

HEALTH WARNINGS

IMPORTANT HEALTH WARNING: PHOTOSENSITIVE SEIZURES

A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in video games.

Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these "photosensitive epileptic seizures" while watching video games.

These seizures may have a variety of symptoms, including lightheadedness, altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.

Immediately stop playing and consult a doctor if you experience any of these symptoms. Parents should watch for or ask their children about the above symptoms, as children and teenagers are more likely than adults to experience these seizures. The risk of photosensitive epileptic seizures may be reduced by taking the following precautions:

- Sit farther from the screen
- Use a smaller screen
- Play in a well-lit room
- Do not play when you are drowsy or fatigued.

If you or any of your relatives have a history of seizures or epilepsy, consult a doctor before playing.

PRODUCT CARE

[If you have purchased the boxed copy]

Handle the game disc with care to prevent scratches or dirt on either side of the disc. Do not bend the disc or enlarge the centre hole.

Clean the disc with a soft cloth, such as lens cleaning cloth. Wipe lightly, moving in a radial pattern outward from the centre hole towards the edge. Never clean the disc with paint thinner, benzene, or other harsh chemicals.

Do not write or attach labels to either side of the disc.

Store the disc in the original case after playing. Do not store the disc in a hot or humid location.

The Elite: Dangerous game disk contains software for use on a personal computer. Please do not play the disc on an ordinary CD player, as this may damage the headphones or speakers.

The game disc may not be used for rental business.

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INSTALLATION

(If you have purchased the boxed copy)

MINIMUM HARDWARE SPECIFICATION

Please ensure your computer meets or exceeds the minimum requirements below:

- DirectX 11
- Quad Core CPU (4 x 2Ghz is a reasonable minimum)
- 6 GB System RAM (more is always better)
- 8 GB HDD (more is always better)
- DX 10 hardware GPU with 1 GB video ram
- Nvidia GTX 470
- ATI 7240HD (DirectX 11 functionality required)
- Internet connection

Supported Operating Systems:

- Windows 7/8/10 - 64-bit

Close all other applications before beginning the installation process. Insert the game disc into your DVD drive. If Autoplay is enabled, the installer should automatically load. When the installer has loaded click "Install" to begin installation.

If Autoplay is disabled, on your DVD drive double click "**EliteDangerousLauncherSetupDX.exe**" to launch the installer.

WARRANTY

Frontier Developments guarantees to the original purchaser of this computer software product that the DVD disc supplied with this product shall not show any defect in material and workmanship or default during normal usage for a period of 90 days from the invoiced date of purchase.

This warranty is limited to the original DVD supplied by Frontier and is not applicable to normal wear and tear or defect that has arisen through abuse, mistreatment or neglect.

Faulty products should be returned using the standard returns procedure outlined at the point of purchase on the Elite: Dangerous store:

<https://store.elitedangerous.com/cancellations-returns/>

Where a game key is required to access the game online it is the responsibility of the original purchaser to keep the game key secure.

Lost, stolen or damaged keys cannot be replaced.

NVIDIA SUPPORT

Elite: Dangerous takes advantage of NVIDIA's excellent GPUs to deliver a rich detailed visual experience with astonishing graphical clarity and performance allowing gamers to play Elite: Dangerous exactly the way it's meant to be played.



**THE WAY
IT'S MEANT
TO BE PLAYED™**

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WELCOME

ELITE: DANGEROUS

Thank you for purchasing Elite: Dangerous! We hope you enjoy the many adventures that await you in the game's ever-evolving galaxy.

Whether you're looking to engage in deadly ship-to-ship combat, discover majestic space-vistas, make your fortune trading, or just experience life as a starship pilot, Elite: Dangerous lets you blaze your own trail.

This quick reference guide will help you get started, but Elite: Dangerous is a big game, with lots of interesting features and systems. To get the most out of your experience, we strongly recommend that you take time to watch the tutorial videos.

You can access them by clicking on the "Training" button on the launcher, or by visiting: www.elitedangerous.com

Your ship is fuelled and ready for launch.

Good luck, Commander!

QUICK STARTER GUIDE V2.40

COCKPIT INTERFACE



COCKPIT INTERFACE

1. COMMS PANEL

Communications from other vessels and structures will be displayed here. You can use the comms panel to send messages and initiate a comms-link with other players.

2. INFO PANEL

Notification messages about the status of your ship, other vessels and criminal activity will be displayed here.

3. SIGNATURE BAR

This graphic represents how visible your ship is to other vessels in the vicinity. The more agitated the image is, the greater the distance your ship will appear on the sensors of other vessels.

4. FUEL GAUGES

Your fuel supplies are displayed here. Your ship's fuel is stored in two reservoirs. The segmented bar represents fuel capacity in your ship's main tank. This fuel is used to perform hyperspace jumps.

5. CHARACTERISTIC INDICATORS

These three indicators provide immediate feedback for common ship statuses.

When the mass lock indicator is lit your ship is close to a stellar body or large structure – you will not be able to engage super cruise or perform a hyperspace jump until you travel further away from the source of the mass lock.

When the landing gear indicator is lit your ship has deployed landing gear – your ship's top speed will be limited as a safety precaution.

When the cargo scoop indicator is lit your ship has deployed its cargo scoop – your ship's top speed will be limited as a safety precaution.

When you are wanted by the authorities in your current location a "wanted" indicator will appear here.

6. POWER DISTRIBUTOR

This graphic represents the currently available amount of energy in your ship's capacitors, and the ratio at which power is distributed to them from the vessel's power plant. This is represented by a number of "pips" underneath each bar. The more pips a bar has, the more quickly it is refilled.

There are three 'capacitors' within the power distribution system, and you can choose which sub-systems to prioritise:

SYS: This displays how much energy is available to recharge shields and power defensive modules. In addition, the more pips assigned, the more resistant shields are to attack.

ENG: This displays how much energy is available to initiate emergency thrust (boost). In addition, the more pips assigned, the more manoeuvrable and fast the ship becomes.

WEP: This displays how much energy is available to cool weapon systems.

7. SHIP SCHEMATIC

This graphic displays a schematic of your ship. When your ship is attacked an attack marker will briefly display indicating the location of the hit.

Your ship's current shield strength is represented by three concentric rings encircling the schematic. As shields weaken, the rings fade away.

When shields strength is reduced to zero, your shields dissipate and must reform after a brief delay. The concentric rings change to display a timer bar that fills up as your shields reform.

8. HULL INTEGRITY

Your ship's hull integrity is represented as a bar and a percentage value, displayed underneath the schematic. Your vessel will be destroyed if hull integrity is reduced to zero.

Hull integrity will not recharge, but needs to be repaired.

9. SPEED INDICATOR

This graphic displays a number of details about your ship's speed. The large segmented bar displays your current speed.

Directly to the right is your throttle bar. The pin on this bar represents your current throttle setting, and the size of the bar represents your throttle range, based on the number of "pips" allotted to the ENG capacitor, the size of your ship and the power of your engines.

To the right of the speed bar is a "sweet spot" indicator shown in blue. When your ship's speed is within this range it will have the best manoeuvrability and smallest turning circle.

10. SCANNER

This displays the volume of space around your ship, which is represented as the small triangle at the centre of the disc.

The scanner detects contacts based on their heat signatures – the stronger the signature, the further away it can be detected. Contacts that your ship's sensors have detected display as markers on the disc; a contact to your right will appear to the right of the disc above the triangle representing your ship is in front of you, a contact in front will appear on the front part of the disc. A triangular area is shown on the disc in front of your ship – this indicates where contacts should be in view. If a contact is above the disc then a line is dropped from the contact to the disc – showing how high it is above the disc. Similarly if it is below the disc, a line will go up to the disc.

The appearance and colour of a contact marker contains a flickering marker indicates that the contact has such a weak signature that it is not properly resolved. Unresolved contacts cannot be targeted, and there is not yet any further information available. To resolve a contact, fly towards it.

A square contact indicates that its weapon hard points are retracted, while a triangular contact indicates that its weapon hard points are deployed.

A hollow marker indicates that the contact is a human commander, a fellow member of the Pilots Federation, while a solid colour marker indicates it is not. Large asteroids are shown as a simple outline.

- Hostile contacts are coloured red.
- Neutral contacts are coloured orange.
- Allied contacts are coloured green.
- Contacts representing structures and anomalies are coloured white.
- A contact that flashes white signifies that it is currently attacking your vessel.

11. SENSOR SCALE

This indicator represents the scale of the sensor disc. When the marker is to the far left, the scale of the sensor is at its smallest. When the marker is to the far right, the scale of the sensor is at its maximum. A small sensor scale is useful when contacts are very close. A large sensor scale is useful when contacts are very far away.

12. INTERNAL HEAT LEVEL

This indicator displays your ship's current internal heat as a vertical bar and a percentage value. As your power plant consumes fuel to operate ship systems it generates heat. Some ship functions, such as engaging the Frame Shift Drive, generate additional heat.

If your ship's heat level rises above 100% your ship will be at risk suffering damage and systems may shut down until the ship's temperature is reduced.

13. NAV-COMPASS

This instrument displays a targeted object's position relative to your ship's facing. The moving dot represents the object, the closer it is to the centre of the circle, the closer it is to your ship's facing. When the dot is hollow, the object is behind your ship.

The Nav-compass appears under specific criteria, and points towards:

- A targeted hyperspace destination
- A targeted stellar body within a system
- An allotted docking bay pad
- An escape vector when attempting to super cruise very close to a stellar body or escape from the pull of an interdiction device.

14. TARGET SCHEMATIC

This graphic displays a schematic of the structure or vessel you are currently targeting. Where applicable the schematic will display any shields of the target as concentric rings, and their change state.

15. TARGET HULL INTEGRITY

When you target a vessel that can be fully scanned, its hull integrity will be displayed here as a bar and a percentage value.

16. TARGET INFORMATION PANEL

This multi-function panel displays various information depending on what (if anything) you have targeted.

NOTHING TARGETED:

Your current location name is displayed, along with the controlling faction (if one is present), its government type and the main commodity market type present in the system.

SOMETHING TARGETED:

The structure/ship/Commander's name is displayed, along with their Pilot's Federation combat rating and criminal status in this location. The location name and controlling faction are also displayed. If a subsystem has been targeted, its structural integrity is also displayed here.

FOCUS MODE

Your vessel has a Focus Mode that allows you to access more detailed information from secondary cockpit panels. To access this mode:

Hold “**UI Focus**” (by default this command is bound to “**LSHIFT**” when using mouse and keyboard).

When holding **UI Focus** you will note that your view pulls back slightly, signifying that you are now in Focus Mode.

While in **Focus Mode** you can navigate to three panels:

SHIP PANEL:

Press “**UI Panel Right**” (by default bound to “**D**” when using mouse and keyboard) while in Focus Mode, then release all controls.

TARGET PANEL:

Press “**UI Panel Left**” (by default bound to “**A**” when using mouse and keyboard) while in Focus Mode, then release all controls.

COMMS PANEL:

Press “**UI Panel Up**” (by default bound to “**W**” when using mouse and keyboard) while in Focus Mode, then release all controls.

When using a Focus Mode Panel, you will be presented with a series of tabbed screens. To move between tabbed screens, use “**Next Panel Tab**” (by default bound to “**E**” when using mouse and keyboard) and “**Previous Panel Tab**” (by default bound to “**Q**” when using mouse and keyboard).

Some screens feature a cursor. To control the cursor, use **UI Panel Up**, **UI Panel Down**, **UI Panel Left** and **UI Panel Right** (these are bound to W, A, S, D by default when using mouse and keyboard).

To make a selection, use **UI Panel Select** (by default bound to “**SPACE**” when using mouse and keyboard).

To exit Focus Mode from any one of these panels, simply tap “**UI Focus**”.

SHIP PANEL

There are five tabbed screens on the ship panel:

STATUS:

Here you can view many personal statistics: your current credit balance, and value of your ship, your Pilot’s Federation ranks, major and minor faction reputations, outstanding fines and bounties in the system and more.

MODULES:

Here you can view all of the modules fitted in your ship. You can toggle modules on/off and set their power draw priority. Modules with lower power draw priority are turned off first in the event of power plant malfunctions that reduce output.

FIRE GROUPS:

A fire group is a number of systems that trigger when one of the fire buttons is pressed. For example you might want all of your lasers to fire on a single trigger, but your missiles to be on a different trigger. Here you can assign any modules with an active ability (including weapons and scanners) to a fire group. You can assign as many modules as you desire to a fire group’s primary or secondary fire button. You might have a different fire group for different circumstances – eg one for combat, another for exploration.

CARGO:

Here you can see any cargo that your ship is carrying. You can jettison cargo by selecting it.

FUNCTIONS:

Your ship has many additional functions that you can access here.

TARGET PANEL

There are five tabbed screens on the target panel:

NAVIGATION:

Here you can view and target stellar bodies in the system, as well as nearby systems within hyperspace jump range. You can also reach the galaxy map and system map from this screen

TRANSACTIONS:

here you can view all contracts you have accepted. You can select them to view further details. Any outstanding fines you have are also displayed here.

CONTACTS:

Here you can see all contacts that your ship's sensors have detected. You can select a contact to target it. If you have scanned a ship, additional details may also be present.

If you select a starport or outpost, you will be presented with additional options, including the ability to request docking.

SUB TARGETS

This screen is only available when you have selected a ship. Once you have scanned a ship, its subsystems are displayed here. You can select a subsystem to target it specifically.

CARGO:

Once you have acquired a Cargo Scanner the contents of any ship you have scanned will appear here.

COMMS PANEL

Selecting the Comms panel displays all communications received and summons a contacts list next to it:

You can navigate to the comms panel to scroll through your comms message history.

You can navigate down to the comms chat box. Doing so enables the keyboard for typing a message only. When you press "ENTER" the message will be transmitted to whatever ship you have currently targeted.

- You can quickly send a message to a targeted ship by pressing "Quick comms" [by default bound to "ENTER" when using mouse and keyboard]. This will directly summon the comms chat box and enable the keyboard for typing.

You can navigate to the contact list and select a contact you will be presented with additional options if you have selected a human player:

- Request a comms chat
- Refuse a comms chat
- Accept a comms chat
- Report player
- Block player [this option prevents you receiving messages from the player and reduces the chance of meeting them during the game].

PROCEDURES

There are a number of procedures you will need to accustom yourself with in order to safely progress your career as a pilot.

Take the time to familiarize yourself with the following guidelines:

TARGETING AND SCANNING

Your ship has a passive, 360 degree sensor that can detect ship and structure signatures, as described in the last section. However, this passive scan will only reveal the basic ship type.

To learn more about a contact, you will need to target it, either by selecting it from the "Contacts" screen in the "Target Panel" or by turning your ship to face the contact and using the "Target Ahead" command (by default bound to "T" when using mouse and keyboard).

Targeting a ship or structure and looking at it allows your sensors to perform a basic scan. The basic scan takes time to complete, during which time you must keep facing the target.

As a basic scan completes, you will learn the following details:

- Ship/Commander Name
- Shield and Hull Strength
- Faction Membership (displayed on the "Contacts" screen in the "Target Panel")
- Criminal Status in the current location.

It is very important to perform a basic scan before you attack! It is a crime to attack without first ascertaining the criminal status of a target.

Note that your ship's sensors rely on detecting the heat/EM signatures of ships and structures, but these signatures are dynamic: a ship that reduces its power draw by turning off modules, or rigs for silent running (closing off external radiators) will have a reduced signature, forcing ships to get closer before they can detect it, while a vessel that maxes out its power plant will increase its signature and be visible from further away.

WEAPONS AND FIRE GROUPS

Your ship is fitted with a fire group system that is used for weapons, advanced scanners and more.

Each fire group you create can have your ship's primary and secondary fire button (by default "Left Mouse Button" and "Right Mouse Button" when using mouse and keyboard) activate a different set of weapons and modules.

You can cycle between fire groups using the "Cycle Next Fire Group" command (by default bound to "N" when using mouse and keyboard)

Weapons, and some other modules, are fitted to retractable hard points on your ship. Before you can fire these modules, you will need to deploy your ship's hard points by using the "Deploy Hardpoints" command (by default bound to "U" when using mouse and keyboard).

Note that deploying hard points is seen as an aggressive activity by some pilots, and will be shown on their scanners. They will also get a warning message if they are nearby. You can retract your hard points by using the "Deploy Hardpoints" a second time.

TRAVELLING

There are three elements to a journey:

- Standard Space Flight: you fly under standard drive power, undocking from your current berth at the start and docking at your destination. Weapons can only be deployed during normal space flight.
- Hyperspace Jump: you charge up and activate your ship's Frame Shift-Drive to make an almost instantaneous hop between systems, often many light years apart.
- Super Cruise: The colloquial name for travelling in a single system using the Frame Shift Drive, often at superluminal speeds.

It is strongly advised that you complete your Pilot's training to get a feel for docking, undocking and travelling.

EXAMPLE JOURNEY SEQUENCE

The following sequence should be used as a reference for a system-to-system journey:

1. Exit from starport services and select "Launch".
2. Fly clear of the starport/outpost's mass-lock radius, retracting landing gear.
3. Use the Galaxy Map or the "Navigation" screen on the "Target Panel" to select a destination target.
4. Align your ship with the destination target using the nav compass and retract hard points.
5. Engage the Frame Shift Drive by using the "Enable Frame Shift Drive" command [by default bound to "J" when using keyboard and mouse], and throttle up to maximum speed.
6. Your ship will perform a hyperspace jump and you will arrive in the new system near its primary star, in super cruise.
7. Use the System Map or "Navigation" screen on the "Target Panel" to select a destination target in the current system.
8. Fly in super cruise towards the target and exit super cruise when within safe drop-out range, within the safe speed limit and aligned to the destination.
9. Fly towards the starport/outpost until you are within traffic control distance (7KM).
10. Use the "Contacts" screen on the Target Panel to select the starport/outpost and request docking.
11. Once docking permission has been approved, fly to your allotted berth, using the Nav-compass and deploy landing gear.
12. Correctly align your ship and alight gently on the pad to successfully dock.

SUPER CRUISE

When travelling in super cruise there are some important changes to your ship's operation:

- You cannot stop.
- Your maximum speed is limited by the mass of nearby stellar bodies. The further away you travel from stellar bodies, the more your Frame Shift Drive can compress space, significantly increasing the relative speed you can achieve.
- If you get too close to a stellar body you will be forced out of super cruise, regardless of speed. Emergency drops will damage your ship.
- When you have a target destination in the system the Target Information Panel will show you required speed, distance and alignment required to safely exit super cruise.
- You can exit from super cruise by using the "Enable Frame Shift Drive"
- The sensor scale changes automatically depending on what you have targeted, and shows stellar bodies.
- You cannot deploy hard points.

GALAXY MAP

You can access the Galaxy Map from the "Navigation" screen in the Target Panel.

Your position in the galaxy is shown as a blue arrow above the system you are currently in.

Select a system using the mouse to gain additional options for it.

The side-bar panel has a number of tabs:

- **INFO:** displays basic information about the selected system.
- **NAVIGATION:** lets you search for specific system names and check routes to systems.
- **VIEW:** Lets you set filters to view different aspects of the galaxy, including factional control and trade routes.
- **OPTIONS:** Lets you configure what information is shown by default in the Galaxy Map.

SYSTEM MAP

You can access the System Map from the "Navigation" screen in the Target Panel, or from the Galaxy map as one of the system select options.

The System map displays the stellar bodies in the system, along with starports and outposts. Use the mouse to select a stellar body, starport or outpost to view information about it in the side-bar panel.

When nothing is selected, the side-bar panel displays which factions are present, their influence in the system, and which one is currently in control.

When a starport or outpost is selected, details of the faction controlling it are displayed, along with the market type, top imports, exports and prohibited commodities.

CRIME

Any crimes committed and reported within a jurisdiction will cause a bounty to be automatically assigned to you.

If a jurisdictional authority has assigned a bounty to you, your Characteristic Indicator will display "WANTED". Be warned, while within the jurisdictional boundary, any vessel is legally allowed to engage and destroy you, but responding in kind is illegal, unless the aggressor also has a bounty in the jurisdiction.

Caution is advised when travelling in war-zones and systems with no functioning authority (anarchies). In such regions of space no law is respected; vessels can engage each other with impunity; no bounties will be issued (though bounties can still be claimed for successful target destruction).

Some active conflict zones may have combat bonds available from the sides involved. Simply choose a faction in the "Functions" screen of the Ship Panel; you will be temporarily co-opted and able to earn rewards for the destruction of enemy vessels in the zone.

You are legally allowed to engage a ship if the Target Information Panel displays "WANTED". Should you destroy such a vessel, you will be awarded a bounty claim, which you can convert to credits at any starport controlled by the faction that issued the bounty.

You can look at the status tab of your ship's System Panel to see what bounties have been issued against you in your current system. If you can reach a starport or outpost, you can pay off (at a premium) these bounties and any fines you have accrued.

SECURE FEED AUTHENTICATED...DECRYPTING SECURE TRANSMISSION

SOURCE AUTHENTICATED...

Sue, Cripple & Sneer, Solicitors
Windrush Tower, Olympus Village, Mars, Sol System O/OSO4 OL1

SOURCE AUTHENTICATED...

Reference: JAS 161200/42
Date: 16.12.3300

PRIMARY TRANSMISSION BEGINS...

To whom it may concern,

It is our solemn duty to deliver to you a package left with us, from a benefactor who wishes to remain anonymous at this time. The package was placed in our care with instructions to be delivered in the event – and only in the event – of your successful membership of the Pilot's Federation.

We have been so notified of said acceptance, following your grading in the recruitment aptitude exams, and so are carrying out this transaction in the manner as specified by our client's wishes.

The package is two-fold. Encoded into this transmission is the first part: a secure code. Use this code to access a starship account, pre-configured with your credentials, including a fully paid, indefinite lease, and comprehensive insurance cover. The second part of the package is a credit transfer to your personal account, which I can confirm was successfully completed at the time this transmission was dispatched.

The attached message was also to be delivered to you upon receipt of the access code. We feel this matter has now been resolved to the satisfaction of all parties concerned. If you have any questions, do not hesitate to contact us. The normal fees of one thousand two hundred credits (1200 CR) per hour (plus Federal Service Tax) apply, plus a one off initial contact fee of five thousand credits (5000 CR).

Yours sincerely

J. Sneer

ATTACHMENT-01

You may be puzzled right now as to why you've just received this little windfall. Nothing wrong with that – I'd be worried if you weren't.

But now get ready for lesson number one. When a golden opportunity comes your way – and trust me, they're few and far between, my friend – reach out and grab it with both hands. Sometimes it's clever to ask questions, and sometimes it's not. This time it's not.

All you need to know is that my organisation has a very specific remit: to seek out those who have the potential to become real movers and shakers, those precious few with the talent to mould and shape the galaxy around them, to create change on a grand scale.

We find them, and then we test them. Consider this your test.

Take the ship. Take the money. No strings, no hidden clauses. Do with them what you will. Blaze your own trail.

Impress me, perhaps you'll learn more.

A Friend

PLAYERS GUIDE V2.40

LIVING MANUAL

This is a "Living Manual", meaning that it will update as the game updates, with new features coming online and tweaks are made to improve game play. You will also be notified of changes and updates to the game via website articles, launcher news and in-game news.

Changes will be entered into the following change log:

CHANGE LOG

- 22.12.2014, Initial Manual Release.
- 23.12.2014, Quick Starter Guide Added, Links for Contents/Numbers Added.
- 05.01.2015, Minor text amendments.
- 09.01.2015, Nvidia Support.
- 18.02.2015, Minor text amendments.
- 11.03.2015, Wings and Communication. [Players Guide]
- 28.07.2015, PowerPlay
- 08.12.2015, CQC.
- 22.12.2015, Horizons.
- 03.06.2016, Horizons 2.1 Update [The Engineers]
- 25.10.2016, Horizons 2.2 Update [The Guardians]
- 10.04.2017, Horizons 2.3 Update [The Commanders]
- 06.10.2017, Horizons 2.4 Update [The Return]

MAIN MENU



The main menu allows you to manage your game save, friends and groups, as well as set options. The main menu comprises of the following options

Training: Selecting this option will take you to a list of training exercises. These allow you to practice various game mechanics in safety, without fear of ruining your career.

Start: Selecting this option first takes you to a menu allowing you to choose how social you want this session to be.

You can choose to start the game in Open Play, where you have the chance to encounter all other Commanders playing the same way.

You can choose to start the game in a Private Group. To start in a private group you must previously have created one or been invited to one (managed in the Friends and Private Groups Menu).

You can choose to start the game Solo. You will never encounter other human Commanders, but the game simulation will still take into account all other players.

Friends and Private Groups: Selecting this option will allow you to create and manage your friends and private groups.

You can search for Commanders and send friend invites to them. Once they accept the invite you will become friends. You can always see when friends are online, and when they are, you can send text messages to them from in-game and the main menu interface.

You can search for private groups and request an invite from the group's owner. A private group is a filtered list of Commanders that are able to encounter each other when playing in the private group, without the chance of meeting any Commander not in the private group.

You can create your own private group and send invites to friends, or kick friends from the private group. You can unblock Commanders that you have blocked.

Report a Player: Selecting this option summons the report player submission.

Options: Selecting this option allows you to configure graphics, audio and controls.

You can also clear your Commander save here. Note that clearing a Commander save is irreversible.

Credits: Selecting this option allows you to view the credits for Elite: Dangerous.

Save and Exit: Selecting this option saves all current settings and Commander career activities from the play session, and exits the game back to your desktop.

CONDENSED FLIGHT MANUAL

Please familiarise yourself with the following documentation before attempting your first solo flight. A spaceship in the hands of an untrained pilot constitutes a significant threat to themselves and others, and may result in loss of life and/or significant insurance costs.

It is recommended that you read the following documents in the order presented, as later entries may reference information detailed in earlier sections.

In addition, this documentation offers the bare minimum of advice to get your flight career started. There are additional subtleties you will discover by gaining experience behind the stick.

It is strongly suggested that you watch the starting pilot's tutorial videos, accessible from the software launcher, and utilise the training scenarios, accessible from the main menu interface.

INTERFACE

Your vessel is fitted with the standardized Pilot's Interface for ease of use and acclimation between different ships.

BASIC COCKPIT ELEMENTS

Each element of the Pilot's Interface is designed to give distinct feedback. The following is a list of elements:



1 Comms Panel: Communications from other vessels and structures will be displayed here. You can use the comms panel to interact with other Commanders. Depending on the status of the message source, different colours are used:

- Red: Authority vessels and structure
- Orange: Unaffiliated Pilots
- Yellow: Direct transmissions
- Cyan: Friends and wingmen
- White: Game system messages

Where possible, pay attention to comms messages that you receive; they may contain useful information.

2 Info Panel: Notification messages about the status of your ship, other vessels and criminal activity will be displayed here.

Some notifications are classed as critical; these will initially display as a large holographic element front and centre, before transitioning to the Info Panel. Pay special attention to these notifications.

3 Signature Waveform: This graphic represents how visible your ship is to other vessels in the vicinity.

Your vessel's signature is composed of thermal and electro-magnetic emissions that can be detected by sensors. Depending on how your ship is being operated, these emissions may be stronger, allowing other vessels to detect your presence further away, or weaker, ensuring that ships must travel closer to your position before you are detected.

Your ship's emissions are represented as a signature waveform. The stronger your ship's emissions, the more agitated the waveform becomes. The weaker your ship's emissions, the calmer the waveform becomes. When you "rig for silent running" (see "Heat and Signature"), "SILENT" displays on your signature waveform.

4 Fuel Gauges: Your ship's fuel supplies are displayed here.

Your ship's fuel is stored in two reservoirs. The segmented bar represents fuel capacity in your ship's main tank. This fuel is used directly to perform hyperspace jumps, which require significant amounts of fuel per jump.

When you have a hyperspace destination targeted your main tank fuel gauge will highlight to show you how much of your current fuel capacity will be used by the jump.

The active reservoir capacity is represented by a thin bar that sits directly above the main tank display. The active reservoir is drained by your ship's power plant to run all of the systems in the ship. When the active reservoir is drained, it is automatically refilled from the main tank if possible.

Warning! Remember to refuel appropriately. Should your main tank and active reservoir become empty, your ship's power plant will be unable to provide power for life support functionality.

5 Characteristic Indicators: These three indicators provide immediate feedback for common ship statuses.

Mass lock indicator: when lit, your ship is close to a stellar body or large structure – you will not be able to engage super cruise or perform a hyperspace jump until you travel further away from the source of the mass lock.

Landing gear indicator: when lit, your ship has deployed landing gear – your ship's top speed will be limited as a safety precaution. You will not be able successfully dock unless your landing gear is deployed.

Cargo scoop indicator: when lit your ship has deployed its cargo scoop – your ship's top speed will be limited as a safety precaution. You will not be able to collect cargo in space unless your cargo scoop is deployed.

When you are wanted by the authorities in your current location a "WANTED" indicator will appear here.

6 Power Distributor: This element represents the currently available amount of energy in three specialised capacitors, displayed as energy bars. These capacitors are used to power specialised functions.

You can choose to prioritise the refilling of these capacitors. The current ratio of power distribution is displayed as a number of "pips" underneath each energy bar. The more pips an energy bar has, the more quickly the capacitor is refilled.

- **SYS:** This displays how much energy is available to recharge shields and power defensive modules. In addition, the more pips assigned, the more resistant shields are to attack.
- **ENG:** This displays how much energy is available to initiate emergency thrust (boost). In addition, the more pips assigned, the more manoeuvrable and fast the ship becomes.
- **WEP:** This displays how much energy is available to cool weapon systems. Should this bar deplete your weapons will automatically shut off until the capacitor begins to replenish.

7 Ship Schematic: This element displays a schematic of your ship. When your ship is attacked, an attack marker will briefly display indicating the location of the hit. The colour of the marker indicates whether the attack was absorbed by your ship's shields or whether your ship's hull integrity was damaged.

- Cyan: the hit was absorbed by your shields
- Orange: your ship's hull was damaged by the hit

Your ship's current shield strength is represented by three concentric rings encircling the schematic. As your ship's shield weakens the rings fade away. As your shield recharges the rings fade back into being.

When your ship's shield strength is reduced to zero, the shield dissipates. There is a short delay while the shield generator resets. The concentric rings change to display a timer bar that fills up during this time. Once your shield generator resets your ship's shield will reform at 50% strength.

Note, your shield generator will not be able to reset and reform if your SYS capacitor is empty.

8 Hull Integrity: Your ship's hull integrity is represented as a bar and a percentage value, displayed underneath the schematic. Your vessel will be destroyed if hull integrity is reduced to zero. Collisions and weapon hits will reduce your ship's hull integrity if your vessel has no active shield.

9 Speed Indicator: This graphic displays a number of details about your ship's speed. The large segmented bar displays your current speed.

Directly to the right is your throttle bar. The pin on this bar represents your current throttle setting, and the size of the bar represents your throttle range, based on the number of "pips" allotted to the ENG capacitor. The more pips assigned to your ship's ENG capacitor, the greater top speed your vessel will be able to achieve.

To the left of the speed bar is a "sweet spot" indicator. When your ship's speed is within this range it will have maximum manoeuvrability.

10 Sensors: This displays an area of space around your ship, which is represented as a triangle at the centre of a disc.

Contacts that your ship's sensors have detected display as markers on the disc; a contact that sits on the disc above the triangle representing your ship is in front of you, a contact to the left of the triangle is to the left of your vessel and so on.

A contact's height is represented by a vertical line that connects it to the disc. The length of the line describes how far above or below you the contact is; a contact sitting on a tall vertical line is high above your ship, a contact hanging from a small vertical line is slightly below your ship etc.

The appearance and colour of a contact marker contains information:

A flickering marker indicates that the contact has such a weak signature that it is not resolved. Unresolved contacts cannot be targeted. To resolve a contact, fly towards it.

A square contact indicates that its weapon hard points are retracted, while a triangle contact indicates that its weapon hard points are deployed.

A hollow marker indicates that the contact is a human commander, while a solid color marker indicates the contact is an AI commander.

Colour is used to indicate your relationship with the contact:

- Hostile contacts are coloured red.
- Neutral contacts are coloured orange.
- Allied contacts are coloured green.
- Wingmen contacts are coloured cyan.
- Wing hostile contacts are coloured purple.
- Contacts representing structures and anomalies are coloured white.
- A contact that flashes white signifies that it is currently attacking your vessel.

11 Sensor Scale: This graphic marker represents the scale of the sensor disc. When the marker is to the far left, the scale of the sensor is at its smallest. When the marker is to the far right, the scale of the sensor is at its maximum. A small sensor scale is useful when contacts are very close. A large sensor scale is useful when contacts are very far away.

12 Internal Heat Level: This graphic displays your ship's current internal heat as a segmented, vertical bar and a percentage value. As your power plant consumes fuel to operate ship systems it generates heat. Some ship functions, such as engaging the Frame Shift Drive, generate additional heat. When your ship's temperature rises into the middle segment your ship's modules will start to suffer damage. Should your ship's temperature rise into the top segment it will begin to lose hull integrity.

13 Nav-Compass: This graphic describes a targeted object's position relative to your ship's facing. The dot represents the object, the closer it is to the centre of the circle, the closer it is to your ship's facing. When the dot is hollow, the object is behind your ship.

The Nav-compass is summoned under specific criteria:

- A targeted hyperspace destination
- A targeted stellar body within a system
- An allotted docking bay pad
- An escape vector when attempting to super cruise very close to a stellar body

14 Target Schematic: This graphic displays a schematic of the structure or vessel you are currently targeting. Where applicable the schematic will display shields of the target as concentric rings.

15 Target Hull Integrity: When you target a vessel that can be damaged, its hull integrity will be displayed here as a bar and a percentage value.

16 Target Information Panel: This multi-function panel displays various information depending on what (if anything) you have targeted.

Nothing Targeted: Your current location name is displayed, along with the controlling faction (if one is present), its government type and the main commodity market type present in the system.

Something Targeted: initially the type of entity targeted is displayed. If you have completed a basic scan, additional information will be displayed:

- Ship/Commander Name
- Hull Health
- Shield Health
- Criminal Status for the current location (clean/wanted)
- If a subsystem has been targeted, its name and structural integrity is also displayed here

The name of your current location and local faction is still displayed.

FOCUS MODE

As well as the basic cockpit elements, the Pilot's interface also features Focus Mode.

Focus Mode allows you to access Focus Panels where you can view additional details and operate specific ship functions. There are three Focus Panels: the System Panel, Target Panel and Comms Panel.

The following commands are used during Focus Mode:

Binding Name	Default K&M	Default Gamepad
UI FOCUS	HOLD LSHIFT	X Button
UI FOCUS/BACK	LSHIFT	B Button
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL LEFT	A	D-Pad Left
UI PANEL RIGHT	D	D-pad Right
UI PANEL SELECT	SPACE	A Button
NEXT PANEL TAB	E	Right Bumper
PREVIOUS PANEL TAB	Q	Left Bumper

To activate Focus mode, press and hold **UI FOCUS**. Note that your view draws back slightly, to indicate that Focus Mode is active. At this point, if you decide not to use Focus Mode, simply release **UI FOCUS**.

While still holding **UI FOCUS**, tap one of the following commands:

- **UI PANEL RIGHT** to select the Systems Panel
- **UI PANEL LEFT** to select the Target Panel
- **UI PANEL UP** to select the Comms Panel

Then release **UI FOCUS** to focus on the selected panel.

SYSTEM PANEL

The Systems Panel has five tabs that detail information and options about your career and ship. You can cycle through the tabs using **NEXT PANEL TAB** and **PREVIOUS PANEL TAB**.



STATUS

This tab shows you various statistics about your career. Use **UI PANEL LEFT** and **UI PANEL RIGHT** to cycle through subsets of useful data

MODULES TAB

- On/Off check box
- Module Name
- Fixed, Gimbal or Turret mount, described as icons, if the module is a hardpoint weapon
- Effectiveness Rating, described as a letter, where "A" is the most effective
- Size, described as a number, where bigger numbers represent larger modules
- Capacitor used to power active functions of the module, if any
- Power draw from the ships power plant
- Power Priority, described as a number
- Health

Use **UI PANEL UP** and **UI PANEL DOWN** to highlight a module. Use **UI PANEL LEFT** and **UI PANEL RIGHT** on a highlighted module to increase/decrease its power priority. Use **UI PANEL SELECT** to toggle the module on/off. Underneath the list is a power Output bar, representing the available draw from your ship's power plant and a power Usage bar, representing the combined draw of all active modules, divided up into power priority.

Power priority is used to determine which modules are automatically turned off should your available power draw be reduced (for example if you fit a smaller power plant, or suffer a power plant malfunction).

When the Output bar drops below a power priority segment in the Usage bar, ALL modules of that power priority will be turned off until available power is restored.

FIRE GROUPS TAB

This tab allows you to configure which weapons will fire when you use your primary and secondary attacks. It allows you to set up groups of weapons and equipment to fire simultaneously. These groups are called fire groups.

The tab is split into two sections. The left-hand section lists all modules fitted that can be activated by using a primary or secondary attack. The modules are grouped according to type.

The right-hand section shows you current fire groups as columns. Each fire group is assigned a number. Below each fire group are entries for each module. Each entry will display one of three things:

- 1: The module will activate when this fire group is active and you use the primary fire command
- 2: The module will activate when this fire group is active and you use the secondary fire command
- Empty: This module cannot be used by either fire command when this fire group is active

Use **UI PANEL UP** and **UI PANEL DOWN** to highlight a module. Then use **UI PANEL LEFT** and **UI PANEL RIGHT** to highlight a fire group.

With a fire group highlighted, use **UI PANEL SELECT** to cycle through the three options (1, 2, empty) to assign the module to primary, secondary fire or to remove the module from the fire group.

A fire group will be removed if no modules are assigned to it. When you make a change to the rightmost fire group a new fire group will be created. You can create up to 8 fire groups.

CARGO TAB

This tab is split into two sections.

The right hand section displays a manifest for all cargo currently in your ship's hold.

Each type of cargo will have its own entry, displaying its category icon, name and amount. If the cargo is stolen or mission critical it will be noted here.

Use **UI PANEL UP**, **UI PANEL DOWN**, **UI PANEL LEFT** and **UI PANEL RIGHT** to highlight a cargo type, and use **UI PANEL SELECT** to summon the jettison menu.

In the jettison menu, use **UI PANEL UP** and **UI PANEL DOWN** to select whether to jettison the cargo while still retaining ownership, or abandon it, jettisoning the cargo with no restrictions on who else can legally collect it.

Use **UI PANEL LEFT** and **UI PANEL RIGHT** to set the amount of the cargo you want to jettison, and use **UI PANEL SELECT** to execute the operation.

Use **UI FOCUS/BACK** to dismiss the jettison menu.

The Left hand section displays your ship's refinery status, if fitted. The refinery is detailed in the "Mining" section, further down.

FUNCTIONS TAB

This tab allows you to execute a variety of different ship operations from a list. Use **UI PANEL UP** and **UI PANEL DOWN** to highlight the function you wish to use then use **UI PANEL SELECT** to execute the operation.

Where the operation has a slider bar, use **UI PANEL LEFT** and **UI PANEL RIGHT** with the operation selected to increase and decrease the bar.

The functions available are:

- Faction: used to select which side of a conflict zone you wish to temporarily join. Only available when in a conflict zone
- Landing Gear: Deploy/retract landing gear
- Cargo Scoop: Deploy/retract cargo scoop
- Silent Running: Turn silent running on/off
- Ship Lights: Turn ship headlights on/off
- Flight Assist: Disable/enable automatic flight assist
- Rotational Correction: Disable/enable starport docking bay rotation matching
- Preflight Checks: Disable/enable preflight checklist before launching
- Turret Weapon Mode: Cycle through turret fire modes, Fire At Will [attack all hostile vessels in range], Target Only [attack targeted hostile ship] and Fire Forward [work as a fixed bore weapon]
- Report Crimes Against Me: Disable/enable automatic crime reporting when attacked
- Interface Brightness: Dim/brighten the holographic Interface
- Gun Sight Mode: Cycle between Leading [targets show a lead indicator for projectile weapons] and Trailing [projectile gun sights move to represent where shots will land]
- Sensor Scale Type: Cycle between Linear [the scale of the sensor disc does not change from the centre to the edge] and Logarithmic [the scale increases from the centre to the edge of the disc]
- Reboot/Repair: Initiate a diagnostics test that temporarily shuts down your ship and cannibalizes healthy modules to bring modules at 0% health back on-line
- Self Destruct: Initiate self destruct, useful when your ship has become stranded due to module failure or fuel loss

TARGET PANEL

The Target Panel has five tabs that detail information and options about your environment. You can cycle through the tabs using **NEXT PANEL TAB** and **PREVIOUS PANEL TAB**.



NAVIGATION

The navigation tab displays your current location and the destination location locked into your navigation system, if any, along with the distance to it.

It also displays a list of known, nearby stellar bodies, points of interests and systems. Each location has an icon signifying what type location it is, and also shows the distance to it.

A blue arrow marker is displayed next to the location you are nearest to in the list. An orange arrow marker is displayed next to the location you have locked into your ship's navigation targeting computer.

The list is a hierarchy, with stars displayed first, by distance, then destinations that orbit the stars, then destinations that orbit those destinations and so on.

Use **UI PANEL UP**, **UI PANEL DOWN**, **UI PANEL LEFT** and **UI PANEL RIGHT** to highlight a destination. Use **PANEL SELECT** to summon the destination menu for a highlighted location.

This menu allows you to execute the following operations:

- Lock/Unlock Destination: Lock or unlock the destination into your ships navigation targeting computer
- Lock and Super Cruise: (if destination is in your system) As above, but your ship will automatically begin charging for super cruise
- Lock and Engage Hyperdrive: (if destination is a system) As above, but your ship will automatically begin charging for a hyperspace jump

This tab also has buttons to summon both the Galaxy Map and System Map. Use **UI PANEL UP**, **UI PANEL DOWN**, **UI PANEL LEFT** and **UI PANEL RIGHT** to highlight either entry then use **PANEL SELECT** to view the appropriate map.

TRANSACTIONS

This tab can display entries for a number of different events:

Contracts: Any contracts you have active will be listed as an entry on this tab. For each contract your immediate goal will be displayed, as well as the destination system and the contract's expiry timer.

Use **UI PANEL UP** and **UI PANEL DOWN** to highlight a contract then use **UI PANEL SELECT** to summon the contract's information panel. This panel displays the contract's details and also features a button to abandon the contract.

Claims: Any unclaimed bounties will be listed as an entry on this tab. Each claim will display the claim's worth and the system where the bounty was issued.

Fines: Any active fines will be listed as an entry on this tab. Each fine will display the total amount owed and the system in which the fines must be paid, along with an expiry timer, [after which the fine will be converted into a bounty against you].

If the expiry timer displays "dormant", it means that the authority that issued the fine believes you have been killed and have closed your file. Dormant fines will be reactivated should you come to the attention of the appropriate authority [if you are scanned by their authority vessels or detected committing a crime in their jurisdiction].

CONTACTS

This tab displays a list of all contacts your sensors have successfully resolved.

Use **UI PANEL UP** and **UI PANEL DOWN** to highlight a contact. A colour bar next to the contact name indicates any special relationship with you:

- Red Bar: The contact is hostile to you.
- Green Bar: The contact is allied with you.

Additional information is shown about selected contacts, including which faction it is affiliated with and the total value of all known bounties issued against it if you have also performed a basic scan.

Then use **UI PANEL SELECT** to set a highlighted contact it as your current target. Brackets will appear around the name of the targeted contact.

If the contact is a starport or outpost, using this command instead summons an interaction menu.

Options available on the menu are:

- Lock Target: Select the contact as your current target.
- Request Docking: select the contact as your current target and Issue a docking request. You should receive confirmation of the request momentarily.

SUB-TARGETS

This tab displays a list of sub-targets detected by a basic scan of your currently selected target. Each entry shows the name of the module, its current health, and whether it is currently powered.

Use **UI PANEL UP** and **UI PANEL DOWN** to highlight a module. Use **UI PANEL SELECT** to target the sub-system. Targeting a sub-system allows you to aim more precisely at it, increasing the chance of such attacks penetrating through and damaging it directly.

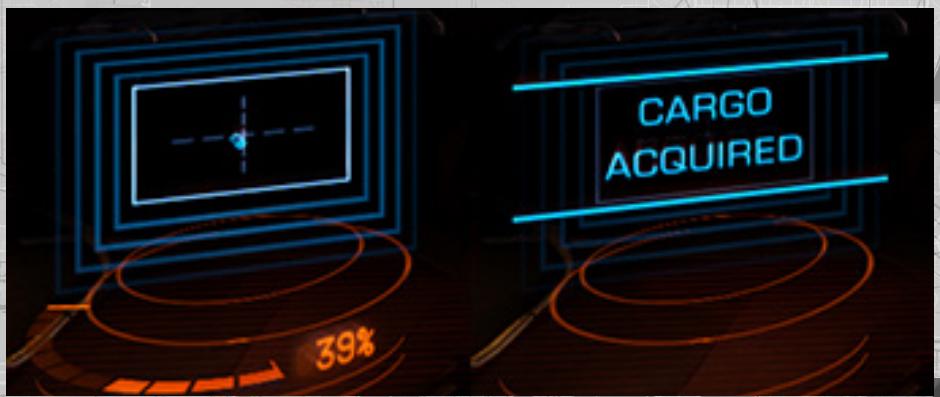
CARGO

This tab displays the cargo manifest of your currently selected target if you have performed a cargo scan (a specialised cargo scanner module is required).

STATUS	MODULES	FIRE GROUPS	CARGO	FUNCTIONS
REFINERY	NAME			QUANTITY
	 FOOD CARTRIDGES			3
	 BATTLE WEAPONS		STOLEN ◊	1

NO REFINERY MODULE INSTALLED

CAPACITY 4/4



BASIC FLIGHT

You will need to learn several different facets of ship control to become a successful pilot.

MANOEUVRES

The following commands are used to manoeuvre your ship:

Binding Name	Default K&M	Default Gamepad
YAW LEFT	A	A
YAW RIGHT	D	D
PITCH UP	MOUSE DOWN	L-STICK DOWN
PITCH DOWN	MOUSE UP	L-STICK UP
ROLL RIGHT	MOUSE RIGHT	L-STICK RIGHT
ROLL LEFT	MOUSE LEFT	L-STICK LEFT
THROTTLE UP	W	RIGHT BUMPER
THROTTLE DOWN	S	LEFT BUMPER
THRUST UP	R	R-STICK UP
THRUST DOWN	F	R-STICK DOWN
THRUST LEFT	Q	R-STICK LEFT
THRUST RIGHT	E	R-STICK RIGHT
ENGINE BOOST	TAB	B Button

Your ship's suite of thrusters allows you to move with six degrees of freedom:

Forward/Backward Motion: Use THROTTLE UP and THROTTLE DOWN to move your ship directly forward or backwards (much like a car accelerating forwards/in reverse). Note that it takes time for your ship to accelerate and decelerate. When travelling forwards, you will only begin to move backwards once all forward momentum has stopped, and vice versa. Note that your ship's retro thrusters, which provide backwards motion, are weaker than your main thrusters, which provide forward motion, resulting in a slower reverse flight acceleration/top reverse speed.

Up/Down Motion: Use THRUST UP and THRUST DOWN to move your ship straight upwards or downwards (much like the movement of an elevator). When moving upwards, you will only begin to move downwards once all upwards momentum has stopped, and vice versa.

Left/Right Motion: Use THRUST LEFT and THRUST RIGHT to move your ship directly to the left or right (much like a soccer goalkeeper sidestepping left and right along the goal line). When moving left, you will only begin to move right once all lateral momentum has stopped, and vice versa.

Note that in the three degrees of movement described above, your ship never changes its facing or orientation (called its attitude). The following movements available do just this:

Pitch Up/Down: Use PITCH UP and PITCH DOWN to rotate your ship in an upwards or downwards motion (much like the movement of your head when you look up and down).

Roll Left/Right: Use ROLL LEFT and ROLL RIGHT to rotate your ship clockwise or counter clock (much like the rotation of a steering wheel).

Yaw Left/Right: Use YAW LEFT and YAW RIGHT to rotate your ship around left or right (much like the rotation of a tank's turret). Note: Yaw rotation is weaker than pitch and roll.

Default gamepad bindings enable "YAW into ROLL on initial roll". This means that when you make very slight/short lived roll inputs they are translated into yaw movements.

Note that in the three degrees of movement described above, your ship does not change its position in space.

Sometimes you may need to accelerate extremely quickly, a likely scenario during combat. In such cases, use ENGINE BOOST to trigger an emergency firing of your thrusters. This burn takes a moment to engage and only lasts for a few seconds, but can accelerate your ship to speeds in excess of normal capabilities and increase manoeuvrability. Note that when the boost ends, your ship will slowly decelerate to within normal operating speeds.

Emergency thrust requires energy from your ENG capacitor (see Power Distributor section, below); insufficient ENG power will cause the emergency thrust to fail.

To fly expertly, you will need to use all of these movements in conjunction with each other. For beginner pilots, it's recommended that you acclimatise yourself with the basic principles of using throttle with pitch and roll:

- Throttle up to the speed you wish to travel at
- Roll so that your destination/target is roughly above the centre-point of your view
- Pitch up until the destination/target is roughly in the centre-point of your view
- Yaw to fine-tune your facing so that the destination/target is directly in the centre point of your view

FLIGHT ASSIST

The following commands are used to control Flight Assist:

Binding Name	Default K&M
--------------	-------------

DISABLE FLIGHT ASSIST

Default Gamepad

Z

Your ship is fitted with Flight Assist functionality. This software ensures that the ship's suite of thrusters fire automatically to provide counterthrust when needed.

You can disable Flight Assist using **DISABLE FLIGHT ASSIST**. While disabled, motion from any flight control input will continue even after the input stops, e.g. if you **PITCH UP**, your ship will continue to pitch up after you release the control. You need to apply the appropriate counterthrust manually, which would be in this case, **PITCH DOWN**.

Disabling Flight Assist can be useful as it allows you to change the orientation of your ship without affecting its velocity. In essence, you can flight in one direction while facing another. It is, however, more challenging.

To re-enable Flight Assist, use **DISABLE FLIGHT ASSIST** again.

SENSORS AND TARGETING

The following commands are used by your sensors and targeting computer:

Binding Name	Default K&M
--------------	-------------

TARGET AHEAD

Default Gamepad

T

Y Button

CYCLE NEXT SHIP

Default Gamepad

G

G

INCREASE SENSOR ZOOM

Default Gamepad

PAGE UP

Default Gamepad

PAGE UP

DECREASE SENSOR ZOOM

Default Gamepad

PAGE DOWN

Default Gamepad

PAGE DOWN

All ships are fitted with a sensor suite module that allows you to detect and identify ships and structures around you. The sensor module works by detecting thermal and EM emissions from ships and structures, matching these signatures against its library of entities.

The sensor system uses two forms of pilot feedback. The first is the sensor disc, situated centrally at the bottom of your cockpit's Pilot Interface.



This element describes a sphere of space around a central point – your ship, and the flat plane drawn is a “slice” of the sphere, parallel to your ship's horizontal plane. When your ship's sensors detect entities, they are represented as markers, placed on the sensor disc. The position of a marker relative to the central point describes the entity's location in space relative to your ship.

For example, a marker to the left of the central point represents an entity that is to the left of your space ship. If the marker sits above the flat plane, connected to it by a descending, vertical line, then the entity it represents is above your ship.

You can adjust the scale of your sensor disc using **INCREASE SENSOR ZOOM** and **DECREASE SENSOR ZOOM**. When contacts are very close to you, you might want to decrease your sensor zoom to increase the granularity of nearby contacts. When contacts are far, you might want to increase zoom.

As long as your sensor module is powered you have access to the following sensor operations:

Passive Scan: active at all times, your ship's passive scan automatically detects emissions in a three hundred and sixty degree radius and is able to reveal contacts of ships and structures around you.

When the emissions are very weak or very far away, the sensor system can only approximate the location of the emission source, and will not provide any information or targeting solutions. Such detections are called unresolved contacts – they appear as sensor disc markers that flicker and constantly change position.

When the emissions are strong enough, or close enough (this distance is determined by the rating of the sensor module versus the strength/distance of the emissions) the sensor system will pinpoint the position of the emissions source and reveal the type ship/structure.

Such detections are called resolved contacts, appearing as fixed markers on the sensor disc that can be locked into your ship's targeting computer.

Initiate Basic Scan: Your ship sensor module has narrow beam, active scan capability which lets you learn more details about a resolved contact.

To initiate a basic scan, you must lock the resolved contact into your ship's targeting computer. There are a number of different ways to do this.

Targeting: The first way to lock a resolved contact into your targeting computer is to target it directly. To do this you will need to manoeuvre your ship until the resolved contact marker is positioned directly in front of the sensor disc's central point, more or less sitting flat on the sensor disc's plane.

This will place the resolved contact directly in front of your ship. You will note that a segmented diamond element appears on your canopy HUD around the entity. Use **TARGET AHEAD** to lock the entity into your targeting computer.

Alternatively, you use the Pilots Interface Focus Mode to navigate to your Target Panel, view the Contacts Tab, and select the resolved contact directly from the list of resolved contacts present. Doing so will lock the resolved contact into your targeting computer.

Finally, you can automatically lock the resolved contact into your targeting computer by using **CYCLE NEXT SHIP**. Each time you use this command your ship's targeting computer will lock the next resolved contact present at your location.

You can only lock a single ship/structure/anomaly into your targeting computer at a time.

When you have a resolved contact locked into your targeting computer its sensor disc marker will become bracketed, allowing you to quickly locate it. A schematic of the target will also display on the Pilot's Interface and its type of entity will be displayed next to it.

Additionally, when you are facing a resolved contact that has been locked into your targeting computer your canopy HUD will display a marker around the entity itself. If the target is a ship, the canopy HUD marker will display three triangles around it. These triangles are three dimensional and rotate to show the ship's facing.

If the target is not a ship, the canopy HUD marker will display as brackets around the target. Next to the marker, the distance to the target is displayed, along with its known name or type.

Completing the Basic Scan: To complete the basic scan, simply keep facing a target. You will see "Scanning" displayed in the Pilot's Interface. Over the course of the next few seconds, additional details can be learnt about the target, including its name, hull and shield strength, and criminal status at this location. You will also reveal the target subsystems (if it has any). These can be viewed by using the Pilot's Interface Focus Mode, navigating to your Sub-Targets Tab in the Target Panel.

Completing a basic scan is very important. Not only do you learn additional details about a target, but, in the case of ships, you learn its criminal status, which will inform you whether you can legally attack the target without committing a crime.

Once you have completed a basic scan on a resolved contact you will retain all information gained while it stays at your location. Even if your sensors lose the emissions of the contact, should you reacquire it the results of the basic scan will be instantly reapplied.

Advanced Scan [Optional modules required]: Your ship can be fitted with a number of advanced scanner modules, which let you learn additional information about your current target that you would otherwise be unable to obtain.

For all intents and purposes, such scanners are treated as weapons which must be assigned to a fire group and "fired" at your target for a set length of time.

Advanced scanners are active and highly visible to a ship's sensors. You will be notified when you are the target of an advanced scan, though your sensor will not be able to determine the origin source.

DOCKING AND UNDOCKING

The following commands are used during Docking and Undocking:

Binding Name	Default K&M	Default Gamepad
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL SELECT	SPACE	A Button
LANDING GEAR	L	L

All pilots must be aware of and able to follow docking protocols which have been standardised across the known galaxy.

To dock, you will need to fulfil three criteria:

- You must not be under attack by the authorities
- You must be within 7.5KM of the starport or Outpost
- You must be granted docking permission

To request docking permission, get within seven and a half kilometres, then target the starport or outpost. When you have the starport or outpost targeted, use the Pilot's Interface Focus Mode to navigate to the Contacts Tab in the Target Panel.

Use **UI PANEL UP** and **UI PANEL DOWN** to highlight the starport or outpost. Use **UI PANEL SELECT** to summon the interaction panel. Use the same commands to highlight and select the Request Docking option.

You should receive audio and comms confirmation of the request. Assuming that the dock has free berths, you will receive permission to dock momentarily.

Once permission has been granted you will be assigned a docking pad and given a time window within which you must complete the docking process. Your allotted pad and time window is displayed directly above the sensor disc in the Pilot's Interface.

Because starports and outposts are massive structures, when you lock them into your targeting computer the nav-compass will become active, helping you to navigate to them.

DOCKING AT STARPORTS

Fly your vessel to the docking bay airlock. Coriolis starport schematics, displayed in the Pilot's Interface when you lock the starport into your targeting computer, show arrows on the faces of the starport that point to the airlock to help you locate it.



Once you have located the airlock, fly through it, taking care to match rotation and avoid collisions with the airlock walls and other vessels using the starport.

Inside the docking bar the starport will engage your ship's rotational assist.

After passing through the airlock and into the docking bay, locate and fly towards your allotted pad, which will be illuminated with a holographic descent path that also displays the pad number. Once in the airlock, your nav-compass will target your allotted pad, helping you to locate it.



Before attempting to dock, deploy your ship's landing gear using the LANDING GEAR command. You will not be able to dock unless your landing gear is deployed.

Note that when your landing gear is deployed, your flight characteristics change: your ship's top speed is reduced as a safety precaution.

You can also define landing gear override commands in Options > Controls from the Main Menu, allowing you to alter your control scheme to make landing easier, for example by swapping head-look commands for yaw.

Once you have flown close to your allotted pad the sensor disc in the Pilot's Interface is replaced by a docking assist element that shows your ship's attitude and position in relation to the pad.



Using this element, line up your ship centrally above the pad, parallel to it, with the schematic of your ship pointing away from you in the docking assist element. When you are in the correct position, the pad schematic will highlight blue.

Slowly lower your ship straight down onto the pad. When you are close enough, the pad's docking clamps will engage and secure your ship, completing the docking process.

DOCKING AT OUTPOSTS

Fly directly towards the outpost. Your nav-compass will activate and point directly towards your allotted pad. Note that due to their three dimensional nature, outpost docking pads might be placed on all faces of the superstructure.

Once you have visually located your pad, use the same process as docking at a starport.



DOCKING RULES

It is important to note that all ports have very strict rules and laws which you must obey if you wish to succeed as a pilot:

- Access Control: Do not wait in the airlock, or over a docking pad that is not allotted to you
- Weapon Control: Never fire your weapons inside a docking bay
- Time Control: Always complete your docking process within the allotted time window
- Loitering: Never enter a docking bay without docking permission

Failure to comply with these rules may result in fines, bounties and ship destruction.

Once you have successfully docked, the docking assist element is replaced by the starport service-link element. Use **UI PANEL UP** and **UI PANEL DOWN** to highlight the option you want, and then use **UI PANEL SELECT** to select it. The three options are:

- Starport Services: Select this to open up the starport services interface
- Enter Hangar/Return to Surface: Select this to transfer your ship into or out from an internal hanger. Some services require your ship to be transferred to an internal hangar
- Launch: Request permission to exit the starport or outpost

Undocking: The process for undocking is very simple. Once you select Launch from the starport service-link you will, after a short delay, be released from the docking clamps.



Note, ensure your throttle is at zero before undocking to avoid collisions upon clamp release.

If you are in a starport you will be allotted a time window within which you must exit the docking bay. Note that as you exit the airlock the starport's rotational assist will terminate; ensure you clear the airlock smoothly and briskly.

At any time you can turn on pre-flight checks by using the Pilot's Interface Focus Mode, navigating to the Functions Tab of the System Panel which features this toggle. When active, the pre-flight check requires you to input a series of commands before launch permission is granted.

The pre-flight check is a great way to safely recap your control method's various commands.

COMBAT

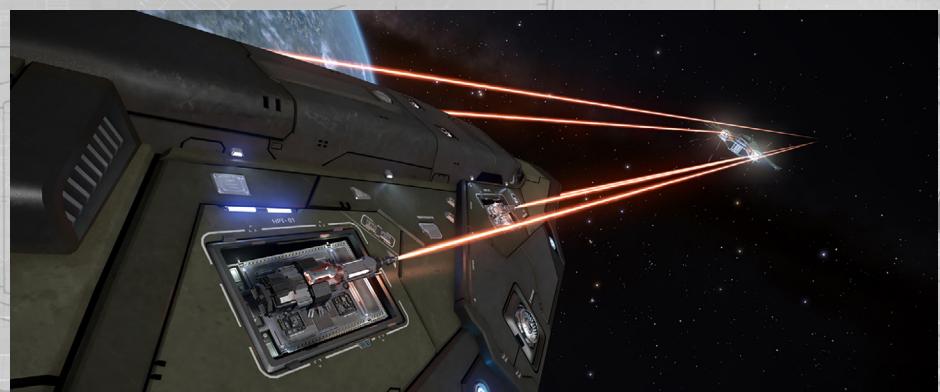
The following commands are used during combat:

Binding Name	Default K&M	Default Gamepad
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL LEFT	A	D-Pad Left
UI PANEL RIGHT	D	D-pad Right
UI PANEL SELECT	SPACE	A Button
DEPLOY HARDPOINTS	U	BACK Button
PRIMARY FIRE	MOUSE 1	R-TRIGGER
SECONDARY FIRE	MOUSE 2	L-TRIGGER
CYCLE NEXT FIRE GROUP	N	A Button

The galaxy is a potentially dangerous place. Every member of the Pilot's Federation must be able to understand and employ the basic principles of ship-to-ship combat.

HARDPOINTS AND UTILITY MOUNTS

Weapons modules are fitted exclusively to your ship's hardpoints. Ships have a differing number of hardpoints, of differing sizes.



All hardpoints are internal weapon bays that must be deployed before use. Use **DEPLOY HARDPOINTS** to deploy your ship's hardpoints.

Utility mounts are small external hardpoints that can be fitted with a number of non-weapon modules, such as anti-missile point defence turrets, heat sink launchers and chaff launchers.

Some modules fitted to utility mounts do not require hardpoints to be deployed, though they might still need to be assigned to a fire group.

FIRE GROUPS

Weapons must also be assigned to a fire group. A fire group is a collection of weapons/device modules that all activate at the same time when a fire command is received. Each fire group has access to a primary and secondary fire command, allowing for even more customisation. Use **PRIMARY FIRE** and **SECONDARY FIRE** to activate weapons assigned to those fire commands in the active fire group.

Ensure that your weapons are assigned to a fire group. Use the Pilot's Interface Focus Mode to navigate to the System Panel's Fire groups Tab.



In this tab, use **UI PANEL UP** and **UI PANEL DOWN** to highlight a weapon module. Then use **UI PANEL LEFT** and **UI PANEL RIGHT** to highlight a fire group.

With a fire group highlighted, use **UI PANEL SELECT** to cycle through the three options (1, 2, empty) to assign the module to primary, secondary fire or to remove the module from the fire group.

WEAPON BRACKETS

Weapon Bracket HUD: When you deploy your ship's hardpoints, note that the canopy HUD gains two large bracket elements. These brackets are labelled Primary and Secondary, followed by a number representing the currently active fire group.



Elements representing the weapons assigned to this fire group sit on the brackets, with weapons assigned to the primary fire command attached to the primary bracket and weapons assigned to the secondary fire command attached to the secondary bracket.

You can cycle through your fire groups at will using **CYCLE NEXT FIRE GROUP**, allowing you to employ many weapons using primary and secondary fire commands.

Each weapon element displays a number of pieces of information:

- Weapon/device name
- Mount type Icon (fixed/gimbal/turret)
- Ammo Count/Coolant Bar
- "Target out of Range" Warning (only when ship locked into targeting computer)

Some modules fixed to utility mounts do not need hardpoints to be deployed but can or must be assigned to a fire group. In such instances, the weapon brackets will be displayed even when hardpoints are not deployed.

SECONDARY BRACKETS

Some modules fixed to utility mounts or internally can be used without the need for deploying hardpoints or being assigned to a fire group – they merely need to be powered.

When such modules are fitted and powered, the canopy HUD displays smaller, secondary brackets with the associated modules present. This allows you to view important information about the module, such as charge time or ammunition at all times.

GUN SIGHT RETICULES



Gun Sight Reticules: when you deploy your ship's hardpoints, note that your canopy HUD gains gun sight reticules. Each type of weapon has its own reticule style, and they are designed to fit together when multiple types of weapon are in the same fire group.

As part of each gun sight reticule element there is small precision marker, representing accurately where the weapon shots will go.

When you have a resolved contact locked into your ship's targeting computer these precision markers move based on the distance to the target. This is because your weapons are calibrated to fire directly forwards, regardless of where they are placed on your ship, and although perspective makes it seem like all attacks travel to the centre of your view, in reality they do not.

On larger vessels, hardpoints can be spaced very far apart, so far that small ships might not be able to be hit by all weapons at once [very small ships can literally fly between the weapons on very large vessels]. The precision marker moves to show exactly where your weapon attacks will be at the point where they reach the distance of the target.

Gun sight reticules for projectile weapons feature an additional element. The canopy HUD element on the ship locked into your targeting computer gains a lead indicator. When firing projectile weapons, aim at the lead indicator as opposed to the target itself – this indicator shows the position of your projectile attacks at the time when they reach the distance of the target.

Some weapons require an additional precision lock before they can be activated. You must keep your aim on target while the precision lock is acquired. The gun sight reticule for these weapons indicates the progress of the precision lock, accompanied by an audible tone. When the lock is complete the indicator will freeze and the audible tone will become constant. A precision lock will fail if you lose track.

Some gun sight reticules will flash additional elements when their associated weapon successfully strikes the target. This extra feedback helps when using projectile weapons that have a travel time to target.

SUB-TARGETS

If you have targeted a sub system on a ship, the canopy HUD target element around the ship gains an addition – a small precision target placed directly over the location of the module, helping you to aim more accurately at it.

MOUNT TYPES

There are three different mount types that weapons use:

- Fixed: The weapon fires straight forward along its bore line
- Gimbal: The weapon has limited movement and is able to semi-autonomously track a ship locked into your ship's targeting computer
- Turret: The weapon has full rotational movement and can autonomously track and engage targets

Fixed-mount: These weapons are straightforward to use. Manoeuvre your ship so that the gun sight reticule – and especially the precision marker – are over the target (or, in the case of projectile weapons, over the lead indicator), then use the associated fire command to attack.

Gimbal-mounts: These weapons operate differently when a ship locked into your targeting computer is in front of your ship; the gimbal-mount will move autonomously towards the target. The point at which this auto-aim occurs is based on how strong your sensors are and how strong the emissions of the target are.

You are still required to use a fire command to execute the attacks.

When a gimbal-mount weapon auto-aims, you can see its precision marker move towards the target. If the precision marker moves outside of the gun sight reticule, it gains a small reticule of its own so you can still quickly identify the type of weapon.



Gimbal-mount weapons are very useful for slower ships that might otherwise have trouble keeping up with their target. However, their auto-aim is very imprecise, causing them to wander when attempting to track targets autonomously, making them ineffective at range or for sniping sub-targets. They also tend to be less powerful than their fixed counterparts.

Turret-mounts: These weapons operate differently from other weapon mounts. Turret-mounted weapons are completely autonomous, able to track targets and fire upon them without pilot input, as long as the target is within their fire arc.

Turrets can be set to three different modes of fire:

- Fire at Will: The turret will automatically engage all hostile resolved contacts
- Target Only: The turret will only engage the ship locked into your targeting computer
- Fire Forward: The turret aims directly forward and acts as a fixed weapon.

Turrets aim based on the same parameters as gimbal-mount weapons and, as such, suffer from the same deficiencies, only more pronounced. They tend to be weaker than all other weapons, and suffer the most extreme wandering.

Even so, they can be extremely effective at covering angles of attack that would otherwise be in your blind spot.

AUTO-AIM VULNERABILITIES

Because gimbal-mount and turret-mount weapons use a target's emissions to enable auto aim, they are vulnerable to enemies that can lower or confuse their emissions.

You will need to get closer to ships with lower emissions to gain the advantage of auto aim.

Ships fitted with chaff launchers can temporarily completely defeat auto aiming weapons. While a ship is under the effects of a chaff cloud, all auto aim weapons will suffer extreme wandering if the ship is locked into the targeting computer.

SHIELDS

Ships can be fitted with a shield generator. When powered, these generators form a field around the ship that absorbs attacks and converts them into harmless light. Each time a shield is struck, its field's bond is weakened.

Given time without attack, power is drawn from the ship to strengthen the bond. If enough successive hits are scored on a shield, it temporarily breaks. A broken shield causes the shield generator to reset.

Once this completes, the generator will begin to internally reform the shield. Once the shield bond reaches fifty percent of its maximum strength the shield is expanded to cover the ship once more, where given time and power, it will continue to recover until its bond is at maximum strength.

Shields are represented in the Pilot's Interface as concentric blue circles around a schematic. When a shield is broken, the concentric rings are replaced by a warning element that also counts up while the shield is internally reforming.



Shields are in general, more effective at absorbing kinetic-based attacks from projectiles and less able to resist thermal-based attacks from lasers.

SHIP DAMAGE



Once a ship's shield is broken (or if it has a destroyed or missing shield generator), attacks on target will strike the hull, causing damage that is permanent until the ship can be repaired.

Hull is represented on the Pilot's Interface as an orange bar and percentage value underneath a schematic.

A ship does not suffer any operational penalties for suffering hull damage, but should its hull integrity be reduced to zero it will break apart and be destroyed.

In general, a ship's hull is more able to resist thermal-based attacks from lasers and more susceptible to kinetic-based attacks from projectile weapons, being especially vulnerable to explosive attacks from missiles.

PENETRATING ATTACKS

Attacks that strike a ship's hull have a chance to penetrate through and damage internal modules.

For this to occur, the attack's flight path must intersect the location of the module on the ship. The chance of penetration varies – some weapons are much more effective at penetrating than others.

When an attack penetrates, some of its power is lost as it travels into the ship, resulting in less hull damage, but some of the damage is transferred directly to the module hit.

WEAPON AMMUNITION AND WEAPON COOLING

Some weapons require ammunition to fire. If so, the amount of ammunition available to them is displayed on the weapon element attached to the weapon bracket.



Once ammunition is depleted, the weapon will be unable to fire until you restock at a starport or outpost.

Some weapons that use ammunition use magazines. Magazines are automatically swapped when emptied, resulting in a delay as the empty magazine is replaced.

All weapons are connected to a closed cooling loop, separate from the ship's main cooling system. This cooling system draws energy from a specific capacitor to keep weapons operational. Weapons cannot activate if the capacitor is drained.

SHIP SYSTEMS

Your vessel features a number of systems that, as a pilot and Commander, you should have at least a basic working knowledge of. Experienced pilots know the limits of their vessel, and how to get the most out of it, operationally and when outfitting.

SHIP MODULES

Your ship is fitted with a number of modules that provide functionality. Some of these modules are mandatory; your ship would not be space-worthy if they were missing. Others are optional, increasing its capabilities beyond basic flight.

All modules have a class indicating their size, and a rating, indicating their effectiveness.

Class: This is rated from 1 to 8. Size 1 modules are the smallest, size 8 modules are the largest. Each ship has a number of module compartments of varying sizes which can be fitted with modules.

You can fit a module of a smaller class into a compartment.

In general, larger modules are heavier. It is important to take mass into account; the heavier a ship, the more strain is placed on its drives and frame shift drive, reducing their effectiveness.

Ratings: Modules are rated using an alphabet system, where "A" is most effective overall. Note that this rating is only a guide; some modules feature benefits that are not taken into account by the rating.



MANDATORY MODULES

The following modules must be fitted to a ship before it is considered space-worthy and allowed to leave port.

Power Plant: This module consumes fuel from your ship's fuel tank, converting it into energy that powers the rest of the ship's modules.

Critical damage to the power plant will cause a catastrophic failure, destroying the ship.

Life Support: This module ensures that the ship has a breathable atmosphere for the crew. It requires energy from the power plant to operate.

Critical damage to life support or a serious breach of the hull will trigger your personal Remlok emergency breather to deploy. You should seek an environment with a sustainable atmosphere immediately.

Power Distributor: This module draws energy from the power plant to fill three capacitors: SYS, ENG and WEP capacitors. These capacitors are used exclusively to power activation costs of specific operations.

Fuel Tank: This module stores ship fuel for use by the power plant. Should your ship run out of fuel, the power plant will fail and suffer catastrophic failure. Ensure that you regularly refuel your vessel.

Drives: This module consists of a suite of thrusters that propel your vessel through space. Drive modules require energy from the power plant to operate, and also drain the active reservoir directly during flight.

Critical damage to drives will cause your ship to lose all propulsion capabilities. In such cases you are advised to abandon and scuttle your ship using the self destruct override.

Sensors: This module provides basic scanning and communications functionality: passive and basic scans and docking link systems. Sensors require energy from the power plant.

Critical damage to your sensors will prevent you from detecting structures and ships and disable your ship's targeting computer.

Frame Shift Drive: This module allows your ship to effectively travel faster than light by compressing space around it.

The FSD requires energy from the power plant to operate and also draws fuel directly when activated. Fuel is drawn from the active reservoir during super cruise, and from the main tank when completing a hyperspace jump.

Critical damage to the frame shift drive will cause catastrophic failure, destroying the vessel completely.

OPTIONAL MODULES

There are many varied modules that can optionally be fitted to a ship to add or enhance its capabilities. The following is a list of common, optional modules:

Shield Generator: This module creates a protective field around a ship that absorbs incoming attacks that would otherwise cause serious damage. The shield generator requires energy from the power plant to become active and draws from your ship's SYS capacitor to recharge (see Power Distributor section, overleaf).

Heat Sink Launcher: This module allows you to purge all current ship heat into a heat sink which is then ejected from the vessel. Heat sink launchers require energy from the power plant to operate, and draw from your ship's SYS capacitor to initiate a purge.

Fuel Scoop: This module allows your ship to skim the outer reaches of a star, collecting fuel for your main fuel tank directly. It requires energy from the power plant to operate.

To use the fuel scoop, approach a star in super cruise and "skim" close to it, along its impact ring (the yellow circle that surrounds the star and signifies the minimum angle you must face from the star's centre to avoid collision course).

The closer you fly to the star's impact plane, the higher rate you will scoop fuel at. However, be aware that the ambient temperature increases along with proximity to a star; you risk cooking your ship if you remain too close.

Refinery: This module allows the refining of asteroid chunks to obtain precious materials from them. It requires energy from the power plant to operate. Refinery modules have a hopper and one or more resource bins, depending on the model.

To use a refinery you will also need to equip a mining laser. Mining lasers can cause chunks of resource-laden rock to splinter and break free from an asteroid. Use your ship's cargo scoop to collect a chunk, which will be placed in your refinery's hopper.

In the Pilot's Interface, use Focus Mode to navigate to the Cargo Tab of the System Panel. Here you can use the refinery interface to assign the various resources in the asteroid chunk to free resource bins. Once you have assigned a resource to a bin, any further chunks collected that contain the resource will automatically be refined into the appropriate bin.

Once a resource bin is full, as long as you have room in your cargo hold a canister of the refined commodity will be generated. You can choose to vent your refinery's hopper and resource bins into space at any time, clearing them.

Weapons and Scanners: There is a wide variety of modules that give a ship offensive, defensive and interrogative capabilities. All such modules require energy from the power plant to operate, and many of them also draw from the SYS or WEP capacitors to activate.

POWER DISTRIBUTOR

During flight, the following commands are used by the power distributor:

Binding Name	Default K&M	Default Gamepad
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL LEFT	A	D-Pad Left
UI PANEL RIGHT	D	D-Pad Right

The Power Distributor siphons energy from the power plant into three capacitors:

- SYS:** Used to recharge shields and activate scanners/defensive modules. In addition, the more pips assigned, the more resistant shields are to attack
- ENG:** Used to activate emergency thrust [known as Boost]. In addition, the more pips assigned, the more manoeuvrable and fast the ship becomes
- WEP:** Used to cool the weapon cooling loop

You can dynamically prioritise which capacitors are filled most quickly at any time during normal flight to ensure you have the correct energy available at all times.



Use **UI PANEL UP** to prioritise the ENG capacitor.

Use **UI PANEL LEFT** to prioritise the SYS capacitor.

Use **UI PANEL RIGHT** to prioritise the WEP capacitor.

Use **UI PANEL DOWN** to distribute energy equally between all three capacitors

Each time you prioritise a capacitor a small "pip" marker will appear underneath the associated capacitor bar. The more "pips" a capacitor has, the greater priority it has and the faster it will be refilled. As noted, any additional benefits based on "pips" will also increase/decrease based on the number of "pips" assigned.

A capacitor can have a maximum of 4 "pips" assigned.

A module that requires energy from a capacitor will not be able to activate if the capacitor does not have enough energy available, even if the module has sufficient power from the power plant to operate.

Learning to operate the power distributor "on-the-fly" will grant you significant benefits over pilots that fail to take advantage of it.

HEAT AND SIGNATURE

Managing heat levels uses the following commands:

Binding Name	Default K&M	Default Gamepad
SILENT RUNNING	DELETE	DELETE
DEPLOY HEAT SINK	V	V
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL SELECT	SPACE	A Button

There are two components to heat: a ship's internal temperature and its external signature.

INTERNAL HEAT

As power is drawn from the ship's power plant to keep modules operational heat is generated within the vessel. Over time, this heat can build to dangerous levels, effectively cooking the ship until it begins to suffer damage. If left unchecked, the ship will suffer a catastrophic failure and be destroyed.



In the Pilot's Interface the ship's internal temperature is displayed as a bar directly to the left of the sensor disc.

Ships are plumbed with cooling systems that collect heat and transport them to heat vents. These vents feature heat-conductive fins that radiate the heat out into space, allowing the ship to maintain heat levels within sustainable operational ranges.

The cooling system operates automatically, opening up vents as the ship's internal temperature rises to dangerous levels and closing again when the temperature drops.

In extreme operating conditions, such as when flying close to a star or when flying under excessive power draw the cooling system may be unable to cope. In such instances it is advisable that you manually turn off modules not required.

You can do this by using the *Pilot's Interface Focus Mode*, navigating to the Modules Tab in the System Panel.

Use **UI PANEL UP** and **UI PANEL DOWN** to highlight a module and use **UI PANEL SELECT** to turn it off. The more energy a module requires from the power plant, the more heat will be removed when it is turned off.

A ship fitted with heat sink launchers can temporarily cool down dramatically in a short space of time by activating the launcher, which purges all heat from the ship into a heat sink. This heat sink is then ejected into space. If a heat sink launcher is assigned to a fire group, then using the appropriate fire command with the fire group selected will activate a heat purge. Alternatively, use **DEPLOY HEAT SINK** to activate a heat purge.

Note that using a heat sink launcher is a short term measure – the ship will continue to increase in temperature until the source of the heat generation is removed.

SIGNATURE AND SILENT RUNNING

A ship's radiating heat, combined with EM emissions from some modules (primarily shields) constitutes its signature. This signature is what ship sensors can detect, allowing them to locate and identify the ship.



Although heat is the primary component of a ship's signature, this does not equate directly to the ship's internal temperature, though it is linked. Rather it is based on the amount of heat being radiated out of the ship.

In simple terms, the hotter a ship is internally, the harder the cooling system works, the more heat is radiated and the bigger its signature becomes.

The greater a ship's signature, the further away it will be detected by sensors as an unresolved contact, and the further away this detection will allow sensors to pinpoint and identify the ship as a resolved contact, allowing them to target and scan it.

By manipulating which modules are on, receiving energy from the power plant, it is possible to reduce your ship's internal heat levels to a point where your ship's signature is effected, becoming weaker, and thus harder to detect. A ship's signature can be significantly reduced by such manipulation, allowing it to remain stealthy for as long as the pilot can live without the functionality of the unpowered modules.

Without module power manipulation the cooling process occurs automatically, so that the hotter the ship becomes, the easier it is to detect. You can manually override this cooling by rigging the ship for silent running.

Use **SILENT RUNNING** to rig the ship for silent running. When so rigged, your cooling vents are locked shut, preventing heat from being radiated out into space. Your shield, if fitted, is also turned off.



Flying while rigged for silent running ensures that only as little discernible heat emissions as possible emanate from the ship.

Some emissions are unavoidable, such as the heat component of thrusters, so even when rigged for silent running a ship can still be detected by sensors. However, the range at which detected can occur is massively reduced.

It is important to note that when rigged for silent running your power plant still generates heat while providing energy to modules. This heat remains inside the ship and can quickly rise to dangerous levels. Therefore, rigging for silent running is not recommended for extended periods.

Use **SILENT RUNNING** again to rig the ship for full power, reactivating the automatic venting system and turning the ship's shield back on if fitted.

TRAVEL

The following commands are used during different modes of travel:

Binding Name	Default K&M	Default Gamepad
ENGAGE FRAME SHIFT DRIVE	J	J
DEPLOY HARPOON	U	BACK Button
LANDING GEAR	L	L
CARGO SCOOP	HOME	HOME

There are three distinct modes of travel available to a ship. Depending on the scale of the journey, pilots may fly through "normal space" using conventional thrusters.

For longer journeys still limited to the same system, pilots engage the ship's frame shift drive to compress space around their ship, giving the impression (and effectively the result) of travel at speeds faster than light.

For journeys between different star systems, the pilot once more uses the frame shift drive, operating it at maximum effect. This allows incredible distances to be covered in seconds. However, the imprecision of such travel requires special destination targeting.

NORMAL SPACE

Under normal flying conditions, a ship uses the thrusters of its conventional drive to propel itself through space. Most activities occur in normal space, such as combat, docking and mining.

Use the controls specified under Basic Flight to fly your ship in normal space.

SUPER CRUISE



Star systems are too large to fly around in normal space. Even at maximum speed, the fastest ship would take at least two centuries to reach Pluto after setting off from orbit around Earth.

Instead, for such journeys, the ship's frame shift drive is used, compressing space around the ship and reducing the journey down to minutes, even using your ship's conventional drive. Travel in such a manner is colloquially known as super cruise.

The process of using the frame shift drive to enter super cruise has a number of stages and requirements.

USING THE FRAME SHIFT DRIVE TO SUPER CRUISE

Mass Lock: Before you can engage the frame shift drive you must ensure that your ship is not mass locked by a large structure such as a starport or outpost. Your ship's mass lock status is displayed on the Pilot's Interface, to the right of your ship schematic.

If the mass lock indicator is lit, you will need to travel away from the entity that is mass locking you using the ship's conventional drive until the indicator light goes out.

Retract Hardpoints/Gear/Cargo Scoop: Due to the enormous stress placed on your ship's hull when frame shifting you must retract your hardpoints, landing gear and cargo scoop before you can activate the frame shift drive.

Use **DEPLOY HARPOON** to retract hardpoints that are already deployed.

Use **LANDING GEAR** to retract landing gear if deployed.

Use **CARGO SCOOP** to retract your cargo scoop if deployed.

Drive Charge: Assuming the ship is not mass locked, use **ENGAGE FRAME SHIFT DRIVE** to activate the frame shift drive. A canopy HUD charge bar indicator will display, showing the remaining time before the Frame shift Drive will compress space.



The amount of time required by the frame shift drive to compress space will increase if there are ships nearby as the frame shift drive has to work harder. The larger the ship, the longer the charge time will take. You will receive notification if your frame shift drive is inhibited in such a manner.

Ships will never prevent the drive from charging, but it is important to note that while charging your frame shift drive also outputs a large amount of heat. Very long charge times can cause your ship's internal temperature to rise to dangerous levels.

It is advised to increase your distance from other vessels before activating the frame shift drive to avoid excessive heat build up.

Escape Vector: If you are extremely close to a stellar body such as a planet you will need to orient your ship's facing away from it before the frame shift drive compresses space, to avoid flying directly into the stellar body or its atmosphere.



To help you orient your ship to a safe direction your canopy HUD gains an Escape Vector element. Simply aim the ship towards the Escape Vector while charging. Your ship's compass will also activate and point to the Escape Vector, allowing you to find it when it is not initially visible through the canopy.

Throttle Up: Once the frame shift has completed its charge you will need to throttle up to maximum and fly straight to engage space compression. You can throttle up at any point during the charge time.

TRAVELLING IN SUPER CRUISE

Once all requirements have been met and the frame shift drive has charged it will compress space around your ship and enter super cruise.

Piloting a ship in super cruise is similar to normal flight, with the following exceptions:

Minimum speed: A ship in super cruise is always travelling forwards, at a minimum speed of 30km per second, even when throttle is set to zero.

Variable Maximum Speed: The maximum speed attainable while in super cruise varies depending on the proximity and mass of nearby stellar bodies.

As a ship travels close to a stellar body, the mass of the body impedes the frame shift drive's capabilities, reducing available top speed. As a ship moves further away, the impeding effects of stellar bodies reduces and the ship's potential top speed increases.

It is important to note that this impeding effect is not all-powerful. It is possible for a ship to attain a speed greater than the impeding effect of a stellar body allows, by first travelling away until the effect is removed, gaining speed and then flying back towards the stellar body.

The impeding effect will kick in, slowing the ship over time rather than instantly dropping its speed to the impeded maximum. Take this into account during long journeys where your speed has increased dramatically.

By setting your throttle in the blue "sweet spot" range, you will ensure that your ship generally slows down to suitable speeds when approaching a stellar body without further throttle manipulation.

Reduced Control: For a ship to remain in super cruise it must fly forwards. Rotation that causes the ship to face a direction other than its direction of travel, or lateral movement, risk causing an emergency drop into normal space. Because of this, flight assist cannot be turned off and vertical/lateral thrusters are disabled.

Pilots will also note that ship response becomes sluggish during super cruise.

Additional Canopy HUD: To aid navigation while travelling in super cruise, additional orbit lines will be displayed on your canopy HUD for known stellar bodies.

Stellar bodies also display blue approach rings around them to help you gauge distance.

When close to a star, planet or moon, a yellow impact ring will be displayed around the body. This ring indicates the minimum angle you must face away from the centre of the stellar body to avoid colliding with the body's mass lock effect, which will drag you out of super cruise in an emergency drop.

A collision course will also activate an impact alarm in the cockpit.

A destination that you have locked into your navigation computer is still displayed during super cruise as a canopy element with distance and ETA displayed.

Sensor Disc Changes: While travelling in super cruise the sensor disc operation changes slightly. The scale automatically adjusts to show stars and planets within a 2 minute time horizon from your ship, based on the maximum speed your ship could currently achieve after all stellar body proximity impediments are taken into account.



Ships are automatically visible within a 40 second time horizon, based on the fastest ship's speed.

When you lock a vessel into your ship's targeting computer, the scale of the sensor disc automatically changes so that the target is approximately half way between the centre point of the disc and the outer edge, to maximise legibility.

Pilot's Interface Travel Information: The most common use of super cruise is to travel between two locations in a system, for example from a system's star to a starport.

To aid this, any destination locked into your navigation computer [highlighted and selected from the Navigation Tab on the Target Panel of the Pilot's Interface] that is a point of interest or dock location, will cause travel information to appear on the Target Information Panel in the Pilot's Interface.

There are three distinct pieces of travel information for such a destination locked into your navigation computer:

- **Alignment:** This indicator lights when you are facing your destination, a prerequisite for successfully dropping out at the destination.
- **Distance:** This bar shows the distance range (highlighted in blue) required for successfully dropping out at the destination
- **Speed:** This bar shows the acceptable speed range required for successfully dropping out at the destination



This information is used at the end of your journey to fine tune your exit from super cruise; to drop back into normal space precisely at the destination, you need to make sure your alignment, distance and speed are all within the set limits.

EXITING SUPER CRUISE

There are several ways to exit super cruise, some on purpose, and some as the result of unexpected events.

Precision Destination Drop: If you have a destination locked into your navigation computer, and it represents a precise location, such as a navigation beacon, unidentified signal source or starport/outpost, you can attempt to exit super cruise in a precise manner that places your ship within a small number of kilometres from the destination.

To successfully perform a precision drop, you need to be:

- Facing the destination
- Within 1000KM (1 mega metre) of the destination
- Travelling at under 1000KM per second

While all of these requirements are being met a “**SAFE TO DISENGAGE**” will display on the Pilot's Interface. Use **ENGAGE FRAME SHIFT DRIVE** to perform a precision destination drop.



Standard Drop: At any point during super cruise a ship can safely exit and drop out into normal space. Throttle down to zero (30KM per second) and use ENGAGE FRAME SHIFT DRIVE to drop out of super cruise in deep space.

Stellar Body Impact: A ship's frame shift drive will fail if the ship travels too close to a stellar body such as a star, planet or moon. When a ship is about to breach this threshold an impact alarm will sound in the cockpit. The ship will then perform an emergency drop out of super cruise.

Emergency drops allow ships to exit super cruise immediately. However, the violent nature of this event will damage the ship's hull and modules, and upon entering normal space the ship will have an unexpected velocity and spin.

Manual Emergency Drop: At any point during super cruise when travelling at above minimum speed, use ENGAGE FRAME SHIFT DRIVE twice to manually trigger an emergency drop. Note that manually triggering an emergency drop will still damage the vessel and its modules.

Interdiction: Some ships are fitted with special modules called Interdictors. These modules are used like weapons in super cruise and can drag a targeted vessel out of super cruise along with the interdicting ship in a joint emergency drop.

When successful interdiction occurs both ships will suffer hull and module damage.

Frame Shift Cool Down: Once you exit from super cruise there is a short delay before you can activate the frame shift drive again. Normally this delay is no more than 5 seconds or so. If however, you performed an emergency drop, the frame shift drive will need to reset and the delay will be around 40 seconds. While the frame shift drive is in cool down an indicator will display in the Pilot's Interface.

Cancelling the Frame Shift: At any point up until the five second countdown starts you can cancel the frame shift by using ENGAGE FRAME SHIFT DRIVE again. Once the five second countdown begins you are locked in for the ride.

INTERDICTION



Pilots need to be aware of a specific threat while travelling in super cruise. Ships fitted with specialised modules can lock a vessel into their targeting computer and attempt to drag both themselves and the target out of super cruise to the same location in normal space.

Such an act is called Interdiction.

When your ship is interdicted, a specific canopy HUD element is displayed. This comprises of an Escape Vector, and alignment rings. Attempt to pilot your ship so that you are aiming directly at the Escape Vector at all times. Doing so keeps your ship travelling at super cruise.

The alignment rings will tighten and highlight when your ship is correctly aligned. They will disperse as your ship becomes out of alignment.

The aggressor will be attempting to keep your ship centred in their own display.

A blue bar to the left of the alignment rings will build as you outperform the aggressor. A red bar to the right of the alignment rings will build as your opponent outperforms you. If your flying is comparable both bars will normalise at half way.

Should your bar reach maximum you will avoid being interdicted. The aggressor however, will still be forced to perform an emergency drop. Should your opponents bar reach maximum you will be interdicted – both ships will perform an emergency drop out of super cruise to the same location in normal space.

When two pilots are evenly matched, interdiction can take continue for some time. As time passes, the interdiction effect becomes more volatile, meaning that smaller and smaller mistakes will have a more significant effect.

HYPERSPACE JUMPS

The frame shift drive can be activated to compress space to the point where ships can travel light-years in seconds, jumping from one star system to another in moments. Such travel is known colloquially as a hyperspace jump.

Hyperspace jumps are inherently imprecise. Only stars can act as large enough targets. Therefore all hyperspace jumps can only be used to travel to the primary star in a system; upon arrival the ship will drop out at a random position around the star.

Like using super cruise, there are a number of steps and rules governing a hyperspace jump. These are duplicated below for ease of reading:

USING THE FRAME SHIFT DRIVE TO PERFORM A HYPERSPACE JUMP

Mass Lock: Like preparing for super cruise, before you can engage the frame shift drive you must ensure that your ship is not mass locked by a large structure such as a starport or outpost. Your ship's mass lock status is displayed on the Pilot's Interface, to the right of your ship schematic.

If the mass lock indicator is lit, you will need to travel away from the entity that is mass locking you using the ship's conventional drive until the indicator light goes out.

Retract Hardpoints/Gear/Cargo Scoop: Even more stress is placed on a ship's hull during a hyperspace jump; you must retract your hardpoints, landing gear and cargo scoop before you can activate the frame shift drive.

Use **DEPLOY HARDPOINTS** to retract hardpoints that are already deployed.

Use **LANDING GEAR** to retract landing gear if deployed.

Use **CARGO SCOOP** to retract your cargo scoop if deployed.

Drive Charge: Assuming the ship is not mass locked, use **ENGAGE FRAME SHIFT DRIVE** to activate the frame shift drive. A canopy HUD charge bar indicator will display, showing the remaining time before the frame shift drive will compress space.

Unlike super cruise, a hyperspace jump drive charge time is never affected by other vessels; the compression effect required for such dramatic compression overwhelms the mass effect of ships. A hyperspace jump always takes 15 seconds to charge.

Destination Alignment: Unlike super cruise, a hyperspace jump must have a star system locked into your ship's navigation computer. You can use Pilot's Interface Focus Mode and select a nearby star system from the Navigation Tab of the Target Panel, or select a star system directly from the galaxy map.

Before the hyperspace jump can occur, you must align your ship so that it is facing the target destination, represented as a canopy HUD element.

To help you locate the target destination when it is not initially visible, the nav-compass will activate when you have a star system locked into your navigation computer.

Line of Effect: You must have direct line of effect to the target destination star system. If the line of travel is blocked by a local body, such as a star or planet, the jump will not initiate.

You will need to super cruise to a point in the system where you have direct line of effect to the target destination star system and try again.

Throttle Up: Once all requirements have been met, throttle up and fly straight towards the target to initiate the hyperspace jump.

Cancelling a Hyperspace Jump: Once the 5 second countdown begins you will not be able to cancel the process. Before this point you can cancel a hyperspace jump by using **ENGAGE FRAME SHIFT DRIVE** again.

The jump itself will take a short amount of time, after which you will arrive at the destination star system near its primary star, in super cruise. Note that you should take care to avoid flying too close to the star on arrival.

Hyperspace Jump Economy: Note that the amount of fuel used in a hyperspace jump is not a linear equation. As the jump distance increase, the fuel costs increase exponentially.

Also note that each frame shift drive has a maximum single jump range. Regardless of how much fuel your ship carries in its main tank, each individual hyperspace jump you make cannot exceed the maximum jump range of your frame shift drive module.

FRAME SHIFT WAKES

When ships enter or exit super cruise, and when they perform hyperspace jumps, they leave a cloud of particulates that are known as a frame shift wake.

Frame shift wakes dissipate after a time, but while they exist they can be used by pilots with the correct level of skill and equipment.

There are two types of frame shift wake:

- Low Energy FSD Wake: Left by ships entering and exiting super cruise inside a star system
- High Energy FSD Wake: Left by a ship when it performs a hyperspace jump to a new system

LOW ENERGY FSD WAKE

Any pilot can lock a low energy FSD wake detected in normal space into their targeting computer. Doing so will allow them to jump to super cruise with an enhanced probability of entering super cruise near nearby the ship that left the wake.



All a pilot needs is to activate the frame shift drive with the low energy FSD wake locked into the targeting computer. Use **ENGAGE FRAME SHIFT DRIVE** to engage the frame shift drive while you have a low energy FSD wake locked into your targeting computer. Note that you must abide by all standard super cruise requirements.

Any pilot can lock a low energy FSD wake into their targeting computer detected while in super cruise. Doing so will allow the pilot to safely drop out of super cruise with an increased probability of appearing in normal space near the ship that left the wake.

When a low energy FSD wake is locked into the targeting computer in super cruise, your Target Information Panel in the Pilot's Interface will show the same additional elements that are displayed when you have a precise location targeted: alignment, distance and speed requirements.

As long as you are meeting these three requirements, you can use **ENGAGE FRAME SHIFT DRIVE** to safely drop out of super cruise into normal space, hopefully near the ship that left the wake.

With low energy FSD wakes, time is of the essence. The longer you take to utilise the wake, the less chance you have of arriving near your target.

HIGH ENERGY FSD WAKE

You can follow ships that hyperspace jump in a similar manner. However, to do so requires an advanced scanner, called an FSD wake scanner.



When you lock a high energy FSD wake into your targeting computer, it will initially display the destination as "unknown".

If you are able to complete a scan of the wake using a FSD wake scanner, it will update its description and display the system name that was jumped to.

With the scanned high energy FSD wake still locked into your targeting computer, use **ENGAGE FRAME SHIFT DRIVE** to perform a jump to the destination system, potentially near the ship that left the wake. Note that you must abide by all standard hyperspace jump requirements. You may not be able to perform the jump if your frame shift drive is inadequate.

In the case of all FSD wakes, time is of the essence. The sooner you utilise the wake and follow it, the greater the chance of arriving near the ship that left the wake.

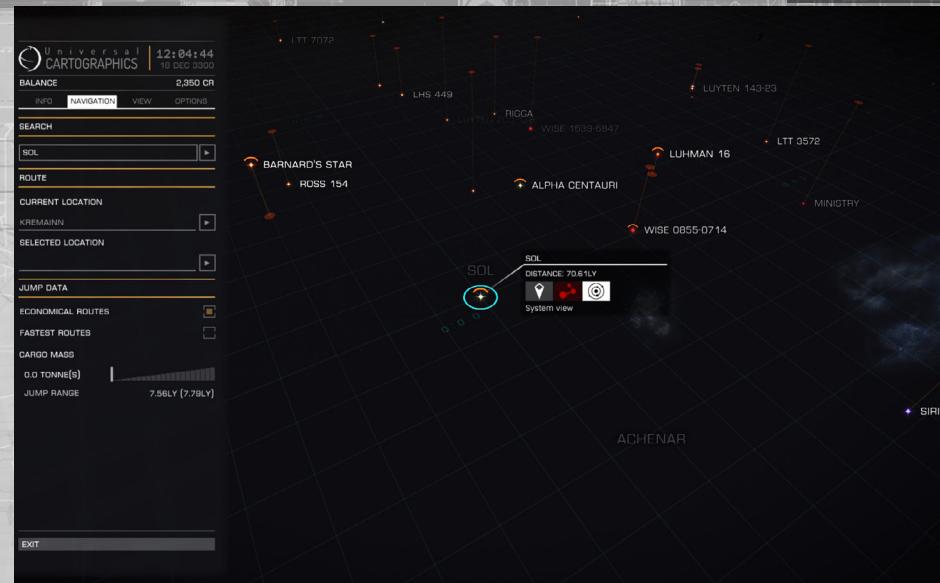
If you leave a high energy wake too long, your scanner may not be able to work out the target system destination.

GALAXY MAP

The following commands are used in the galaxy map:

Binding Name	Default K&M	Default Gamepad
GALAXY CAM PITCH UP	T	
GALAXY CAM PITCH DOWN	G	
GALAXY CAM YAW LEFT	Q	
GALAXY CAM YAW RIGHT	E	
G C TRANSLATE FORWARD	W	
G C TRANSLATE BACKWARD	S	
G C TRANSLATE LEFT	A	
G C TRANSLATE RIGHT	D	
G C TRANSLATE UP	R	
G C TRANSLATE DOWN	F	
GALAXY CAM ZOOM IN	Z	R-STICK Up/Down
GALAXY CAM ZOOM OUT	X	R-STICK Left/Right
GALAXY CAM PITCH AXIS	-	L-STICK Up/Down/Left/Right
GALAXY CAM YAW AXIS	-	X Button
GALAXY CAM TRANSLATE AXIS	-	D-Pad Up
GALAXY SERT Y to X AXIS	-	D-Pad Down
UI PANEL UP	W	D-Pad Left
UI PANEL DOWN	S	D-Pad Right
UI PANEL LEFT	A	A Button
UI PANEL RIGHT	D	RIGHT BUMPER
UI PANEL SELECT	SPACE	
NEXT PANEL TAB	E	LEFT BUMPER
PREVIOUS PANEL TAB	Q	

You can access the galaxy map by using the Pilot's interface Focus Mode, navigating to the Navigation Tab of the Target Panel, then highlighting and selecting the galaxy map button in the bottom left of the panel.



The galaxy map shows a three dimensional display of the galaxy. Star systems are displayed as star-like markers, along with their name. The star system you are currently in has a blue indicator above it.

Systems related to your current missions will have a globe icon next to them. If you own multiple ships, a ship icon will be displayed next to those systems where they are stored.

Blue lines emanate from your current system to nearby systems. These lines represent available systems that you can hyperspace jump to.

Dotted lines represent jumps that your ship could make but lack the fuel to perform.

On the left of the screen is a banner panel with several tabs. This panel is used to show useful information about star systems.

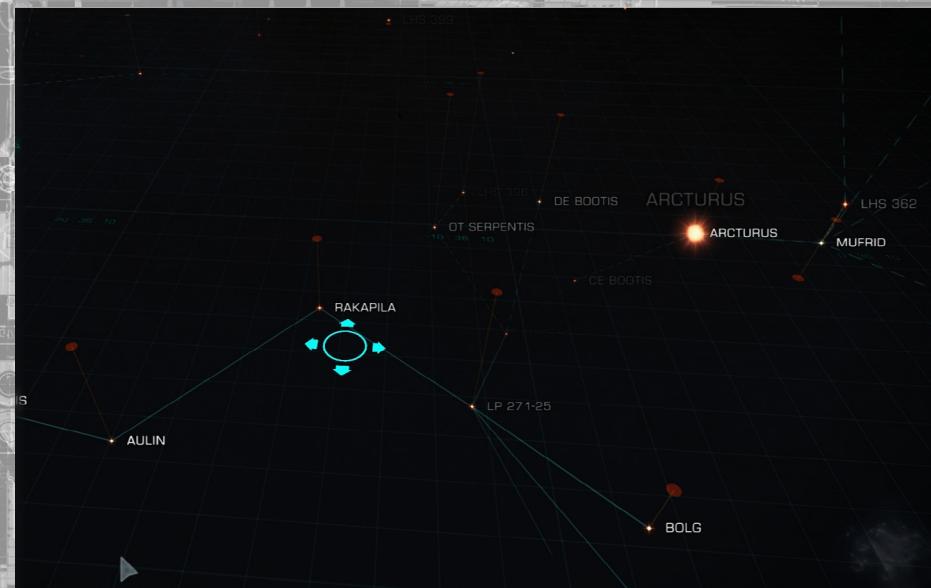
MOVEMENT IN THE GALAXY MAP

A horizontal grid-plane is present in the view. Star systems that are below or above this plane have vertical lines connecting them to it. The grid-plane is used as a floor along which a blue selector ring can move.

If you are using a keyboard, **GALAXY CAM TRANSLATE LEFT, RIGHT, FORWARD** and **BACKWARD** move the selector ring along the plane. Note that when the selector ring approaches the intersection point of a vertical line leading to a star it snaps to it.

If you are using a gamepad, use **GALAXY CAM TRANSLATE AXIS** to move the selector ring.

Note that when you are moving the selector ring along the plane it grows arrow indicators to indicate the axis of travel.



You can raise and lower the view and grid plane. For keyboard and mouse, use **GALAXY CAM TRANSLATE UP** and **GALAXY CAM TRANSLATE DOWN** to move the view and grid plane up and down.

If you are using a gamepad, hold Button X and use **GALAXY CAM TRANSLATE AXIS** to move the view and grid-plane up and down.

Note that when you move the selector ring grid-plane and view up or down it grows arrows to indicate the axis of travel.

You can zoom your view of the galaxy in and out. Using the keyboard and mouse, use **GALAXY CAM ZOOM IN** and **GALAXY CAM ZOOM OUT** to change the level of zoom.

If you are using a gamepad, use LEFT Trigger and RIGHT Trigger to zoom in and out. You are able to zoom to view the entire galaxy.

You can tilt your view of the galaxy. Using keyboard and mouse, **GALAXY CAM PITCH UP** and **GALAXY CAM PITCH DOWN** will pitch the view up and down.

If you are using a gamepad, **GALAXY CAM PITCH AXIS** can be used to pitch the view up and down.

You can rotate your view of the galaxy map around the centre point view of the grid plane. If you are using keyboard and mouse, **GALAXY CAM YAW LEFT** and **GALAXY CAM YAW RIGHT** will rotate the view.

If you are using a gamepad **GALAXY CAM YAW AXIS** will rotate the view.

GALAXY MAP SELECTION OPTIONS

You can highlight a star system by moving the selector ring over the point where it is joined to the grid-plane. Note that the ring has "stickiness" when approaching an intersection to aid in highlighting a star system.

Alternatively, when you can simply left click on the actual star system marker, the selector ring will automatically centre and highlight the star system's intersection point on the grid-plane.

Note that when a star system marker has been highlighted, several new elements appear on the galaxy map.

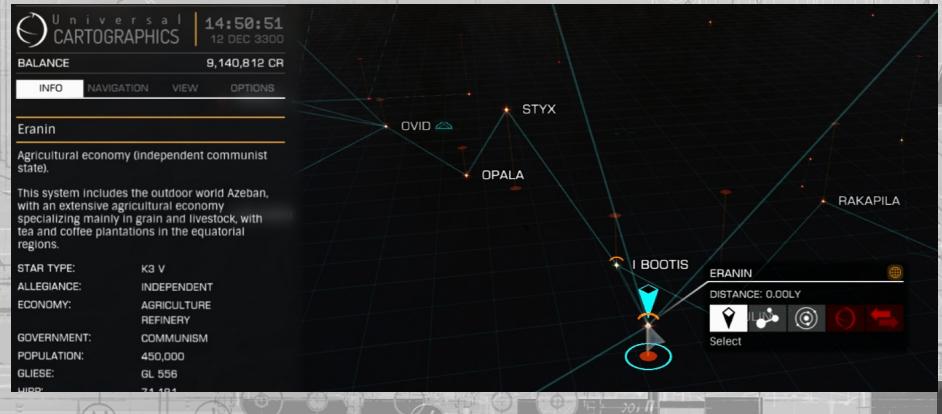
Interaction Menu: Next to the highlighted star system an interaction menu is displayed. This menu displays the distance to the system from your current location and features five buttons:

- **Select:** Use this button to select the system, marking it with an orange arrow indicator
- **Plot Route :** Use this button to plot a route to the system
- **System View:** Use this button to view the system map of the highlighted star system
- **Buy exploration data:** use this button to purchase exploration data about the highlighted system (note, you must be docked and the highlighted system must be within 20 LY or your current system)
- **Buy Trade Data:** use this button to purchase trade data about the highlighted system (note, you must be docked and the highlighted system must be within 20 LY or your current system)

Using mouse and keyboard, left click on a button in the interaction menu to activate it.

Using a gamepad, UI PANEL LEFT and UI PANEL RIGHT will cycle through the buttons left and right. UI PANEL SELECT will activate the highlighted button.

Purchasing Data: when you purchase trade or exploration data for a star system, the additional information will be automatically added to the associated interface panels.



Route Plotting: When you plot a route to a system using the appropriate interaction menu button the lines describing the route will display as orange. It will also lock the first hyperspace jump destination into your navigation computer and select it in the galaxy map.

As you successfully make hyperspace jumps along the route, the next destination in the list will automatically be locked into your navigation computer and selected in the galaxy map.

In the Pilot's Interface Focus Mode Target Panel, on the Navigation Tab, the next destination in a plotted route will display a route plot icon next to it, should you need to locate it in the list.

Note that the route plotter has a limited range.



GALAXY MAP BANNER PANEL

The banner panel displays information about a highlighted system. There are four tabs on the panel. Use **NEXT PANEL TAB** and **PREVIOUS PANEL TAB** to cycle through the tabs.

In all tabs use **UI PANEL UP**, **UI PANEL DOWN**, **UI PANEL LEFT**, **UI PANEL RIGHT** and **UI PANEL SELECT** to highlight and toggle the options.

Alternatively, left click with the mouse on the option you wish to select/toggle.

Info Tab: This displays basic known information about the system, such as the star type, controlling government type, market economies present and population

Navigation Tab: This tab allows you to search for a specific star system by name [use **UI PANEL SELECT** on this option then type the name in using the keyboard].

It also allows you to quickly locate to your current system or your selected system.

Options here also exist to change the nature of the jump route from your current system, showing economical routes (smaller jumps) or faster routes (longer jumps).

Finally, this tab features a slider bar that lets you check jump ranges and routes assuming different cargo loads. Slide the orange marker along the bar to the right to simulate carrying more cargo. Slide the orange marker along the bar to the left to simulate carrying less cargo. The blue marker displays your actual cargo weight.

View Tab: This tab allows you to set various filters on information displayed on the galaxy map.

You can use these options to show factional allegiance of star systems and known trade routes between them. Note that these trade routes represent all ships trading between systems, not just other human Commanders.

When you purchase trade data for a system it is represented as trade routes on the View Tab, visible when trade data has been selected.

Trade commodity categories can be expanded by clicking the arrow next to each group.

Options Tab: This tab features a number of visualisation options for the galaxy map.

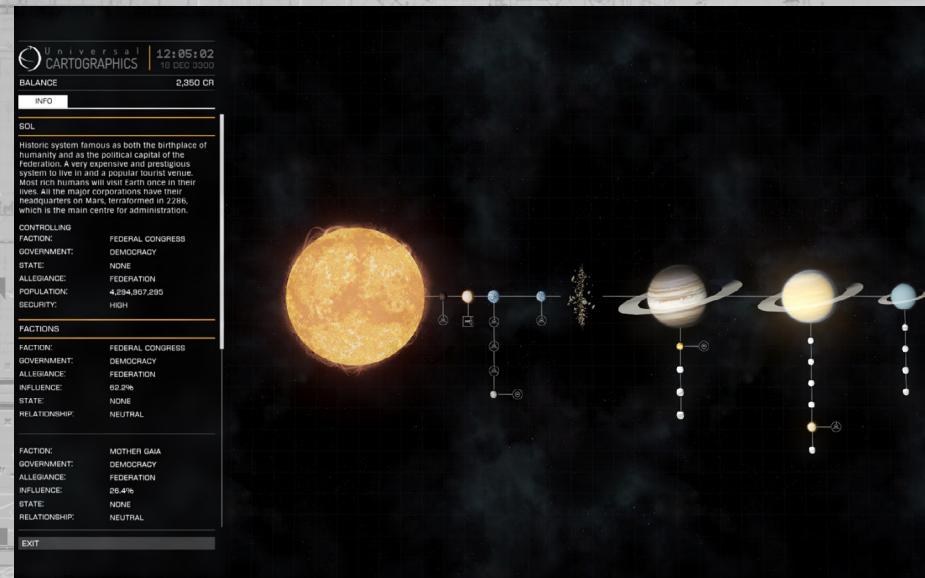


SYSTEM MAP

The following commands are used in the system map:

Binding Name	Default K&M	Default Gamepad
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL LEFT	A	D-Pad Left
UI PANEL RIGHT	D	D-Pad Right
GALAXY CAM TRANSLATE AXIS	-	L-STICK Up/Down/Left/Right
GALAXY CAM ZOOM IN	Z	-
GALAXY CAM ZOOM OUT	X	-

You can use the system map to view known stellar bodies in a star system. It comprises of a two dimensional view of the system, displaying stellar bodies linked by their orbits. In the centre of the view is a square selector.



MOVEMENT IN THE SYSTEM MAP

Using keyboard and mouse, **UI PANEL DOWN**, **UI PANEL UP**, **UI PANEL LEFT** and **UI PANEL RIGHT** move the view around, while **GALAXY CAM ZOOM IN** and **GALAXY CAM ZOOM OUT** zoom the view in and out.

Alternatively, hold both left and right mouse buttons then move the mouse to manipulate the view and zoom in and out using the mouse wheel.

Finally, you can simply left click on a stellar body or structure to snap the square selector's focus to it.

When using a gamepad, use **GALAXY CAM TRANSLATE AXIS** to move the view around and use **LEFT** and **RIGHT TRIGGER** to zoom in and out.

Note that the square selector is sticky as it approaches stellar bodies and man-made structures, snapping to focus on them.

SYSTEM MAP BANNER PANEL

To the left of the screen is a Banner Panel that displays information about the current entity the square selector is focused on.

When nothing is the focus of the square selector the banner panel displays information about the system as a whole. This includes a brief description of the system and details of the factions that are present within it.

Focusing the square selector on a stellar body offers information about its composition.

Focusing the square selector on a man-made structure details the faction that currently controls it, trade data and prohibited commodities (if known) and orbit data. If you have one or more ships stored at a starport or outpost, it will be indicated by a ship icon here.

If you have purchased exploration data about a system, it will be displayed here as stellar bodies that were previously unknown to you.

COMMUNICATIONS

The following commands are used during comms:

Binding Name	Default K&M	Default Gamepad
QUICK COMMS	ENTER	ENTER
UI FOCUS	HOLD LSHIFT	X Button
UI FOCUS/BACK	LSHIFT	B Button
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL LEFT	A	D-Pad Left
UI PANEL RIGHT	D	D-Pad Right
UI PANEL SELECT	SPACE	A Button
NEXT PANEL TAB	E	RIGHT BUMPER
PREVIOUS PANEL TAB	Q	LEFT BUMPER
CYCLE COMMS	TAB	TAB

Your ship features a comms array that lets you communicate with other Commanders. The Comms Panel is displayed in the Pilot's Interface in the top left corner of the view.



There are two main ways to interact with the Comms Panel. You can access quick comms mode by using **QUICK COMMS**. This activates the comms chat window and sets the keyboard into typing mode.

When you are done typing your message, press **QUICK COMMS** again to send the message. By default the message will be broadcast to all ships nearby.

You can use **CYCLE COMMS** to change who the message will be sent to: LOCAL broadcast to all nearby vessels, DIRECT broadcast to targeted vessel, DIRECT broadcast to the Commander that last sent you a message and WING broadcast to all Commanders in your wing.

You can also begin your message with shortcuts:

- /L forces the message to be a local broadcast
- /T forces the message to be sent to the vessel you have targeted
- /R forces the message to be sent to the Commander that you last received a message from
- /W forces the message to be sent to all of your wingmen
- /help summons information of available shortcuts

Messages in the text feed are colour coded:

- ORANGE: local broadcast
- CYAN: Wing broadcast
- YELLOW: Direct transmission
- RED: Authority ship broadcast
- WHITE: System broadcast

When you press ENTER to send your message you will be returned to your normal view.

COMMS PANEL TABS

The second method to access your Comms Panel is to use the Pilot's Interface Focus Mode and navigate to the panel [while holding **UI FOCUS**, tap **UI PANEL UP**, then release all commands].

The Comms panel has a number of tabs. You can use **NEXT PANEL TAB** and **PREVIOUS PANEL TAB** to move between them.



1 COMMS TEXT FEED TAB

This tab shows all messages received and activates the chat line, allowing you to type and send messages.

This is the same as using quick Comms for all intents and purposes, except when you press **ENTER** to send the message you remain focused on this tab.

When using mouse and keyboard the game defaults so you must press **ENTER** to activate the chat line when viewing the Comms Text Feed Tab, and press **ESCAPE** to deactivate the chat line.

You can change this functionality so that the chat line is activated automatically when viewing the Comms Text Feed Tab by toggling **AUTO FOCUS ON TEXT INPUT FIELD** in the controls menu. When using a Gamepad or Flight Stick, use **NEXT PANEL TAB** and **PREVIOUS PANEL TAB** to automatically close the chat line and cycle through the tabs.

Use **UI PANEL UP**, **UI PANEL DOWN** to scroll up and down through the text feed.

When you receive a message whilst you are not looking at the Comms Text Feed Tab, an indicator will appear next to the tab heading.

2 COMMS CONTACTS TAB

This tab shows you entries for your Elite: Dangerous friends and local Commanders. It also shows their game mode status if it differs from yours (Solo/Open Play).

Friends will always be present in this list. Other Commanders are added only if they are nearby.

You can use **UI PANEL UP**, **UI PANEL DOWN** and **UI SELECT** to summon additional options for each entry:

- Invite to Wing: invite the Commander to join your wing
- Engage/Disengage Wingman Nav-Lock: [must be in a wing] Slave your FSD to a wingman
- Text Chat: Start a direct broadcast chat with the Commander
- Mute/Un-mute: Toggle voice Comms for the Commander, and decrease the likelihood of encountering them
- Send Private Voice Comms Request: Invite the Commander to a voice chat session
- Back: Exit this menu

If you are part of a wing, your wingmen will show as entries under a Wing heading, along with an Options entry. Selecting the Options entry summons additional options for the wing:

- Enable/Disable Wing Beacon: Activates your wing beacon
- Text Chat: Start a wings broadcast chat
- Disable/Enable Voice Comms: Toggle voice Comms with your wing on/off
- Leave Wing: Leave the Wing
- Back: Exit this menu

3 INBOX TAB

This tab shows any currently active wing invitations and requests.

You can use **UI PANEL UP**, **UI PANEL DOWN**, **UI PANEL LEFT**, **UI PANEL RIGHT** and **UI SELECT** to accept or decline a wing invitation.

When you receive a wing invite whilst you are not looking at the Inbox Tab, an indicator will appear next to the tab heading.

4 COMMS OPTIONS TAB

This tab gives you access to a number of Comms text options:

- Local ON/OFF: Toggle whether to receive local broadcast text
- Voice ON/OFF: Toggle whether to receive text transmissions from Commanders in your voice Comms chat
- Wing: ON/OFF: Toggle whether to receive text transmissions from wings or not
- Direct Messages from Players ON/OFF: Toggle whether you want to receive direct text transmissions or not
- Auto Enable Wing Voice Comms ON/OFF: When this is on, you will automatically join a wing's voice Comms chat when you join the wing

VOICE CHAT CHANNEL

Should you receive a voice chat hail request from a Commander you will receive an audio notification and the Commander's Name will be highlighted in the Comms Contacts Tab. You can use the interaction menu for that Commander to either accept or refuse the hail.

If you accept a hail you will open an audio chat channel between yourself and the Commander.

You can use the interaction menu for the Commander to exit this chat channel at any time.

Up to six Commanders may be invited to a voice chat channel.

REPORTING A PLAYER

To report a player, use the main menu interface.

When you report a player you will be required to fill out a report sheet that is sent to Frontier Developments Plc. You will be asked to detail why you are reporting the player. Please reserve player reports for clear breaches of conduct.

WINGS

The following commands are used with wings:

Binding Name	Default K&M	Default Gamepad
QUICK COMMS	ENTER	ENTER
UI FOCUS	HOLD LSHIFT	X Button
UI FOCUS/BACK	LSHIFT	B Button
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL LEFT	A	D-Pad Left
UI PANEL RIGHT	D	D-Pad Right
UI PANEL SELECT	SPACE	A Button
NEXT PANEL TAB	E	RIGHT BUMPER
PREVIOUS PANEL TAB	Q	LEFT BUMPER
SELECT WINGMAN 1	7	7
SELECT WINGMAN 2	8	8
SELECT WINGMAN 3	9	9
SELECT WINGMAN'S TARGET	0	0
WINGMAN NAV-LOCK	-	-
CYCLE COMMS	TAB	TAB

You can create a wing of up to four Commanders and work together as a single, more effective unit than each of you might be flying alone.

CREATING/JOINING A WING

You can create a wing by sending an invite to a Commander. Use **UI FOCUS** and **UI PANEL UP** to focus on the Comms Panel.

Use **NEXT PANEL TAB** and **PREVIOUS PANEL TAB** to view the Comms Contacts Tab.

In this tab are listed your Elite Dangerous friends and Commanders who are nearby.

Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select the Commander you wish to invite to a wing.

From the additional options, choose "Invite to Wing". This will send the Commander an invitation to join you.

If you receive an invitation to join a wing the Inbox Tab header of the Comms Panel will display a new message icon.

Use **UI FOCUS** and **UI PANEL UP** to focus on the Comms Panel and then use **NEXT PANEL TAB** and **PREVIOUS PANEL TAB** to view the Inbox Tab. Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select the invitation and then use **UI PANEL LEFT**, **UI PANEL RIGHT** and **UI PANEL SELECT** to choose either the "check" to accept or the "cross" to decline the invitation.

Once an invitation has been accepted the wing is formed. There is no wing leader, everyone has equal standing within a wing and all can continue to issue invitations until the wing is full (Four Commanders).

LEAVING A WING

To leave a wing, use **UI FOCUS** and **UI PANEL UP** to focus on the Comms Panel and then use **NEXT PANEL TAB** and **PREVIOUS PANEL TAB** to view the Comms Contacts Tab.

Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select the "options" entry under the Wings header.

The will summon additional options.

Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select "Leave Wing". You will instantly be removed from the wing.

When you leave a wing, there is a cool down time before you can join another wing.

WING INTERFACE

The wing interface is positioned at the top of your view, in between the Comms and Info Panels. Each wing man has an entry in this interface.



The entry displays several pieces of information:

- **1 Wing Icon:** Each wingman has a ID icon used to identify them in the HUD
 - Your own ID icon is displayed at the top right of your Comms Panel tab line
- **2 Shield Icon:** This set of concentric rings shows the wingman's ship shield status
 - As the shields are depleted the rings fade away
- **3 Nav-Lock Icon:** The Nav-lock icon square brackets
 - This will only be displayed if you have nav-locked to the wingman
 - It will display red when you are out of nav-lock range
 - It will display cyan when you are in nav-lock range
- **4 Selector Icon:** the selector icon chevron brackets
 - This will only display if you have targeted the wingman and they are present at your location
- **5 Hull Icon:** the wingman's ship hull status is represented by a segmented bar
 - As the hull is damaged the bar is reduced
- **6 Commander Name:** the wingman's Commander name
- **7 Target Icon:** the wingman's current target
 - If the wingman is in a different system the system name is displayed here, along with a system icon
 - If the wingman is targeting a vessel the vessel's name is displayed here, along with a target icon
 - If the wingman is targeting a navigation location the navigation location's name is displayed here, along with a system icon
- **8 Voice Icon:** the Wingman's voice status

When a wingman targets a vessel, their ID icon will appear next to the ship when you look at it.

All HUD elements connected with your wing are coloured cyan to help you spot them.

When a vessel is hostile to a member of your wing but not you its HUD elements will be coloured purple.

When you target a vessel and perform a basic scan the bottom left target info panel will display if the ship is in a wing and how many members that wing has.

You can quickly target a wingman by using **SELECT WINGMAN 1**, **SELECT WINGMAN 2** and **SELECT WINGMAN 3** respectively.

When you have a wingman targeted, you can select their target by using **SELECT WINGMAN'S TARGET**. This works for vessels, structures and navigation targets, but only if you are in the same location as your wingmen.

If your wingman is in a different, nearby system, then you can use **SELECT WINGMAN 1**, **SELECT WINGMAN 2** and **SELECT WINGMAN 3** respectively to target the system they are in.

WING BENEFITS

There are several automatic benefits to flying in a wing:

- Shared Knowledge: All ship scans results are instantly shared between all wingmen present at a location.
- Shared Bounties: Bounties are shared equally between all members of the wing who engaged the target
- Additional Exploration Profit: Exploration scan data is shared between all members of a wing in the same system, allowing all such members to sell the exploration data.
 - The first member to sell the data is eligible for extra credits if the system has not yet been discovered, though all wingmen present in the system when the scan was completed will be named as the discoverers
- Crime Immunity: Wingmen cannot commit crimes against each other
 - Be aware: wingmen can still commit crimes against other vessels/structures
 - Cargo can be freely carried between the entire wing, all members count as owners for the purposes of legal status
- Additional Trade Profit: Wingmen receive trade dividends from a starport if they are in the same system as a wingman when they make a profitable trade

WING BEACON SIGNAL



The wing beacon signal is a special ability available to all members of a wing. It lets wingmen in local space generate a signal visible to members of their wing in super cruise, allowing them to use the signal like a frame shift wake and drop out at the same location.

To activate the wing beacon signal, use **UI FOCUS** and **UI PANEL UP** to focus on the Systems Panel and then use **NEXT PANEL TAB** and **PREVIOUS PANEL TAB** to view the Functions Tab.

Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select the Beacon option and summon additional choices for it.

Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select the "wing" entry in these additional options and activate the wing beacon signal.

Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select the "Off" entry in these additional options and deactivate the wing beacon signal.

WINGMAN NAV-LOCK

You can slave your ship's frame shift drive to a wingman's vessel. This is called nav-locking, it lets your vessel automatically follow the nav-locked target when it engages its frame shift drive.

Use **UI FOCUS** and **UI PANEL UP** to focus on the Comms Panel and then use **NEXT PANEL TAB** and **PREVIOUS PANEL TAB** to view the Comms Contacts Tab.

Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select wingman that you wish to nav-lock. This will summon additional options.

Use **UI PANEL UP**, **UI PANEL DOWN** and **UI PANEL SELECT** to select the "Engage Wingman Nav-lock" entry from these additional options.

You can also nav-lock to a wingman by targeting them and using **WINGMAN NAV-LOCK**.

When you nav-lock to a wingman, their entry in the wings interface gains the nav-lock icon. When this icon is red it indicates your vessel is too far away to trigger automatic frame shifting.

When the nav-lock icon is cyan it indicates that your vessel is close enough to trigger automatic frame shifting.

When you are nav-locked to a wingman and in nav-lock range, the following benefits are active:

- You will automatically follow the nav-locked ship into super cruise,
- You will automatically follow the nav-locked ship when it drops out of super cruise
- You will automatically follow the nav-locked ship if it is interdicted
- You will automatically drop out at a nav-locked ship's wake
- You will automatically begin charging a hyperspace jump when your nav-locked wingman performs a hyperspace jump

In all cases, any standard hyperspace or super cruise requirements still apply, e.g. you must retract hardpoints, gear and scoop, you must have the fuel and frame shift drive to perform the jump etc.

Your nav-lock will automatically disengage if you are interdicted. You will need to reengage it.

STARPORT SERVICES

The following commands are used in starport services:

Binding Name	Default K&M	Default Gamepad
UI PANEL UP	W	D-Pad Up
UI PANEL DOWN	S	D-Pad Down
UI PANEL LEFT	A	D-Pad Left
UI PANEL RIGHT	D	D-pad Right
UI PANEL SELECT	SPACE	A Button
UI BACK	BACKSPACE	B Button

When you are docked at a starport or outpost, you can use UI PANEL UP and UI PANEL DOWN to highlight the starport services option and initiate the starport service link. This feeds a special starport services interface into your cockpit.



Use **UI PANEL UP**, **UI PANEL DOWN**, **UI PANEL LEFT**, **UI PANEL RIGHT** to navigate the interface and **UI PANEL SELECT** to select options. You can use **UI BACK** to go back a step in any interface page.

There are several pages to this interface. Note that at different starports and outposts, some services may not be available.

Home: This page details basic information about the starport, your career and ship, and might also offer refuelling and basic repairs and munitions resupply for Commanders who are short on time.

It also displays a news feed; you can select a news item to learn more details.

Munitions: If available, allows you to resupply individual modules which require ammunition or resources to function.

Repairs: If available, allows you to repair modules and hull health individually.

Bulletin Board: If available, displays contracts that are available from this starport. You can select a contract to learn more details and potentially accept it.

Contacts: If available, displays a list of individuals and organisations that you can contact for a variety of services, including claiming bounty payment and clearing your own bounties and fines, and visiting the local black market.

Note that not all contacts are available at all starports or outposts.

Outfitting: if available, allows you to visit the workshop hangar and purchase and sell modules for your current ship.

Shipyard: If available, allows you to purchase a new ship. You will be presented with options to trade in your old ship or store it at this starport/outpost.

Commodities Market: If available, allows you to buy and sell commodities from the local market.

Universal Cartographics: If available, allows you to sell exploration data you have obtained during your travels.

OUTFITTING NOW UPDATED IN 2.1 - PAGE 160

OUTFITTING

When you access outfitting, your ship is transported to the workshop hangar and you are presented with the outfitting interface.



In the bottom right of the view an overview panel displays basic information about the weight of your ship, its potential power draw, cargo capacity and jump range.

As you browse modules to buy and sell, you can see the effect such actions will have on these statistics, represented by red values and a down arrow (the statistic is adversely affected) and blue text with an up arrow (the statistic is improved).

The outfitting interface has three tabs:

Hardpoints: This displays a list of all hardpoint entries available on the ship and the modules (if any) fitted to them. Each entry displays the following data:

- **Module Name:** The name of the fitted module
- **Mount Type (if appropriate):** The mount type (fixed/gimbal/turret) of the module
- **Hardpoint Name:** The name of the hardpoint
- **Module Rating:** The effectiveness rating of the module
- **Module Class:** The size of the module

Selecting an entry expands it to show the mass of the module and interaction options:

- **Buy and Equip:** Browse the list of available replacements for this hardpoint
- **Sell:** Sell the module fitted to this hardpoint
- **Swap:** move the module to another suitable hardpoint. If the hardpoint has a module fitted, swap them

When you choose to buy a new module for the hardpoint, the interface alters to display a list of modules available at this starport or outpost that can be accepted by the hardpoint. You can highlight a module to view additional statistics in a companion panel.

Modules that are too expensive are displayed in red.

If the starport or outpost has modules for a specific hardpoint, the hardpoint's entry will gain a blue "+" indicator at the top right edge of the entry.

Internal: Much like the hardpoint interface, the internal interface displays a list of internal ship compartments and modules fitted in them, where applicable.

Some compartments can only accept a subset of modules. For example, the reactor bay can only accept power plant modules. Other compartments are generic and can accept a range of modules.

The same options apply as the hardpoint interface. The only caveat is that mandatory modules cannot be sold; only upgraded, by buying and fitting a new module of the appropriate type.

Livery: This interface has an entry for each decal that may be placed on the ship, as well as entry for a paint job. You can choose which decals and paint job you want to apply to the ship using this interface.

TRADING

WOHLER TERMINAL
LARGE POPULATION REFINERY AND INDUSTRIAL ECONOMY (FEDERATION, DEMOCRACY)

GOODS	SELL	BUY	CARGO	DEMAND	SUPPLY	GALACTIC AVERAGE
CHEMICALS						
EXPLOSIVES	182	195	-	-	149,141 HIGH	280 CR
HYDROGEN FUEL	90	93	-	-	145,612 HIGH	116 CR
MINERAL OIL	204	-	-	138,233 LOW	-	172 CR
CONSUMER ITEMS						
CLOTHING	188	202	-	0 LOW	58,301 HIGH	287 CR
CONSUMER TECHNOLOGY	7,054	-	-	3,936 MED	-	6,697 CR
DOMESTIC APPLIANCES	548	-	-	4,101 LOW	-	495 CR
FOODS						
ALGAE	147	-	-	12,247 LOW	-	111 CR
ANIMAL MEAT	1,320	-	-	3,927 LOW	-	1,269 CR
COFFEE	1,320	-	-	988 LOW	-	1,258 CR
FISH	420	-	-	10,972 LOW	-	382 CR
FOOD CARTRIDGES	34	44	-	-	32,518 HIGH	112 CR
FRUIT AND VEGETABLES	330	-	-	3,543 LOW	-	289 CR
GRAIN	219	-	-	23,843 LOW	-	183 CR
SYNTHETIC MEAT	328	-	-	4,575 MED	-	240 CR
TEA	1,498	-	-	3,583 LOW	-	1,443 CR

INFO 11:58:3
SELL TO MARKET BUY FROM MARKET
188 CR 202 CR
Even in the 34th century, fashion is continually changing, driving purchases of new clothing for those with some credits to spare.
SUPPLY 58,301
CARGO -
IMPORTED FROM YAKABUGAI, CHAMUNDA
EXPORTED TO EKONIR, KINI, UZUMERU, LTT, 18480, ERAWATE, MBIKURAY, LHS 3437, APOYOTA, POTRITI
SIDEWINDER CARGO SPACE 0 OUT OF 4 US
CMDR TERRY BAD BALANCE 2,350
BALANCE 2,350
EXIT
CRUNCH

The trading interface lets you buy and sell commodities. It is laid out in spreadsheet format, with a description panel on the far right.

You can highlight a commodity to see details about it in the description panel.

Selecting a commodity causes a transaction panel to appear, where you can buy or sell commodities as appropriate.

Note that not all commodities are available to buy and sell at all markets.

Note that the market economies are dynamic, affected by the trade of other Commanders and events that occur in the system.

Galactic Average: The galactic average column shows the average price that a commodity is currently worth. You can select the galactic average to summon a drop down list of recently visited markets and markets for which you have purchased trade data.

Selecting an entry replaces the galactic average with notations describing whether the selected system imports or exports the commodity.

WELCOME TO THE PILOT'S FEDERATION

As a newcomer to the life of a starship pilot, and as a new member of the Pilot's Federation, please read the following short guides for additional information you may find useful in your travels across the galaxy.

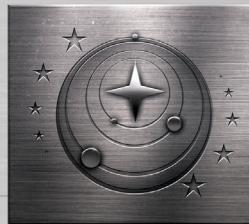
THE GALAXY IS REALLY BIG

The galaxy you inhabit is comprised of billions of stars. The massive majority are as yet unexplored by any spacefaring nation. Yet even the tiny portion of the galaxy we called inhabited space comprises of thousands of star systems across a distance of hundreds of light-years.

Inhabited space has remained fairly static, but now, with the invention of the frame shift drive and its ability to warp and compress space shortening journey times that used to take weeks into mere moments, humanity stands on the threshold of a new golden age of discovery and expansion. And with all such game-changing events, the grand spider web of interstellar politics that entangles every spacefaring nation vibrate and sing. Strands will snap, breaking old alliances and shattering schemes, and form, weaving new bonds and spawning new plots.

It is an exciting time to take the first skyward step into a greater world, but a dangerous one too.

FACTIONS



Currently, much of human space is at peace; the cold war between the two great factions of the Federation, the oldest interstellar nation, and the Empire, born out of brutal secession from it, has thawed somewhat, but the potential for a crisis is still there.

The constant proxy and low intensity conflicts of the previous decades have now reduced in number and relations have stabilised. It's not a total peace; here and there some conflicts smoulder. A new player has made their presence felt. In a short period of time the Alliance has expanded from a handful of worlds to a much larger coalition of systems, united politically for stability. This has forced the two older powers into realising they no longer dominate.

The independent systems still constitute the bulk of the human inhabited systems. They bring a rich tapestry of cultures and beliefs to the dark of space. From these worlds individuals and governments seek new opportunities deep in unexplored space.

REPUTATION

On your travels, you may encounter many factions, vying for control of a single outpost to domination of multiple systems. Beware how you deal with such entities. Every contract you succeed, fail or betray, every ship you attack, all the profits you make and lose, can affect your reputation.

Gaining reputation can offer many benefits, from reduced costs specialised ships to temporary alliances, while losing it can incur serious penalties, spiralling down to open hostility. The trick is deciding who to side with and who to side against, for now humankind can be friends with everyone; choices will always have to be made.

You can gain and lose reputation with minor factions and the three great nations. You can also attempt to curry favour and progress through the ranks of the Federation and Empire navies.

INFLUENCE

One faction always has overall control within a system. However a system may contain several factions vying for control. Such factions have an influence rating that describes their current power within the system.

By supporting factions, you can increase their influence, potentially causing a change in system control by either peaceful means or violent civil war.

THINGS TO DO

There are many activities and professions available to you, and you are free to try all and any of them, reaping the rewards and suffering the consequences.

The Pilot's Federation does not judge you on your morals but on your ability. You will be closely monitored and ranked in levels of excellence with regards to combat, trading and exploration.

Only a select few manage to reach the rank of Elite in a single skill, and even less are able to show perfection in all areas.

The following are some example professions along with starting advice and instruction.

TRADING



The potential to make your mark (and your fortune) may reside in your uncanny ability to rub two credits together in trade, and finish the deal with three in your hand.

There is no entry restriction to trade other than starting capital, and at its core is a simple, fundamental truth: buy low and sell high. As a trader you will need to carefully study market economies in the systems you pass through.

Learn to spot not just the changing prices of commodities as they are traded between systems, but also the states and events in those systems that might spell the once in a lifetime opportunity – or hide the trapdoor to spiralling debt.

SMUGGLING



Some decide that borders and regulations are for other people. As a smuggler, you take your search for riches beyond the bounds of the law. The rewards can be great, as can the penalties for being caught red handed.

You must learn to avoid detection and seek out the most valuable prohibited and stolen goods to sell on the black market. And you will master the art of flying with one eye constantly looking behind you.

Smugglers tend to trade in smaller quantities than traders; ships that are fast and can run cold are especially useful, for the very best smuggler is usually the one that got away.

PIRACY



There are those who laugh at the rules and precepts of society, scoffing at their reputation among law abiding folk, sometimes even revelling in the fear they inspire in their wake of crime.

All pirates view anything they can take by force as theirs by right, but to become the best pirate you will learn to understand the need to balance reward against risk, learning to farm traders on the trade routes you haunt, rather than slaughter them in wanton bloodlust that will lead to violent retribution.

In addition to skewed morals, a pirate might need to invest in a number of different ship modules to get the best out of this profession. An interdictor device will allow you to drag your hapless victims out of super cruise, and hatchbreaker limpets will allow you take what you need without causing undue damage.

BOUNTY HUNTING



In almost direct opposition to the pirate, the bounty hunter plies their trade across the galaxy, hunting down and dispatching lawbreakers for cold, hard credits. To those able to bring low the greatest of villains go the greatest rewards.

As a bounty hunter, you will need to decide just how far you are willing to push in order to dispense your personal justice. For those who are criminals in one system might be heroic defenders in another, and sometimes enforcing one law might mean breaking another.

As well as the constant threat of violent death at the hands of a criminal whose ability and ship outclass your own, as a bounty hunter you will learn to understand that for every faction you befriend with your help, you are increasing the hatred of another.

Anyone can try their hand at bounty hunting, but if you intend to take it seriously, you might want to consider a FSD wake scanner that will allow you to doggedly track down your prey.

EXPLORATION



With the advent of the frame shift drive there has never been a better time to join the hallowed ranks of the great space explorers. As well as the wonder of vistas unseen by human eyes, there is money to be made collecting data for the mega-corporation Universal Cartographics.

Perhaps more than any other profession, the explorer understands the long term risks of space travel, and acts accordingly. You will also need to become a jack of all trades, able to turn your hand to any number of short term contracts, as you understand that staying on the move over great distances can shut off opportunities just as fast as it can reveal them.

Explorer vessels should excel at travelling great distances, so a big fuel tank and powerful frame shift drive are desirable. However, perhaps your closest friend might be a fuel scoop, allowing you to refuel for free, if you are brave enough to use it.

MINING



The life of a miner can be dangerous and even frustrating as they search for the "motherlode". It is also has a reasonably expensive entry barrier; your ship will need to be fitted with both a mining laser and a refinery module.

You will need to travel far in your hunt for asteroid belts and clusters rich in mineral resources. And should you manage to fill your hold, you need to be canny or strong enough to make it back to port where you can sell your refined resource.

Mining is definitely not for the faint of heart, or impatient. But for the skilled and patient miner, the chance exists to do something almost unheard of in the galaxy: generate a fortune from nothing more than cold dead rock.

CRIME AND PUNISHMENT

It is important that you are aware of how crime and punishment operates across the galaxy, if you are to avoid falling foul of its intricacies.



JURISDICTIONS

In normal space you will often be flying within the jurisdiction of a minor faction that controls the local space. Most systems have one faction that is in overall control. All space within the system falls under its jurisdiction except the areas of space around starports and outposts that are controlled by different factions.

The faction whose jurisdiction you are in is displayed in the Pilot's Interface, at the bottom of the Target Information Panel. Any crimes you are detected committing in this location will be against the jurisdiction's controlling faction.

Any bounties or fines issued against you will be from this faction.

Some systems and areas within systems have no form of working government. This includes anarchies, where the controlling government is criminal or is suffering collapse, empty systems where there is no form of government at all, and warzones, where normal laws are suspended in the fight for supremacy.

In such locations, there is no law. No crimes are detected or logged. Take due care and attention when travelling in such areas.

CRIME

There are a number of ways that your crimes might be detected. The most obvious path is that you commit a crime directly against a vessel in jurisdiction. The vessel will squawk the crime to the faction authorities and you will instantly have a bounty issued against you.

The crimes of transporting stolen or illegal goods will only be detected by a successful cargo scan, carried out, by an authority vessel; you will receive a fine or bounty immediately. Commanders may perform cargo scans and see that you are carrying stolen goods, but it does not log a crime.

Criminal dumping crimes will only be detected by authority vessels that have resolved you as a contact. Starport and outpost crimes (such as firing within the no-fire zone of a starport) will immediately be detected and action taken.

LAWS

Most systems share laws, though they may have differing penalties for breaking them. The following is a list of common laws:

- Assault: The act of shooting and hitting a ship that is not wanted in the local jurisdiction
- Murder: The act of destroying a ship that is not wanted in the local jurisdiction
- Carrying Stolen/Illegal Goods: The act of being scanned by authorities while carrying stolen/illegal goods
- Firing in a No-Fire Zone: The act of firing, without hitting a target in a starport or outposts no-fire zone
- Loitering in an Airlock or over a Docking Pad: the act of spending too much time in a starport's airlock or above a docking pad that has not been allotted to you
- Illegal Dumping: The act of jettisoning cargo near a starport, or being detected jettisoning toxic waste

FINES AND BOUNTIES

Some crimes are considered “lesser” infractions of the law. For committing a lesser crime, you can expect to be issued a fine by the faction controlling the jurisdiction you were detected committing the crime in.

Fines must be paid to a local security office or liaising official, available in the starport services “contacts” page. Should you fail to pay a fine within twenty-four hours (real time), it will be converted into a bounty, issued against you.

Should you be detected committing a greater crime (in most systems, violent crime fall into this category), then a bounty will be issued against you.

Having an active bounty means that you will be “wanted” in any jurisdiction controlled by that faction. Ships that perform a basic scan will learn of this criminal status and be allowed to attack you with impunity. If you fight back you will likely be committing even more crimes.

A bounty will be cleared if a Commander kills you – they will receive a bounty claim that they can cash in at a starport or outpost.

If your ship is destroyed, your personal escape system will kick in and eject you from the ship, micro-jumping you to the last starport you docked in, where you will be processed by the authorities and your insurance company.

If you have an unclaimed bounty or fine issued against you by the faction controlling the starport you are out of luck – you will need to pay off the bounty as part of the costs of getting a replacement ship. If you have unclaimed bounties and fines issued against you by factions that do not control the starport then you have a stay of execution: those bounties and fines will become dormant as those factions believe you dead.

Dormant bounties and fines are invisible to Commanders. Dormant fines do not tick up towards becoming a bounty. However, if you are scanned by authorities of the faction that issued the bounty or fine, or detected committing a crime in their jurisdiction, the dormant bounty and fine will reactivate.

INSURANCE FEES

Your first ship is essentially on loan, and covered by a comprehensive insurance policy, ensuring that you only have to pay a bounty or fine to be issued with a replacement.

Any modules you purchase and fit to this ship are covered by a lesser insurance – should they need to be replaced you will have to pay a premium excess.

Should you purchase a ship, then this too is covered by a lesser insurance policy – should it be destroyed, you will need to pay a premium excess for it and all modules fitted.

Although the premium excess fees are only small fractions of the ship and modules' actual worth, the resulting bill can still become significant, potentially more than you can afford.

In such circumstances you have a number of options. Assuming you have enough to cover the hull cost (which includes all mandatory modules), you can choose not to pay for optional modules, reducing the cost.

You have access to a creditor who can lend you up to 200,000CR. If you take this option, any credits you make will have 10% deducted at source until the debt is paid.

If you have ships in storage, you can choose to abandon your current vessel claim and select a ship in storage to activate.

If you have no ships and not enough credits to even pay the bounty or fine you owe at the starport or outpost you arrive at after your ship has been destroyed, you are declared bankrupt. All debt and crimes are cleared and you are transported to your starting location where you receive a new loaned starting ship.

Effectively, your career is reset, but note that you retain all reputation and rank gained/lost (to clear your career completely you will need to clear your save from the main menu).

POWERPLAY

Powerplay represents the machinations of powerful individuals and organizations as they strive to control inhabited space for their own agendas.

At its heart, Powerplay is a battle for territory. Each power attempts to expand into systems, extracting resources from them in order to pay for continued expansion and protect systems already being exploited.

As a commander of a star ship you can pledge your support to a power, carrying out tasks for them in return for rewards and prestige.

POWERS AND FACTIONS

Powers are distinct entities compared to minor and major factions.

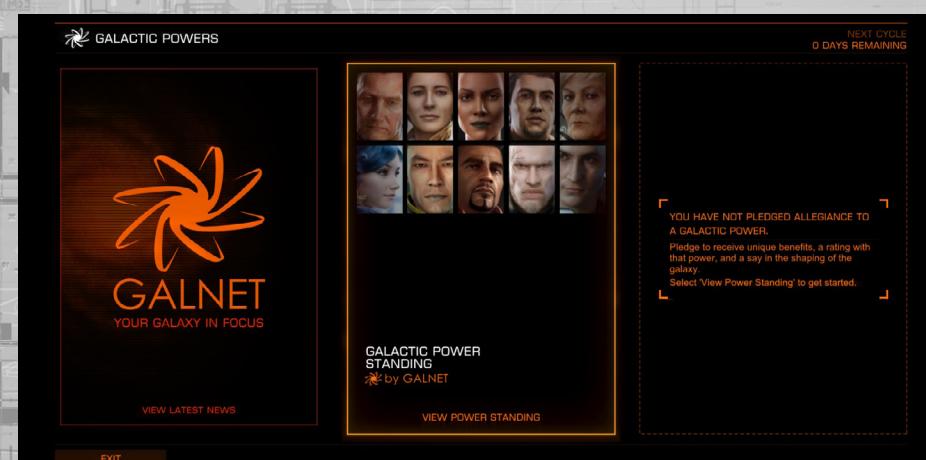
Minor factions generally control individual areas of space within a system. Normally one minor faction will be dominant, controlling the lion's share of space.

Major factions are huge super powers that control vast swathes of inhabited space. Many, but not all, minor factions align themselves with major factions, adopting their laws and customs.

Powers sit between major and minor factions. Technically they can control up to dozens, if not hundreds of systems, though they may also control a mere handful.

Whilst many powers are aligned directly with major factions, being Imperial senators or Federal politicians, others are not, being independent entities.

Importantly, even when a power is aligned with a major faction this does not prevent it scheming against its "allies". Ultimately, every power stands alone.



COMMAND CAPITAL [CC]

Each power uses a resource called command capital [CC] to pay for its endeavours. CC represents a combination of financial, political and social weight that can be channelled into use by the power.

CC is received from systems under the control of a power. The bigger the population of a system, the greater the amount of CC can be exploited from it.

CC is the lifeblood of a power. Without it, the power cannot expand or protect its territory.

CYCLES

Powerplay runs in cycles, each one lasting a continuous week in real-time.

A cycle represents the amount of time it takes for powers to take significant actions. At the end of each cycle, all actions started within it are resolved and the power's CC reserve for the next cycle is computed.

CONTROL SYSTEMS AND EXPLOITATION

Powers do not take direct control of all systems they wish to expand into. They instead focus on single systems, dominating them, turning them into control systems.

Every cycle a power must pay CC upkeep to maintain control systems. The amount of upkeep is directly related to the distance a control system is from the power's home system. The further away a control system is the greater the upkeep required to maintain it. *3000*

In addition to CC upkeep, for every control system a power has it must pay a CC overhead, representing an overall logistical cost to maintaining control. The more control systems a power has, the greater this cost will be.

A control system automatically collects CC income from all nearby systems within a 15 light year radius. These systems become exploited systems.

Importantly, control and exploited systems cannot be expanded into by other powers.

TURMOIL AND REVOLT

If a power begins a cycle with a deficit of CC, it is in trouble as it effectively does not have the strength to maintain control over all of the systems it controls.

The control system with the highest CC upkeep falls into turmoil and its upkeep cost is removed from the power's CC reserve. Additional control systems fall into turmoil until the power has a positive CC reserve.

When the next cycle begins, control systems already in turmoil will no longer exploit nearby systems for CC income, though their upkeep cost will still be due at the end of the cycle.

Any control systems that started the cycle in turmoil, will revolt at the end of the cycle if the Power is still running a CC deficit. Systems that revolt are no longer controlled by the power.

Note that revolting systems will not address the CC deficit, other systems might still fall into turmoil.

CONTROL EFFECTS

When a power controls or exploits a system, it doesn't simply harvest CC from them. It also applies one or more control effects to the systems.

Control effects are varied and dependent on the power, but could include shutting down all black markets, increasing penalties for criminals or legalising/criminalising specific commodities.

THE PROCESS OF POWERPLAY

There are three elements to Powerplay: preparation, expansion and control.

In the first instance, a target system must be prepared for expansion. This preparation may involve different tasks for supporters to complete, depending on the power involved.

Once a system has been successfully prepared, an expansion attempt may be purchased for the next cycle. Again, different powers require their supporters to carry out different tasks to successfully prosecute expansion.

Supporters of other powers may directly oppose expansion making success even more difficult to achieve.

Once a system has been expanded into, supporters may fortify it to reduce its drain on the power's CC reserves.

Supporters of other powers may undermine control systems making them more expensive to maintain and more likely to revolt.

PREPARATION

If you have pledged support to a power, you can prepare systems for expansion. The details of the preparation tasks required of you are described in the details of the preparation tab in the Powerplay interface.

TOP 10 SYSTEMS	COST
1 SENIUL PREP 32043	118 CC 67.3LY
2 LHS 1541 PREP 18528	118 CC 142LY
3 TRELLA PREP 13172	182 CC 130LY
4 WARWAL PREP 9840	132 CC 152LY

Any system may be prepared for expansion with the following caveats:

- The system must be inhabited
- The system must not be a control system for a power
- The system must not be an exploited system for a different power

In addition, each target system has an expansion cost. This expansion cost will be deducted from the power's CC reserve at the end of the cycle if the system is chosen for an expansion attempt.

A system cannot be prepared if its expansion cost is greater than the power's current CC reserve.

PREPARATION TOP TEN

Although any amount of systems may be prepared, a power is limited to purchasing no more than 10 expansion attempts each cycle.

Importantly, its choices are based on the amount of preparation carried out at a system, not the system's expansion cost.

At the end of a cycle, expansion attempts are purchased in this order until either:

- Expansion attempts are purchased for all prepared systems in the top ten
- The power runs out of CC

All systems have a preparation threshold. Until supporters have completed enough preparation tasks to breach this threshold the system cannot be a top ten entry.

VOTE NOMINATIONS

Once supporters become influential within a power they may vote for a preparation top ten entry from the preparation tab to directly increase preparation for it, increasing the likelihood of an expansion attempt being purchased for it.

MULTIPLE PREPARATION

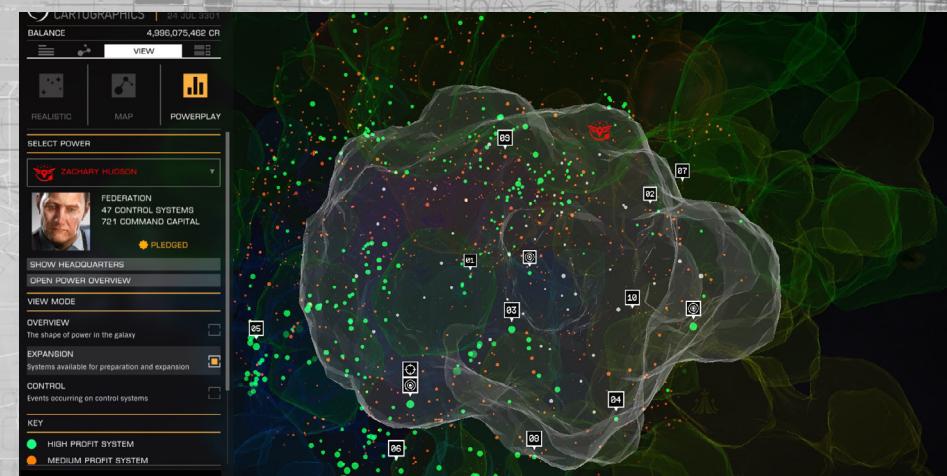
More than one power can prepare a system at the same time. In such cases, at the end of the cycle the power which completed the most preparation gets to purchase an expansion attempt whilst all other preparation fails.

Powers can prepare systems that would be in the 15 light year exploitation radius of systems being prepared by an opposing powers.

In such cases, at the end of the cycle the power which completed the most preparation gets to purchase an expansion attempt whilst all other preparation fails.

PREPARATION AND THE GALAXY MAP

You can use the galaxy map to help you view potential candidates for preparation, by selecting the "Powerplay" view, choosing your power from the drop down selection then activating the "Expansion" filter.



The Expansion view shows all systems outside your control with the following identification markers:

- Colour is used to denote value of a system if it was controlled:
- Green are the most profitable, red are the least profitable, orange are average
- Grey systems would actually cost CC upkeep to maintain, even after all the income had been harvested from exploited systems
- Hollow systems cannot be prepared, for one of the following reasons:
 - The upkeep cost is greater than the power's entire CC reserve that cycle
 - Another power is controlling the system
 - Another power is exploiting the system
 - Another power is attempting an expansion that would cause the system to be exploited if it is successful
 - Systems that are uninhabited are not displayed at all

Top ten preparation entries are displayed in the Powerplay galaxy map when the "expansion" filter is active. Each such system has a number entry above it, denoting its top ten preparation status.

Rolling over or selecting a system summons an information panel giving more details as well as highlighting all systems that would be exploited if this were a control system.

EXPANSION

Once an expansion attempt has been purchased for a prepared system the attempt takes place during the following cycle.

Depending on the power involved, different tasks may be required for supporters of the power. By completing these tasks an expansion value increases for the target system.

The target system has an expansion success trigger value. At the end of a cycle, an expansion attempt is successful if the expansion value is greater than the success trigger.

You can use the "Expansion" tab in the Powerplay interface to view a list and details of all active expansion attempts.



This screen also informs you of the exact tasks required by your power to increase the expansion value.

If you are looking at the expansion tab of another power, this screen will instead inform you of the tasks required to oppose the expansion.

OPPOSITION

Expansion can be directly opposed by supporters of foreign powers when they complete opposition tasks in the system. Completing these tasks increases an opposition value.

For expansion to be successful, the expansion value must be greater than both the success trigger and the opposition value.

EXPANSION ETHOS

Each power has an ethos that dictates their method of expansion. Depending on the controlling government of an expansion attempt system and its exploited systems, the ethos may make expansion easier or more difficult.

This is reflected in a change to the success trigger value. If the ethos is particularly effective the success trigger is reduced. If the ethos is particularly ineffective the success trigger is increased. If over 50% of all systems that would be exploited by the expansion attempt system share a controlling government type that the ethos is particularly effective against, the success trigger is further reduced by a significant margin.

If over 50% of all systems that would be exploited by the expansion attempt system share a controlling government type that the ethos is particularly ineffective against, the success trigger is further increased by a significant margin. Effects of ethos versus government type are only computed at the end of a cycle. Any changes to government types controlling systems will only apply during the following cycle.

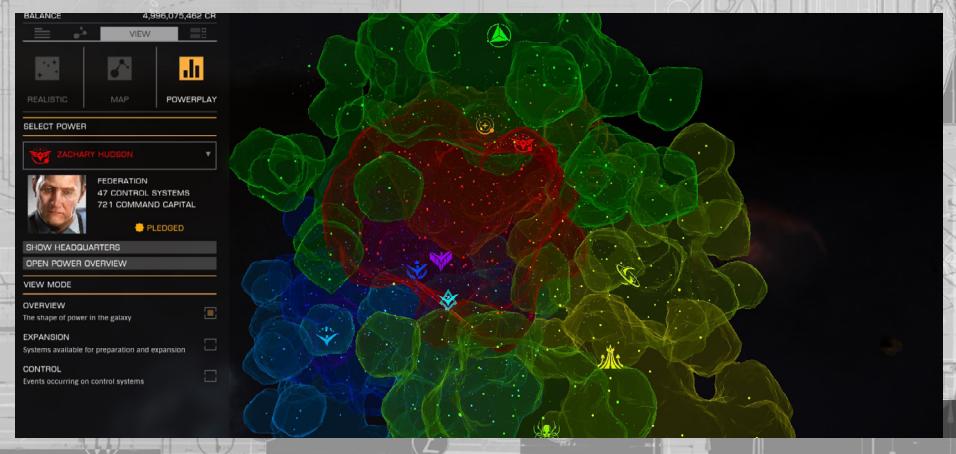
EXPANSION AND DEFICIT

If the successful resolution of an expansion attempt would cause the power to end up with a CC deficit at the start of the next cycle, the expansion attempt will fail regardless of support.

At the end of each cycle, expansion resolution occurs in order of the most successful expansion attempt first (relative to opposition and success threshold). If an expansion attempt fails because of this CC safety net, other expansion attempts could still succeed, as they may have lower upkeep and overheads.

EXPANSION AND THE GALACTIC MAP

You can use the galaxy map to help you view active expansion attempts, by selecting the "Powerplay" view, choosing your power from the drop down selection then activating the "Expansion" filter. The expansion filter displays an expansion icon above all systems that have an active expansion attempt. You can roll over or select a system that has an active expansion attempt to view its current expansion and opposition values, as well as their success trigger values.



CONTROL

A system that is controlled by a power can be fortified by that power's supporters and undermined by supporters of other powers.

FORTIFY

Once a power controls a system, it pays CC upkeep and receives CC income from its exploited systems every cycle. Supporters of the power can temporarily reduce the CC upkeep of a control system by completing fortify tasks for it during the cycle, which increase the system's fortify value.

Every control system has a fortify success trigger. If at the end of a cycle a system's fortify value is greater than its fortify success trigger its CC upkeep is reduced. This effect only lasts for a single cycle change; once the next cycle begins all fortification is removed and must be re-applied to retain the benefit.

The "Control" tab of the Powerplay interface lists all of the current control systems that are currently being fortified, as well as describing the nature of the tasks required to fortify.

ZACHARY HUDSON

OVERVIEW
FORTIFY, UNDERMINE

SYSTEM ALERTS

- GROOMBRIDGE 16° FORTIFYING 110LY
- WW PISCIS AUSTRI CANCELLED 87.0LY
- ALPHA FORNACIS CANCELLED 87.0LY
- LHS 142 CANCELLED 104LY
- GLISEP 868 CANCELLED 85.9LY
- SOL FORTIFYING 87.0LY

CONTROL

YOU'RE NOT PLEDGED TO ZACHARY HUDSON
Pledge to participate in preparation tasks.

As far as President Hudson is concerned, only a continued show of Federal might is enough to ensure law and order is maintained.
Strong against Feudal and Patronage governments.
Weak against Dictatorship governments.

FORTIFY ETHOS

Like expansion, each power has an ethos that dictates the methods it uses to fortify a system, which are particularly effective against some government types and ineffective against others.

If the control system's government type is vulnerable to the power's ethos the fortify success trigger is reduced. If the government type is resistant to the power's ethos the fortify success trigger is increased. If over 50% of exploited systems have a vulnerable government type to the power's ethos the success trigger is further reduced by a significant amount. If over 50% of exploited systems have a resistant government type to the power's ethos the success trigger is further increased by a significant amount.

Effects of ethos versus government type are only computed at the end of a cycle. Any changes to government types controlling systems will only apply during the following cycle.

UNDERMINING

Supporters of powers can attempt to undermine systems controlled by other powers.

Every control system has tasks which opposing supporters can complete to increase an undermine value for the system. It also has an undermine success trigger value. If at the end of a cycle a control system's undermine value is greater than its undermine success trigger value the system is temporarily undermined.

An undermined system increases its upkeep by an amount equal to its full CC income from exploited systems. Like fortification, undermining is temporary; once the CC upkeep penalty has been applied at the end of a cycle and the next cycle begins all undermining is removed and must be re-applied to retain the effect.

JOINT SUCCESS

A system that is both fortified and undermined at the end of a cycle is counted as neither – each state cancels out the other.

FORTIFICATION, UNDERMINING AND THE GALACTIC MAP

You can use the galaxy map to help you view the fortification and undermined status of control systems, by selecting the "Powerplay" view, choosing your power from the drop down selection then activating the "Control" filter.



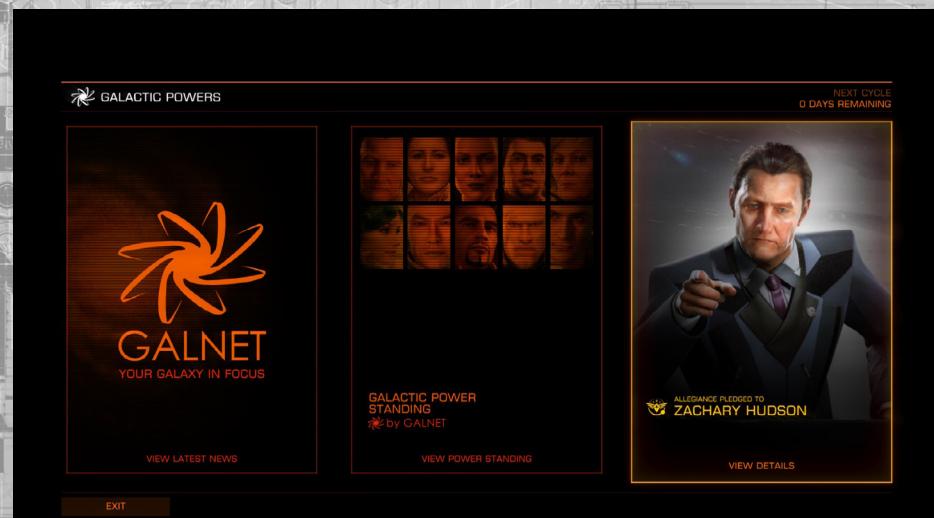
Control systems that are currently being fortified show a fortify [shield] icon above them.

Control systems that are currently being undermined show an undermined [target] icon above them.

Systems that are being both fortified and undermined at the same time show the icon of the activity that is relatively closer to success.

PLEDGING SUPPORT

You can pledge support to any power, at any time, using the Powerplay interface. You might choose to pledge to a power because you agree with their ethos, major faction alignment, or you might simply like their control effects and rewards.



Once you have pledged to a faction, you are given a power rating of one. You can increase this rating by successfully completing preparation, expansion, fortify and undermine tasks for the power.

Doing so will give you merits with the power. At the end of each cycle, the total number of merits you have accumulated determines what rating you will be for the next cycle.

Merits earned from previous cycles still count towards your rating at diminishing rates.

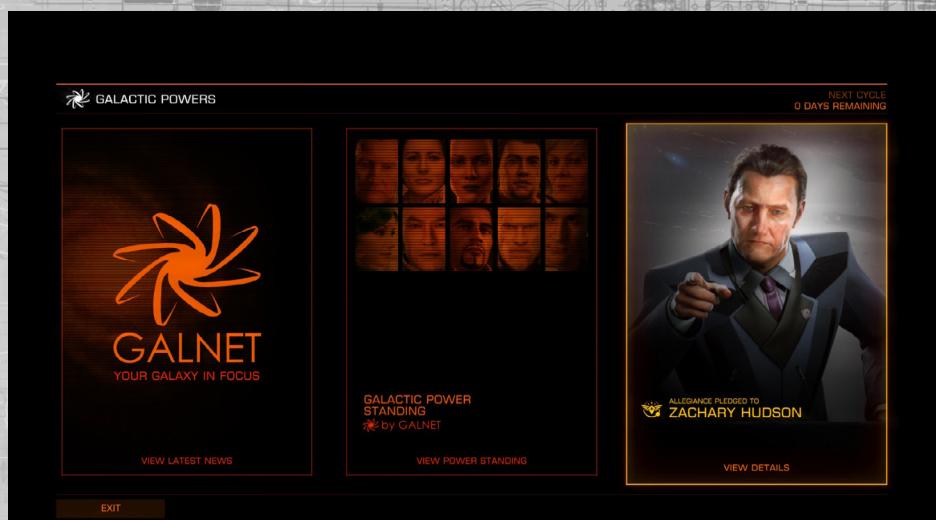
Your merit total from the previous cycle is halved then added to your current cycle value. After two cycles, its value is halved again before being added. After three cycles, the value is halved once more. After four cycles the value is no longer added.

PLEDGE BENEFITS

Pledge benefits are available at the various ratings for a power. As rating increases, additional Powerplay cargo is made available, as well as increased preparation votes. These benefits are the same across all powers.

In addition, each power has one or more unique benefits. Such benefits might include reduced costs in outfitting or increased rewards for bounties.

You can see what the pledge benefits are for a power by looking at the "Pledge" tab for the power in the Powerplay interface.

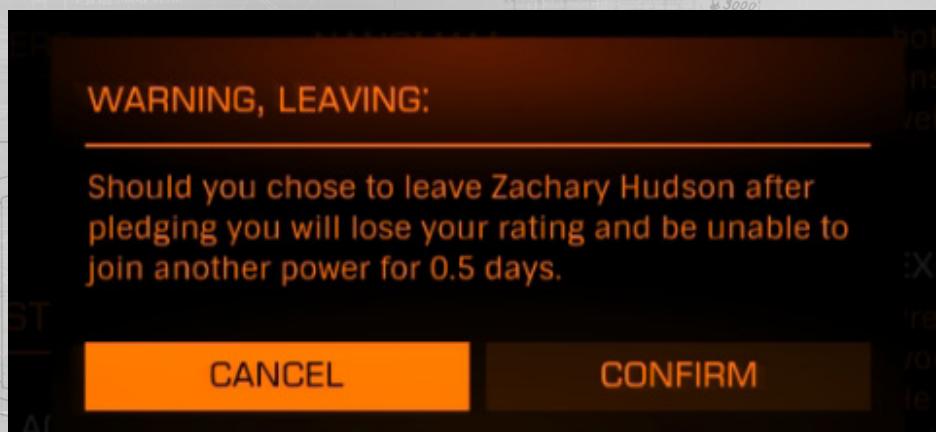


WITHDRAWING SUPPORT

You can leave a power at any time.

Should you leave a power, all benefits are immediately revoked, but any modules unlocked as a reward and purchased are kept.

Once you have left a power there is a "cooling off" period before you can join a new power.



DEFECTION

You can defect from one power directly to another power.

Doing so allows you to carry over an amount of merits from your old power.

However, if you defect you may be hunted and attacked by mercenaries working for the power you left. The higher rating you had when you defected, the longer this hunt will last.

Once you have defected you cannot defect again, until you are no longer being hunted. You may leave the new power, but you will not be able to pledge again until the hunt has finished.

WARNING, DEFECTING:

Defecting to Aisling Duval you will carry over 0 merits from your current 0 merits.

You will be assigned Rating 1 with its associated perks.

After defecting, Zachary Hudson's agents will attempt to hunt you down over the next 1 days. During this time you will not be able to join another power.

CANCEL

CONFIRM

INCOME FROM 467 EXPLOITED SYSTEMS

GALACTIC STANDING

At the end of each cycle the galactic standing of currently active powers is calculated, allowing the powers to be ranked relative to each other.



The following elements are used to determine galactic standing:

- Number of controlled and exploited systems (more is better)
- Number of successful preparations and expansions (more is better)
- Number of systems in turmoil (fewer is better)
- Number of systems revolted (fewer is better)

As well as provide an easy to understand ranking, galactic standing has two additional functions:

- The top three ranked powers provide an increasing benefit for one of their pledge benefits (every power has at least one pledge benefit that can increase in effectiveness)
- The bottom three ranked powers are in danger of collapse

POWERS AND FACTIONS

A power that is in the bottom three ranks of the galactic standing list is at risk of collapsing and vanishing altogether.

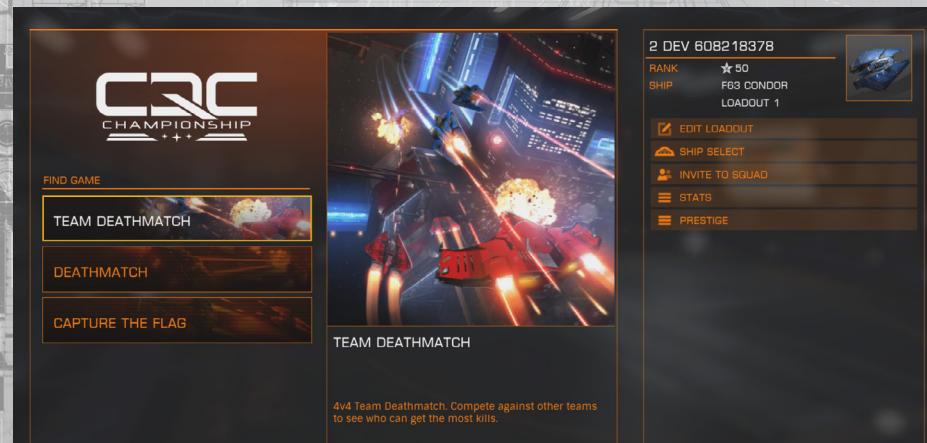
Simply being in the bottom three ranks does not automatically put the power at risk. It also has to fail to achieve any expansion during the cycle.

The more cycles a power is ranked in the bottom three and fails to expand, the more likely it will collapse. Supporters of a collapsed power are freed from service; once they have come to terms with the ignominy of failing to save their power they are free to pledge to a new power.

CQC CHAMPIONSHIP

Close Quarters Combat (CQC) Championship brings arena based combat to Elite: Dangerous. Prove to everyone that you're the best by destroying every pilot who stands between you and becoming Elite.

To access CQC go to Full Game and select CQC.



Once in the CQC menu you can choose the playlist you want to play; currently each playlist is its own game mode. Selecting one will put you into a lobby, ready for the competition.



You'll be given a map at random from the list, should enough people chose to, the initially selected map can be skipped and another will be automatically selected; after each match you'll be given a different map to play.

FLIGHT CONTROLS

The flight controls are exactly the same as the main game with a few reductions in CQC. Please see the controls section for an in-depth description of the controls. Below are the default controls for CQC:

Binding Name	Default K&M	Default Gamepad
YAW LEFT	A	A
YAW RIGHT	D	D
PITCH UP	Mouse Down	Left Stick Down
PITCH DOWN	Mouse Up	Left Stick Up
ROLL RIGHT	Mouse Right	Left Stick Right
ROLL LEFT	Mouse Left	Left Stick Left
HEADLOOK	Mouse 3	Mouse 3
MENU	Esc	
SCORECARD		
LOCK ON	T	Y
ENGINE BOOST	TAB	B Button
FIRE WEAPONS	Mouse 1	Right Trigger
USE DEFENSIVE MODULES	Mouse 2	Left Trigger
THROTTLE UP	W	Right Bumper
THROTTLE DOWN	S	Left Bumper
THRUST UP	R	Right Stick Up
THRUST DOWN	F	Right Stick Down
THRUST LEFT	Q	Right Stick Left
THRUST RIGHT	E	Right Stick Right
FLIGHT ASSIST TOGGLE	Z	
SILENT RUNNING	Delete	
DIVERT POWER TO SHIELDS	Left Arrow	D-Pad Left
DIVERT POWER TO ENGINES	Up Arrow	D-Pad Up
DIVERT POWER TO WEAPONS	Right Arrow	D-Pad Right
BALANCE POWER DISTRIBUTION	Down Arrow	D-Pad Down

For more information about flying your ship please read the Basic Flight section of the manual. Play the in game training scenarios and view the videos here:

Basic Combat & Basic Flight: <https://community.elitedangerous.com/tutorial-videos>

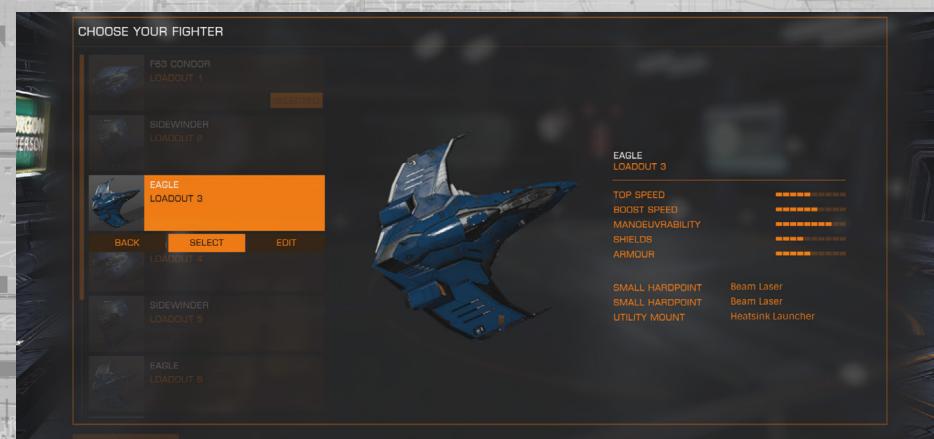
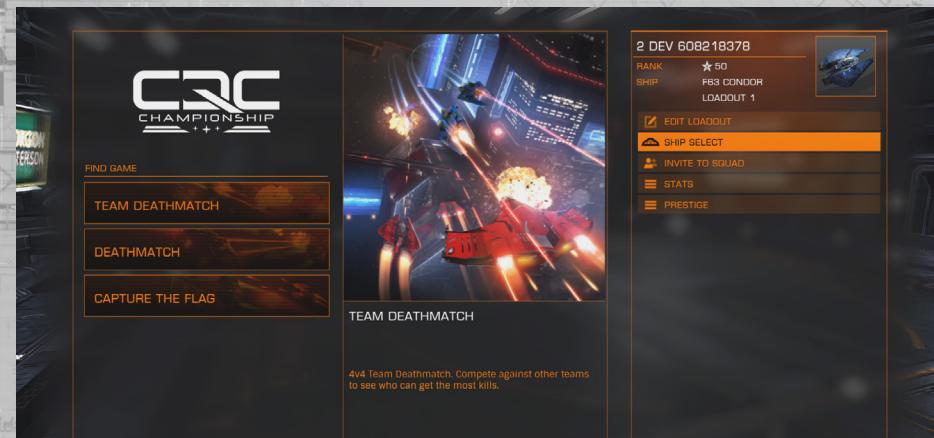
CHOOSING YOUR SHIP

Before a match, if you are level 2 or higher (in CQC you can level up by earning points and unlock new ship loadouts), you can choose which ship you'll start the match with. Choose the 'Ship Select' option on the menu. In here you can scroll through any ships and loadouts you have unlocked, look at their stats and then select which one you want to load into the level with.

CUSTOMISING YOUR LOADOUT

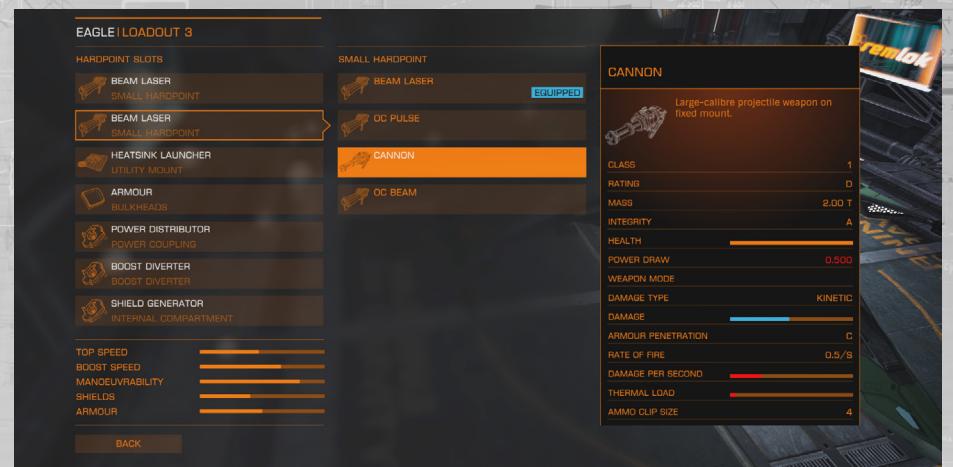
At level 4 you'll be able to start customising your ship's loadout. As you progress you'll unlock new loadout slots for each ship which you can edit; there's a total of 3 customisable loadouts for each ship. You'll also unlock new weapons, internal modules and abilities for each ship; you can use these in any combination to create a ship that suits your play style.

To edit a loadout you go to 'Select Ship', pick the loadout you want to change, and then select 'Edit'. Alternatively you can select 'Edit Loadout' on the main CQC menu which will let you edit your currently selected loadout.



When you've selected a loadout to edit you'll see that in the left column you've got the different items you can edit: Weapon Slot 1, Weapon Slot 2, Utility Mount [Ability], Armour, Power Distributor, Boost Diverter, Shield Generator.

In the right hand column are all of the modules; any that are still locked will have a locked icon next to them. You can highlight any option and it will show you a preview of how the new module will affect your ship's stats; shown to you in the bottom left. Selecting it will apply it to your ship.



If you edit a ship it will automatically be selected as the one you want to start the next match with.

CHANGING SHIP MID-MATCH

When you die you are presented with the option to change your ship, assuming you are at least level 2 and have other loadouts unlocked. Click the "Change Ship" option to enter the fighter selection page and click another loadout to select it.

CLOSE QUARTERS COMBAT

Combat in CQC is similar to the main game but is tuned for more frenetic close quarter's encounters. You'll be flying around much tighter environments so your piloting skills will be tested when you're chasing an enemy down.

You have two weapons on your ship, both mapped to Fire Group 1, although these can be remapped to a different Fire Group.

Advanced players can chose to use sub targeting, this will cause module malfunctions on the targeted ships as well as hull damage.

Depending on your ship and loadout you also have access to defensive modules, such as Chaff, which is mapped to Fire Group 2 by default. Or passive defence with modules like Shield Booster which gives you enhanced shield capacity all the time.

LINE OF SIGHT

You will only be able to lock onto an enemy if you can see them. If they are behind a structure you will not be able to lock onto them.

If you lock onto an enemy and they fly behind a structure then they have broken 'line of sight' and you will no longer be locked onto them; this will be accompanied by a "Target Lost" message. If you gain line of sight within a short amount of time after having lost lock then you will automatically lock onto them again.

When an enemy has locked onto you and is attacking you, your best course of action is to try and put something between your ship and theirs. There are lots of buildings, tunnels, asteroids and much more that you can use to your tactical advantage and launch a counter attack.

POWER-UPS

CQC has four different power-ups. To activate a power-up simply fly through it. When activated it lasts for a short amount of time. The power-up ring which you flew through will take a short amount of time to regenerate before it can be used again.

Shield Boost:

Regenerate your shields instantly and have them overcharged by 30% which slowly depletes.

Speed Surge:

A rapid acceleration to help you travel long distances quickly or get away from an enemy.

Weapon Enhance:

Do increased damage to your enemies.

Stealth Mode:

Disappear from your enemy's radar and stop them from being able to lock onto you.



COCKPIT INTERFACE

The cockpit interface has been adapted specifically for CQC.



CQC SPECIFIC

1. Comms Panel: Text chat can be used to communicate with other players. Muting of players is done through the furthest right tab.
2. Info Panel: Will show you information on who has killed who.

3. Scoreboard: Shows you the current scores. When playing Team Deathmatch or Capture the Flag your teams score is in blue and the enemies in red. In Deathmatch your score is in blue and the highest scoring opponent will be in red.

4. Timer: Displays the amount of time remaining for the match.

5. Power-Up Indicators: This shows any active power-ups and how long they will last.

6. Scanner: This displays an area of space around your ship, which is represented as a triangle at the centre of a disc.

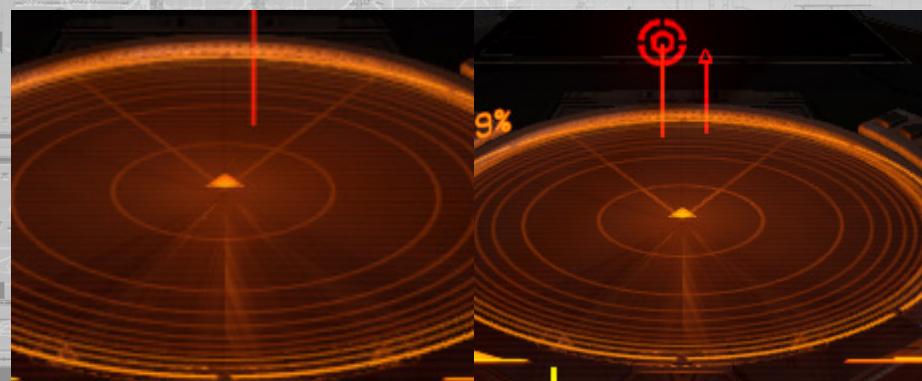
Contacts that your ship's sensors have detected display as markers on the disc; a contact that sits on the disc above the triangle representing your ship is in front of you, a contact to the left of the triangle is to the left of your vessel and so on.

A contact's height is represented by a vertical line that connects it to the disc. The length of the line describes how far above or below you the contact is; a contact sitting on a tall vertical line is high above your ship, a contact hanging from a small vertical line is slightly below your ship etc.

Colour is used to indicate your relationship with the contact:

- Enemies are coloured red.
- Allied contacts are coloured cyan.
- Power-ups are coloured white.
- Objectives are coloured red when they refer to an enemy.
- Objectives are coloured blue when they refer to your team.

A contact that flashes white signifies that it is currently attacking your vessel.



7. Nav Compass: This graphic describes the centre of a map's position relative to your ship's facing. The dot represents the centre, the closer it is to the centre of the circle, the closer it is to your ship's facing. When the dot is hollow, the centre of the map is behind your ship.



8. Objective Markers: Certain CQC modes have objectives in them. During these matches objective marker arrows will appear in the cockpit. These will point towards any objectives and provide a text description of what you need to do.



9. Hit Indicator: When an enemy is firing on you and you take a hit, the hit indicator will pop up to show you the direction the hit came from (CQC only).

10. Score Card: Press the F1 to access the scorecard mid-game. In here you can see how well you are performing. Pressing B or the View button again will return you to game.

GENERAL

11. Signature Bar: This shows how visible your ship is to other vessels in the vicinity. The more agitated the reading, the greater the distance that your ship will be visible to enemy sensors.

12. Power Distributor: This shows the amount of energy stored in three capacitors. These capacitors are used to power your Systems, Engines and Weapons respectively.

The current ratio of power distribution is displayed as a number of "pips" underneath each energy bar. The more pips an energy bar has, the more quickly the capacitor is refilled. You can choose to prioritise the refilling of these capacitors by assigning the pips accordingly.

The three capacitors are:

- **SYS:** This displays how much energy is available to recharge shields and power defensive modules. In addition, the more pips assigned, the more resistant shields are to attack.
- **ENG:** This displays how much energy is available to initiate emergency thrust (boost). In addition, the more pips assigned, the faster and more manoeuvrable the ship becomes.
- **WEP:** This displays how much energy is available to cool weapon systems. Should this bar deplete, your weapons will automatically shut off until the capacitor begins to replenish.



13. Ship Schematic: This displays a schematic of your ship. When your ship is attacked, an attack marker will briefly display indicating the location of the hit. The colour of the marker indicates whether the attack was absorbed by your ship's shields or whether your ship's hull integrity was damaged.

- Cyan: the hit was absorbed by your shields
- Orange: your ship's hull was damaged by the hit

Your ship's current shield strength is represented by three concentric rings encircling the schematic. As your ship's shield weakens the rings fade away. As your shield recharges the rings fade back into being.

When your ship's shield strength is reduced to zero, the shield dissipates. There is a short delay whilst the shield generator resets. The concentric rings change to display a timer bar that fills up during this time. Once your shield generator resets, your ship's shield will have reactivated at 90% strength.

Note: your shield generator will not be able to reset and reform if your SYS capacitor is empty



14. Hull Integrity: Your ship's hull integrity is represented as a bar and a percentage value underneath the schematic. Your vessel will be destroyed if hull integrity is reduced to zero. Collisions and weapon hits will reduce your ship's hull integrity when your vessel has no active shield.

15. Speed Indicator: This gives information about your ship's speed.

The thin bar on the right is your throttle bar. The blue pin on this bar represents your current throttle setting, and the size of the bar represents your throttle range, based on the number of "pips" allotted to the ENG capacitor. The more pips assigned to your ship's ENG capacitor, the greater top speed your vessel will be able to achieve.

Your speed is indicated numerically and by the number of segments on the larger bar.

To the left of the speed bar is the blue "sweet spot" indicator. When your ship's speed is within this range it will have maximum manoeuvrability.



16. Internal Heat Level: This graphic displays your ship's current internal heat as a segmented, vertical bar and a percentage value. As your power plant consumes fuel to operate ship systems it generates heat. Some ship functions, such as using weapons, generate additional heat. When your ship's temperature rises into the middle segment your ship's modules will start to suffer damage. Should your ship's temperature rise into the top segment it will begin to lose hull integrity. Once you lose hull you cannot repair it.

17. Targeting Schematic: This shows the vessel you are currently targeting. Where applicable the schematic will display shields of the target as concentric rings.



18. Target Hull Integrity: When you target a vessel its hull integrity will be displayed under the schematic as a bar and a percentage value.

CQC INTERFACE

In streamlining the ships for CQC the side data panels have also been optimised.

NAVIGATION PANEL

For CQC your ship only has the Contacts and Sub Target tab active. The contacts tab is where you can see a list of teammates and enemies that are currently on your radar. The Sub Target tab is where you can see the load out of the targeted ship and select which module to target.



SYSTEM PANEL

The system panel has two tabs in CQC, Modules and Fire Groups.

In the Modules tab you are able to turn modules on and off if you wish to by highlighting a module and pressing Space. You can also change the priority of a module by highlighting it and pressing A and D on the keyboard; the higher the number the lower the priority of powering it is.



In Fire Groups you're able to assign your weapons to your preferred buttons. 1 will map a weapon to the LMB and 2 will map it to the RMB. To change the number, highlight the weapon and press Space.



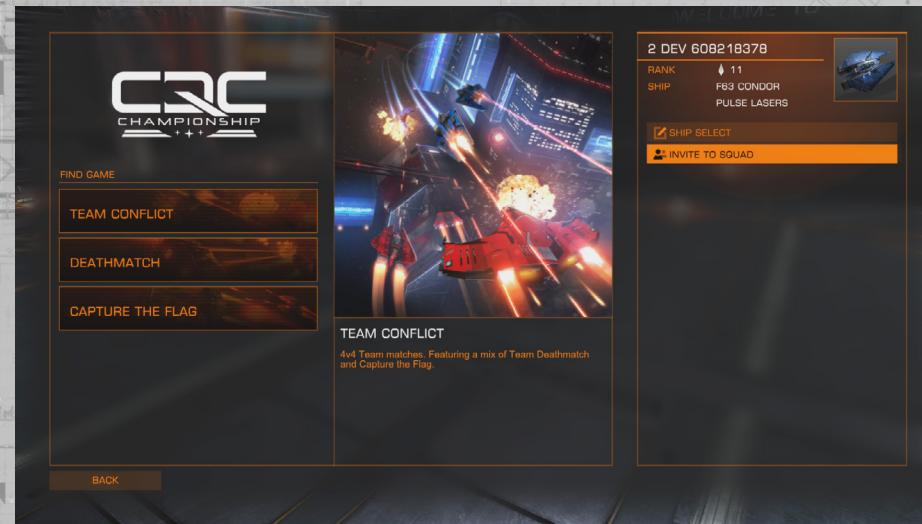
COMMUNICATIONS

In the lobby you'll automatically be able to talk to and hear any other player who has a headset. To mute a player highlight them in the lobby and select them to bring up their CQC stats, then pick the option to mute them.

In team based matches you'll be able to hear and communicate with other members of your team using voice comms.

CREATING A SQUAD

You can invite other players to come and play with you and join your squad. In the main menu you'll be able to select 'Invite to Squad'. In there you'll see a list of your friends and which ones are online. To invite them highlight their name and press enter and select 'Invite'. If they accept your request they will be added to your squad. You can only send an invite to someone who is playing Elite.



If you are the first player to invite a friend into your squad then you are the squad leader and get to decide which play list you'll go into.

Once in a lobby, quitting back to the main menu will cause you to leave the squad.

PLAY LISTS AND GAME MODES

When you first enter the CQC menu you'll have a choice of Playlist.

Team Deathmatch is where you'll need to use teamwork to overcome your enemies, by blowing them up.

Deathmatch is all-against-all carnage, where you prove that on an individual level your are the best pilot.

Capture the Flag is where you need to capture your enemy's flag while protecting your own.

See below for more details on each game mode. More Maps, Game Modes and playlists will be added in the future.

TEAM DEATHMATCH

Match Length: 15 minutes

Max. # Players: 8

Kill Limit: 25

Team Deathmatch is where you and your teammates must work together in order to destroy the opposing team. First team to 25 kills wins, or the team with the most kills when the timer expires.

DEATHMATCH

Match Length: 7.5 minutes

Max. # Players: 8

Score Limit: 750 points

Free-for-all Deathmatch where you must annihilate your opponent, racking up as many kills and assists as possible. The first player to reach 750 points wins or the player with the highest score when the timer expires. You get 100 points for a kill and 50 for an assist.

CAPTURE THE FLAG

Match Length: 15 minutes

Max. # Players: 8

Captures Required to Win: 3

Capture the Flag sees you go to the enemy's base and fly through their goal to pick up their flag. You must then transport it back to your base where you must fly through your goal in order to score. Beware; in order to score your flag must also be at your base, so work as a team to make sure your flag is secure while you transport the enemy's flag.

If you kill an enemy who is carrying your flag then they will drop it. If another enemy flies into it they will then be carrying it. If you or a teammate flies into it then it will automatically be returned to your base.

You'll get fewer points for normal kills and assists in this mode but you'll get points for picking up the flag, capturing it, returning it to base and killing the carrier.

The first team to capture the flag 3 times wins, or the team with the most captures when the timer expires. If the scores are tied at this point then it's a draw.

CQC PROGRESSION

As you level up in CQC you will unlock new ships, loadout slots, weapons, internal modules and abilities.

To level up you need to earn points. You earn points by participating in matches. During a match you are awarded points for wins, kills, assists and completing objectives e.g. capturing the flag. Earning enough points will see you level up, potentially unlocking a new item for you to equip.

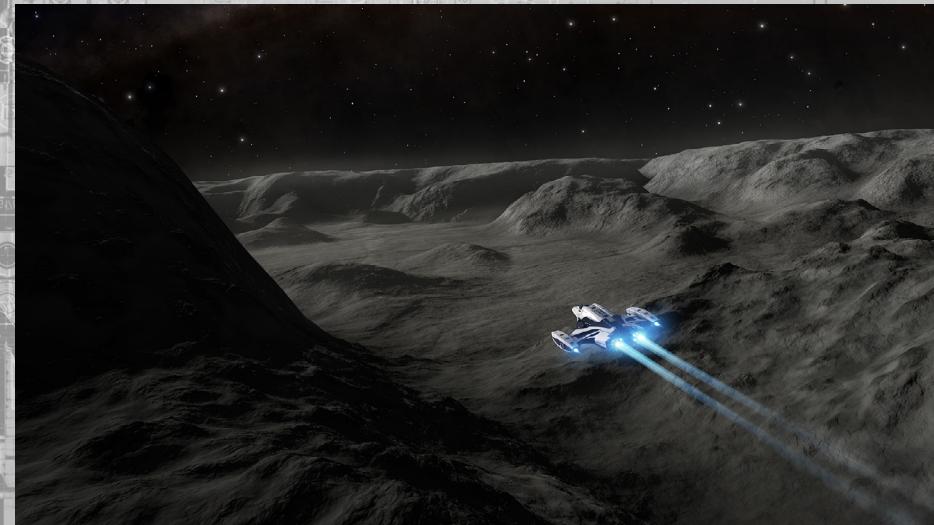
CQC is a career path in Elite, you will not only gain points for your effort but you will be rewarded with credits for every match you participate in. You will also progress towards an Elite career rank within CQC.

PRESTIGE

When you reach level 50 in CQC you'll have the option to 'Prestige'; increasing your stature within the CQC community. This is where we reset your rank back to 1 and remove all of the things you've unlocked and prove yourself once again. It's not all bad though, you'll be able to earn more credits pre match than you did before, unlock a permit to the Attilius Orbital starport in CD-43 11917 and get a new icon next to your name to recognise your achievement.

ELITE DANGEROUS® HORIZONS™

PLANETARY FLIGHT PROCEDURES



INTRODUCTION EXCERPT

"Thank you for purchasing our planetary approach suite upgrade for your vessel. We are confident it will meet and exceed all of your operational expectations.

However, please familiarise yourself with the following basic procedures to avoid injury AND/OR destruction of property."

PLANETARY FLIGHT SEQUENCE CHECKLIST

1. Locate **valid planet**
2. Approach in **super cruise**
3. Distance-based transition to **orbital cruise**
4. Distance-based **glide manoeuvre** exit from orbital cruise
5. Utilise drives for **planetary flight**

HUD ENHANCEMENT

To enable safe planetary flight, your ship's 'Heads Up Display' (**HUD**) features several new elements which will be displayed based on context and need. For your convenience they are listed below:



DISTANCE TO ORBITAL CRUISE TRANSITION



The **distance** element displays your current distance to the orbital cruise transition plane. When you pass this point your planetary approach suite will automatically configure your ship's frame shift drive and thrusters for orbital cruise.

The **speed** element displays your current speed and the maximum safe speed for engaging orbital cruise. If you reach the orbital cruise transition plane at unsafe speeds your ship's frame shift drive will automatically perform an emergency drop.

ALTIMETER

As you near the orbital cruise transition plane the Altimeter element will be displayed.

The altimeter displays your distance from the planet surface. The altimeter shows important transition planes:

- **OC [Orbital Cruise]:**

this represents the orbital cruise transition plane, the distance from the planet surface that your ship will enter orbital cruise when approaching

- **DRP [Drop]:**

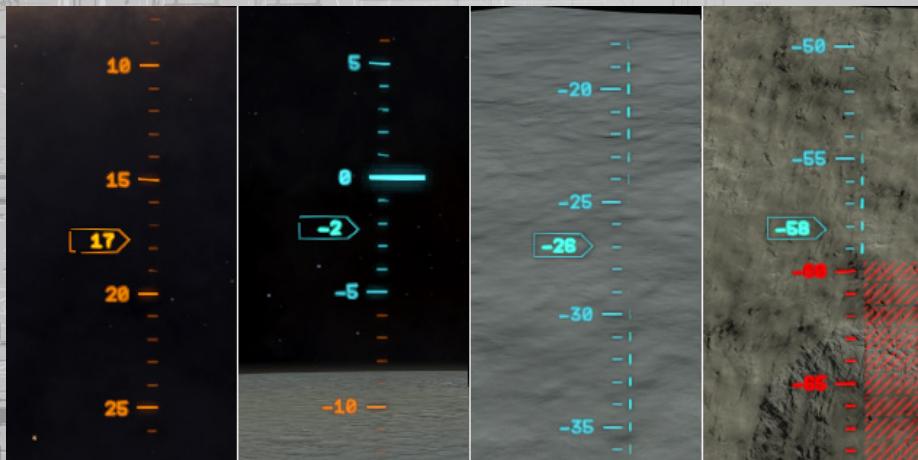
when in orbital cruise, this represents the distance from the planet surface that your ship will initiate a glide manoeuvre, allowing planetary flight at high speed as the frame shift drive disengages

- **SURF [Surface]:**

this represents the planet surface. Avoid contact at speed

ATTITUDE LADDER

As you near the orbital cruise transition plane the Attitude Ladder element will be displayed.



The 'attitude ladder' describes the pitch and roll of your ship relative to the planet surface. The numbers on the ladder represent pitch, where 0 degrees is parallel to the surface.

The rotation of the attitude ladder represents roll, with a perfectly vertical ladder indicating no roll.

During **orbital cruise**, a segment of the attitude ladder is coloured blue. Keeping your ship's pitch within this angle range will allow increased travel speed in order to quickly orbit the planet.

During **orbital cruise**, a segment of the attitude ladder is coloured red and crosshatched. This indicates that a glide manoeuvre from orbital cruise will automatically fail and cause an emergency drop and is not recommended.

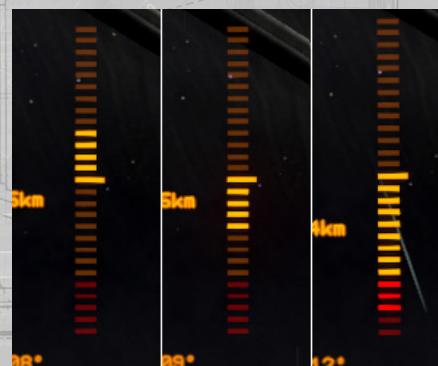
During a **glide manoeuvre**, a segment of the attitude ladder is coloured blue. Keeping your ship's pitch within this angle range will allow the glide manoeuvre to fully complete. Pitching up out of the blue segment will abort the manoeuvre and safely drop your ship into normal planetary flight.

During a **glide manoeuvre**, a segment of the attitude ladder is coloured red and crosshatched. Pitching down into this segment will cause the ship to perform an emergency drop from the glide manoeuvre and is not recommended.

HEADING INDICATOR

As you near the orbital cruise transition plane the **Heading Indicator** element will be displayed.

The heading indicator describes your heading, in degrees, from polar north, with zero degrees being a direct northern heading.

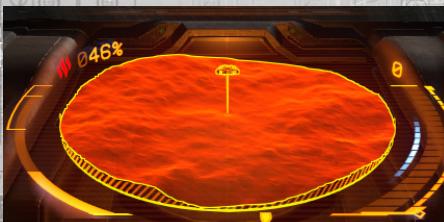
RATE OF DESCENT INDICATOR

As you near the orbital cruise transition plane the **Rate of Descent** element will be displayed.

This bar describes how quickly you are moving directly towards or away from the planet surface, ignoring distance covered in any other direction.

When the bar turns red it indicates that your downward speed is outside safe rate of descent margins and you should consider rectifying your direction and speed.

TERRAIN RENDER



LANDING INDICATORS

During planetary flight, when your ship has deployed its landing gear and is below 150m from the planet's surface **landing indicators** are displayed in the central HUD area.



If your ship is travelling too fast or your ship is not above suitable terrain the landing indicator will display as red with an appropriate message.

A disc is displayed underneath your ship schematic on the terrain render. When this disc turns blue your ship is above a suitable landing location.



If your ship is not aligned to the correct parallel positioning with a suitable landing area below, chevrons will appear in order to guide your ship to the correct orientation required to land safely.



Once your ship is correctly aligned the landing indicator will display as blue and lock in. Your ship schematic in the terrain render will also display as blue.

SYSTEM MAP UPGRADE

Your ship's system map is upgraded to show planetary details.



Airless planets capable of supporting ground travel gain a visual indicator.

Planets that have known settlements or ports on them use a modified version of this indicator.

You can zoom in on such planets, or use the planetary map button, to summon a tactical view. The tactical view shows the locations of any known settlements on the planet surface.

Settlement size is indicated by "+" characters. The more "+" characters next to a settlement, the larger it is.



You can rotate the tactical view and lock on to settlements using the same controls as the galaxy map. Be aware that settlements may have local jurisdictions and laws different from each other.

ORBITAL CRUISE

NOTE: your ship must be outfitted with a planetary approach module before it can fly to planets.

Orbital cruise is a modified version of **super cruise**, configuring your ship's frame shift drive to specifically allow fast travel to – and around – a planet.

During orbital cruise, all interdiction devices and wake-lock jumping procedures are deactivated for safety reasons.

Flying parallel to the surface, so that your ship's pitch is within the **blue** segment of the attitude ladder, increases the efficiency of your ships thrusters' ability to work in conjunction with the frame shift drive. This allows you to safely travel at speeds beyond normal super cruise mass limits.

Orbital cruise is available down to approximately twenty five kilometres from the planet surface, though this height may be increased if the planet features mountains that are taller than this distance. This height is marked on your ship's altimeter by the **DRP** indicator.

Travelling below this height will cause orbital cruise to end in one of two ways:

- If your ship's angle of descent is within the **red** segment of the attitude ladder your ship will perform an emergency drop.
- If your ship's angle of descent is in the **orange** or **blue** segment of the attitude ladder your ship will initiate a **glide** manoeuvre.

GLIDE

When dropping from orbital cruise around a planet, if your angle of descent is shallow enough, your ship will perform a glide manoeuvre. Doing so allows your ship to maintain very high speed for a short time as the frame shift drive shuts down.



During a glide you have full control over your ship. However the glide will end prematurely if your ship's angle of descent strays from the **blue** segment of the attitude ladder:

- If your ship's angle of descent is within the **red** segment of the attitude ladder your ship will perform an emergency drop from the glide.
- If your ship's angle of descent is in the **orange** segment of the attitude ladder your ship abort the glide and engage **planetary flight**.

Because a glide manoeuvre is a transition from orbital cruise to planetary flight, it will eventually run its course, leaving your ship in planetary flight.

PLANETARY FLIGHT

Planetary flight is similar to space flight and is carried out under power of your ship's thrusters. While flight assist is enabled, the thrusters are configured to transfer power to your ship's ventral thrusters in order to facilitate level flight above the surface.

Whilst this results in stable horizontal flight, the rest of your ship's manoeuvring thrusters are weaker, which has the following effects whilst travelling at low speeds:

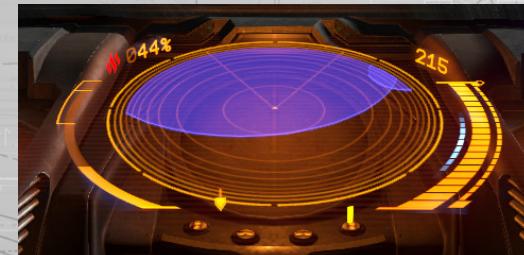
- Your ship will **lose stability** when it is pitching downwards.
- Your ship will **lose altitude** when pitching or rolling out of level flight.

Use your normal ship controls to pilot the ship during planetary flight.

Be aware that local gravity levels may greatly affect ship performance. When flying above high gravity planets it is recommended that you fly level and at speed to minimise unwanted loss of altitude.

SENSORS AND SIGNALS

During planetary flight your sensors work as normal, though their ability to detect signatures is greatly reduced as they are designed for space flight.



Signals that are detected but cannot be identified will be displayed on the sensors as a blue circle. The precise origin of the signal source will not be shown, but can be located by landing your ship nearby and exploring the area using a surface reconnaissance vehicle.

LANDING

Once fitted with a planetary approach suite your ship is able to land on the surface of a planet as long as the following criteria met:

- You have deployed your ship's landing gear.
- Your ship is above an area of ground flat enough to support your ship's landing gear footprint.
- Your ship is parallel to the surface in both pitch and roll axis.
- Your ship is stationary.

Once all these criteria are met, simply thrust down slowly to land on the planet surface.

Once your ship has landed the main drives will automatically disengage. To launch, apply continuous upward vertical thrust; your ship's drives will engage and will then lift off from the surface.

Be aware that different gravity levels will affect ship performance when landing and taking off.

PLANETARY PORTS AND OUTPOSTS

Some planets have ports and/or outposts on their surface which function much like starports and outposts in space. Treat these surface ports in exactly the same way when attempting to land at them. You must approach within 7.5km, request docking and land at the pad allotted to you within the time limit provided.

Be advised, much like space-based ports, planetary ports and outposts are fortified locations; with both anti-air and anti-ground weapon placements they will always defend themselves against transgressors.

**SRV OPERATING INSTRUCTIONS****SRV OVERVIEW**

The Scarab SRV is an eight wheeled, all-terrain surface reconnaissance vehicle, featuring a turret mounted plasma repeater and data-link scanner, jump jets, shield generator and a forward arc wave scanner. It can be deployed via the standard cargo hatch and is capable of extended planetary exploration.

PLANETARY VEHICLE HANGAR AND VEHICLE BAYS

To drive on a planet's surface, you'll need to fit a **planetary vehicle hangar** module. You can purchase one at stations with Outfitting services. Please note that not all modules are available at all ports.

Once you have a planetary vehicle hangar, you will need to install **vehicle bays** in it. Vehicle bay slots are shown directly **beneath the planetary vehicle hangar** in Outfitting. Hangars are available in multiple sizes, with larger ones allowing more vehicle bays.

POWER CLOUD	
SENSORS (LOANED)	E 1
SENSOR SUITE	1
FUEL TANK (CAPACITY: 2) (LOA...	C 1
FUEL STORE	1
SHIELD GENERATOR (LOANED)	E 2
INTERNAL COMPARTMENT	2
PLANETARY VEHICLE HANGAR (...	H 2
INTERNAL COMPARTMENT	2
VEHICLE BAY	
VEHICLE SLOT	1
BASIC DISCOVERY SCANNER (L...	E 1
INTERNAL COMPARTMENT	1
CARGO BAG (CAPACITY: 2) (...	F 1
INTERNAL COMPARTMENT	1

Each vehicle bay allows your ship to carry a single SRV, and comes with a vehicle when fitted. Be aware though, if this SRV is destroyed, you'll need to purchase a replacement for the vehicle bay. You can do this from any dock where the **Restock** service is available.

ROLE SWITCH INTERFACE

Your ship is upgraded to support the role switch interface. You can access this interface from the cockpit by using UI Focus and UI Down.



The role switch interface allows you to select an active SRV and deploy it from your ship, or from a port that your ship is docked at. This interface is also used to dismiss your ship to safe orbit from the SRV, and recall the ship to your SRV's current location, using the autopilot functionality of your ship's planetary approach suite.

Finally, the role switch interface is used to board your ship directly when your SRV is correctly positioned underneath your ship's cargo hatch, or when inside an allotted garage at a port that your ship is docked at.

DRIVING INSTRUCTIONS

The SRV shares many concepts and elements with your ship: modules, power distributor, shields, fuel, fire groups. For example, the power distributor provides similar benefits as when in the ship: moving pips to shields will improve shield recharge rate.

By default, when driving the SRV, you have direct control of the throttle and brake. Optionally, you may engage drive assist, which places the throttle under the same mechanics as a ship, with the pilot setting the desired speed.

The SRV is equipped with jump jets. Activating these thrusters will deplete your **ENG** capacitor. When in the air, you can pitch and roll the SRV much like a ship, in order to control your landing. Please note that the SRV's shields do not provide protection from collisions with the surface or other objects, however you can use the jump jets to slow your fall and reduce any damage that may be taken from colliding with the surface.

The SRV consumes fuel in the same way a ship does. SRV fuel is automatically refilled when you dock at any port. If your reserves begin to run low, driving more slowly and turning off modules will reduce drain on the fuel supply. Fuel (and other resources) can also be **synthesised** (p.153) in the SRV by harvesting appropriate materials from the planet surface.

The SRV features cargo scoop and storage for two universal containers. Simply deploy the scoop and slowly drive over cargo to pick it up.

TURRET VIEW

The SRV features a **neural-linked turret**.



Whilst controlling the turret you can still drive the SRV. Likewise, when driving, you can still target entities and fire the turret with limited gimballed tracking.

The turret view allows you to aim the turret manually in a full circle around the SRV and in a limited arc up and down. An indicator whilst in the turret view interface shows the alignment of the turret relative to the facing of the SRV.

The Scarab SRV turret features a dual plasma repeater weapon platform. Like most plasma-based weapons, this gun uses both ammunition and energy from the **WEP** capacitor to operate. Use the primary fire binding to attack with the turret weapon.

The turret also features a data-link scanner. The data link scanner is a special scanner that you can use in turret mode. It allows you to connect to targeted entities, often activating contextual commands. To use the data link, target an entity then hold the appropriate fire group activation binding.

BOARDING THE SHIP



SRV AND PORTS

If your ship is docked at a port whilst you are driving an SRV you can use two methods to return to it.

- Use the role switch interface to recall your ship to your current location (you must be several kilometers from a port or settlement before you can recall your ship).
- Request docking from the port whilst in the SRV. Doing so will cause the **nav-compass** to point towards the garage allotted to you. Once inside the garage you can use the **board ship** option to be transferred back to your vessel.

WAVE SCANNER

The SRV features a Wave Scanner, displayed directly above the sensor disc. The wave scanner is a forward arc passive scanner that can detect signatures from a variety of objects.



You can turn the wave scanner on/off using the modules tab in the cockpit interface when piloting the SRV. The wave scanner can detect a variety of signatures from surface based entities, ranging from mineral deposits to man-made structures and landed craft.

The wave scanner display is comprised of a repeating sensor sweep across an array of bands. Signatures display as glowing portions on one or more of these bands as the sweeps occur.

Each signature is comprised of a number of lit bands, arrayed vertically in the display. Different entities have different patterns of lit and unlit bands.

Signatures at distance will be indistinct and large, covering a large section of the wave scanner array. As you approach, they will shrink and the lit bands will become brighter.

When you are within 50m of a signature source, you should be able to target it directly.

SYNTHESIS



MATERIALS

You are able to collect a new type of resource from planet surfaces: materials. Once detected you can use the SRV cargo scoop to obtain them.

STATUS	MODULES	FIRE GROUPS	INVENTORY		FUNCTIONS	
			QTY	GRADE		
SRV CARGO	MATERIAL					
MATERIALS	IRON		3			
SYNTHESIS	NICKEL		4			
	CARBON		4			
	SULPHUR		4			
	PHOSPHORUS		1			
	MANGANESE		1			

Materials are stored in personal luggage space and are not lost if your ship or SRV is destroyed.

You can view your current materials inventory in the cargo tab under the materials heading.

You can only carry a limited number of materials. You can discard unwanted materials from this interface.

Materials have different rarities and are used in a process called synthesis.

RECIPES

You have access to a new procedure: synthesis, which allows you to restock and enhance aspects of your ship and SRV, consuming materials in the process.



You can view synthesis recipes in the cargo tab under the synthesis heading.

Each recipe has three variants; basic, standard and premium. Each variant requires its own set of materials, with standard and premium recipes generally requiring more and rarer materials.

Standard and premium versions of synthesis also bestow temporary benefits beyond restocking modules or the SRV.

You can initiate synthesis from the cargo tab menu or directly for a module in the module tab.

ELITE DANGEROUS® HORIZONS™

2.1 UPDATE

OVERVIEW

Welcome to the 2.1 Update Intel Package. Please familiarise yourself with the following documentation to ensure continued safe and lawful operations across all stellar jurisdictions.

OUTFITTING UPDATE

Port outfitting services have successfully completed an update to the outfitting interface. The purpose of this update is to increase access to critical information about module capabilities, allowing Commanders to make informed decisions that best support their ship designs.

OUTFITTING FLOW

You can access the new outfitting interface by using the outfitting option in the station services interface. You will be presented with the group selection screen, the hub of the outfitting interface. From here you can select which group of modules you wish to interact with.



When you select a group to interact with, the interface will change to display a list of the appropriate module slots on your current vessel.

SHIP SPECS

In the updated outfitting interface a ship specs section is always present, running along the bottom of the interface. This section contains critical ship information and will update automatically as you highlight new module options, displaying the consequence of fitting them to your vessel.

SHIP SPECS		TOTAL POWER	MAX 13.00MW
INTEGRITY	302.4	RETRACTED	7.62MW
TOP SPEED	284M/S	DEPLOYED	9.56MW
BOOST SPEED	406M/S		
TOTAL MASS	286.0/314.0/473.0 T	JUMP MIN/CURRENT/MAX	12.29/13.50/13.69LY

PATH BANNER

Note that as you make selections that take you further into the interface, you now have access to a path banner. You can select any element on the path banner to go directly to that section of the interface.



OUTFITTING STATISTICS

The outfitting interface now shows detail statistics for modules, allowing you to more clearly see benefits between module choices.

HARDPOINTS		OUTFITTING	HARDPOINTS
SELECT SLOT			
2	2F PULSE LASER MEDIUM HARPOINTER		
2	2F PULSE LASER MEDIUM HARPOINTER		
1	1G MULTICANNON SMALL HARPOINTER	CLASS 1	
1	1G MULTICANNON SMALL HARPOINTER	1G MULTICANNON	
		•	
		◆ GIMBALED	
		CLASS	1
		RATING	G
		MASS	2.00 T
		INTEGRITY	40
		POWER DRAW	0.37MW
		BOOT TIME	0S
		DAMAGE PER SECOND	6.8/S
		DAMAGE	0.8
		DISTRIBUTOR DRAW	0.07MW
		THERMAL LOAD	0.1
		ARMOUR PIERCING	22
		MAXIMUM RANGE	4,000M
		SHOT SPEED	1,600M/S
		RATE OF FIRE	8.3/S
		AMMO CLIP SIZE	90
		AMMO MAXIMUM	2,100
		RELOAD TIME	4S
		BREACH DAMAGE	0.7
		MIN BREACH CHANCE	40%
SHIP SPECS		TOTAL POWER	MAX 13.00MW
INTEGRITY	302.4	RETRACTED	7.62MW
TOP SPEED	284M/S		

You can select a module slot to summon a detailed statistical breakdown for the module currently fitted.

Once selected, you have access to additional options:

Browse Shop:

View available modules for purchase that fit into this slot.

Modifications:

View any Engineer upgrade fitted to the module in this slot.

Sell:

Sell the module in this slot.

Swap:

Swap the module in this slot with another module on your ship.

When you select BROWSE SHOP, you are shown the outfitter's available stock in categories.

CLASS 2

2F PULSE LASER

- GIMBALED

CLASS	2
RATING	F
MASS	4.00 T
INTEGRITY	51
POWER DRAW	0.80MW
BOOT TIME	05
DAMAGE PER SECOND	9.6/S
DAMAGE	2.7
DISTRIBUTOR DRAW	0.04MW
Thermal Load	0.5
Armour Piercing	35
Maximum Range	3.000M
Rate of Fire	3.6/S
Breach Damage	2.3
Min Breach Chance	40%
Max Breach Chance	80%
Damage Type	Thermal

SHIP SPECS

TOTAL POWER	302.4	
TOP SPEED	284M/S	
BOOST SPEED	408M/S	
TOTAL MASS	286.0 / 314.0 / 473.0 T	
JUMP MIN/CURRENT/MAX		12.28 / 13.50 / 13.69LY
BALANCE	226,795 CR	
INSURANCE COST	25,297 CR	

OUTFITTING **HARDPOINTS** **MEDIUM HARDPOINT**

SHOP CATEGORIES

SUITABLE FOR A CLASS 2 HARDPOINT

BEAM LASERS	BURST LASERS	CANNONS	FRAGMENT CANNONS
THERMAL	THERMAL	KINETIC	KINETIC

MINES	MINING LASERS	MISSILES	MULTICANNONS
EXPLOSIVE	THERMAL	EXPLOSIVE	KINETIC

PLASMA ACCELERATORS	PULSE LASERS	RAIL GUNS	TORPEDOES
KINETIC	THERMAL	KINETIC	EXPLOSIVE

BACK

the module slot you have selected will be displayed. At the top of this list are filters to help you organize the list to your preference.

Once you have selected a category you will be presented with a list of modules available from the outfitters.

You can highlight a module to view shared statistical changes that would occur if you chose to replace the current module.

MULTI-CANNONS

ENFORCER CANNON

OUTFITTING **HARDPOINTS** **SMALL HARDPOINT** **MULTI-CANNONS**

ENFORCER CANNON

BUY & SWAP COST 19,894 CR

CLASS INTEGRITY F **INTEGRITY** 40

RATING MASS 2.00T

FIXED

POWER DRAW 0.28MW ▼24% **OS** 13.0/S ▲90% **DAMG PER SECOND** 0.12MW ▲71% **DISTRIBUTOR DRAW**

BOOT TIME 30 ▲36% **MAXIMUM RANGE** 4,500M ▲12% **SHOT SPEED** 1,800M/S ▲12% **RATE OF FIRE** 4.3/S ▼47%

ARMOUR PIERCING

SHIP SPECS

TOTAL POWER	302.4		
INTEGRITY	RETRACTED	7.62MW	
TOP SPEED	284M/S	DEPLOYED	9.47MW
BOOST SPEED	408M/S		
TOTAL MASS	286.0 / 314.0 / 473.0 T		
JUMP MIN/CURRENT/MAX		12.28 / 13.50 / 13.69LY	
BALANCE	226,795 CR		
INSURANCE COST	25,297 CR		

BACK

Modules in red cannot replace the currently installed module. When they are highlighted, a message explaining why will be displayed.

Any statistic changes in red indicate a downgrade in performance, whilst any changes in blue indicate an upgrade in performance. As you highlight modules, values in the ship specs section will update to show what effect fitting the module would have. Again, changes in red denote a loss of performance and changes in blue indicate gains in performance.

You can select a valid, highlighted module to summon additional options, allowing you to purchase the module as well as view a detailed statistical breakdown for it. Individual statistics can be highlighted to view more detailed explanations for them.

MISSIONS UPDATE

Port communications services have recently completed an upgrade to the mission board interface, allowing a clearer, stress-free flow for Commanders searching for appropriate contracts.

FACTION REPRESENTATIVES

When selecting the mission board option from starport services you will be presented with a list of faction representatives operating within the system.

The entries provide an image of the faction representative, the name of the faction they work for, your reputation with that faction, and the number of mission contracts they currently offer.



If their faction is aligned with a superpower (such as the Empire or Federation), an appropriate identifier will be displayed.

The faction currently in control of the system will also be displayed in this entry.

In the list of faction representatives is a Community Goal entry. Selecting this entry allows you to view and join active Community goals from across known human space.

FACTION REPUTATION

Factions have increased the granularity with which they describe their reputation with you. An additional state of "Cordial" indicates first steps towards a stronger relationship.

As you increase your reputation with a faction, the liaising representatives attitude towards you may change, signifying your importance to the faction.

A faction reputation of "Hostile" will now cause all starports controlled by the faction to refuse docking permissions and attack upon detection. This will slowly improve over time, eventually becoming "Unfriendly".

FACTION MISSION BOARD

Selecting a faction will summon their mission board interface. Here you will find entries detailing all current missions, divided into two lists: available and unavailable.

The screenshot shows the mission board for the People's Anlave for Equality. It displays the faction's status, a portrait of the representative, and a quote. Below this, the "AVAILABLE MISSIONS" section lists two tasks.

PEOPLE'S ANLAVE FOR EQUALITY

- SUPERPOWER FEDERATION AFFILIATION
- CURRENT STATE NONE
- RECOVERING STATES NONE
- PENDING STATES NONE
- SYSTEM INFLUENCE
- FACTION REPUTATION NEUTRAL

COUNCILLOR SAMIRA ZAMORA

“Once again my hopes of meeting my equal are dashed, but I guess that's not your fault. Cast your eyes over the list of endeavours below, and let us know what takes your fancy. ”

AVAILABLE MISSIONS

- ASSASSINATE PIRATE LORD: JOHN ELLIOT 115,870 CR, REP++, INF++ DESTINATION ROSS 318 [7.54LY]
- EXTRACT 2 UNITS OF WATER DESTINATION

In addition, faction status details are displayed, including their government type, how much influence they currently have in the system and any states they are in, heading towards or recovering from.

MISSION LIST

Each mission entry displays salient information: the task involved, rewards offered and locations involved. Missions that require planet surface activities gain a planetary identifier.



For missions that are not available, the unfulfilled requirement will be shown, such as not having enough reputation, cargo space or cash (in the case of missions requiring donations).

MISSION DETAILS

You can select a mission entry to summon a mission details screen. Here you will find more details about the mission, including clear mission objectives, potential hazards & risks, as well as full reward details.

MISSION REWARDS

Mission rewards can now comprise of credits, reputation with the faction, commodities and materials for crafting module upgrades.

FACTION REPRESENTATIVE COMMUNIQUES

When you have an active mission, you may receive further, in-flight communication from the appropriate faction representative.

Normally, such communication will be via messages delivered to your ship's inbox. Pay attention to such correspondence as it may concern changes to the mission requirements.

ENGINEERS

Engineers are exceptionally talented ship mechanics, able to craft upgrades for ship modules that eke out a surprising amount of improvement and augmentation.



Acting as much on instinct and natural talent as knowledge and experience, Engineers are eccentric and reclusive, preferring to experiment and tweak for their own, esoteric ends.

MISSION REWARDS

You can access the Engineers interface by selecting the "View Engineers" option in the Status Tab of the cockpit interface. The Engineers interface displays a list of Engineer entries. Each entry displays the Engineer's name, what modules they specialise in and your current reputation grade with them.

Engineer Name	Specialization	Access Level
FELICITY FARSEER	Frame Shift Drives Engines and Thrusters	GRADE 1 ACCESS
TOD 'THE BLASTER' MCQUINN	MULTI-CANNONS FRAGMENTATION CANNONS	
ELVIRA MARTUUK	Frame Shift Drives Shield Generators	
THE DWELLER	POWER DISTRIBUTORS PULSE LASERS	
LIZ RYDER	MIGGLES MINES	

FELICITY FARSEER
Specialisations Frame shift drives & Engines and thrusters
Allegiance Federation
Home System Deciat
Grade 1 Access
Welcome back, Commander. How was your latest journey in the void?
Unlock Progress Buy Modifications 0%
Bio
Felicity Farseeer is a legendary explorer, who engineered her own improvements to her Asp Explorer early in her career. She is willing to share some of that knowledge with fellow explorers and also operates an extensive training programme for technicians and mechanics heading out into the black. She based herself here at her father's mining and refinery facility, though in fact her operation is separate. Develop your relationship with her to learn about another engineer.
Log
You learned about Felicity Farseeer from public data sources.
You gained access to Felicity Farseeer because your Pilots Federation exploration rank is Scout or higher.
You fulfilled your initial contract by providing a unit of Meta Alloys.
View on Galaxy Map View Pinned Blueprint

MISSION REWARDS

There are several grades of reputation you can gain with an Engineer:

- **Unknown:** You do not even know about the Engineer – they are not present in the Engineer interface.
- **Locked** (represented by a padlock symbol): you have no direct contact with the Engineer – they are present in the Engineer interface but have yet to invite you to work with them.
- **Invited** (represented by an envelope symbol): you have come to the attention of the Engineer and have received an invitation from them to visit their workshop, but you are still not trusted enough for them to work with you.
- **Grade 1-5** (represented by 1-5 hexagons): you can access module upgrades of the appropriate grade, which the Engineer will craft for you once you have delivered all required resources.

ENGINEER DETAILS

You can select an Engineer entry to summon a details panel. This panel also displays a bio for the Engineer, your current reputation grade with them and any tasks that may be required to receive an invite or gain the Engineer's trust.

If you have received an invitation, the Engineer's workshop location will also be shown, along with a quick link to its coordinates in the galaxy map.

Finally, if you have gained access to an Engineer's workshop by completing the appropriate task, there is an option to **VIEW PINNED BLUEPRINT**. This option is only available once you have pinned a blueprint when browsing the Engineer's upgrades.

ENGINEER'S BASE

Once you have received an invite, you may safely approach their base and request docking.

Engineer base locations are represented by a hexagonal identifier in the galaxy and system maps. Standard docking procedures should be employed to land at an Engineer's base. Once you have docked, you can access the Engineer's workshop via the starport services interface.

WORKSHOP INTERFACE

This interface allows you to browse all of the upgrade blueprints the Engineer has to offer, as well as order the Engineer to craft an upgrade for a currently fitted module on your ship.

The Workshop Interface screenshot shows the following sections:

- HISTORY:** Felicity Farseeer is a legendary explorer who engineered her own improvements to her Asp Explorer early in her career. She is willing to share some of that knowledge with fellow explorers and also operates an extensive training programme for technicians and mechanics heading out into the void. She based herself here at her father's mining and refinery facility, though in fact her operation is separate. Develop your relationship with her to learn about another engineer.
- ALLEGIANCE:** Federation
- HOME SYSTEM:** Declat
- SPECIALISATIONS:**
 - MODIFY YOUR MODULE:** Shows currently fitted modules: ENGINES (grade 1), FSD (grade 1), and POWER PLANTS (grade 1).
 - BROWSE ALL:** Shows module types: ENGINES, FSD, and POWER PLANTS.
- GRADE 1 ACCESS:** "The more upgrades you commission from me, the more our relationship develops."
- UNLOCK:** Shows progress towards unlocking new modifications.
- BUY MODIFICATIONS:** Shows a progress bar at 0% completion.

The **MODIFY YOUR MODULE** tab lists all currently fitted modules that the Engineer has upgrade blueprints for. If the list is empty then you do not currently have a module fitted that the Engineer can craft an upgrade for.

The **BROWSE ALL** tab lists all of the module types that the Engineer has upgrade blueprints for. This option allows you to examine every blueprint in order to note effects and crafting requirements.

BLUEPRINTS

A blueprint describes a distinct upgrade for a specific module type. In general, upgrades crafted from blueprints are beneficial. However, the Engineers are as much artists as mechanics, so there is always variation within the results. Some upgrades will end up being better than others, and some may even result in offsetting penalties.



There are several components to a blueprint.

- Name and Description:** A blueprint's name and description give an indication as to the overall effect that an upgrade crafted from it will offer.
- Grade:** A blueprint's grade, denoted by a number of hexagon markers, describes the minimum reputation grade you must have reached in order for the Engineer to craft an upgrade from the blueprint.
- Cost:** this is a list of materials and commodities required by the Engineer in order for them to craft an upgrade from the blueprint.
- Primary Effects:** these are core statistical changes that an upgrade crafted from the blueprint will apply to the module.
- Secondary Effects:** these are additional statistical effects that may be generated when an upgrade is crafted from the blueprint.
- Experimental Effect (not shown):** upgrades crafted from weapon blueprints have a small chance to generate an experimental effect. These effects are powerful changes to a weapon, sometimes even adding core functionality.

PIN BLUEPRINT

You can pin a blueprint for each Engineer you have access to.

When you pin a blueprint you can access its information even when you are not docked at the Engineer's Base, via the Engineers Interface in the Status Tab of the cockpit interface.

PINNED BLUEPRINT ⚙ DRIVE STRENGTHENING GRADE 1

PRIMARY EFFECTS

ATTRIBUTE	MIN	MAX
MASS	10%	0%
INTEGRITY	10%	20%
THERMAL LOAD	0%	-11%
OPTIMAL MULTIPLIER	-3%	0%

SECONDARY EFFECTS

This blueprint has no side effects.

COST

Available Attempts: 3

MICRO RESOURCES	COST	CURRENT
CARBON	1	7
SHIELD EMITTERS	2	7

BACK

RESOURCE COST

There are two types of resource required by a blueprint: materials and crafting commodities.

Materials can be collected through a variety of methods:

- Salvage from destroyed ships
- Mined from asteroids
- Mined from planet surfaces
- Data from scans of data points, wakes and ships
- Free-floating at signal sources
- Rewards from missions

You can highlight a material to obtain help as to how to acquire that particular resource. Some blueprints also require crafting commodities. Again, you can highlight a crafting commodity to obtain help as to how to acquire it.

Crafting commodities can be obtained in different ways:

- Cargo in specific ship types
- Free-floating from signal sources
- Purchased from markets
- Rewards from missions

Note that some commodities are only present in certain geographical regions of space.

CRAFTING AN UPGRADE

You can order an Engineer to craft an upgrade if the following conditions are met:

- Your ship is fitted with a module that the Engineer has blueprints for
- You are carrying the correct materials and crafting commodities required by the chosen blueprint
- You have reached the required reputation grade with the Engineer for the chosen blueprint

Once these conditions are met, you are able to **PREVIEW OUTCOME**.

POTENTIAL OUTCOME

4D THRUSTERS ⚙ DRIVE STRENGTHENING

PRIMARY EFFECTS

ATTRIBUTE	CURRENT	AFTER
MASS	4.4	4
INTEGRITY	64	78.8
THERMAL LOAD	70.4	1.17
OPTIMAL MULTIPLIER	1.3	100

Attributes will be changed within ranges shown.

SECONDARY EFFECTS

No side Effects.

EXPERIMENTAL

No chance of an experimental effect.

BACK **HELP** **VIEW COST & GENERATE**

This screen will show you how the statistical changes of the primary effects would apply to the module in question, including the chance of an experimental effect being generated as part of the crafting process.

If you are happy with the potential outcome, you can **VIEW COST & GENERATE**.

This screen will show the required resources, and your current stocks, and offer you the chance to commit by selecting GENERATE. Doing so will initiate the crafting process and reveal the results.

Once the crafting process is complete you have three options:

- Discard: Remove and trash the upgrade – note that all resources are lost
- Apply: Apply the upgrade to the module – note that any previous upgrade will be removed and trashed
- Try Again: If you have enough resources, you can remove and trash the upgrade and immediately repeat the crafting process.

MISCELLANEOUS UPDATES

A number of changes have occurred within the galaxy that you should familiarize yourself with.

SILENT RUNNING AND WEAPONS

Cost efficiency changes to ship and module construction have resulted in additional heat being generated by firing weapons whilst operating silent running.

A number of changes have occurred within the galaxy that you should familiarize yourself with.

MISSILES AND TORPEDOES

Improvements to missile munitions technology mean that all missiles and torpedoes now have the following, default properties:

- Increased damage versus shields
- The ability to damage all external modules (hardpoints, utility mounts and drives) caught in the blast radius

In addition, seeker missiles have had a subsystems upgrade, resulting in more efficient tracking.

SENSOR UPGRADE

A software upgrade to basic sensor modules has resulted in all ships being able to scan Nav-beacons and signal sources in order to acquire additional information.

In addition, signal sources associated with missions are now coloured differently to increase legibility.

Finally, the software update is able to better communicate with frame shift drives, enabling larger frame shift drop out tolerances for signal sources. Note that tolerances are affected by gravity wells – the further away from gravitation forces, the larger the drop out tolerance awarded.

SCHEMATIC STATUS BAR UPGRADE

Your ship's cockpit interface has been upgraded to include a schematic status bars. This bar displays icons when a ship is suffering special effects.

Please refer to the following chart for a legend of effects displayed on the schematic status bars.

	REGENERATION		
	TARGETING OVERLOAD		MALFUNCTION
	MASS LOCKED		THERMAL ATTACK
	FSD REBOOT		IMPULSE ATTACK
	SENSOR DISRUPTION		TARGET INTERFERENCE
	CORROSION		SHIELD CELL CASCADE
	ENGINE REBOOT		SHIELD GENERATOR ATTACK
	SHIELD REBOOT		SHIELD BREACH
	ENGINE DISRUPTION		INTERNAL DAMAGE
	INCREASED EMISSIONS		HULL BREACH

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2.2 UPDATE

2.2 GUARDIANS UPDATE

SHIP LAUNCHED FIGHTERS

A subset of the available ships is now able to be fitted with fighter hangar modules. These hangars can support the construction and maintenance of fighter craft, deployable via a specialized launch rail system.

The following ships are fighter capable:

- Keelback
- Federal Gunship
- Type 9 Heavy
- Anaconda
- Federal Corvette
- Imperial Cutter

The fighter hangar is purchased via **Outfitting**.

Once purchased, fighter bays for specific fighters can be fitted to your fighter hangar, again, purchased via **Outfitting**.



FIGHTER INTERFACE

Once you have a fighter hangar fitted with an appropriate fighter bay, you may launch a fighter using the role switch panel in your cockpit interface.

Fighters are controlled remotely using advanced virtual reality tele-presence software, allowing you full visual awareness, as if you were in the fighter's cockpit. Tele-presence cannot operate at distances greater than 30km. At any point you can use the role switch panel to switch back to control of your main vessel.

At any point you can use the role switch panel to request docking clearance from your main vessel. This will cause the ship to deploy launch/retrieve rails and project a flight corridor to guide you in. Fly within the flight corridor to safely dock and be retrieved by the main vessel.



AUTOPILOT FUNCTIONS

When you have two active ships (a fighter and your main vessel), the ship you are not controlling gains limited autopilot functionality. The default autopilot response for a vessel is follow mode; the ship will be to stay within 3km of the ship you are currently piloting.

You can issue a hold position order via the role switch panel. This will cause the vessel to come to a stop at its current location. If you travel more than 25km away the vessel will automatically switch to follow mode to maintain tele-presence contact.

You can issue a follow me order via the role switch panel to cause a ship currently holding position to return to following the vessel you are controlling. Any turrets on a ship under autopilot will continue to function in whatever capacity you set them to when you last manned the vessel.

CREW MANAGEMENT

You can hire fighter pilot crew from the crew lounge interface located in starport services.

CREW

INACTIVE
Inactive Crew remain in the Crew Lounge.

Jean Gross	HARMLESS 2%
FRANK PROFIT SHARE	CREW SLOT
CREW SLOT	CREW SLOT

ACTIVE
Take 1 Crew member with you on board.

HARRIS BATTLE	EXPERT 16%
HIRING COST	150,000 CR

PILOT APPLICATION BOARD
Hire up to 3 Pilots for your Crew.

15,000 CR HARMLESS	30,000 CR MOSTLY HARMLESS	55,000 CR NOVICE	90,000 CR COMPETENT	150,000 CR EXPERT
-----------------------	------------------------------	---------------------	------------------------	----------------------

BALANCE: 4,884,138,447 CR

“I’m from a little planet called Valhalla. Not as hell! Couldn’t wait to make it up into the cold of space when I was a kid. I needed a change - to get out there and really see the galaxy. What better way than going freelance and picking my own jobs. You’d be surprised the scrapes you get in flying escort. Safety isn’t always in numbers.”

Crewmembers have an initial signing on fee, after which they take a tithe of profits from trade, missions and bounty claims. Their fees are commensurate to their combat rank. You can hire up to three crewmembers. You can set a crewmember to be active – doing so will make them board your vessel and be available for pilot duties. If your ship is destroyed, the active crewmember is killed. You can dismiss crew or change which are active in the crew lounge interface.

ADDITIONAL FIGHTER PILOT OPTIONS

If you have fighter pilot crew on board, you can order them to deploy and control your fighter, using the role switch panel.

When a pilot is controlling your fighter, you can issue additional orders to the ship which the pilot will attempt to follow to the best of their abilities.

- Defend: the pilot will only engage ships that attack it or the main vessel
- Attack Target: the fighter will engage your currently selected target
- Engage At Will: the fighter will engage all hostiles
- Maintain Formation: the fighter will only follow and not engage any targets
- Follow Me: the fighter will attempt to fly in formation
- Hold Position: the fighter will come to a stop at its current location
- Recall Fighter: the fighter will return to the main ship and dock using the launch/retrieve rails

At any point, you can use the role switch panel to take control of a fighter currently operated by fighter pilot crew. The pilot will instead take control of the main vessel. You can give a pilot operating your main vessel the same commands as when they are operating a fighter ship.

FIGHTER CONSTRUCTION

If your fighter becomes separated from your main ship by a distance of greater than 30km the tele-presence link is severed and the ship will self-destruct.

Should your fighter be destroyed, your fighter bay will fabricate a replacement, a procedure that will prevent fighter launch for a period of time.

Your fighter bay will be able to manufacture a number of replacements, after which it must be restocked at a starport.

PASSENGER CABINS

You can purchase passenger cabin modules in outfitting.

Fitting these modules allows you to take on passenger contracts, ferrying peoples around the galaxy.

You can find passenger contracts through the Passenger Contact in starport services.

There are several types of passenger cabin, each differing in levels of luxury. Some important passengers require more luxurious cabins before you can take their contract.

Only specialized passenger ships can fit the most luxurious cabins modules.

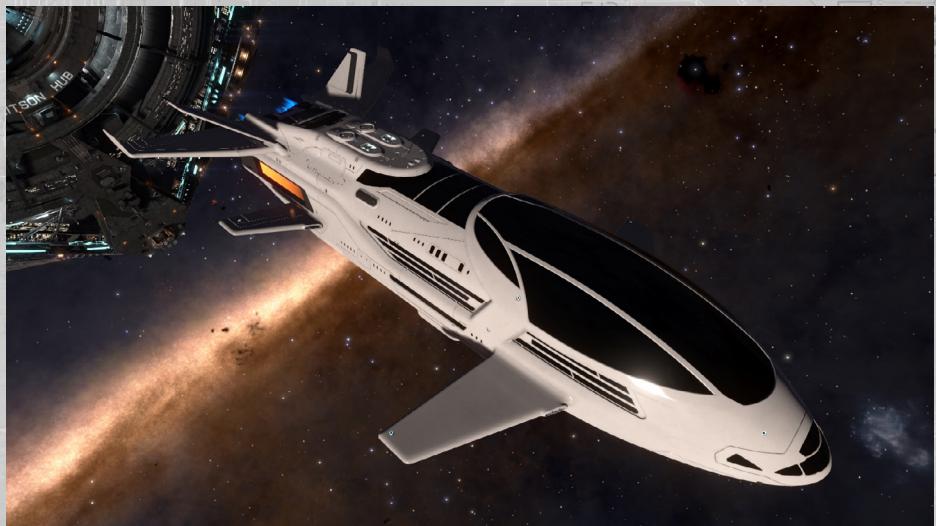


ESCAPE PODS

All passenger cabins are fitted with escape pods.

In the event of ship destruction, all passengers will safely escape using these pods.

You must restock escape pods at starport services before you can use those cabins to carry out further passenger contracts.



INTERSTELLAR FACTORS

At starports in systems with a security rating of 40 or less you will be able to visit an Interstellar Factors contact.

Interstellar Factors is a somewhat disreputable organization that allows you to pay off fines and claim bounties and combat bonds from any location in the galaxy.

When using the services of Interstellar Factors you will be charged a handling fee which is a percentage of the credit value to be paid/claimed.



SHIP TRANSFER AND REMOTE SALE

You can pay to have ships transported to your current location by bulk freighter.

This service is only offered at starports featuring shipyards facilities.

You can use the shipyard interface to pay for ships to be delivered to your current starport.

The cost of delivery is based on the value of the ship to be delivered and the distance it is to be transported.

It takes time for a ship to be delivered. The greater the haulage distance, the longer the delay before the ship is delivered and ready for use.

Once you initiate a ship delivery it is in transit and cannot be cancelled or interacted with.

You can also remotely sell ships stored at distant starport locations using the shipyard interface.

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2.3 UPDATE

2.3 COMMANDERS UPDATE

MULTI-CREW

Ships that feature multiple flight seats in the cockpit are capable of supporting Multi-crew. Multi-crew lets up to three Commanders control a single vessel for mutual gain.



MULTI-CREW CAPABLE SHIP LIST

The following ships can support Multi-crew. The number in parenthesis is the number of crew supported:

- Adder (2)
- CobraMk3 (2)
- CobraMk4 (2)
- Asp Scout (2)
- Asp Explorer (2)
- Imperial Clipper (2)
- Federal Gunship (2)
- Orca (2)
- Python (2)
- Fer de Lance (2)
- Federal Corvette (3)
- Federal Dropship (2)
- Vulture (2)
- Federal Assault Ship (2)
- Type 9 (3)
- Beluga (3)
- Anaconda (3)
- Imperial Cutter (3)

MULTI-CREW ROLES

A Multi-crew ship can support different roles:

Helm: The helm role is always adopted by the owner of the Multi-crew vessel. Helm pilots the ship, operates fixed & gimbled weapons, and manages all system and starport interfaces with the exceptions noted below.

Idle: When a Commander joins a Multi-crew ship they will initially be placed in the idle role. From this role, gunner or fighter con roles may be chosen using the role switch panel.

Gunner: Gunner takes control of all turreted weapons, missile launchers, counter measures, advanced scanners and limpets. Gunner can use the fire group interface to set up fire groups for these modules. Here, the gunner has access to two additional quick slot buttons, which can be assigned to any single module under gunner's control.

Gunner has access to an advanced third person camera, giving them three hundred and sixty degree vision around the vessel. All modules track to their reticule, allowing them to focus fire, initiate scans and missile locks from any angle. However, turrets will only be able to track and fire within their own arcs.

Gunner's third person view features a banner label system for ships that have been detected, allowing gunner to locate them even when they are not in view. By default, gunner's reticule automatically targets the nearest vessel it is placed over, switching targets as appropriate to ensure maximum accuracy. Gunner can also target lock a ship to ensure that the lock is maintained and not switched.

Gunner has access to an additional Power distributor pip, allowing them to increase the efficiency of the Multi-crew vessel.



Fighter Con: Fighter con is only available if the Multi-crew vessel has been outfitted with a ship launched fighter hangar. Fighter con can take control of a ship launched fighter.

If the mother ship has been outfitted with a hangar that supports multiple fighter bays up to two crewmembers can take on the role of fighter con.

Fighter con has access to an additional Power distributor pip, allowing them to increase the efficiency of the Multi-crew vessel.



INVITING CREW

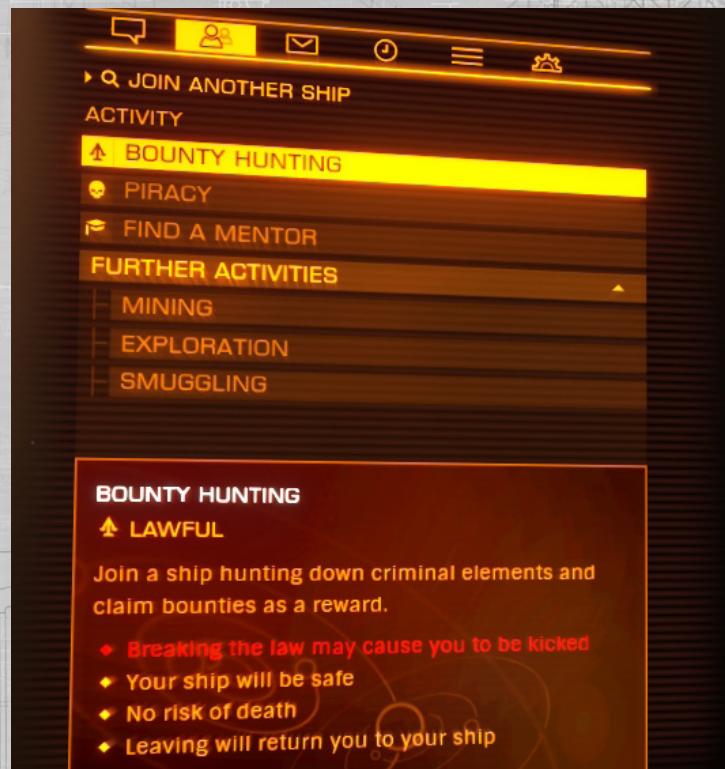
As the Commander of a Multi-crew ship, you can use the Comms panel to invite crew to your vessel. There are two ways to invite crew. Both methods allow you to select a play style to ensure that appropriate Commanders are matched with you. If you pick a lawful play style, crewmembers that break the law whilst onboard will be automatically removed from your ship after a warning:

- Direct Invite: you can issue direct crew invites to friends or Commanders in your history list, in the same manner as you send wing invites. If the recipient accepts they will join your crew after a short delay.
- Find Crew: you can use this new feature to allow anyone seeking to be crew to join your ship. Commanders looking to join a ship as crew will be automatically selected and added to your crew.

JOINING AS A CREW

You have two ways to become crew on a Commander's vessel using the Comms panel:

- Direct Invite: you can accept a direct invite from a Commander. Doing so will log you out of your current game and join the Commander's crew immediately. If you are currently in danger you will have to wait until the danger timer expires before the process continues.
- Join Another Ship: you can use this feature to search and join a ship whose Commander is also using matchmaking to invite crew. Select a play style to ensure that you are matched with an appropriate Multi-crew ship. If you pick a lawful play style, you will be automatically removed from the ship after a if you commit multiple crimes. When you are successfully matched you will be logged out of your current game before you join as crew.



ENDING MUTLI-CREW

The Commander of a Multi-crew ship can remove any crewmember at any time using the Comms panel.

Each crewmember can leave a Multi-crew vessel at any time from the same panel.

When a crewmember voluntarily leaves or is removed from a Multi-crew vessel they are presented with a post session interface that details their exploits.



The exiting crewmember must choose to accept all rewards and penalties gained during the Multi-crew session, or reject all of them.

Rewards can consist of Elite rank progression and credit vouchers from bounty claims, combat bonds and trade tithes.

Penalties consist of fines (active bounties are converted into fines).

HISTORY COMMS TAB

As part of the Multi-crew update, you now have access to a history tab in the Comms panel. This tab lists Commanders that you have recently interacted with. You can use to list to make friends/block Commanders.

HOLO-ME

The Holo-Me feature allows you to personalize your look as a Commander. You can view and alter your Holo-Me from the status tab of the ship's cockpit interface at any time.



The Holo-Me feature allows you to personalize your look as a Commander. You can view and alter your Holo-Me from the status tab of the ship's cockpit interface at any time.

CAMERA SUITE

The camera suite has been expanded to include additional controls and effects. There are now several camera positions, placed both internally and externally.



You still access the camera suite using the normal Ship – Toggle Camera Suite binding. You still maintain basic controls for your vessel whilst in the camera suite: you can manoeuvre, and fire your active weapons.

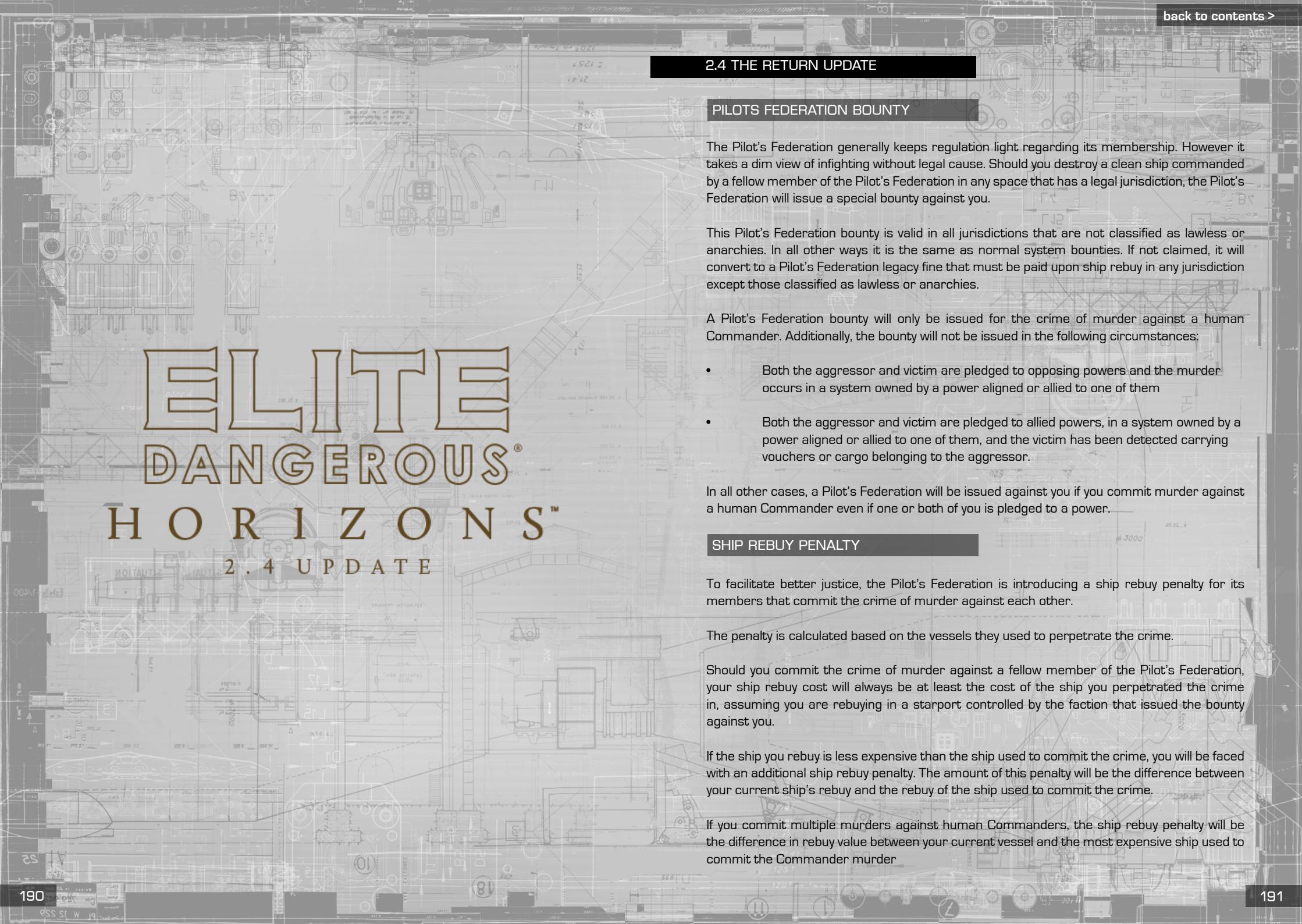
Once you have entered the camera suite, you can use Next and Previous camera buttons/ bindings to cycle through the various cameras.

From each camera position you can Enter Free Camera. In this mode, you can pivot and zoom internal camera views, and take full movement control over external camera views. If your external camera collides with an object, such as your ship, its signal will be lost until you select a different camera or manoeuvre it so that it is not longer colliding.

You also have access to additional features:

- Lock to Vehicle – When using the free camera, you can lock the camera to your vehicle. When you do this, you will gain back control of your ship or buggy and the camera will move along with your vehicle.
- Lock Rotation – When the camera is locked to your vehicle, pressing the ‘Lock Rotation’ button locks the rotation of the camera, allowing your vehicle to rotate independently from the camera.
- Lock to World – You can also lock the camera to a world position. This allows you to capture dramatic footage such as your ship flying off into the distance, or your ship flying down and landing near the camera.
- Zoom/DOF Modes – Pressing the Zoom / DOF Toggle button toggles between zoom and depth of field controls. When in zoom mode, cameras can be zoomed from 0 to 4x zoom. When in DOF mode, you can increase or decrease the Blur Level and the Focus Distance. A high level of blur allows you to focus tightly on one object while blurring out the background or foreground. A low level of blur will produce a clear image throughout, where everything is in focus.
- Hide UI – For those dedicated to capturing impressive screenshots and movie footage, the ‘Hide UI’ button toggles off the UI. It can be toggled back on by using the same button.





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2.4 UPDATE

2.4 THE RETURN UPDATE

PILOTS FEDERATION BOUNTY

The Pilot's Federation generally keeps regulation light regarding its membership. However it takes a dim view of infighting without legal cause. Should you destroy a clean ship commanded by a fellow member of the Pilot's Federation in any space that has a legal jurisdiction, the Pilot's Federation will issue a special bounty against you.

This Pilot's Federation bounty is valid in all jurisdictions that are not classified as lawless or anarchies. In all other ways it is the same as normal system bounties. If not claimed, it will convert to a Pilot's Federation legacy fine that must be paid upon ship rebuy in any jurisdiction except those classified as lawless or anarchies.

A Pilot's Federation bounty will only be issued for the crime of murder against a human Commander. Additionally, the bounty will not be issued in the following circumstances:

- Both the aggressor and victim are pledged to opposing powers and the murder occurs in a system owned by a power aligned or allied to one of them
- Both the aggressor and victim are pledged to allied powers, in a system owned by a power aligned or allied to one of them, and the victim has been detected carrying vouchers or cargo belonging to the aggressor.

In all other cases, a Pilot's Federation will be issued against you if you commit murder against a human Commander even if one or both of you is pledged to a power.

SHIP REBUY PENALTY

To facilitate better justice, the Pilot's Federation is introducing a ship rebuy penalty for its members that commit the crime of murder against each other.

The penalty is calculated based on the vessels they used to perpetrate the crime.

Should you commit the crime of murder against a fellow member of the Pilot's Federation, your ship rebuy cost will always be at least the cost of the ship you perpetrated the crime in, assuming you are rebuying in a starport controlled by the faction that issued the bounty against you.

If the ship you rebuy is less expensive than the ship used to commit the crime, you will be faced with an additional ship rebuy penalty. The amount of this penalty will be the difference between your current ship's rebuy and the rebuy of the ship used to commit the crime.

If you commit multiple murders against human Commanders, the ship rebuy penalty will be the difference in rebuy value between your current vessel and the most expensive ship used to commit the Commander murder.

PULSE LASER
INTERNAL COMPARTMENT
CARGO BAY (CAP. 4)

SHIP REBUY PENALTY

Because one or more of your crimes targeted a member of the Pilot's Federation, you have incurred an additional penalty. This penalty is equal to the difference in rebuy cost of your current vessel and the one used when perpetrating the crime.

SHIP USED AGAINST PILOT'S FEDERATION (ANACONDA)

+12,085,860 CR

OK

SELLING SHIPS TO COVER REBUY

During the rebuy process you are now able to sell ships held in storage to cover your rebuy cost for the ship you are currently using.

The ships can be stored at any starport shipyard, and when used to cover costs will be sold "as is", with all modules currently fitted to them. Use the interface to select ships to liquidate to cover your rebuy cost.

SHIP DESTROYED

YOUR PILOTS INSURANCE ALLOWS YOU TO REBUY YOUR OLD SHIP LOADOUT AT REDUCED COST, OR TAKE A BASIC SIDEWINDER FOR FREE.

SELL SHIP

MACMILLAN TERMINAL SIDEWINDER	28,080 CR
KIRK MARKET EAGLE	40,320 CR
MACMILLAN TERMINAL IMPERIAL EAGLE	97,248 CR
MACMILLAN TERMINAL DOLPHIN	938,801 CR

CUSTOMIZED LOADOUT

- SIMILAR HARPOON
- PULSE LASER
- SMALL HARPOON
- PULSE LASER
- BULKHEADS
- LIGHTWEIGHT ALLOY
- REACTOR BAY
- POWER PLANT
- THRUSTER MOUNTING
- THRUSTERS
- FBD HOUSING
- SHIELD
- ENVIRONMENT CONTROL
- LIFE SUPPORT

BALANCE

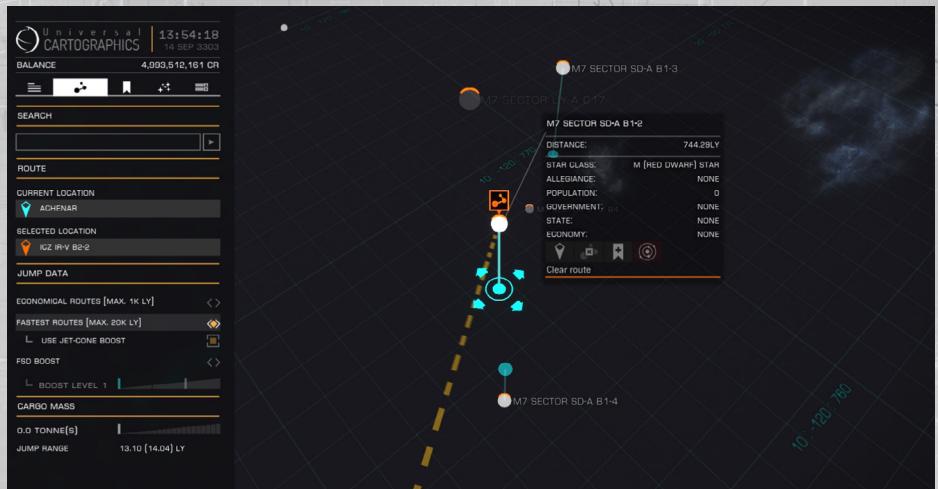
INITIAL BALANCE	4,998,708,642 CR
SHIP REBUY COST (INC. DISCOUNTS)	-780 CR
FINAL BALANCE	4,990,707,862 CR

BACK SELL

ROUTE PLOTTING ENHANCEMENTS

The ship's route plotting functionality has been updated and improved. As well as increased plotting speeds, the following functionality has been added:

- The maximum route plotting range is now 20,000 LY
- A new option exists that allows your route to take into account neutron star FSD supercharging when being plotted
- An icon is displayed on the route to indicate the last star allowing fuel scooping before your ship would run out of fuel



INBOX UPDATE

The ship's inbox interface has been updated and improved.



NEW LIMPETS AND SYNTHESIS

Technological breakthroughs now allow for the manufacture of hull repair limpet controllers.

These modules allow the production of limpets which can be used to repair the hull damage of any ship you have targeted when you launch them. If you launch a hull repair limpet with no target it will attach to and repair the hull of your own vessel. Hull repair limpets repair a set amount of damage over time. Any damage sustained during this time will cause the limpet to fail and detonate. Only one hull repair limpet may be attached at a time.

Note that your ship's canopy will be repaired by these limpets if it is not fully blown out.

The process of synthesis has been updated. Synthesis now takes an amount of time to complete. Different types of synthesis take different amounts of time, ranging from two to thirty seconds. Whilst synthesis is active you are unable to use your right side interface panel. You can cancel synthesis at any time and will be refunded all materials.

IMPORTANT: if your ship takes damage during synthesis the process will fail and abort. All materials will be refunded, but you will need to initiate the process from the beginning.

New synthesis operations are available in your ships.

- Heat Sinks
- Chaff Ammunition
- Emergency Life Support Supply
- Limpets

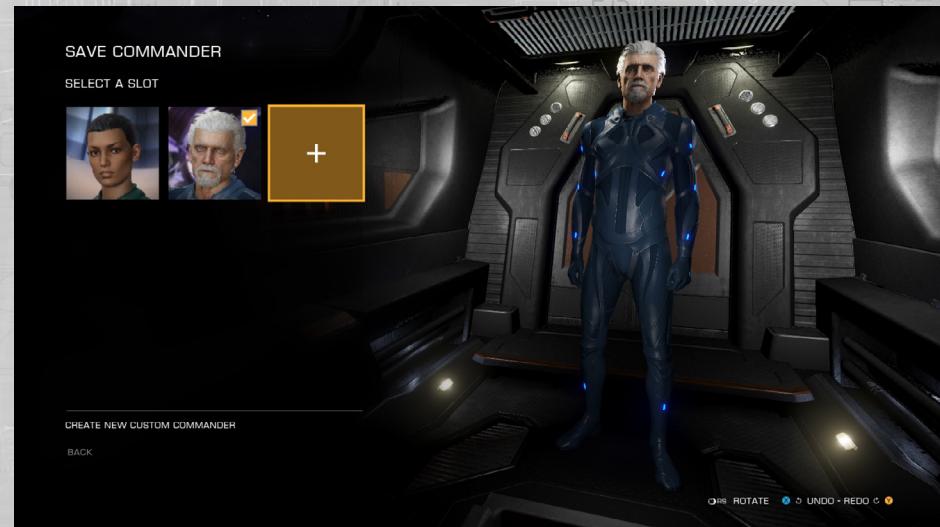
STATUS	MODULES	FIRE GROUPS	INVENTORY	FUNCTIONS
SHIP CARGO	SYNTHESIS			
MATERIALS	HIGH VELOCITY MUNITIONS		[] [] []	
DATA	LIMPETS		[] [] []	
SYNTHESIS	LARGE CALIBRE MUNITIONS		[] [] []	
CABINS	AX EXPLOSIVE MUNITIONS		[] [] []	
	AFM REFILL		[] [] []	
	CHAFF		[] [] []	
	HEAT SINKS		[] [] []	
	LIFE SUPPORT		[] [] []	
	SRV AMMO RESTOCK		[] [] []	
	SRV REPAIR		[] [] []	
	SRV REFUEL		[] [] []	

HOLO-ME IMPROVEMENTS

You can now save multiple appearances in the Holo-Me interface using save slots.

You can change between these appearances at will in the Holo-Me interface.

In addition, your appearance now includes outfit and eyewear slots, allowing for further customization.



PILOT TRAINING

Videos can be found at: community.elitedangerous.com/tutorial-videos

1. BASIC FLIGHT CONTROLS

In this Pilot Training video you will learn basic flight controls and manoeuvres.



2. DOCKING

In this Pilot Training video you will learn about the basics of docking with a Starport.



3. TRAVEL

In this Pilot Training video, we take a look at travel. Learn about using the Frame Shift Drive (FSD) to supercruise between planets and jump between star systems. The tutorial also explains the nuances of normal flight, supercruise and hyperspace jumps.



4. BASIC COMBAT

In this Pilot Training video you will learn the following:

- How to use the scanner
- How to target ships
- How to divert power around systems in your ship
- Basic flight maneuvers including turn rates



5. STARPORT SERVICES

In this Pilot Training video you will learn about services available at Starports and Outposts.



7. WINGS

In this Pilot Training Video you will learn about the basics of forming up and working together with other pilots in a co-op wing.

Wings is the second major free content update for Elite: Dangerous, introducing new cooperative features and shared bounties for all players.



6. GALAXY AND SYSTEM MAP

In this Pilot Training video you will learn basic features of both the galaxy and system maps.



8. POWERPLAY - PART1

This is part 1 of the Elite: Dangerous Powerplay Training, with an overview of Powerplay's new features.



9. POWERPLAY - PART2

This is part 2 of the Elite: Dangerous Powerplay Training, focussing on preparing star systems for takeover. At the end of each cycle the top 10 most prepared systems will be eligible for an expansion attempt.



10. POWERPLAY - PART3

This is part 3 of the Elite: Dangerous Powerplay Training looking at how to expand your power's territory. There is also information on how to oppose other powers from their expansion attempts.



11. POWERPLAY - PART4

This is part 4 of the Elite: Dangerous Powerplay Training showing how to control and maintain systems under your power's influence. It is also possible to undermine other powers, using different techniques depending on whether or not they are a part of the same faction.



12. CQC

In this pilot training video you will learn about The Close Quarters Championship. CQC thrusts players into intense PVP action within the Elite: Dangerous galaxy.



13. LANDING - HORIZONS

Elite Dangerous: Horizons - Pilot Training

**15. SRV - HORIZONS**

Elite Dangerous: Horizons - Pilot Training

**14. SETTLEMENTS - HORIZONS**

Elite Dangerous: Horizons - Pilot Training

**16. WAVE SCANNER - HORIZONS**

Elite Dangerous: Horizons - Pilot Training



17. LOOTING & CRAFTING - HORIZONS

Welcome to the Loot & Crafting Pilot Training video, teaching you everything you need to know about how to get started with the Loot & Crafting system.



18. THE ENGINEERS - HORIZONS 2.1

Welcome to The Engineers Pilot Training video, teaching you everything you need to know about how to utilise The Engineers in Elite Dangerous: Horizons.



18. FIGHTERS - HORIZONS 2.2

Elite Dangerous: Horizons 2.2 - The Guardians



19. FIGHTER PILOTS - HORIZONS 2.2

Elite Dangerous: Horizons 2.2 - The Guardians



NOTES

20. PASSENGERS - HORIZONS 2.2

Elite Dangerous: Horizons 2.2 - The Guardians

**21. MULTI-CREW - HORIZONS 2.3**

Elite Dangerous: Horizons 2.3 - The Commanders





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