgraded, **it is not possible** to stop the process
- If the playership is waiting for a delayed upgrade (due to Ware shortages / Waiting List), **it can be cancelled** by taking off (Shift+D)
- If a player-owned ship piloted by a Captain is waiting for a delayed upgrade, **it is not possible** to cancel the upgrade
 - Under these circumstances, **it is not possible** for the player to take control of the ship to cancel the upgrade

Loadout Options

- **Engines** (determines ship max linear speed and acceleration):
 - All-Round: Available for all ships with no weaknesses
 - Combat: Available for S and M ships, sacrificing Travel Mode speed for improved Standard and Boost speed
 - Travel: Available for S and M ships, sacrificing Boost speed for Travel Mode speed
- **Thrusters** (determines how fast a ship yaws/turns, pitches, rolls and strafes):
 - All-Round: Available for all ships with no weaknesses
 - Combat: Available for S and M ships, sacrificing yaw/turning for better pitching and rolling. [Yaw is side-to-side movement (rudder in an aircraft); pitch is up/down movement; roll is twist, all aligned to the ship's primary axis (usually longitudinally). These can be combined with strafe for highly effective combat maneuver]
- **Shield Generators** (determine the shield capacity and regeneration rate for protecting the hull damage):
 - Some Engines, Weapons and Turrets may be grouped with shields that protect them
- **Main Guns and Gun Turrets**
 - Beam: Low DPS damage but accurate beam
 - Bolt Repeater: Rapid fire weapon that does high burst damage but has poor heat management
 - Ion Blaster: Argon weapon for removing shields without causing a lot of hull damage
 - Plasma Cannon: Long range weapon with a slow projectile speed
 - Pulse Laser: All rounder with a good balance of damage, range, fire rate, accuracy and heat management
 - Shard Battery: Launches a short range burst of multiple high damage projectiles which moderately scatter at longer distances
- **Main Missile Launchers and Missile Turrets**
 - Dumbfire Launcher: Launches Dumbfire and Cluster consumables as missile projectiles
 - Torpedo Launcher: Launches Torpedo consumables as missile projectiles
 - Tracking Launcher: Launches EMP, Guided, Heatseeker, Smart and Swarm consumables as missile projectiles

- **Other weapons**

- Mining Drill: Weak beam that does bonus damage to Asteroids (main gun and turret)
- Main Battery: Long-ranged Destroyer weapons (only the racial variant can be used on the race's Destroyer)

- **Software**

- Docking Computer: makes landing easier ([see here for further info](#))
- Flight Assist Software: Mandatory upgrade (assists by automatically compensating for drift when using Flight Assist Mode)
- Long-range Scanner Software: Mandatory upgrade (see below)
- Object Scanner: Mandatory upgrade with Scan Mode (Basic Scanner gains info about ships and modules, and obtain discounts and commissions from data leaks; Police Scanner gains further info about objects, and can obtain Blueprints from some data leaks)
- Targeting Computer Extension: Allows the targeting of small objects (e.g. debris and containers) via the HUD and radar
- Trading Computer Extension: Maintains a link to trade info offered by recently-visited stations for a limited period

Missile Ammo

Ships can carry a finite number of consumable missiles for their missile launchers and missile turrets. The max number of which is listed in the Ship Builder UI and in the Ship Info menu. Missiles can be replenished at Equipment Docks and, depending on ship size, Wharfs and Shipyards. Once missile stores are depleted, the "Out of ammo" warning greets us. Detailed Info for missiles themselves has begun to be added to the [Missiles](#) ? page of the main X4: Foundations Wiki.

Crafting

(*main article [Crafted Items](#)*)

Some wares collected do not go into the storage of the flown ship but into a separate inventory for the avatar of the player. These wares are used for completing missions, special actions and crafting an assortment of tools to give the player an additional edge. The player inventory can be found under the Inventory tab of the Player Information menu.

Near **Traders** and **Black Marketeers** there is usually a **Crafting Bench** which can be interacted with open a **Crafting Menu**. Items to craft only appear once the player has collected one of the components for the recipe. Select a ware to craft and then click the Craft item button before selecting the number to craft with the slider which appears and then confirming by clicking the Craft Item button again. Some crafting components can only be obtained by performing specific tasks like mining or combat.

It is also possible to further **customise favourite ships** by applying **Ship Mods** to them. Ship Mods come in 3 tiers: **Basic**, with a modest bonus, **Enhanced** with a larger bonus at the expense of a penalty to a related parameter, and **Exceptional** with a much larger bonus but penalties to to related parameters. When created, the size if each bonus or penalty is random, within defined ranges.

To apply a Ship Mod requires the ship to be docked at a station. **Ship Mods** may be dropped by destroyed ships and when they do, they can be installed through the **Redesign menu** in **panels in front of landing pads**. Alternatively, they can be crafted and installed using a **Workbench** found near most **Ship Dealers**, using designs which need to be unlocked through Research (Player Headquarter needed). Installed Ship Mods can be salvaged to regain their ingredients.

Personnel

Every ship has a limited capacity to host Crew. Crew consist of 3 types of NPC:

- Captain (or Pilot for smaller ships): Enables a ship to be remotely given orders. Skill points contribute most to ship efficiency.
- Crewman: Skill points contribute slightly to ship efficiency.
- Marines: Can be used to claim abandoned ships remotely, board other ships and stations or to repel enemy boarding attempts. **Marines are not required for ships not used directly for boarding**, having marines in ships that aren't used for boarding is not recommended.

On stations there are also :

- Managers: Give orders to subordinate ships

A skilled captain will unlock more maneuvers, fight and trade better and will unlock new options for the **DEFAULT BEHAVIOUR** of the ship.

Ship crew management is an essential part of improving your fleet's abilities. The skill of Service Crew will also improve the rate of ship actions and the quality of steering, repairing, aiming, trading and fighting, although their skills will not count as much as those of the captain/pilot. The sum quality of a ship's crew is increased with the number of people and with the **SKILL** of each individual.

Passengers from missions also count as temporary crew, & need (crew) space in the transport ship to fulfil the mission acceptance requirements: if you've filled your ship with crew they'll refuse to board, claiming 'no space for me' or similar. Fire/reassign a crewmember to another ship, or change ships to one with a free crew slot to allow the passenger their comforts

Resupply Ships

i Updated for version 5.10, **TODO:** Add more information on other resupply behaviours

- Simplest Case
 - Setting up your ship:
 - Getting resources:
 - Activating automatic resupply and repair:
- Resupply Ships and Their Capabilities
- Activating Fleet Auxiliary Ships
- Supplying Resupply Ships
 - Determining what resupply ships need:
 - Supplying resupply ships:
- Resupplying at Resupply Ships

Simplest Case

In the simplest case, all you have to do to use a resupply ship is: set up your resupply ship, make sure your ship has resources, and activate automatic resupply

Setting up your ship:

- If your resupply ship is a carrier, attach it to a fleet.
- If your resupply ship is a fleet auxiliary ship, order it to **Supply Fleet** at a location in space via a Behaviour, or while assigning it to a fleet. (detailed [here](#))
- If you want to resupply missiles on your ships you will need to get the relevant [Blueprints](#).

Getting resources:

Right-click your resupply ship and tell it to **Get Supplies**. Note that fleet auxiliary ships will also passively purchase resources from free traders.

Activating automatic resupply and repair:

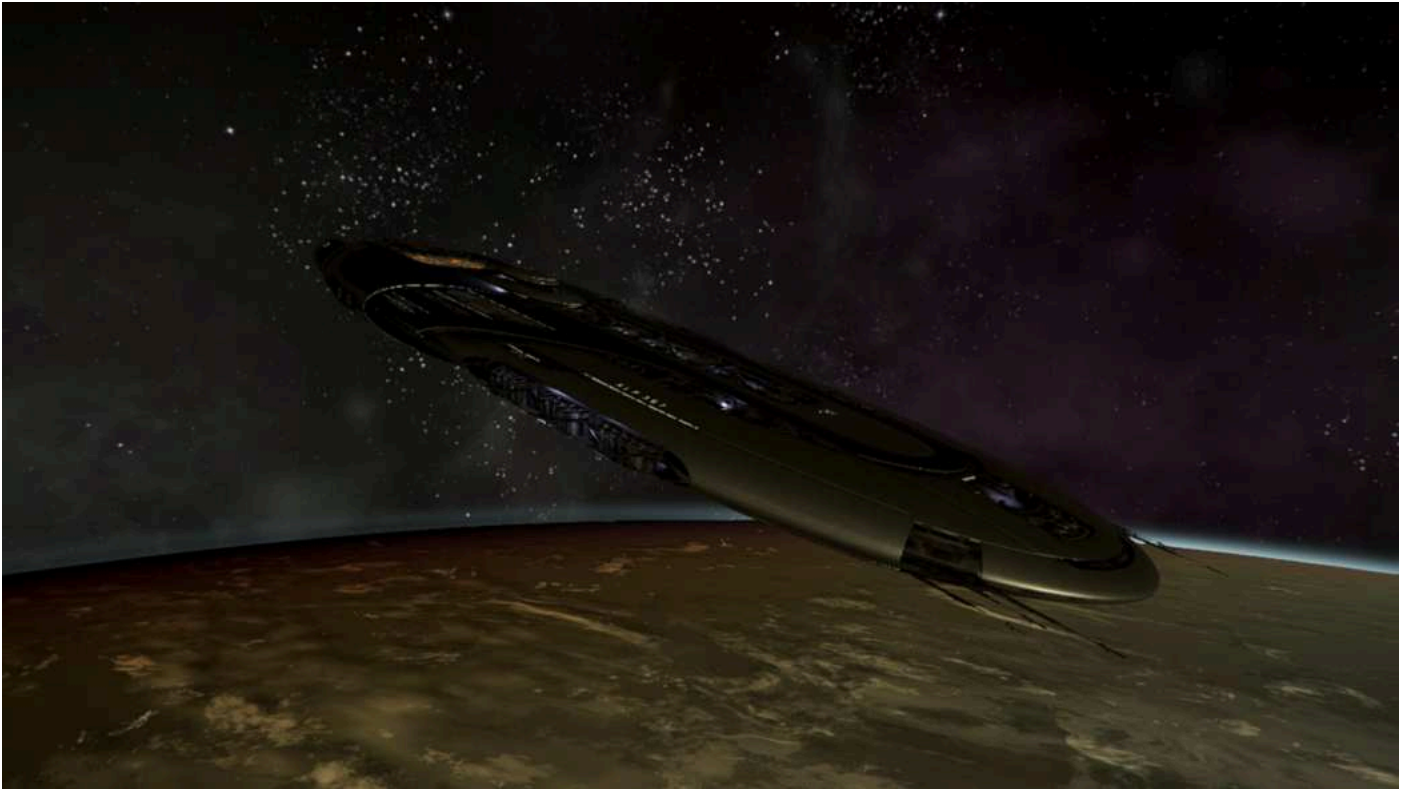
Navigate to the Global Orders section of the Empire menu (under Player Information) and set Automatic Resupply to High, Medium or Low (anything other than Off).

The fleet attached to auxiliary ship ONLY will go to auto repairs if they don't have any order in their queue.

Resupply Ships and Their Capabilities

Two types of ship can be used to provide supplies to other ships:

Auxiliaries



Carriers



Carriers are able to repair and rearm ships that can dock at them (exclusively S and M ships).

Fleet Auxiliary Ships are able to repair and rearm ships of all size-classes including Carriers and other Fleet Auxiliary Ships. Ships of this type also advertise trade offers to acquire resources that they need as long as they are actively providing supplies.

To be clear, the term Resupply Ship refers to both carriers and fleet auxiliary ships.

Activating Fleet Auxiliary Ships

While carriers will always repair and rearm fighters subordinate to them as needed, fleet auxiliary ships must be activated to make them available to ships that require repair and resupply. This also instructs fleet auxiliary ships to acquire resources that they need to rearm ships.

To activate fleet auxiliary ships, either:

1. Assign the ship to be subordinate to another ship with Assignment: **Supply this fleet**.

Orders for ✕

2 selected ships

Redesign
Disarm turrets
Flee
Remove all orders
Remove all orders and assignments
Dock at my current location

Orders for **Auxiliary**

Proceed with current orders (1 selected s...
Dock and Wait **Condor**
Follow until further notice **Condor**
Transfer crew with **Condor**
Resupply / Repair at **Condor**

Trade Orders for **Auxiliary**

Transfer wares with **Condor**

Assign Role for **Auxiliary**

Defend commander ▶
Attack with commander ▶
Intercept for commander ▶
Follow commander ▶
Supply commander's fleet ▶
Mimic commander's behaviour ▶

Auxiliary (KLP-367)
Model: Atlas E
Fleet 2
Wait for Signal

Ship Information

Captain:	Sayreen Rider
Passengers:	258 / 258
Crew:	216
Marines:	42
Docked ships:	10 / 42
Storage:	0 / 34040

Alpha	2 ships
Beta	46 ships
Gamma	Empty
Delta	Empty
Epsilon	Empty
Zeta	Empty
Eta	Empty
Theta	Empty
Iota	Empty
Kappa	Empty

2. Or give it the behaviour to **Supply Fleet**, and specify a location.



Click on the field labeled **Destination:** and click on the desired location on the map.



Don't forget to click Confirm to lock in the new behaviour.

This will cause your fleet auxiliary ship to start acquiring resources and will make it available to other ships that you own for resupply.

Note that this step is neither necessary nor available for Carriers.

Supplying Resupply Ships

While repairs do not require resources; ammunition, units and deployables are built to order so, in order to fulfill orders for these items, resupply ships need certain resources.

Determining what resupply ships need:

To find out what a resupply ship needs, right-click on the ship and click on **Information**. The wares that it needs and the corresponding target amounts can be found in the Storage section of the Info menu for that ship.



Supplying resupply ships:

1. You can manually order the resupply ship to purchase resources that it requires.





Note that the amount of scanning arrays needed is indicated in the trade menu in parentheses. This method is available to both Carriers and Fleet Auxiliary Ships.

2. You can manually order one or more of your own freighters to deliver resources that it requires.



Magpie Sentinel (FPU-121)		Nomad Vanguard (YKB-501)	
Ware	Ship	Ship (Wanted)	
Scanning Arrays	83		0 (13)
Flares	0		40
Cargo Drone	0		26
Defence Drone	0		6
Repair Drone	0		68
Laser Tower Mk1	2		300
Ship storage details		Ship storage details	
Container	3,154 / 3,156 m ³	Container	0 / 29,000 m ³
Missiles	0 / 10	Missiles	0 / 40
Countermeasures	0 / 4	Countermeasures	40 / 40
Drones	0 / 0	Drones	100 / 100
Deployables	14 / 50	Deployables	450 / 450

The number of scanning arrays that the Nomad needs is also indicated here in parentheses. This method is available to both Carriers and Fleet Auxiliary Ships.

3. You can also tell your resupply ship to **Get Supplies**.



This will order the ship to look for trades on its own and buy all of the resources that it needs. As long as you know of trades within a few sectors of the ship that are selling the resources that it needs, this will result in a series of trade orders to purchase these resources. You can verify that the ship is going off to trade by looking at that ship's **Order Queue**.



Note the maximum gate distance over which the ship will look for trades at the bottom of this image. This gate distance depends on the Piloting skill of the ship's captain.

While this is the fastest method by which resupply ships automatically get resources, this is also usually the most expensive.

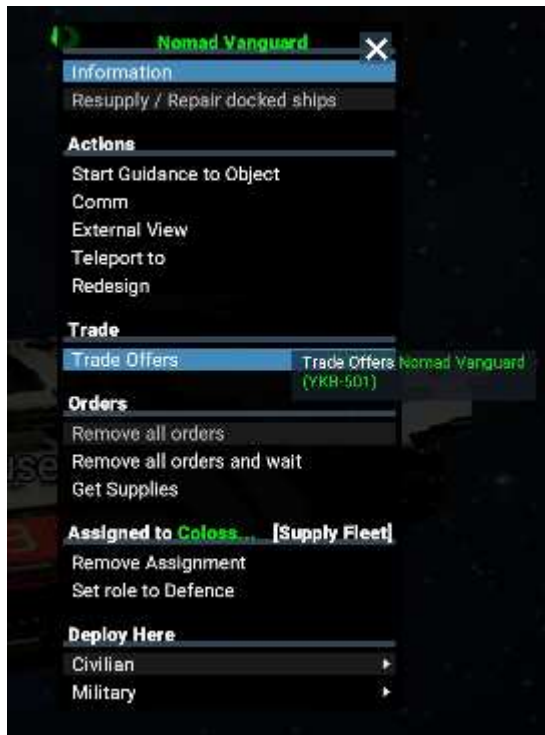
This method is available to both Carriers and Fleet Auxiliary Ships.

4. You can allow the resupply ship to acquire resources on its own.

- Fleet auxiliary ships advertise trade offers for the resources that they need. Free traders will occasionally entertain these offers and spontaneously fly to these ships to deliver resources. Do note, however, that resupply ships deactivate these trade offers when they engage in certain activities such as going into combat.

To activate this, all that needs to be done is to order your fleet auxiliary ship to **Supply Fleet** as detailed in the section above labeled [Activating Fleet Auxiliary Ships](#).

To verify that these trade offers are active, right-click on the ship's icon on the map and select **Trade**

Offers.

Ware	Price	Ship (Wanted)	Sell offer	Buy offer
Advanced Composites	- Cr	0 (124)		124
Drone Components	- Cr	0 (39)		39
Energy Cells	- Cr	0 (4,951)		4,951
Hull Parts	- Cr	0 (2)		2
Smart Chips	- Cr	0 (2,819)		2,819
Weapon Components	- Cr	0 (4)		4

Ship storage details		Transaction Details	
Container	0 / 29,000 m ³	Profits from sales:	0 Cr
		Transaction Value:	0 Cr

Warnings

Ship does not have the desired item

Confirm Cancel

This brings up a menu that details all of the wares that your resupply ship is trying to purchase, and in which amounts.

This is the most hands-off method, but also tends to be the slowest.

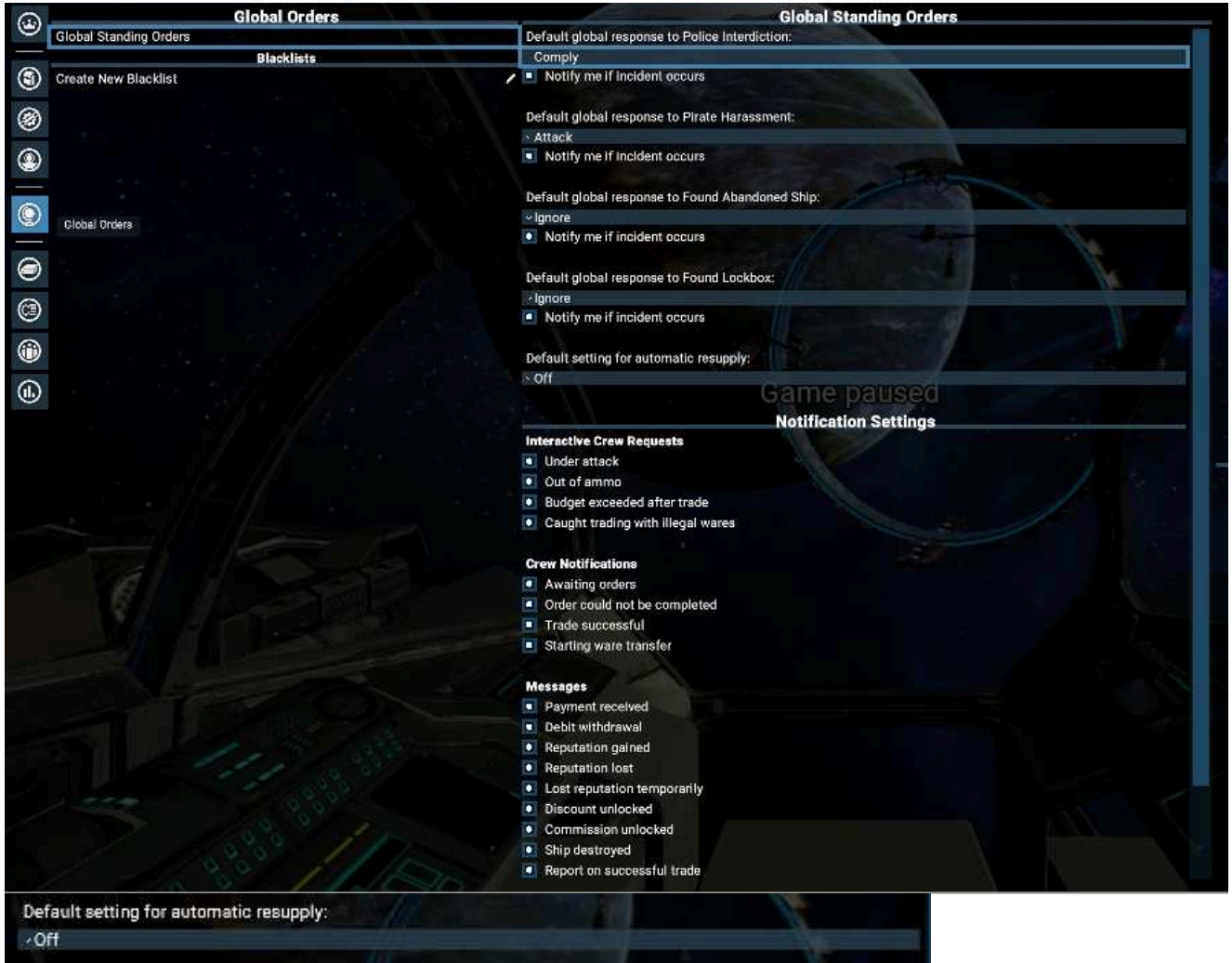
Note that this method is only available to Fleet Auxiliary Ships.

Resupplying at Resupply Ships

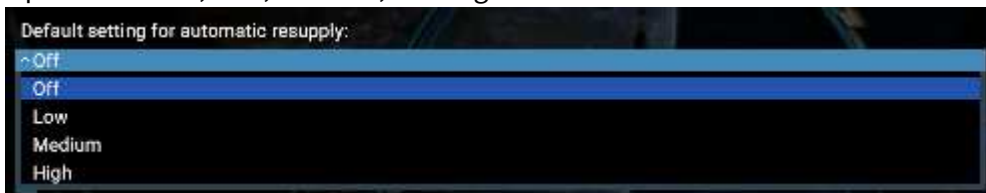
There are three ways to get ships to rearm and get repairs at resupply ships: automatic resupply, by ordering a resupply ship to resupply all docked ships, and by ordering a ship (or group of ships) to resupply at a resupply ship.

1. **Automatic:** by default, all ships periodically check to see if they need supplies or repairs. If they find a resupply ship that is owned by their own faction, they go there to rearm and get repairs. Preference is given to resupply ships attached to their fleet, with further preference to resupply ships that they are already docked at when they do this check.

When rearming in this manner, the equipment that they get is determined by the loadout level set for automatic resupply. A global policy is set in the Global Orders section of the Empire menu:



Options are: Off, Low, Medium, and High.



In general, Low, Medium, and High sets the number and quality of ammunition and deployables that your ships get when they automatically rearm. Off instructs them to never automatically rearm. Default is Off.

It is possible to override this global policy for each individual object. This is done in the ship's Individual Instructions Menu:

Individual Instructions

Fleet Resupply Ship **UBA-049**

Reaction to Events

Default response to Attack:

- Use global setting
- Use judgement
- Notify me if incident occurs

Default response to Police Interdiction:

- Use global setting
- Comply
- Notify me if incident occurs

Default response to Pirate Harassment:

- Use global setting
- Attack
- Notify me if incident occurs

Default response to Found Abandoned Ship:

- Use global setting
- Ignore
- Notify me if incident occurs

Default response to Found Lockbox:

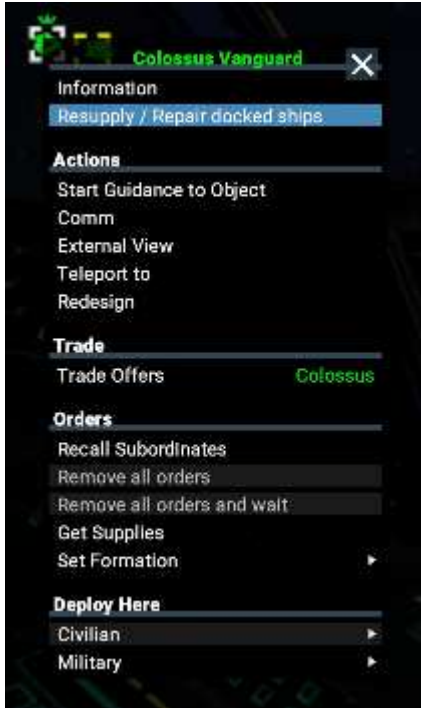
- Use global setting
- Ignore
- Notify me if incident occurs

Default response to Found Contraband:

- Use global setting
- Destroy dropped crates
- Notify me if incident occurs

The per-object setting defaults to use their commander's setting. In this way, you could change the loadout level of an entire fleet by setting a level of their commanding ship.

2. **Resupply docked ships:** Order a resupply ship to resupply all docked ships: if you have a resupply ship that has ships docked at it selected, then right-click on it, you have the option to **Resupply / Repair all docked ships**.



Clicking on this option pulls up the Ship Configuration menu in a mode that allows you to select any of the ships docked at your resupply ship. You could order any combination of ammunition and deployables as well as order repairs for them in this way. Blueprints are required for any kind of refitting, ship upgrades, and restocking/changing ammunition types i.e. (Torpedoes, and missiles).





The menu as well as this procedure is described in more detail in [this section of the manual](#) ? .

3. **Order ships to resupply at a resupply ship:** With one or more ships selected, right-click on a resupply ship that you own.



This will give you the option to **Resupply / Repair at** the resupply ship.

Selecting this option will pull up the Ship Configuration menu where you can configure your selected ships.

After you have reconfigured the first ship that is shown, use the "Add to shopping list" button and then used the drop-down menus in the top-middle of the screen to select other ships you'd selected.

Resupply Ships



The above menu, as well as the procedure for using it, is described in more detail in [this section of the manual](#) ? .

Note that capital ships cannot resupply at a Carrier.



They would need either a Fleet Auxiliary Ship, a Shipyard, or an Equipment Dock.

Ships And The Player Ship

i Updated for version 5.10 **TODO:** Update HUD graphic

- [Ships](#)
- [Ship IDs](#)
- [The Player Ship HUD](#)
 - [Ship status](#)
 - [Warning and SETA icons](#)
 - [Situational awareness](#)
 - [Weapon controls](#)
 - [Weapon groups](#)
- [Long Range Scanning](#)
- [Ship Modes](#)
- [Types Of Ship](#)
- [Ship Repairs](#)

Ships

With a ship in hand the player is free to explore the universe and make a name for themselves. Ships can accelerate, brake turn, tilt and strafe with the speeds based on the type of ship and equipment used. When viewed from the cockpit the ship vitals, weapon systems and targeting markers can be seen.

Ship IDs

Ships have unique IDs displayed on their hulls and within menus consisting of 3 letters followed by 3 numbers. The generation of IDs is completely random.

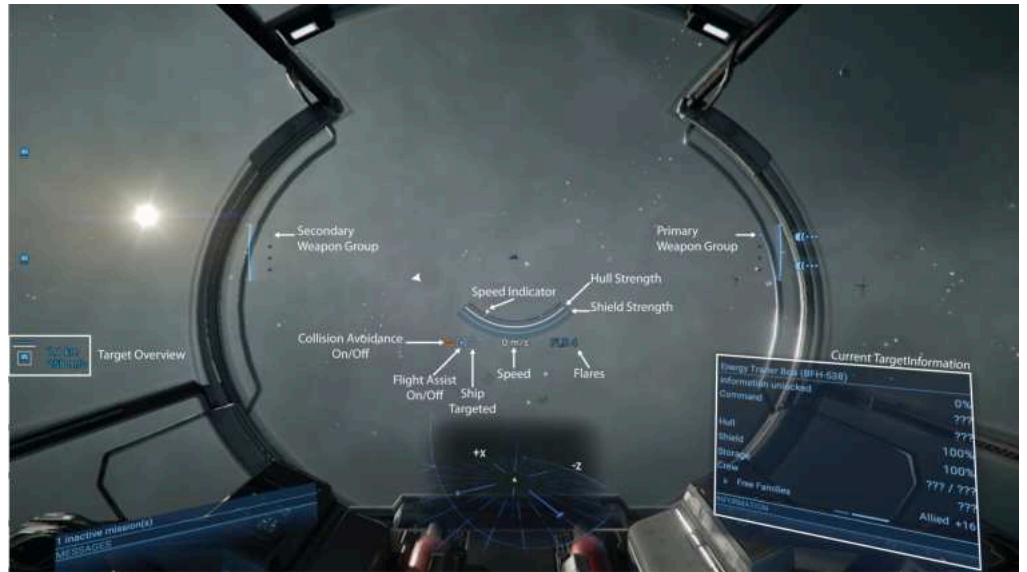
The Player Ship HUD

Example HUD view:

Not Annotated



Annotated



Ship status

Below the central reticle, three curved bars are located:

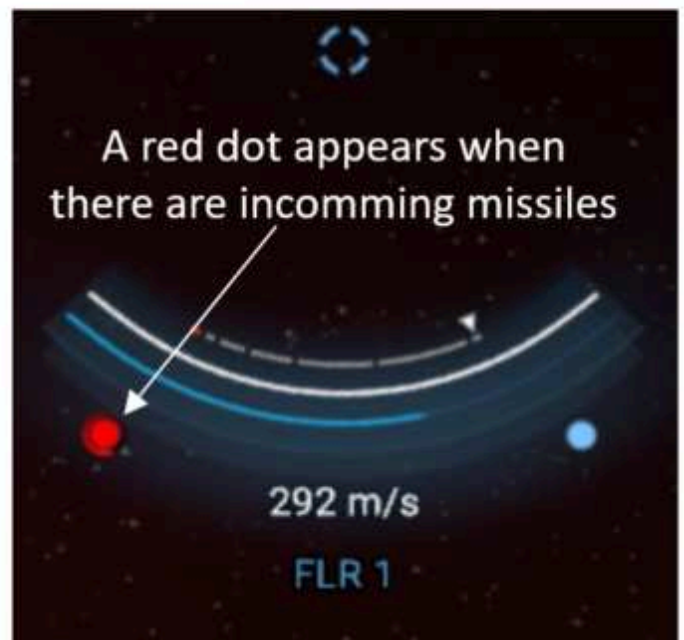
- Top = speed
- Middle = hull strength
- Bottom = shield strength

Warning and SETA icons

SETA is the Singularity Engine Time Accelerator.

In the centre of the HUD icons may appear for the following (see diagram below):

- SETA ownership
- SETA activity
- Target lock
- Incoming missile(s)



Situational awareness

Three monitors provide info along the bottom of the screen:

- Left = Message ticker (e.g. mission progress, guidance info, recent credit and standings changes)
- Middle = Radar (shows local features and allows their selection to make them the player ship target)
- Right = Target monitor (display for target info and video comms with NPCs)

Weapon controls

- The position in space that main weapons currently aim at is denoted by one white dot each (see two dots in image below, up-left from central reticle)
- Turrets controls for Medium ships have quick-access icons in the top-middle (Turret controls for all ships are described on the [Combat And Weapons page](#))

Weapon groups

To the right and left of the central reticle are the primary and secondary weapon groups, respectively (setup via the Ship Interactions menu accessed via the chevron icon in the top-centre of the screen or the enter key).

Long Range Scanning

- **A player ship "Ship Mode"** (see below for how to operate it)
 - Detected objects are marked on the map with "?" icons
 - Nebulae are highlighted with a blue/cyan glow
- **Versions:**
 - Mk1 pings found objects and creates a ? at their location on the map
 - Mk2 has increased scan resolution, colour-coding identified small objects:
 - Blue ring = wrecks and uncommon lockboxes
 - Yellow ring = explosive asteroids and rare lock boxes
 - Purple ring = anomalies and data vaults
 - Grey/white ring = Other
- **Target size-based performance:**
 - Large objects (stations and gates) are detected if they are:
 - Within 200 km
 - On the same horizontal plane as the player ship cockpit (360°)
 - Within 45° above and below the horizon
 - Small object (e.g. lockboxes and anomalies) are detected if they are:
 - Within 50 km
 - On the same horizontal plane as the player ship cockpit (within 60° left or right)
 - Within 45° above and below the horizon

Ship Modes

The player ship can activate four different modes to aid in exploration and espionage. Modes can be activated/stopped directly via the hotkey or the Ship Interactions Menu. Other player owned ships and NPC ships will automatically activate Travel Mode when travelling long distances.

- **Travel (Shift+1)**
 -

After a short delay the ship will accelerate to a higher speed enabling long distances of space to be rapidly traversed. While in Travel Mode steering is impaired. Loss of shielding will disable travel mode preventing it from being used to escape combat. Using Boost directly after coming out of Travel Mode can be used for a short burst of extremely high speed.
- **Scan (Shift+2)**
 - Colour-codes the modules and equipment of stations and ships (& asteroids & their modules) when close enough.
 - Getting really close to a station module allows for the passive obtaining information about it.
 - Similarly, getting within 1km of a ship, right-clicking, and initiating an active scan (or using the shortcut SHIFT+F) will reveal info about the ship too and uncover any pirates.

- The amount of information gained being proportional to the type of scanner equipped (basic scanner < police scanner < spacesuit scanner < upgraded spacesuit scanner).
- Audio Signals and Data Leaks are highlighted with red and able to be scanned passively.
- **Long Range Scan (Shift+3)**
 - Enables the ship to charge a pulse to scan for objects in space near the player ship.
 - The longer the pulse is charged for the further it travels, however charging for too long will cause the pulse to abort.
 - When objects are detected by the pulse, they emit a "ping" sound like submarine sonar and a circular ring temporarily shows their location on the HUD.
- **SETA (Shift+4)**
 - Singularity Engine Time Accelerator - Accelerates the passage of time for everything relative to the player ship by 6-times.
 - Makes long journeys seem shorter, but applies to the whole X-universe, including NPCs. Think of it a 'sleep time': the game (ie NPC trading/battle/war etc) advances at its normal rate while you're asleep, whether you're aware of external changes or not.

Types Of Ship

There are currently over 60 different ships in X4: Foundations (195 ships total with both DLCs) and with the exception of drones and Xenon and Kha'ak ships all can be flown by the player. Ships are classed into four size categories determining where and how many can dock at a docking module or ship hangar. Ships are also classified into specific roles determining the weapon and software options available.

- **Sizes**
 - S
 - Small ships are cheap and fast but fragile with only S weapon options making them useful for dangerous tasks like exploring unknown territory or for swarming larger ships (includes, scouts, fighters, traders and miners).
 - M
 - Medium ships are the most common ship type covering a diverse range of economic (mining and trading) and military roles (Corvettes and Frigates).
 - L
 - Large ships are expensive and have limited docking options, but are considerably more effective than their smaller counterparts at mining, trading and combat (Destroyers).
 - XL
 - Extra Large ships have limited combat options but cover specialised roles (station construction, Carriers and Fleet Auxiliaries).
- **Roles**
 - Combat
 - Ships built to engage other ships and stations in combat to either destroy or capture them. Fight ships range from small agile scout craft to large and heavily armed destroyers. In general, as fight ships progress in size (scout->interceptor->fighter->heavy fighter->corvette->frigate->destroyer->carrier->battleship), there is an increase in shielding, fire power and cargo bay size but at the cost of being slower and more expensive to manufacture. frigates, destroyers and carriers, especially, specialise in transporting wings of smaller ships at high speeds to where they are needed.

- Trading
 - ■ Ships with large cargo bays for shifting wares around the universe for profit, manufacture, construction work and to keep front lines supplied. Traders come in many sizes balancing speed with cargo space and armaments. Small Courier ships are fast, medium sized Transporter ships offer a good mix of mobility and cargo space while large Freighter ships are good for carrying wares in bulk.
- Mining
 - ■ Miner ships are capable of efficiently harvesting Solid and Liquid resources from asteroids and nebulae
- Salvage
 - ■ Salvage ships either recycle large wrecks into smaller ones or transport small wrecks to scrap processing factories
- Construction
 - ■ Large and lightly armed builder ships able to construct stations
- Other
 - ■ Other ships include the player space suit, autonomous drone craft used by larger ships and stations and NPC mass traffic police vehicle ships that scan for illegal cargo which are lightly armed.

Ship Repairs

Ship hulls, and surface elements on large and extra large Ships, can become damaged and need repairs.

Methods of repair:

1. Manually, slowly with the [Spacesuit Repair Laser](#)
2. Quickly at a [Wharf, Shipyard or Equipment Dock](#) in exchange for credits
3. Quickly at a resupply ship with resources consumed
4. Automatically (Medium, Large and Extra Large only):
 - The Captain's skills influence the max % that can be repaired too
 - Higher numbers of Service Personnel increase repair rate
 - Service Personnel with higher skills increase repair percentage
 - Repair Drones noticeably speed up repair rate

Station Building And Management

i Updated for version 5.10

- Station Building
 - Very Basic Overview of Building in Friendly Space
 - Claiming a Plot
 - Construction Planning
 - Station Module Blueprints
 - Construction Guide
 - Supplying The Build Storage With Construction Wares
 - Automatic Ware Supply
 - Ware Transfer Supplying
 - Manual Ware Delivery
- Station Management
 - Hiring a Manager
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 - Top half: The logical station overview:
 - Lower half: The graphs:
 - Interacting With the Logical Station Overview (LSO)
 - Automatic storage allocation:
 - Setting storage allocation manually:
 - Restricting trade with other factions:
 - Automatic amount / Automatic pricing for sell and buy offers:
 - Production Module Boxes
 - Station Account and Drones
 - Cargo Drones:
 - Defence Drones:
 - Repair Drones:
 - Trade Wares / Trading stations
 - Trade Rules
 - Workforce
 - Station Trade Offers

Station Building

Stations that can be visited are not limited to just NPC ownership; the player can also construct their own stations from small factories to supply a a local niche to self-sufficient mega complexes and fortresses to control regions of space. Station costs can be estimated from blueprints. A simple station with just a basic dock and small platform will cost 2-3 million.

Very Basic Overview of Building in Friendly Space

The following list isn't a recommended approach. It is just a basic overview of the minimum steps needed to build a simple station that the rest of the page elaborates on in more detail.

1. Open Map and select the Manage Plots tab
2. Decide how big you want your Plot (top-left area)
3. Click on "Create new plot"
4. If the fee is too high, return to Manage Plot tab and click on 'red x' to delete the Plot (top-left area)
5. Select a position on the map (z/x axis is easy from a top down perspective; y axis is possible but wonky by rotating to side view)
6. Left click and decide whether to buy a license
7. When ready, click on "Continue"
8. Place a Dock, then anything else in sequence
9. When ready, click on "Confirm module placement"
10. On Map, 'right mouse button' on the Plot and select "Manage funds"
11. Provide funds to cover wares you won't be delivering yourself
12. On Map, select Plot, 'right mouse button' on NPC Builder Ship, hire, and wait



Claiming a Plot

Open the Manage Plots tab of the Map and select a New Plot from the list at the top. In the middle are sliders for adjusting the size of the plot relative to the centre with the sum of the directions along an axis being able to range from 1-20. Click the Create New Plot button to be able to place the plot of the selected size on the map

along the ecliptic by left clicking. The player then has the choice to pay the Real Estate Transfer Tax for the plot or to ignore it. The tax costs between 1,000 and 7,000 credits per km³ depending on location and notoriety with the faction who owns the sector. If the player ignores the tax the owning faction of the sector will attack any station modules built in that plot. Plots placed in Xenon or unowned sectors will not need to pay anything. The player can then click Continue to enter the Plan Build UI for station construction.

Construction Planning

The construction of a station requires some planning. It is only possible to plan stations using **Blueprints that the player has already obtained** (see below). Note that modules will be constructed in the order of their placement meaning priority modules should be placed first. The actual construction (i.e. hire a builder ship) should commence after all modules have been placed and equipped with turrets and shield because any change on a module already built will recycle that module at the cost of part of the resources required. One of the upper right buttons of the construction screen provides the option to save the current construction and the player is encouraged to use that option frequently during the construction.

Station Module Blueprints

When starting the game the player has access to several basic Blueprints (BPs), which allows for . In order to construct more complex stations, and station defences (see "**Station Defences**" section below), further Blueprints must be acquired (e.g. for habitation, better docks or additional production modules). Blueprints are acquired from Faction Representatives, Data Leaks and Space Suit EMPs. As additional Blueprints are unlocked, they become listed in the player's Encyclopedia.

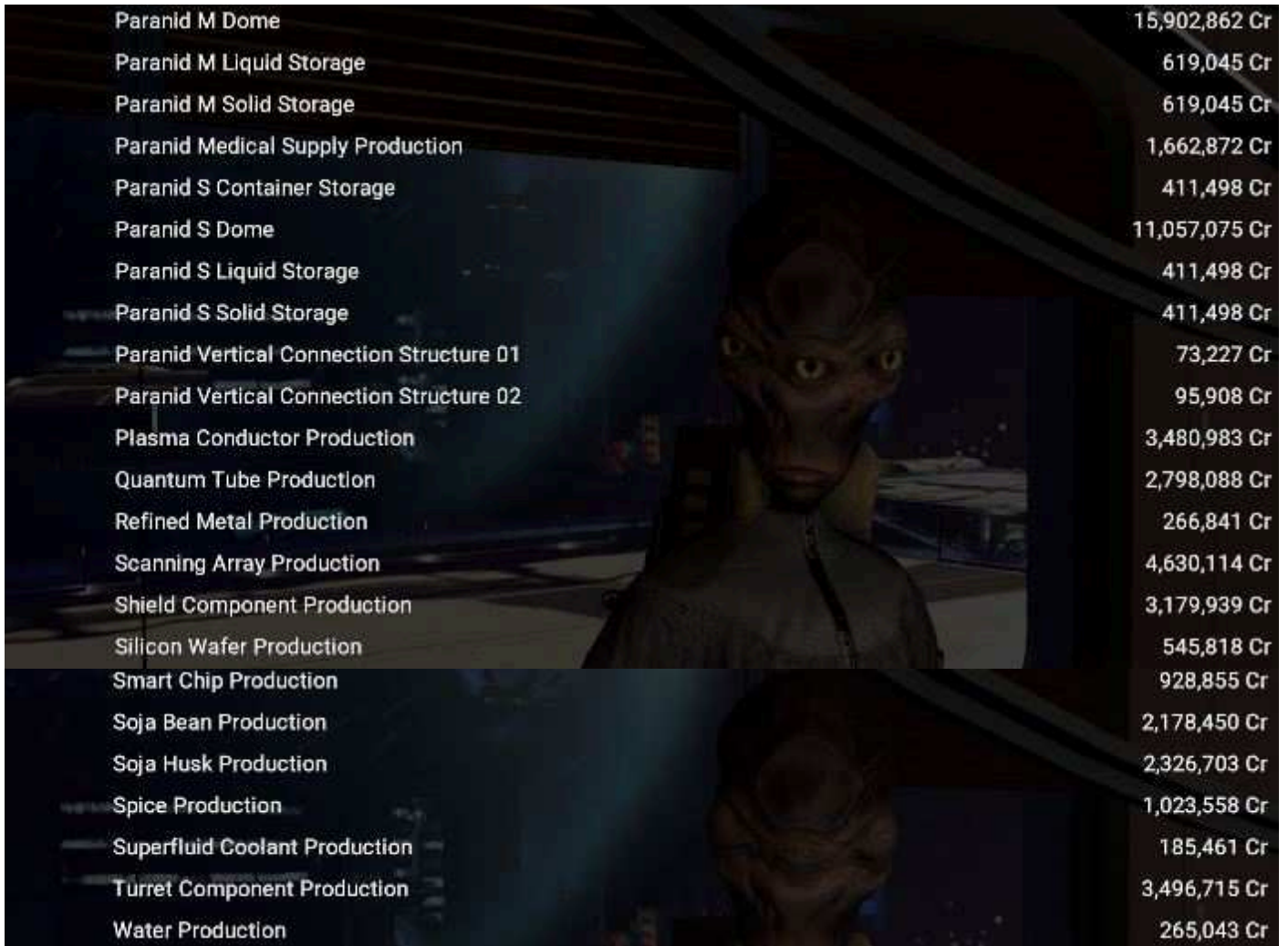
For a given gamestart, the available BPs are found in the Encyclopedia:



Faction Representatives will show you the full list of Station Module Blueprints their Faction offers. The Sector that a Faction Representative is based in is listed in the Faction's entry in the in-game Encyclopedia (expand the "Factions" group in the image above). If unsure what station they are on, you can ask local NPCs for directions.

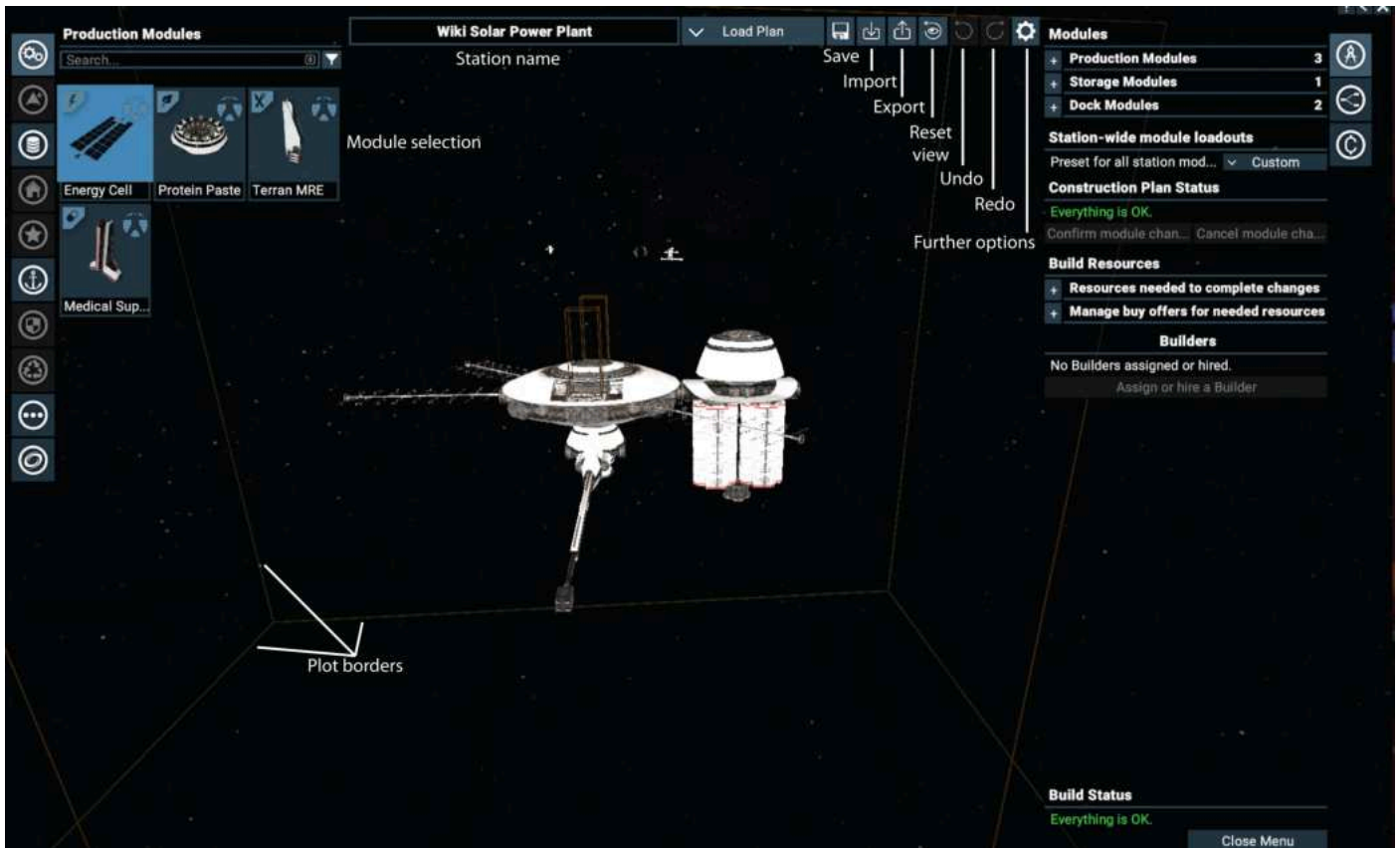
The full list of modules available for **Argon** and **Paranid** stations are in the following images. Since the **Teladi** produce Teladianium-based equipment, they offer a Teladianium Production Module instead of a Refined Metals Production Module. Similarly, **Teladi** Representatives offer several modules that utilise Teladianium instead of Refined Metals but have the same name as their **Argon** and **Paranid** counterpart modules.

Blueprints	
Blueprint	Price
Modules	
1M6S Luxury Dock Area	426,618 Cr
1M6S Standard Dock Area	397,564 Cr
3M6S Basic Dock Area	551,579 Cr
3M6S Luxury Dock Area	589,398 Cr
3M6S Standard Dock Area	573,054 Cr
Advanced Composite Production	4,768,990 Cr
Advanced Electronics Production	3,548,449 Cr
Antimatter Cell Production	507,999 Cr
Antimatter Converter Production	13,098,564 Cr
Engine Part Production	2,863,755 Cr
Field Coil Production	12,767,261 Cr
Graphene Production	206,954 Cr
Hull Part Production	4,519,086 Cr
Maja Snail Production	1,826,264 Cr
Microchip Production	5,577,459 Cr
Missile Component Production	259,281 Cr
Paranid 1-Dock Pier	2,390,572 Cr
Paranid 3-Dock T Pier	4,141,198 Cr
Paranid Administrative Centre	1,029,319 Cr
Paranid Base Connection Structure 01	87,142 Cr
Paranid Base Connection Structure 02	124,368 Cr
Paranid Base Connection Structure 03	155,220 Cr
Paranid Bridge Defence Platform	625,993 Cr
Paranid Cross Connection Structure 01	74,433 Cr
Paranid Cross Connection Structure 02	155,220 Cr
Paranid Cross Connection Structure 03	124,368 Cr
Paranid Disc Defence Platform	721,308 Cr
Paranid L Container Storage	911,918 Cr
Paranid L Dome	24,708,550 Cr
Paranid L Liquid Storage	911,918 Cr
Paranid L Solid Storage	911,918 Cr
Paranid M Container Storage	619,045 Cr



Paravid M Dome	15,902,862 Cr
Paravid M Liquid Storage	619,045 Cr
Paravid M Solid Storage	619,045 Cr
Paravid Medical Supply Production	1,662,872 Cr
Paravid S Container Storage	411,498 Cr
Paravid S Dome	11,057,075 Cr
Paravid S Liquid Storage	411,498 Cr
Paravid S Solid Storage	411,498 Cr
Paravid Vertical Connection Structure 01	73,227 Cr
Paravid Vertical Connection Structure 02	95,908 Cr
Plasma Conductor Production	3,480,983 Cr
Quantum Tube Production	2,798,088 Cr
Refined Metal Production	266,841 Cr
Scanning Array Production	4,630,114 Cr
Shield Component Production	3,179,939 Cr
Silicon Wafer Production	545,818 Cr
Smart Chip Production	928,855 Cr
Soja Bean Production	2,178,450 Cr
Soja Husk Production	2,326,703 Cr
Spice Production	1,023,558 Cr
Superfluid Coolant Production	185,461 Cr
Turret Component Production	3,496,715 Cr
Water Production	265,043 Cr

Construction Guide



Controls

- Left mouse button is panning the screen
- The scroll wheel is zooming in and out
- Right click on a module opens a context window with option to remove or copy★
- Left click on a module to select it and then right click and hold rotates the module horizontally (note: vertical rotation is not possible)

Placing modules

It is recommended to make the first placed module one from the Dock Modules category to enable a Manager to be assigned early on, the station to use drones (see **Drone Management** section below) and for the player to be able to dock their ships. The player can select a module they want built using the upper left window and then placing it on the plot.

The first module placed will have the height default to the ecliptic while subsequent modules can have their height adjusted using vertical connection points. Available connection points a placed module has are represented by white arrows, which will turn green and form a line with compatible connection points of modules selected for placement.

Many production, storage and habitation modules require connection points in a specific direction making Cross Connection modules very useful for forming a framework to attach other modules to.

Anchor modules

Selecting an anchor and moving it (left click and hold) will also move the sequence of all modules attached to it. This is useful in combination with the copy sequence option(see * above). The anchor module of a construction

is usually the first placed, i.e. the module on the top of the list(**).

Disconnected modules

Modules will be build even if they are disconnected from any other module or only connected to some others but to to the entire construction. That can be useful, for example a defence module placed far out at the plot cube perimeter, but it can also be of great disadvantage, for example a resource production or a storage module because the wares will not be transferred. To detect disconnected modules move the anchor module(see ** above).

Merging/overlapping modules

It is possible to merge or overlap modules if the snap points allow it. This will not affect the functionality.

Station defences

Some modules can be equipped with turrets and shield. They can be identified by a plus symbol "+" behind their names. To add turrets and shield click that symbol to open the equipment menu. Similar to the equipment menu of ships there are optional preset loadouts available on the top right of the screen. It also allows to save a manually equipped loadout.

Starting construction

Once the player is happy with their design it should be saved, and a Builder type ship needs to be hired or assigned to the construction site. Click the Assign or hire a builder button to open the Object List of the Map, use this or the property Menu to find a player owned or NPC Builder ship which is not busy and right click it in the list to click the Select option. NPC Builders will charge 50k credits for their service. Note: If a build is waiting for resources for a longer period of time the hired NPC CV will disengage in case they're needed elsewhere. This won't happen if an owned CV is used.

Supplying The Build Storage With Construction Wares

Although the **Build Storage** modules **do not have Map icons**, they are found in space (red box below) close to the build sites (orange box below), which do have "factory" map icons:



The Build Storage has 2 cradles for docking S/M ships (red bars below) and 1 dock for L/XL ships (above the orange arrow below):



The rate of station construction is dependent on the available construction materials and the number of Building Drones the Builder ship has (a max of 30 drone are used).

As wares begin to be delivered to the Build Storage, prism-shaped storage containers appear 'inside' the build storage giving a hexagonal shape as it fills up (illustrated in other images below). Note that the prism-shaped storage containers can be destroyed by weapon fire.

There are 3 ways to **supply** Wares to the Build Storage:

1. Let your Station Manager take care of it **automatically**
2. Order your Captains to deliver them via a **Ware Transfer** (any ship size)
3. **Manually** deliver them personally

Automatic Ware Supply

Under the **Plan Build menu** there is the "**Manage buy offers for needed resources**" tab, which has an option to transfer credits to the station Build Storage using the "**Available money for construction**" slider. The offered **buying price** for the construction materials can be set in the "**Configure buy offers**" sliders to determine how much of the money is spent on each resource. If the Build Storage has funds it will trade with NPC traders for the necessary resources until construction is completed or it runs out of credits.

Ware Transfer Supplying

Additionally it is possible to move resources directly into the build storage with the "**Ware Exchange**" menu. The player can manually use "**Execute Trade orders**" from the Map to buy construction materials for a cheaper price and then use the "**Trade with and Transfer wares with...**" commands to deliver the wares to the Build Storage for the station.

Select a transporter with a useful build resource (e.g. Energy Cells) and then right-click the station. Select the ware exchange action for the Build Storage. This allows wares to be moved directly from the ship to the storage. This method also allows more resources to be loaded at a build storage than are currently needed where they will remain available for future construction plans. This process can be conducted with ships of any size class.

Manual Ware Delivery

Notes for when piloting a **capital ship** (now possible in v3.20 b1 HF1):

- The Build Storage has no cargo drones so remember to bring your own
- Ensure you have a Docking Computer Mk2 equipped

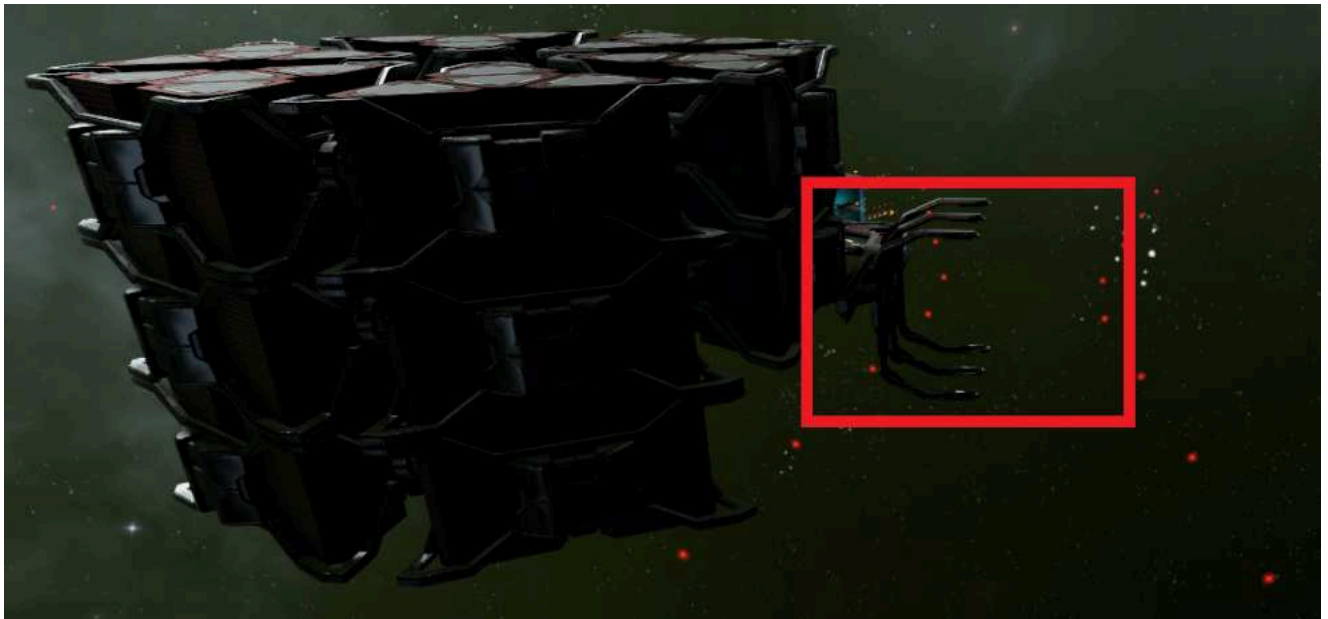
As usual, the docking process involves approaching the Build Storage Module and requesting docking permission. However as mentioned, Build Storage Modules **do not have HUD icons**. Therefore the process is different to docking on stations and ships.

In order to request docking permission, we need to fly close to either of the 2 S/M ship cradles. Doing so puts the Build Storage on your HUD's right-side context menu. Note that this is the same even if you are flying a Capital Ship. This process is illustrated in the following images.

1. Top-down view of a Build Storage module with S/M ship cradles boxed in red:



2. Approach the centre area of a Cradle in your S/M ship (just to the side to avoid crashing in an capital ship):

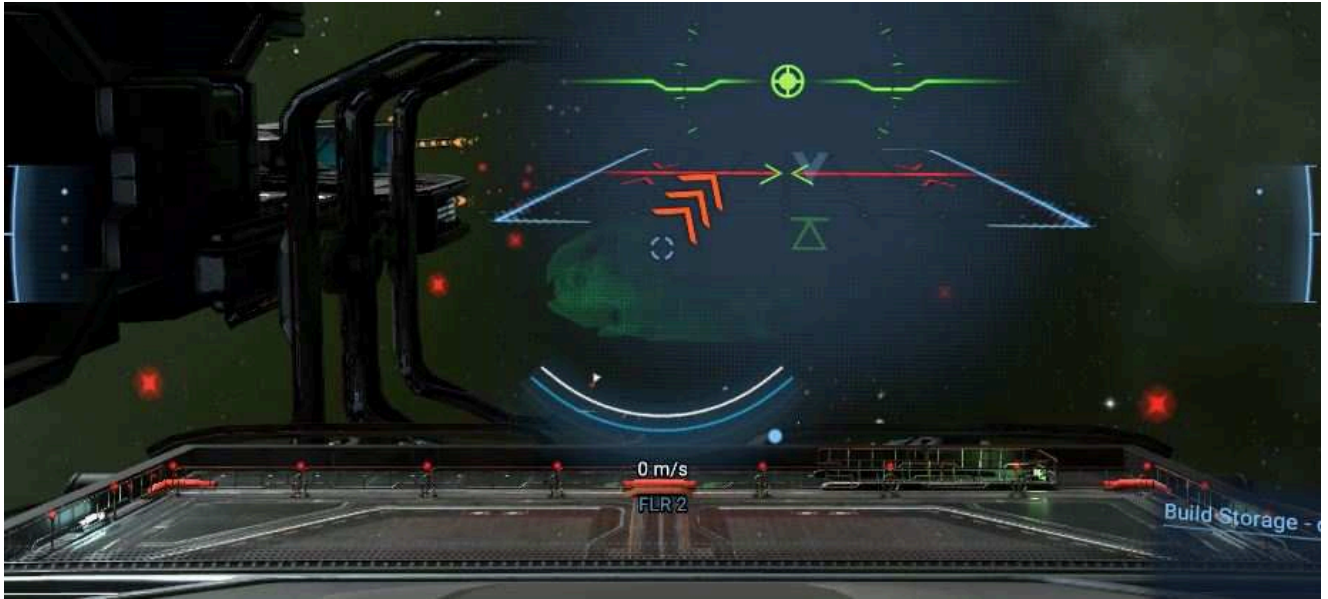


3. Once you are close enough, you can request docking permission (Shift+D) when the right-side monitor shows the Build Storage:



For capital ships, your Docking Computer Mk 2 will move you automatically to the central L/XL dock.

4. For S/M ships, follow the docking guidance as usual:



Station Management

Most aspects of station operations are performed automatically by the **Manager** who will order subordinate ships to mine and trade for the station and automatically allocate the volume of storage space dedicated to each ware. To add a subordinate ship to a station simply select the ship then right click the station in the Property Owned menu and choose one of the Assign Role for options. The station is also run by **Workforce** (see bottom) who aids module production rates.

Stations are managed via settings in the **Logical Station Overview** (see below), with various duplicate controls also available via the **Map**.

Hiring a Manager

1. Since version 3.30, steps have been simplified.
2. Hire a Crewman/woman and assign them to work as manager on the newly built station via the map.
3. Management and morale skills are important for managers. To see their ratings for individual skills, click on player information (top menu), then "personnel management" (left menu) and finally, click on the plus sign to the left of their names.

The Logical Station Overview Menu

The **Logical Station Overview** menu can be your main interface to understand the internal proceedings of your factory, trade station or wharf, but it is also your best method to control all the settings you need to manage it.



Top half: The logical station overview:

The top half of this menu shows left to right the process of how wares are manufactured, stored and potentially further processed inside a factory.

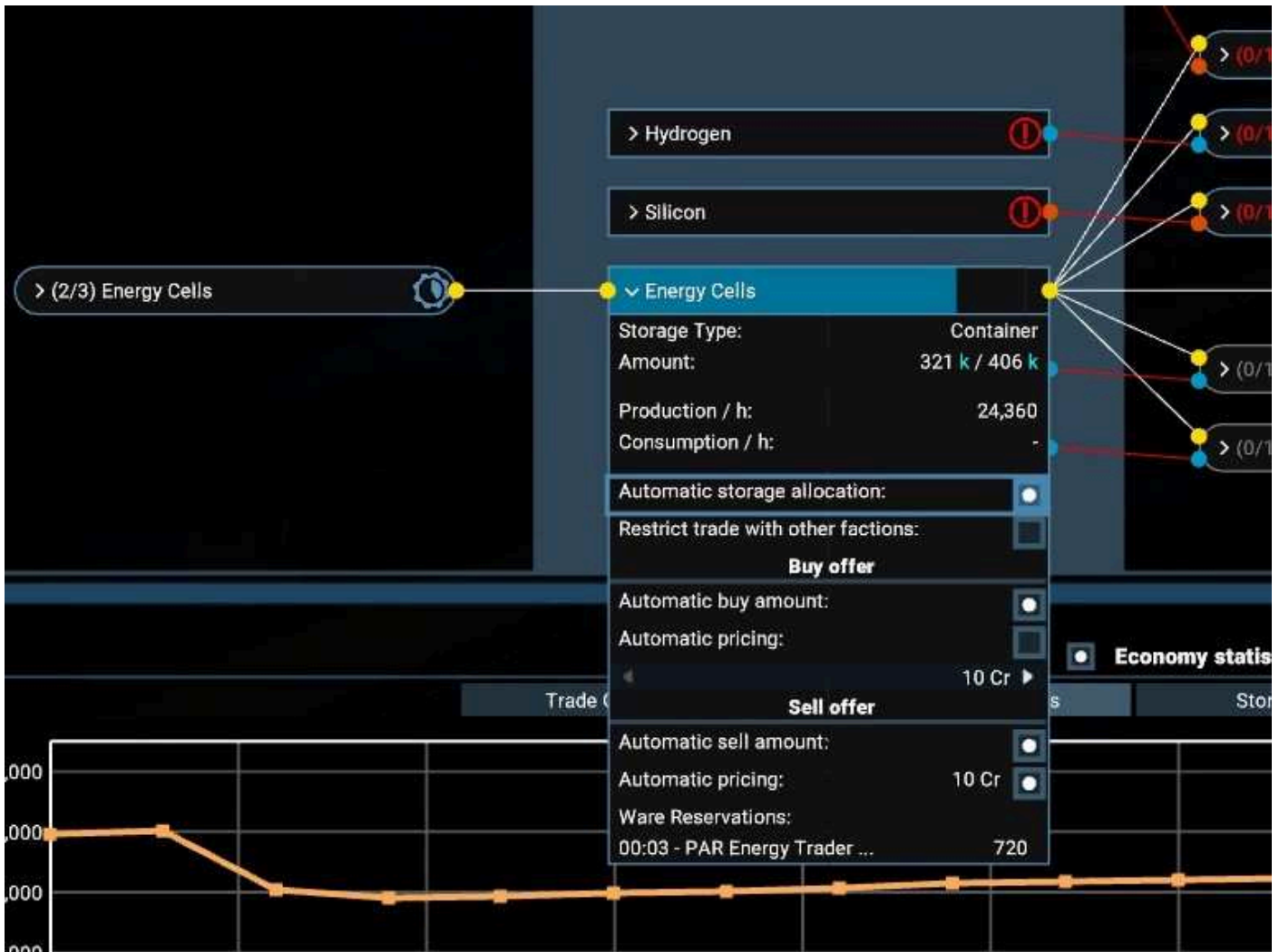
- The rounded boxes represent your stations "production modules". So this is where wares are made.
- The sharp edged boxes represent the storage used per ware, either as resources consumed by a production or as product coming out of a production, OR if it is in between two productions BOTH at the same time.
- The lines show wares flowing through a factory, refined from simpler things (like minerals or energy) on the left of the diagram to the higher level (e.g tech) goods on the right.

Lower half: The graphs:

The lower half of the screen can show proceedings over time. You can display the development of storage levels, funds, traded quantities or traded prices over hours days or even weeks. By selecting the involved wares you can select multiple wares (up to 4) on the right side which then are visualised over the selected time.

You can close (or later re-open) the lower half of the menu and get more space for the logical station overview by clicking on the icon in the middle separation bar.

Interacting With the Logical Station Overview (LSO)



By clicking on any ware storage, you can configure how your station manager will deal with this particular ware.

Automatic storage allocation:

By default this setting is turned on and the manager will assign a given fraction of the total storage space available in a station for this ware. The storage space is calculated by the amount of wares needed in the same type of storage.

A station can have up to three different types of storage: Solid (orange dot), Liquid (blue dot) and Container (yellow dot). The most commonly used storage from these is definitely CONTAINER storage as this is used for all the intermediate goods in the economy, while SOLID and LIQUID are only used for resources.

This means a station can often function with a single container storage module, but its space might be fragmented for many different wares that are stored in your factory.

Setting storage allocation manually:

If you uncheck the "automatic storage allocation" checkbox, you can manually specify the amount that the manager should reserve for only this ware. This amount is then shown as a little triangle under the box while the bright blue bar represents the current stock level. When storage allocation is set manually, the LSO icon for the ware turns into blue horizontal arrows.

Restricting trade with other factions:

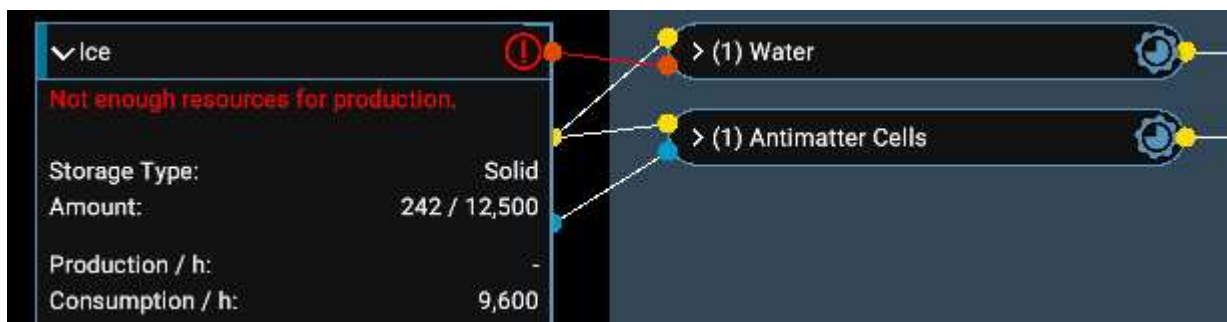
By checking this box you command your manager to only trade with your own stations and ships.

Automatic amount / Automatic pricing for sell and buy offers:

With all four of these checkboxes enabled (which is the default) your station will behave like NPC stations in the X universe. Your station will offer higher prices the fewer goods of a type it has and it will ask lower prices for a product the higher its stock level is.

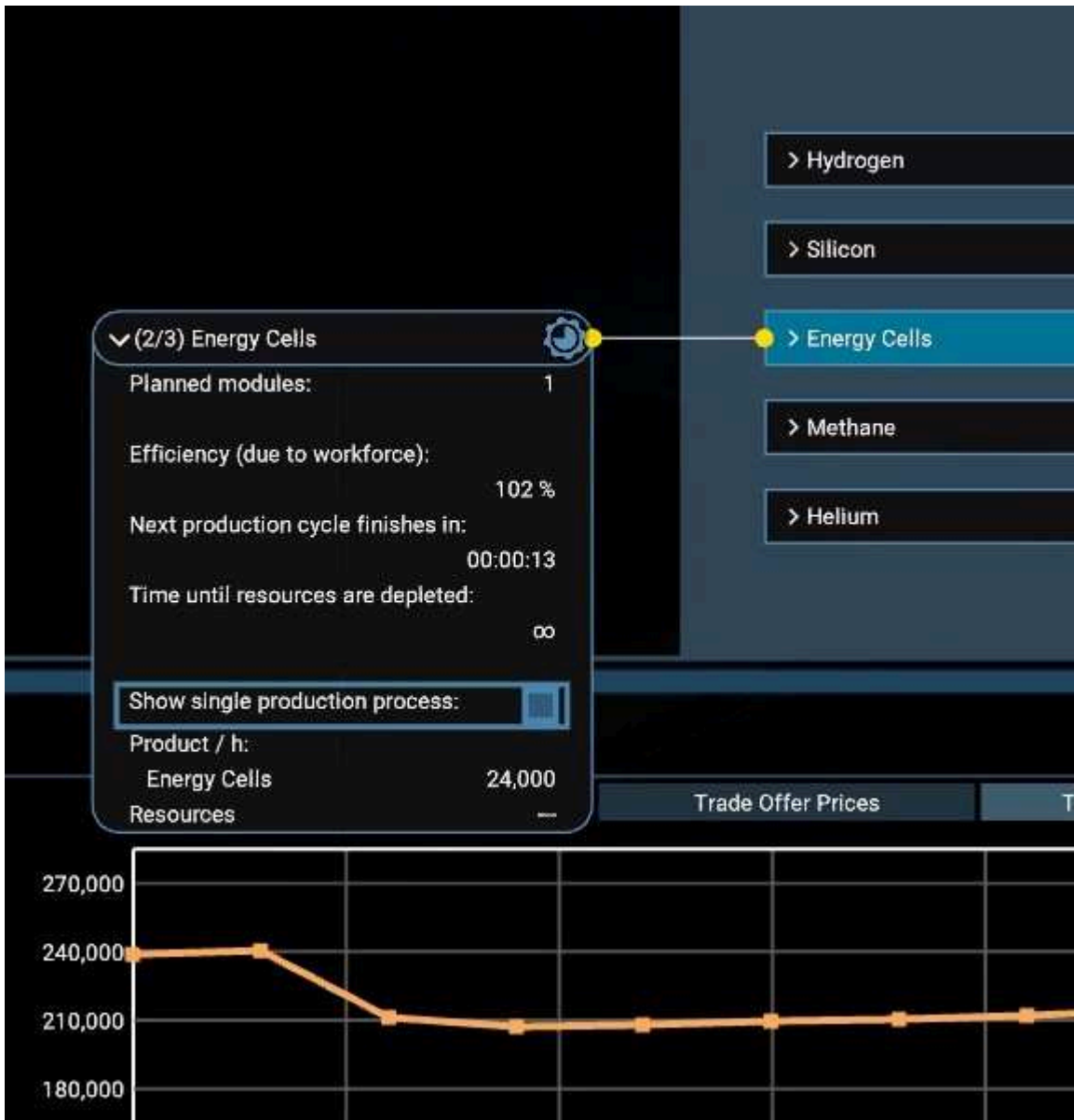
In the case of Energy Cells for example, the manager will go down near the minimum price of 10Cr paid for energy as a resource only if its own storage is close to the set maximum as defined using the storage allocation described above. He will ask close to the maximum of 22Cr only if its product storage is almost empty.

You can turn off the automatic price calculation and set buying and selling prices manually with the two slider bars.



A red exclamation mark will highlight problems and expanding the box for that ware will offer details about the issue that needs to be resolved.

Production Module Boxes



The rotating circle in a production box shows the progress of one production cycle. Every time this circle finishes a set amount of wares are produced and resources are consumed. If this icon is instead red, the production can currently not produce (usually because it lacks the needed resources).

The interactive part of the production box mostly shows output status information for this type of production. Most notable the efficiency of a production, the time until the next cycle ends and the amount of products produced per hour (note that all timings can be shortened by SETA!).

Station Account and Drones

(see also [Drones](#))

In the top-middle area of the menu is the box that governs the station's budget and lets you setup drone stocks.

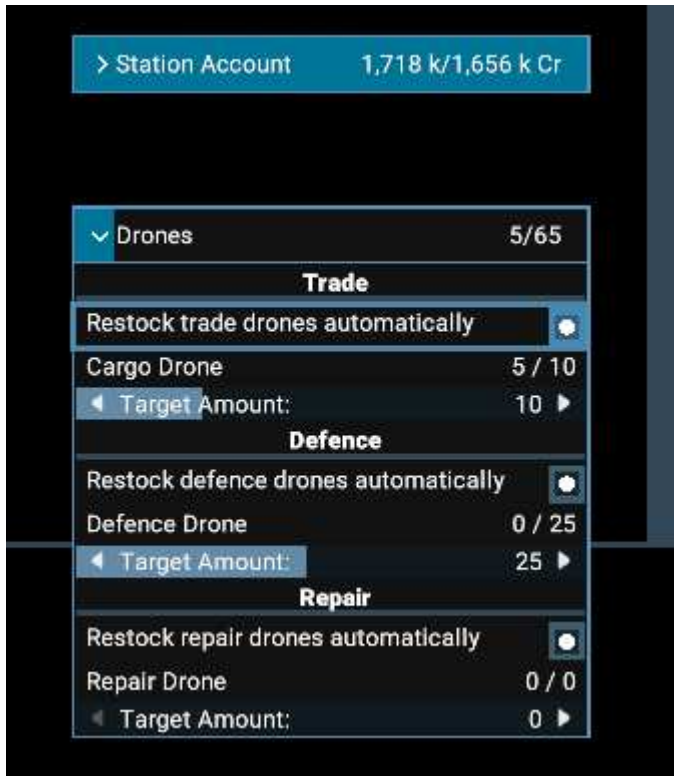


When you expand the Station Account section, you can see the **Minimum Recommended Budget** for your stations current array of modules (based on the **Production** and **Supply** budgets).

Here is how the budget is used (source: <https://forum.egosoft.com/viewtopic.php?f=180&t=436010&p=5031334&hilit=build+storage&sid=e3b5ebaa58cca24de649d2288180ef40#p5031334>)

<p>A If you personally trade this is essentially a ware exchange where money doesn't change hands and you can see how many of a ware the HQ really wants, not just how much it can afford.</p>	<p>Subordinates to your HQ still need to pay when they buy from your warehouse or any of your other factories there so they are only allowed to buy as much as their homebase is willing to pay for. (and it reserves some money for all the other resources it wants to buy)</p>	<p>Subordinates of the warehouse or the other factories are also limited by the funds the HQ has. They only see the buy offer amounts your HQ is able to afford.</p>	<p>That same situation applies to the build storages. It doesn't matter if it's only your own trade ships, they still expect that they get money from the build storage when they deliver and as long as you have not assigned enough funds for construction the build storage isn't going to pay them.</p>
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You can also see the current **Station Account**, which you can **adjust manually** by using the slider or clicking on the value to type in a specific amount. Alternatively, you can set accept the recommended value via the **Accept Estimate** button.



You can also control what types and number of **drones** your station should have to ensure smooth operations. With automatic restocking of drones enabled the manager will order the necessary parts to assemble enough drones to maintain the amount set via the corresponding slider. If automatic restocking is off, the slider can be used to place a one-time order for drone parts that will disappear once fulfilled.

Cargo Drones:

Used to exchange wares with L and XL ships docked at piers. Additionally if your station stocks any resources required by its build storage, cargo drones are used to transfer wares to the build storage directly.

Defence Drones:

As the name suggests they bolster your stations defences and can deal with minor threats.

Repair Drones:

Should any turrets, shields or modules of your station get damaged, these drones will slowly patch things up.

Trade Wares / Trading stations



If you want your station to trade a ware that is neither a product nor a needed resource, you may manually transfer a sample of that ware to your station and will then be able to control trade offers and pricing for that ware following the same principle as described above.

Trade Rules

(see also [Trade Rules](#))

With **Trade Rules** you have finer control over buying and selling of each ware and can create templates to apply to your empire, multiple stations or even single wares. This works a lot like blacklists do.

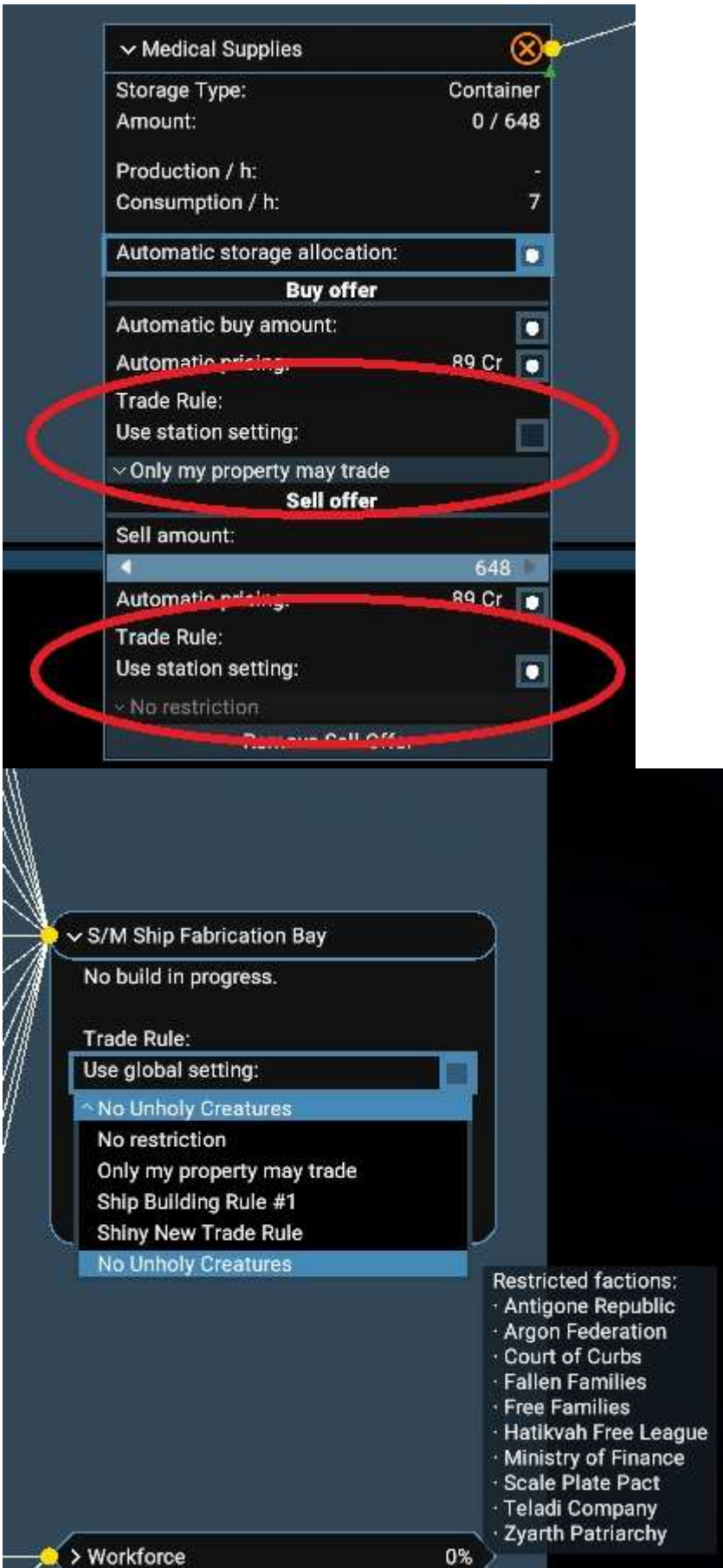
You can create Trade Rules (Empire Menu > Global Orders) to set up any number of white- or blacklists for trading as well as ship building. When a Trade Rule is applied, the war's icon in the LSO turns into an orange cross.



On the map you can set this quickly for an entire station using the Info tab.

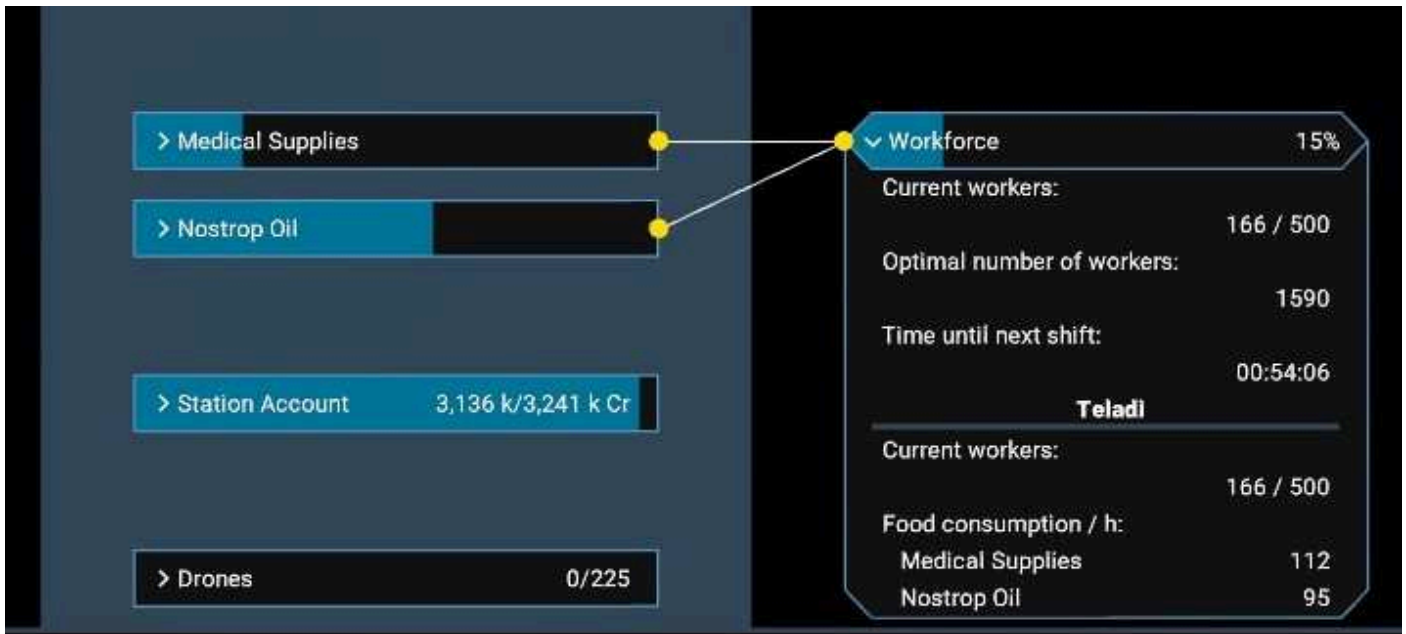


Using the LSO you can specify different rules for buying and selling and also for ship construction.



Existing save games are automatically converted to the new format. If you have previously used the LSO to restrict certain factions from buying ships you manufacture, a matching trade rule is automatically generated and assigned.

Workforce



A special case of the logical station overview menu is the workforce. It represents the people working aboard your station once you added a living section to your station layout. Workforce will increase all your production efficiency and can be very valuable.

Workforce is represented in a hexagon shaped box and contains all information about their effect on your production.

Workers however also need food, so unless your station already has food wares in storage, the necessary storage will be allocated and their effect on your workforce will be shown.

Station Trade Offers

In order to see what trade wares your station is currently buying and/or selling, return to the map, right-click on the station, and select either **Trade Offers** for the **Station** or for the **Build Storage**.



Stations Basics



i Updated for version 5.10

- [Introduction](#)
- [Station IDs](#)
- [Platforms](#)
- [Elevators And Transporters](#)
- [NPCs](#)
- [Modules](#)
- [Scanning](#)
 - [Audio Signals And Data Leaks](#)
- [Mass Traffic](#)
- [Docks](#)
- [Docking, and Using The Docking Computer](#)
 - [Manual Landing](#)
 - [Docking Computer-Assisted Landing](#)
 - [Guide with screenshots](#)
 - [Request Permission to Dock](#)
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 - [Find the docking alignment indicator](#)
 - [Use alignment indicator to land](#)
- [Hidden Crates](#)
- [Climb On-board A Ship](#)
- [Undocking](#)
- [Sabotage](#)
- [Research](#)

Introduction

Scattered throughout the X-universe are numerous stations and more will be constructed while other will be destroyed as play progresses. Stations consume wares to manufacture other wares or build and equip ships. Trading stations are special in that they will both buy and sell a range of wares. Defence platforms provide a means for a faction or the player to maintain ownership of a sector.

Players are able to build manufacturing stations, defense platforms, trading stations and wharves/shipyards/equipment docks. Station trade offers are only available to the player once they have gathered this information (see the [Trading And Mining](#) page).

Station IDs

Like ships stations have unique IDs displayed within menus. The generation of IDs is completely random.

Platforms

Docking modules that look small when seen from space appear vast when explored on foot. Each docking module has a unique layout from which the player can watch ships come and go. Automated safety systems prevent unoccupied landing pads from being walked on (if you find yourself trapped in a bay, look for escape ladders near regular exits). Player-owned ships can have their Ship Options displayed via interacting with the panel on the edge of the landing pad in front of the ship. In addition to docks, all stations have an Engineering Bay, Managers Office and a mission-unlocked Bar.

Elevators And Transporters

Whilst travelators are available on larger docks, not all areas of all stations may be accessed on foot. The player may need to take an elevator or transporter to other areas. Elevators and transporters are used by interacting with control panels on the inside on the left. From left to right, elevators, transporters and the panel on the edge of the landing pads are ringed in the picture below.



NPCs

Talk to the denizens of stations to ask for directions, progress missions, trade and to hire new staff for ships and stations.

Modules

Stations are constructed from multiple interconnected modules. Each module acts independently from the rest having an independent amount of hull and surface elements. NPC modules can be scanned to reveal information about the module, while player-owned station will show this by default. Modules are classed into Production, Build, Storage, Habitation, Defence, Dock and Other categories.

- Production: Manufacture wares using other wares as resources
- Build: Produces, upgrades and repairs ships
- Processing: Converts scrap debris delivered by tugs into scrap metal, after which it can be used to produce goods
- Storage: Stores excess resource and product wares
- Habitation: Houses the station workforce
- Defence: Heavily armed and durable modules for repelling attackers
- Dock: Provides docking facilities which enable ships to dock at the station
- Other: Struts and other connectors for linking modules together
- Venture: Specialised modules for undertaking ventures and other online features

Scanning

Modules, Audio Signals and Data Leaks are scanned by setting the player ship or Space Suit to Scan Mode (SHIFT+2) and facing the object to scan before flying close enough. With Audio Signals and Data Leaks the player needs to aim for the middle of the glowing red part while station modules can be scanned from any place on the module.

Audio Signals And Data Leaks

When approaching a station there is a chance Audio Signals and Data Leaks will spawn at specific hardpoints on modules. They have a 'static' sound, and their visual location is easier to detect when your Ship is in Scan Mode.

These can be repaired using the Repair Laser of the Space Suit to earn some notoriety with the faction which owns the station or scanned for other benefits. Audio Signals will reveal hidden missions when scanned while Data Leaks can grant temporary station wide discounts or commissions for specific wares. There is even a chance to obtain a free Blueprint for the module with the Data Leak when scanned. The probability of obtaining rewards when scanning data leaks is dependent on the type of Data Leak and the type of scanner used to scan it with. This means not all Blueprints can be obtained using ships to scan the Data Leaks and using the Spacesuit Scanner yields the best results.

Mass Traffic

When stations are large enough they will begin to generate mass traffic of smaller NPC ships that fly around the station along specific lanes. Some of these ships will be Police Vehicles which will deviate from the mass traffic lanes to scan random ships nearby for wares which are illegal to the faction which owns the sector. Failure to comply will cause the Police Vehicle to go hostile and attack the offending ship and may even lead to the whole

station attacking the ship. Killing mass traffic is considered a hostile act by the owning faction. Mass traffic will occasionally spawn Criminal owned craft which can be killed without penalty and even earn notoriety with the faction which owns the station.

Docks

These allow ships to dock at stations. There are usually a mix of S and M size landing pads on the same docking modules while L and XL ships need to use piers. The availability of docking options can limit which ships can trade with a station.

Docking, and Using The Docking Computer

Manual Landing

After requesting docking permission (see below), approach the designated docking bay and use the on-screen guidance to help you land flat, in the center of the bay.

To land, the following 4 parameters must be met exactly:

1. The front of the ship must be pointing in the right direction
2. The ship must be parallel to the landing pad
3. The ship must be located centrally over the landing area
4. The ship must be hovering at a certain maximum height above the landing pad

Docking Computer-Assisted Landing

The Docking Computer helps the player to land by taking over when your ship has almost met the above four parameters.

The **Mk1** version will kick in when the player has almost landed, avoiding the need to match the parameters very precisely. The **Mk2** version kicks in while your ship is further from the landing point, streamlining landing further.

Guide with screenshots

Request Permission to Dock



1. Left click on the station to select it.
 2. Right Click to bring up a context menu, then select "Request dock at"
- Alternatively select the station and use Shift +D
 - You must be within a 6km to dock. If the docking option is unavailable, you may be too far away, the docking module may be full, or you may need a higher reputation with the owning faction.

Navigate to docking area



Follow the green landing lights to the approximate docking area.

The green lights may not always indicate the optimal path, so be aware of obstacles!



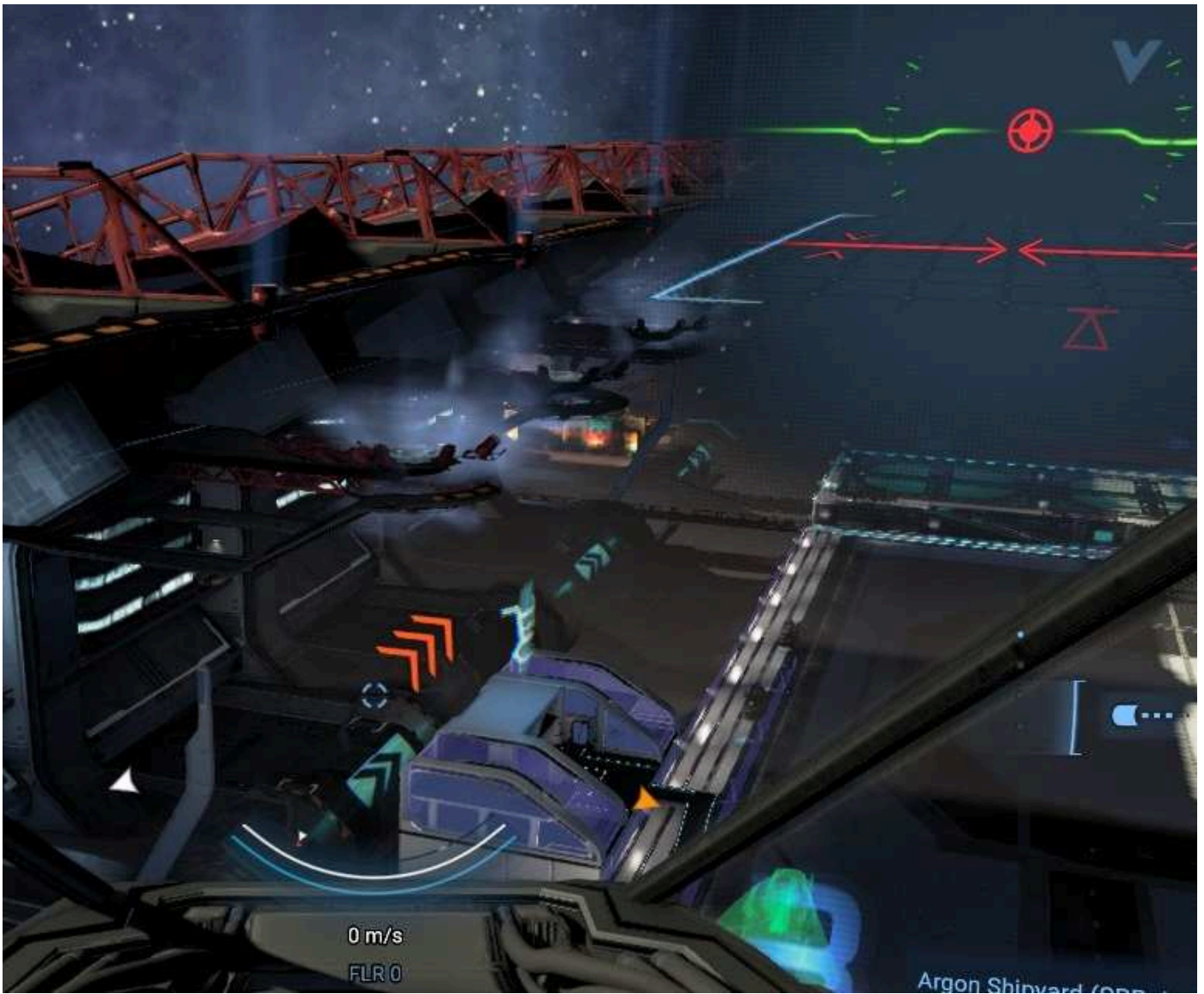
When approaching the landing pad, there will be a faint hologram of your ship superimposed over the allocated landing pad, showing the required alignment.

Slowly fly towards this location, being mindful of speed, position and alignment. It may be best to try and fly above the spot, then descend into it.

Find the docking alignment indicator



As the landing pad is approached, a red triple chevron symbol will point towards the docking alignment indicator. If you are facing in completely the wrong direction, there will be a U-turn symbol in the top left of the screen.



Try to centre it onto your screen.

Use alignment indicator to land



Your initial alignment may be very bad!



First, centre your direction reticle on the target in the alignment indicator, and rotate so that you're level.



Now, strafe left/right so that the red triangle with a line above it is centred. When you're centred, you'll see the two arrow tips turn green.



Now, slowly move forwards or backwards to bring the red triangle in alignment with the line. You will see more of the diagram turn green when you're perfectly aligned.

Now, slowly strafe down until docked. You may need to make minor adjustments at the landing pad, but you'll soon be landed.

HINT: it may be easiest/quickest to lock steering using the Space bar once the (round, central) target indicator is green, then use strafe, Q/E to roll, & slowly accelerate/decelerate until ILS alignment is correct. Only then should you use S strafe to move down onto the pad

Hidden Crates

Certain missions will require crates hidden on the station platforms to be found and collected by the player. These crates usually contain wares to progress the mission.


Climb On-board A Ship

The player can enter owned and friendly docked ships. If the player owns the ship it is possible to interact with the pilot seat ask the pilot to vacate their seat and let the player fly the ship while NPC owned ships will permit the player to be a passenger while they go about their business.

Undocking

Open the Ship Interactions Menu and click Undock to begin your journey into space. Alternatively, while in the pilot's chair use the dock/undock hotkey (SHIFT+D by default).

Sabotage

A number of nefarious Inventory Items (Security Bypass Systems, Decryption Systems, and Slicers) may be used to sabotage a station. The player can cripple station defences, shielding, repair, production, construction, trading, or gain discounts or release stored wares by using them on the panels on the station (e.g. the Engineering Bay). These devices often have to be crafted  and players may run the risk of having the items detected by police.

Research

In order to stay ahead of the competition a player with a Player Headquarters can undertake Research to unlock upgrades and perks to make their growing empire more effective. To research an upgrade click the Research menu (when unlocked at the Player HQ) and select a technology to research before clicking the "Start Research button". If the player has the required wares available at the research facility the upgrade will be completed within the specified time.

The Spacesuit



i Updated for version 5.10

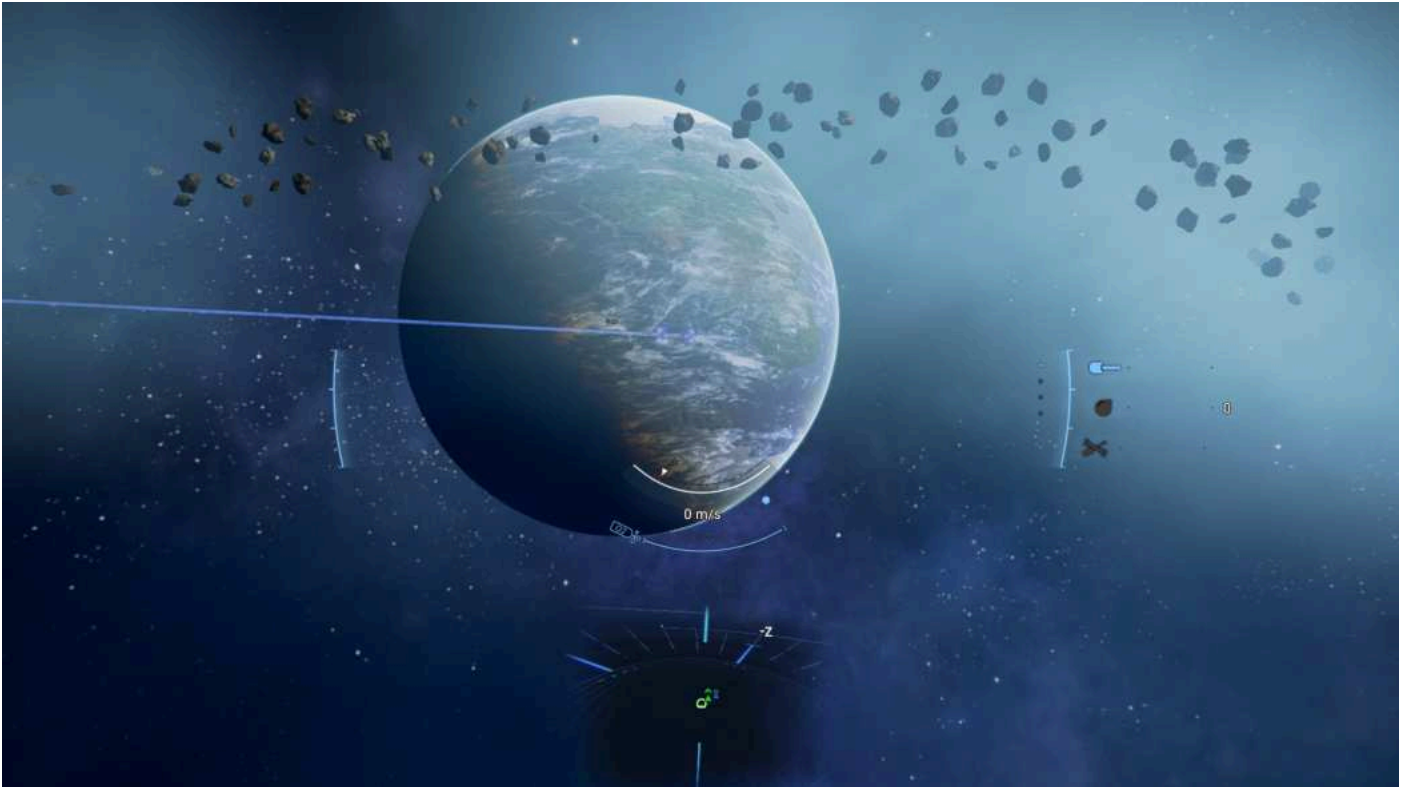
- [Tools and Weapons](#)
- [Abilities](#)
- [Getting Back To The Ship](#)
- [Oxygen levels](#)

When the player steps out into the vast reaches of space in only a Spacesuit they are comparatively slow, clumsy and vulnerable, but are able to perform actions that no ship could. Use the Spacesuit to patch up damage from combat, sabotage competitors or gain intelligence. To help you get around, you will be sitting in an EVA chair equipped with thrusters.

Tools and Weapons

The Spacesuit may be equipped with a variety of tools. They are sold by Item Traders on each station and they are individually selected just like ship weapon groups (Hotkeys 1-4).

- Repair Laser (available on all spacesuits):
 - A tool used for slowly repairing hull damage for free at up to 25m range. It's a fixed amount of repair per tick, so tougher hulls will take a looong time to repair this way!
- Hand Laser:
 - A weak beam weapon that can be used for shooting locks and surface components.
- Bomb Launcher:
 - Launches magnetic **explosive** and surface-element-disrupting **EMP bombs**. Projectiles are consumable and need to be crafted in the player's inventory. Spacesuit Bombs are remotely detonated by selecting the attached bomb and selecting the Detonate order by right clicking to deal heavy damage in an area around the bomb - which can harm the player if used at close range! The detonation point of the Spacesuit EMP creates several small data leaks, which can be scanned to unlock blueprints if the appropriate research is undertaken at the player headquarters.



The Spacesuit HUD with possible tools located on the right

Abilities

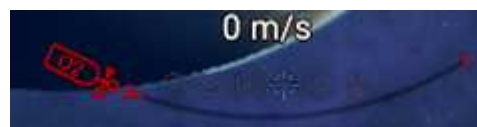
- Spacesuit Scanner:
 - The Spacesuit scanner is capable of performing the deepest scans of ships and station modules to gain full information of the scanned object. Scanning a Data Leak with the Spacesuit Scanner also has a higher chance to obtain Blueprints, and level 2 Data Leaks can only be scanned this way.

Getting Back To The Ship

- You can pilot your Spacesuit back into your ship by requesting docking permission, which opens the hatch you manoeuvre into. Entering the hatch will move the player to the Transporter Room of the ship. With teleportation researched, players can also simply select their ship on their map and choose "teleport to" from the right-click context menu.

Oxygen levels

The Spacesuit has a finite amount of oxygen supply. A bar under the cross-hair shows the remaining oxygen. After 25 minutes, it will become harder to breathe as indicated by changing (increasing frequency) breathing sounds. The oxygen bar will also turn red. If the player has not returned to a ship or station within 30 minutes of going EVA, they will die.




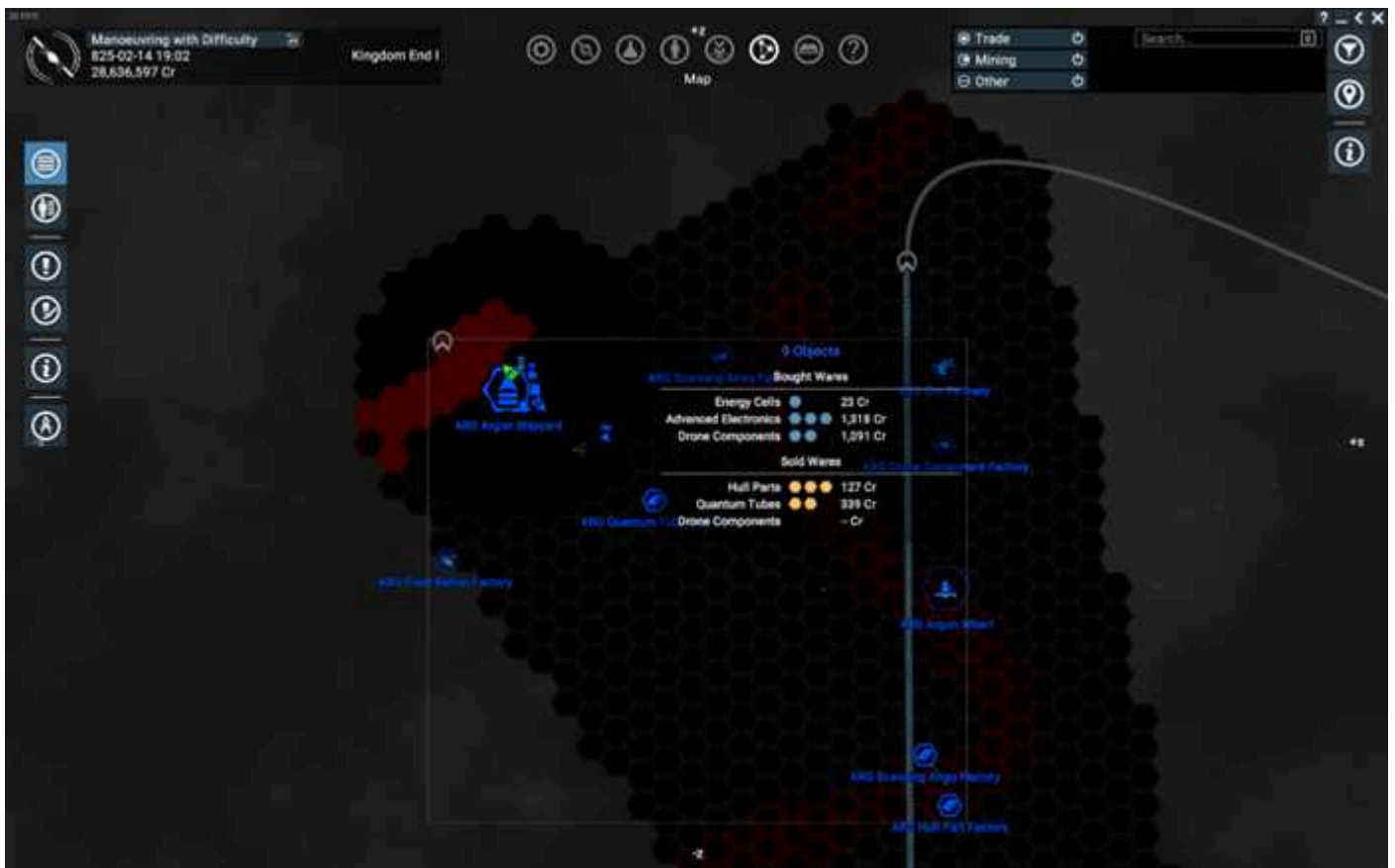
The X-Verse And Map



✓ Current as of 6.10

The Map Interface

To access the map use the (M) key or open the ship menu (ENTER) and select the map icon  from the top.



An example map interface centred on Argon Prime

Navigation and Operation

The X universe map can be operated with mouse, keyboard, controller or a combination of all three input methods. The most important mouse and keyboard controls are provided here.

Operation	Mouse Input	Keyboard Input
Pan	Left-click and drag	Arrow keys

<p>Rotate note that rotation in the map is 3D, press R to reset the camera to be at your cur- rent posi- tion and in the default orientation</p>	<p>Right-click and drag</p>	<p>Numberpad keys 1-9</p>
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<p>Zoom</p>	<p>Scroll in/out</p>	<p>+/-</p>
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Map Menus

The map interface features 3 sets of tabs. The top tabs move between the map and the other menus such as the encyclopaedia and the ship interaction menu, the tabs on the left move through objects, missions, information displays and station plot purchase and finally, the tabs on the right allow for setting map filters, checking the legend and providing an alternate information display.

Top level Tabs



<p>Option s menu</p>	<p><u>Terraformin</u> <u>g menu</u> (Requires Terraformin g Research)</p>	<p><u>Research</u> (Requires the Player Headquarter s with Boso Ta)</p>	<p>Player Informatio n</p>	<p>Ship Interactions/Doc k Interactions</p>	<p>Map (Curren t Menu)</p>	<p>Encyclopaedi a</p>	<p>Tutorial s</p>
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Left Sidebar Tabs



Object List

The objects tab shows a list of all elements visible at the current map zoom on the screen. Tabs within the menu allow for narrowing the list to stations, ships and deployables.



Player-owned Object List

This tab provides the full list of all player-owned properties sorted into the categories:

- Stations and Subordinates
- Fleets
- Un-assigned ships

Tabs at the top of the menu allow more granular filtering by stations and subordinates, fleets, un-assigned ships, deployables



Mission Offers

The mission offers tab provides a bulletin board of all local missions offered by stations and guild missions based on the guilds the player has joined as well as Terraforming missions and some plot missions.



Active Missions

Upon accepting a mission it will appear in the active missions tab which filters them into the 3 categories:

- Regular, these are all the missions accepted in the mission offers tab as well as all current plot missions
- Upkeep, these missions are generated dynamically based upon what the game thinks could improve the player's empire. For instance if a station doesn't have any cargo drones there will be an upkeep mission to provide the station with the drones. There are never any rewards for completing upkeep missions but it is generally recommended to keep everything running smoothly.
- Guidance missions are just those that are generated when the player selects an object and then sets their guidance computer to select the object (SHIFT+G), guidance missions automatically abort when the player comes within range of the intended target and like upkeep missions do not facilitate any reward

Regular missions can be broken further down into the following:

- Important, these are invariably plot missions which have big impacts on the X universe upon completion
 - Guild
 - Terraforming
 - Other
-



Information

The [information pane](#) is one of the most important (if not the most important) menus in the entirety of X4 allowing for the inspection and modification of ship, station and sector properties.



Manage Plots

This menu brings up a list of currently owned plots as well as an option to create a new plot. While this tab is selected most map functionality is disabled to allow the player to place new plots by left clicking and rotating them about the vertical axis by holding down the right mouse button.

For more information see [Constructing a Station](#) ?

Right Sidebar Tabs



Filters

Filters allow for customising what layers appear in the map and cover a broad range of functionalities



Legend

The legend has a guide to all icons visible in the map interface and provides context to elements like the resource region colours.



Information

The [information pane](#) is one of the most important (if not the most important) menus in the entirety of X4 allowing for the inspection and modification of ship, station and sector properties.

The Search Bar

The search bar in the top-right allows for more precision in filtering what is shown on the map and players can use it to pinpoint their lost traders or spot pirates. Searches can be done for the object's name, type or 6 digit identifier. A table of accepted types is outlined below:

Search Query	Result
a	Shows all objects in the universe regardless of how far the map is zoomed in or out (this often causes fps issues)
Accelerator	Shows all trans-orbital accelerator gates
Data vault	Shows all data vaults
Equipment Dock	Shows all equipment docks

Highway	Shows all highways
Jumpgate	Shows all Jumpgates
Shipyard	Shows all wharves and shipyards
Trade	Shows all trading stations
Trades	Shows all trading ships as well as equipment docks, wharves and shipyards

Note: Some of these filters are order sensitive (despite not always conflicting), if the filter isn't working just delete some and then re-add them in a different order.

Layout of the X-Universe

Information Menu

Overview

The information menu is the main way to inspect and modify the properties of ships, stations and sectors. Depending on the object selected different options and sets of information is available to the player.

Information Pane Tabs

At the top of the information pane are 6 tabs that cover general information to inspected and adjusting ship behaviours.



General
Information
and
Description
(All)

Crew
Information
(Ships and
Stations only)

Loadout
Information
(weapons, turrets
and
subordinates)

(Ships and
Stations only)

Logbook
(All)

Behaviours
(Ships only)

Individual
Instructions
(Ships and
Stations only)

A comparison of the different information panes for each type is shown below:

Ship

Information
Wiki Example Ship
SOP-743

General Information

Name:	Wiki Example Ship
Owner:	Manoeuvring with Difficulty
Location:	Kingdom End I
Model:	Shark
Produced by:	Queendom of Boron
Ship Type:	Carrier
Hull:	383,000 / 383,000 MJ (10...
Shield:	884,316 / 884,316 MJ (10...
Cruising Speed:	119 m/s
Burst Weapon Output (...):	1,400 MW
Burst Weapon Output (...):	1,284 MW
Burst Weapon Output (...):	1,751 MW
Burst Weapon Output (...):	1,617 MW
Burst Weapon Output (...):	1,284 MW
Burst Weapon Output (...):	728 MW
Crew Skill:	★☆☆☆☆
Radar Range:	40 km
Boarding Attack Streng...:	2,313
⊕ Docked Ships:	78 / 92

Description

The Shark heavy carrier was the second carrier developed by Atreus Shipbuilding Currents. Aside from various budget increases, the renowned company managed to engineer and deliver the ship without major incidents. After seven years of development the first Shark was completed, and departed from the Ocean of Fantasy Shipyard in 797 (NT) to serve the Boron Royal Navy.

Menelaus Era ships were built between 785 (NT) and 798 (NT) as a second wave of more autonomous ships in preparation for the Jump Gate shutdowns. To reduce

Ship Overview

Station

Information
Wiki Example Station
LIM-771

General Information

Name:	Wiki Example Station
Owner:	Manoeuvring with Difficulty
Location:	Atreus' Clouds
Hull:	13,448 k / 13,448 k MJ (1...
Radar Range:	40 km
⊕ Docked Ships:	10 / 308
Updating Trade Offers:	Yes

Account Management

Station Account

20,000,000 / 23,082,731 Cr

Expected operating bu... 88,113,868 Cr

Accept Est... Confirm Cancel

Funds for Station Construction

0 / 3,082,731 Cr

Expected construction ... 0 Cr

Accept Est... Confirm Cancel

Trade Rules

Station Trades:

- Use global setting
- Self Only

Station Supply:

- Use global setting
- No restriction

Sale of Ships:

- Use global setting

Description

No information available

Configure Station
Station Overview

Sector

Information
Argon Prime

General Information

Name:	Argon Prime
Owner:	Argon Federation
Population:	8,524 M
Workforce Availability Bonus:	+852%
Station Workforce:	7,633
Known Stations:	12
Main Production:	High Tech Goods

Natural Resources

Sunlight:	100%
Ore:	44,746
Silicon:	44,757

Description

Colonised by the survivors of the First Terraformer War, the Sonra system is seen by many as the birthplace of modern Argon civilization and culture. Renamed from Sonra to R. Gunne to commemorate the hero of the First Terraformer War, then to Argon Prime, the system has served as the capital of the Federation for all of its five hundred and eighty-four years. As such, the fourth planet, also called Argon Prime, is steeped in history, and even despite the Jump Gate shutdown, the system once again thrives on a strong trading and tourist economy.

Trading And Mining

i Updated for version 5.10

- [Items Versus Wares](#)
- [Natural Resources](#)
- [Trading](#)
 - [Price Development](#)
 - [Gaining Info About Trade Offers](#)
 - [How To Buy And Sell Items - Station Trader](#)
 - [How to Buy and Sell Wares - Ship Trading](#)
 - [How To Transfer Wares Between Player Owned Ships - Ware Exchange](#)
 - [Auto Trading and Auto Mining](#)
- [Mining](#)
 - [Introduction](#)
 - [Mining Turrets](#)
 - [Mining ships Piloted By Captains](#)
 - [Small and Medium Mining Ships:](#)
 - [Large Mining Ships:](#)
 - [Ordering Ships To Mine](#)
 - [Manual Asteroid Mining For Solid Resources](#)
 - [Manual Nebula Mining For Liquid Resources](#)

Items Versus Wares

It is important to understand the difference between Inventory (also known as items) and cargo (usually referred to as wares). Cargo is in your ship, while inventory is on you. Inventory is listed in the SHIFT+I menu under player information. It moves with you when you go (or later teleport!) from ship to ship. Cargo is listed in ship storage and can be seen in the ship info menu (Shift+Enter for your current ship or INFO option in the map).

Trade and Combat ships have CONTAINER class storage, which covers all tradeable goods that are manufactured. Mining ships can have either LIQUID *or* SOLID storage, which covers all materials that can be harvested from space. The Tides of Avarice DLC also introduces a 4th type of storage CONDENSATE, which is exclusively used for protection. Trading with ship storage items happens with the TRADE menu when docking, while trading with inventory happens in-person with the trader found on a platform (look out for the shop sign above the building).

Natural Resources

At the base of the Ware manufacturing chains are natural resources which have to be harvested and refined into useful products. Solar energy is converted directly into Energy Cells by Energy Cell Production modules while other Solid and Liquid resources need to be harvested by specialized Miner ships. Liquid resources are collected from flying in nebulae while solids require asteroids to be broken up and the fragments collected. The abundance of solar energy in a sector can be seen under the entry for the sector in the Galaxy category of the Encyclopedia.

- **Energy Resources** (from suns): Energy Cells produced by Solar Power Plants
- **Liquid Resources** (from nebulae): Helium, Hydrogen and Methane (also known as gases)
- **Solid Resources** (from asteroids): Ice, Ore, Nividium and Silicon (also known as minerals)

Trading

Price Development

The production and exchange of wares is key to any healthy economy and the X-Universe is no different. Despite fierce competition from NPC traders there are always gaps in the market for the player to fill and line their pocket with credits in the process whether it is using a small courier or a huge manufacturing complex.

Ware prices vary a lot depending on the quantity of the ware the station has in its reserves. For reference menus often show the average price of a ware to give a trader an idea of how good a price is.

Gaining Info About Trade Offers

Trade Offers describe what wares a station, or it's Build Storage Module currently wish to buy or sell. Once Trade Offers are known for a station, they will begin to become out of date over time if whatever granted knowledge of them stops occurring. If the player ship has **Trade Computer Extension software**, it postpones the time before knowledge of Trade Offers begins to deteriorate.

Ways to gain trade offers from stations:

- When the player ship, or other owned ships, are near them
- When the station is within radar range of a player-owned Satellite or station
- If the player has gained sufficient rank and cash to purchase a Faction's Trade Subscription (usually 10million Cr for large factions and around 1million Cr for minor factions)

Scanning station modules will reveal info on what wares it uses and creates.

Trade offers will appear in the map as:

Number of stations in zoomed region

Wares bought by the station

9 Objects

Bought Wares

Medical Supplies	2 hexagons	89 Cr
Nostrop Oil	1 hexagon	47 Cr
Graphene	3 hexagons	233 Cr

Sold Wares

Antimatter Cells	3 hexagons	121 Cr
Medical Supplies	2 hexagons	49 Cr
Advanced Composites	4 hexagons	494 Cr

Wares sold by the station

Trade price

Trade quantity. Number of hexagons relates to suitable ship size (S/M/L respectively).

How To Buy And Sell Items - Station Trader

Items are often found in space as loot (dropped by other ships), or in lockboxes and other storages. Some items can be useful in crafting special upgrades or useful items like the EMP bombs used in a spacesuit. Most however can be sold at a good profit. When on station platforms, the player can travel to the Trader's Corner and interact with the trader behind the counter and ask for them to **"Show me your wares"**, opening the trade menu for items from the personal inventory. Use the sliders to buy or sell items and then click the Confirm button to complete the transaction.

How to Buy and Sell Wares - Ship Trading

When in the pilot seat of the player ship, the Ship Interactions menu will have the Trade option in the middle allowing the ship to trade with the station currently docked at. The trade menu works similar to the item trader menus, except the ship and station will trade wares from their storage with the type of wares able to be exchanged being limited by the storage type. Other player assets can be told to remotely trade by left clicking them in the Object List or Property Owned menu and then right clicking a target station and selecting **Trade With** to either trade with the station or its Build Storage (only present on expanding stations). Alternatively, after selecting a player owned ship the wares shown by the filter can be right clicked to open a trade menu to order the ship to buy/sell the wares for the best price within the viewed area of space. Wares on stations will be automatically sold to interested NPC traders by the manager or by player owned ships assigned to act as a subordinate for the station.

How To Transfer Wares Between Player Owned Ships - Ware Exchange

There will be times when it is preferable for wares or consumables to be on a different player owned ship or station. This can be to free up cargo space for other purposes, stock up a reserve ship for exploration, meet mission requirements or to keep fleets supplied. To transfer wares between ships or stations requires one of the assets to have Cargo Drones before left clicking the asset with the ware to transfer in the Object List or Property Owned menu and then right click a target asset in Map and select the **Transfer Wares With** action to open a trade menu allowing wares to be transferred between the two ships up to their respective capacities for the ware.

Auto Trading and Auto Mining

Player owned ships that have captains with enough skill stars can be set to automatically find profitable transactions or to mine resources and sell them at nearby NPC stations.

The **AutoTrade** and **AutoMine** behaviors are set as the Default Behavior under the Behavior menu (see below for info on mining). As opposed to an order, a Behavior is a permanent assignment for a ship until revoked. For AutoTrade and AutoMine the player must specify a whitelist of wares to trade before adjusting the leash range for how far to look for stations to buy and sell at. The ships will then be fully automated allowing the player to divert attention to other tasks.

Mining

Introduction

Ships with **Solid** or **Liquid** storage types can harvest **asteroids** or **nebulae**, respectively. This generates resources (see above), which can be sold to NPC stations as a source of income that requires no operating costs. Alternatively, it can be fed into player-owned stations to act as the basis for manufacturing chains.

Resource Probes can be deployed at prospective mining sites to learn about the abundance of natural resources. In order to locate Solid natural resources, the player ship can use both Short and Long-range Scan Modes to help visually detect asteroids. Nebulae are represented as blue tiles, asteroid fields as red tiles and mixed collection sites as purple tiles on the Map. After use, Deployables like Resource Probes can be deactivated through the HUD menu, and collected by flying over them.

As of version 4.00 mining has been tweaked and here is an interpretation of what Bernd say in his stream for the release of 4.00 and Cradle of Humanity DLC.

Mining ships will only go to resource areas you have discovered. Yield from resource area with a resource probe will be compared to the average of the larger area it is in. If higher the mining ships will prefer that zone. If lower they will look for another spot to mine. This is important because the resources are not so plentiful anymore in 4.00.

Resource probes show two values for any resource detected. The left value is the current amount of resource, the right value in parenthesis is the maximum amount of resource possible at that location. *This was derived from in-game observation and need to be confirmed by Egosoft.*

Mining Turrets

- Used to break up **asteroids** into small, collectable mineral fragments (Sold cargo)
- **Turret Settings** are explained on the [Combat And Weapons](#) page
- Once in range, **Mining Turrets** automatically open fire on asteroids within line-of-sight

Mining ships Piloted By Captains

Small and Medium Mining Ships:

- These ships collect gases or minerals **like other items and wares in space** (on contact with the ship)

Large Mining Ships:

- These vessels collect gases or minerals through the use of specialised [collector drones](#)

Ordering Ships To Mine

All player-owned mining ships can be ordered to mine using the Mine order by right clicking a resource region on the map and selecting the **Mine** order before left clicking a resource to harvest from the list. They can then be ordered to sell their wares to stations. Player-owned mining ships that have captains with enough skill stars can be set to automatically mine resources and sell them at nearby NPC stations (see "Auto Trading and Auto Mining" section above).

Manual Asteroid Mining For Solid Resources

Mineral mining with Small and Medium ships:

- The Container Magnet (hold the O hotkey) can be used to speed up collection of mineral fragments.

Mineral mining with Large ships:

- At this time, only NPC-piloted large mining ships will deploy and use their drones to collect mineral fragments.
 - Handing over control of the ship to the Captain and ordering them to mine locally could work around this (unconfirmed).
 - Where the fragments are small enough, they may be collectable on ship contact like small/medium ships (unconfirmed).

Crystal mining:

- Some asteroids have surface spots that can be individually mined away to release various types of crystals.
- Depending on rarity, crystals can be quite valuable when sold to Item Traders (see "Items versus Wares" section above).
- As with mineral fragments, the Container Magnet can speed up collection.

Manual Nebula Mining For Liquid Resources

At this time, it is currently not possible to collect resources from nebulae while the player pilots the ship.