Cougar Display (EDCD) User Manual

This user guide is designed to get you started as quickly as possible, with minimal clicks. If you're reading this for the fist time, then the Quick Start Guide will get you up and running in a minute, and even if you don't read it then you'll get to see something working even if you don't know exactly what's going on!

For those who want to customise the layout screens and voice synthesis options, you should skip ahead.

Table of Contents

Quick Start Guide

I know, you just want to get started without any hassle in the fastest possible time. From reading this to starting Elite with EDCD should take no more than 2 minutes.

Some things you may want to consider before starting

- You may want to change the Windows taskbar to auto hide.

- You might want to run Elite in Window mode (using Elite's settings menu) so that you have more control of window positioning and mouse/keyboard. I would recommend starting Elite after step 6 below, so that your main monitor doesn't get too cluttered before you have a chance to see what's going on.

- Plug in your Cougars and USB / additional monitors. Note – if you have touch screen monitors then the use of the Cougars are optional.

Now please read the following section: **Running EDCD for the first time**

Running EDCD For the First Time

Running the application is as simple as the following 7 steps:

1. Double-click the application to launch
2. Wait 1-3 minutes for the application to initialise (SAPI voices, EDDB downloads)
3. Reposition Windows
4. Ensure correct Elite folder locations are shown on the main form
5. Configure Key bindings (optional)
6. Minimise to taskbar
7. Use Taskbar applet to “start” EDCD

Start Elite Dangerous!

Launching

The first thing that happens when EDCD runs is that multiple windows open (may take a few moments to completely initialise):

- Main Application screen
- Commander’s Log
- Mission Explorer
- Chat Log
- Splash screen (hopefully on top) detailing the current background task.

On the very first run, the following happens in the background:

- ### SAPI Initialisation

  Each and every (SAPI) TTS Voice in your system is tested and default voices for NPCs, System Authority NPCs and your ship are assigned. This task takes about 30 seconds, but is system dependant.

- ### Downloading Files / building database

  Additionally, since you’re are running for the first time, updates from EDDB are downloaded – for this a splash screen shows the progress of the task. This takes approximately 3 minutes and can be skipped via the settings option on future launches.

Positioning and Sizing Windows

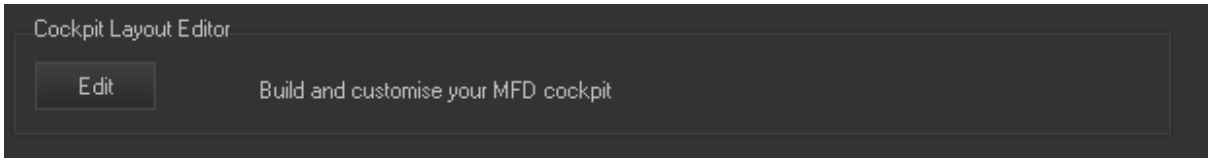
The next most important step is to position and resize the windows to their respective monitors and ensure the Cougar joysticks are placed over the monitors for the MFDs.
After launch, you can resize the MFD windows to cover any gaps between the edges of the Cougar and monitor so that the desktop background does not bleed through.
From now on, these settings are saved to an INI file in the application root folder “MFD.ini”.
Each time EDCD is launched, these windows are shown on the screen so you can reposition them if necessary (for example if a monitor is unplugged, or a window would be partially off-screen).

Key Bindings

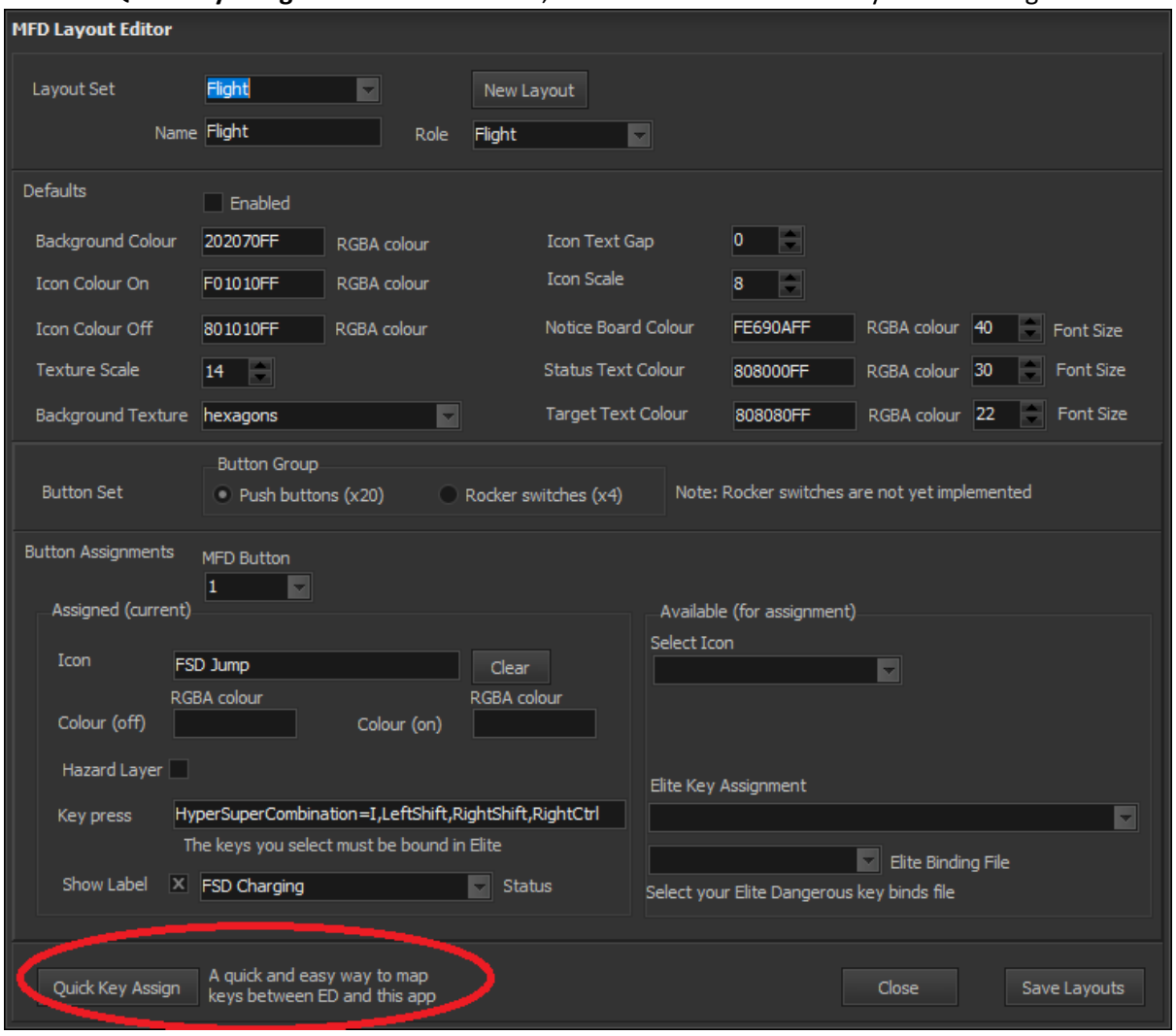
EDCD is designed to run without any specific configuration and works ‘out of the box’. However, by its very nature, the icons representing actions within Elite are dynamically assigned to the different

screens according to the game status. Therefore, the same Cougar button press needs to be dynamically bound to different Elite key bindings. With twenty joystick buttons per Cougar, and 4 or 5 screens of icons, we are looking at hundreds of key bindings.
To simplify the whole process, the built-in layout designer has a **quick key** binding option to automatically map the virtual Cougar buttons/icons to Elite keyboard bindings. With once click, all the key assignments can be made by finding unused bindings for actions within the Elite key bindings file. If there are no unused bindings, then the utility will overwrite the keyboard binding, starting with the secondary binding.

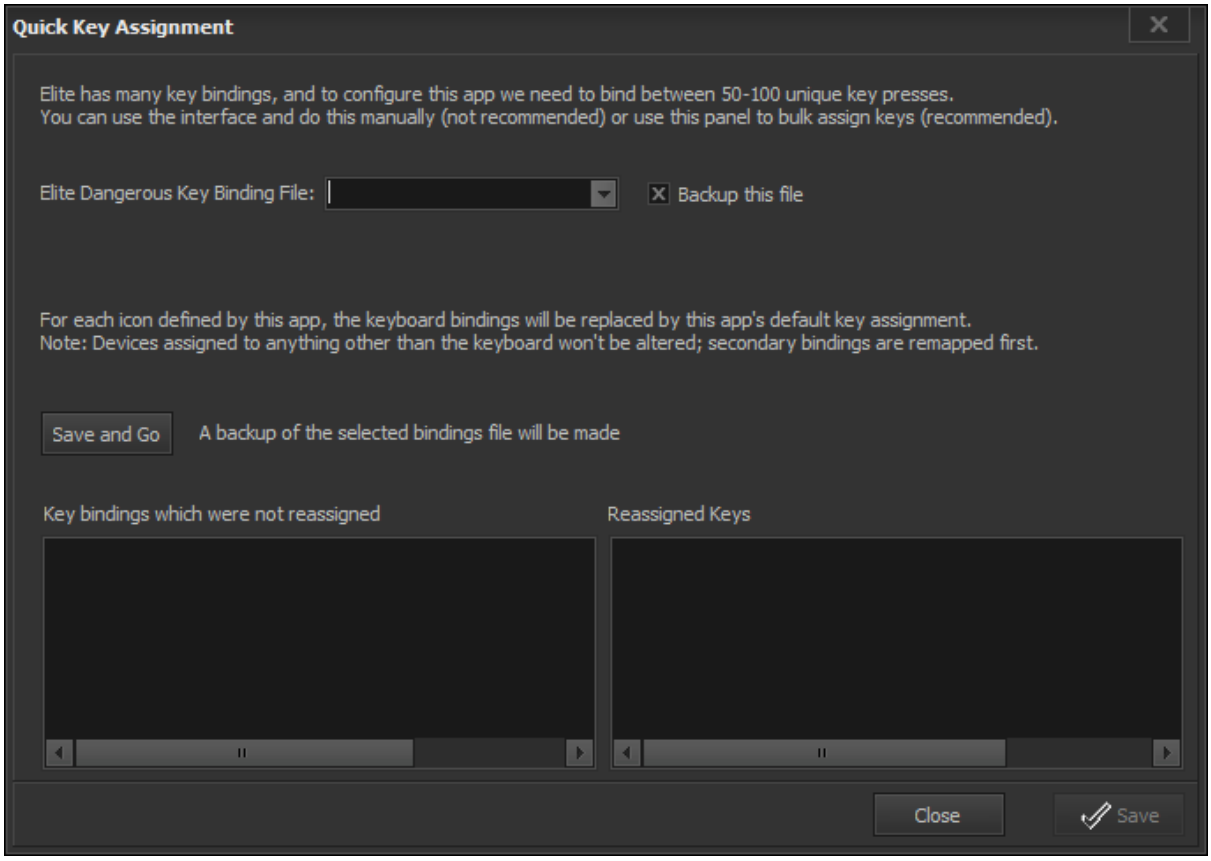
From the main screen, locate the **Cockpit Layout Editor** and click **Edit.**



Click the **Quick Key Assign** button. At this time, there is no need to alter any other setting.



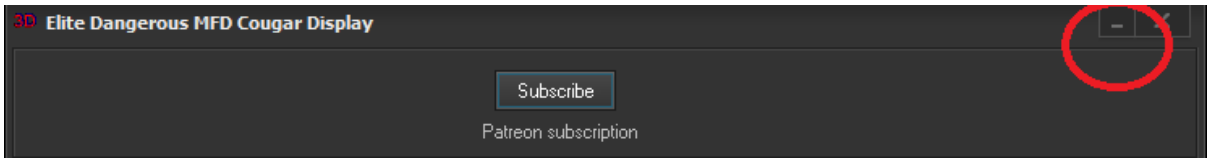
Click **Save and Go** button.
Note: By default, a backup copy of the selected bindings file is performed.



Any issues found with the mapping will be listed on the left in the **Key bindings which were not reassigned**. Conversely, the remapped keys are shown on the right. This is for your information only in case you wish to manually inspect your Elite bindings file.
If you are happy, click the **Save** button.

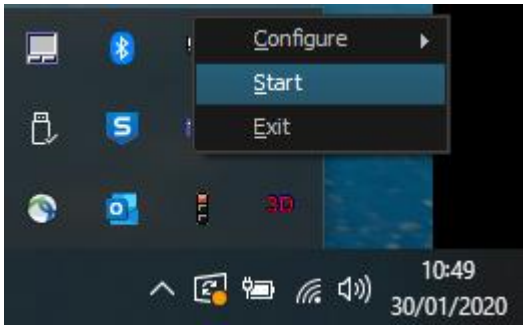
Minimise to taskbar

Activate the main window and use the system menu to minimise the window.
At this point you should have move all other windows to their respective locations and, in particular, resized the MFD Cougar screens.



Use Taskbar Applet to Start

Clicking **Start** executes the render loop on a separate thread and makes the application respond to in-game events.



Clicking **Pause** temporarily freezes the render loop and displays the MFD Cougar windows as regular ‘windows’ so that you can adjust positions as necessary.

That’s it! You’ve finished the quick start guide and are hopefully enjoying the experience.

Dependencies

No dependencies upon other programs, utilities or external DLLs. Only Elite Dangerous is required, along with a second/third/forth monitor and [Thrustmaster MFD Cougar joysticks](#).

Note: Open GL 4.5 or later is required. This is provided by your graphics card vendor and is in-built along-side DirectX 11/12.

MFD Window Guide

This section covers the images displayed on the Cougar MFD windows.

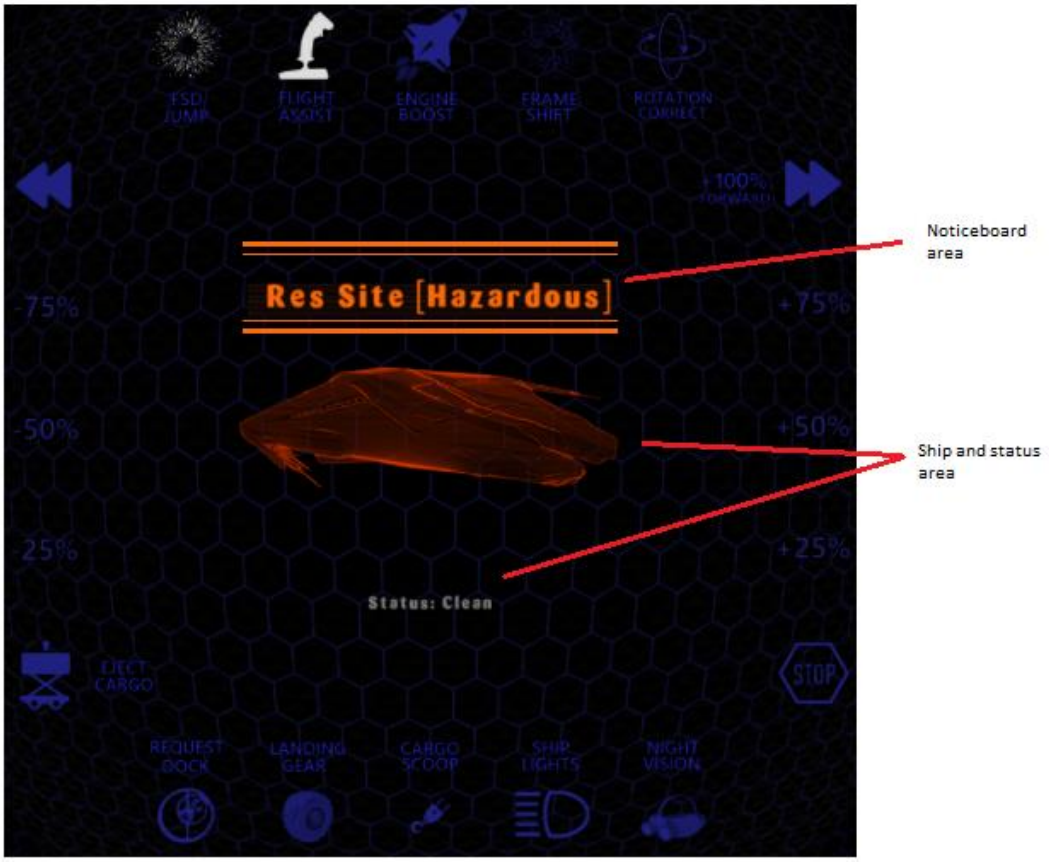
The 4 rocker switches on the Cougars are mapped as follows. Currently, there is no user interface to remap or configure these buttons.

The 20 buttons are configured via key bindings in the Layout Editor.

Weapons console is assigned to MFD Cougar 1


PREV TARGET
NEXT TARGET
HIGHEST THREAT
NEXT HOSTILE
PREV HOSTILE
SELECT TARGET
RESET
Systems pips
SYSTEMS
ENGINES
WEAPONS
Engine pips
Weapon pips
Mass Locked
SHIELD CELL
CHAFF
ECM
HEAT SINK
RUN SILENT


PREV TARGET
NEXT TARGET
HIGHEST THREAT
NEXT HOSTILE
PREV HOSTILE
SELECT TARGET
RESET
SYSTEMS
ENGINES
WEAPONS
Hull: 100.00 Shield: 100.00
Mark Warbey
Clean
Mass Locked
SHIELD CELL
CHAFF
ECM
HEAT SINK
RUN SILENT
Target area (hull/sheild CMDR name status human/npc)

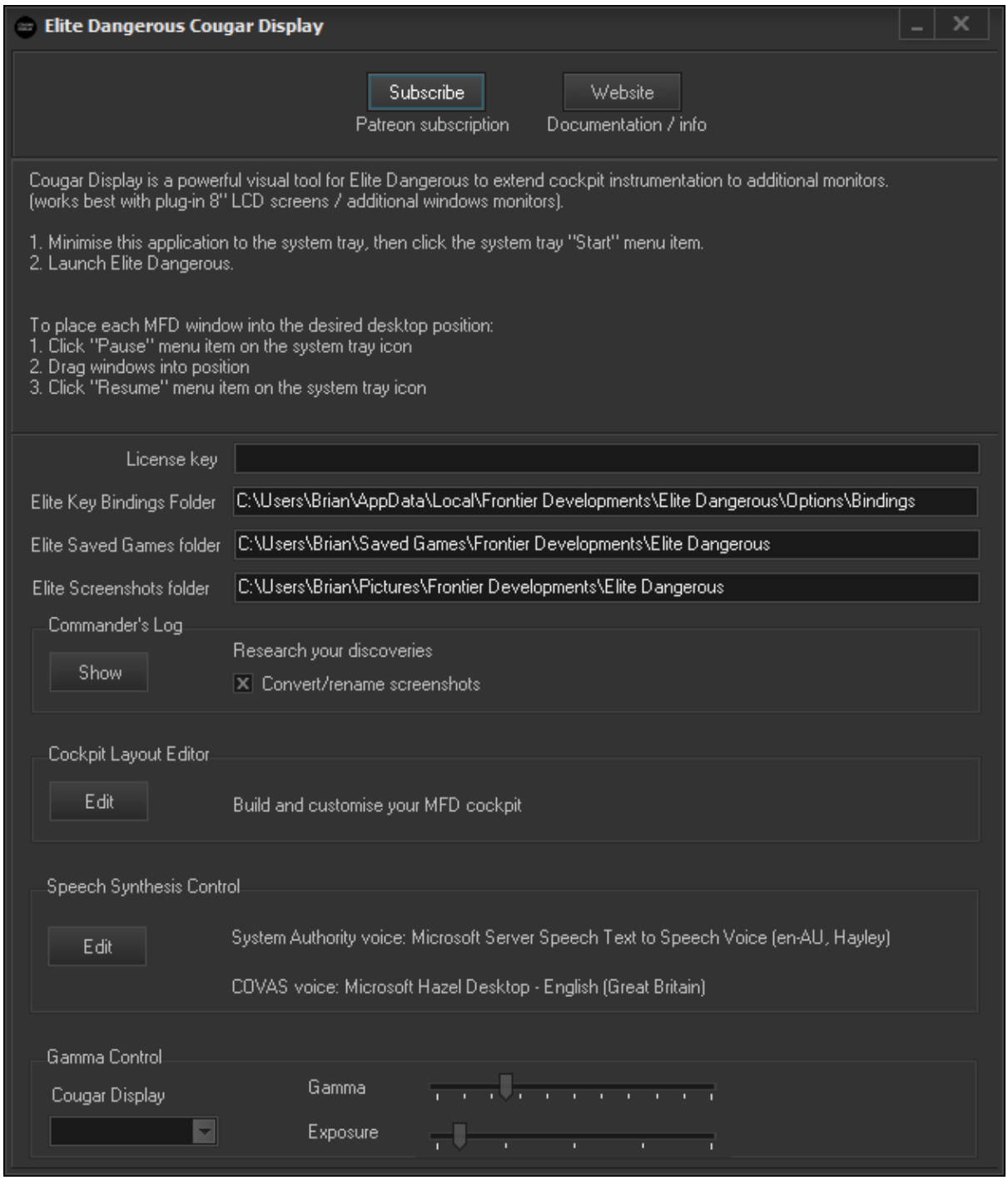

FSD JUMP
FLIGHT ASSIST
ENGINE BOOST
FRAME SHIFT
ROTATION CORRECT
100%
Res Site [Hazardous]
75%
+75%
50%
+50%
25%
+25%
Status: Clean
EJECT CARGO
STOP
REQUEST DOCK
LANDING GEAR
CARGO SCOOP
SHIP LIGHTS
NIGHT VISION
Noticeboard area
Ship and status area

UI Guide

This section covers the settings found of the user interface windows.

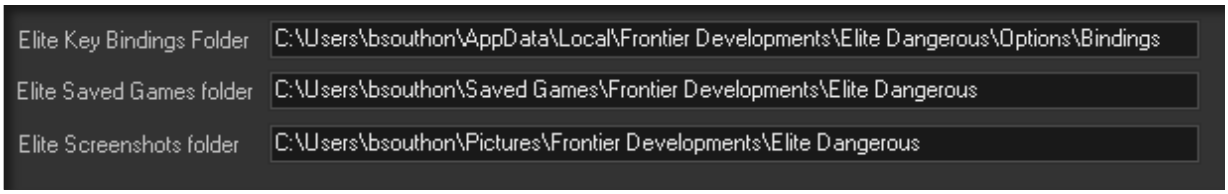
Patreon

Clicking the Subscribe button opens a web browser at the EDCD portion of Patreon, where you can purchase a monthly subscription or make other donations. The only reason why this option exists is to cover my costs during my year-long development of this project.

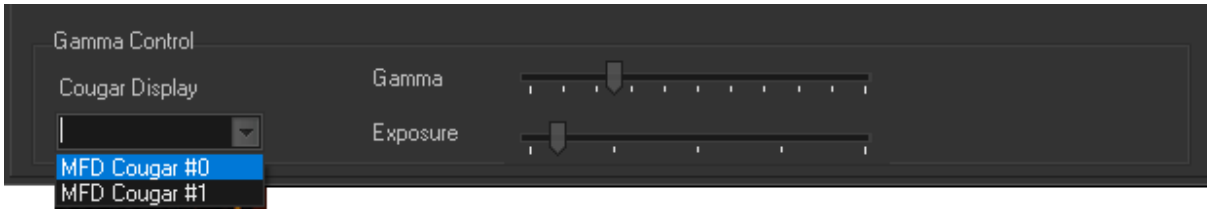


Configure Elite's Default Folders

There are three options to specify the folder locations for Key bindings, log files and screen shots. Please ensure these are correct for your system. The application is initialised with default values based on a new installation.



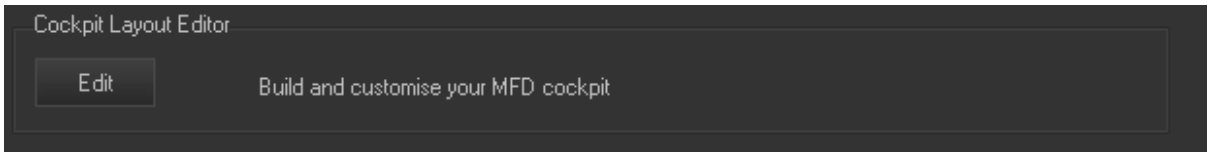
Gamma Control



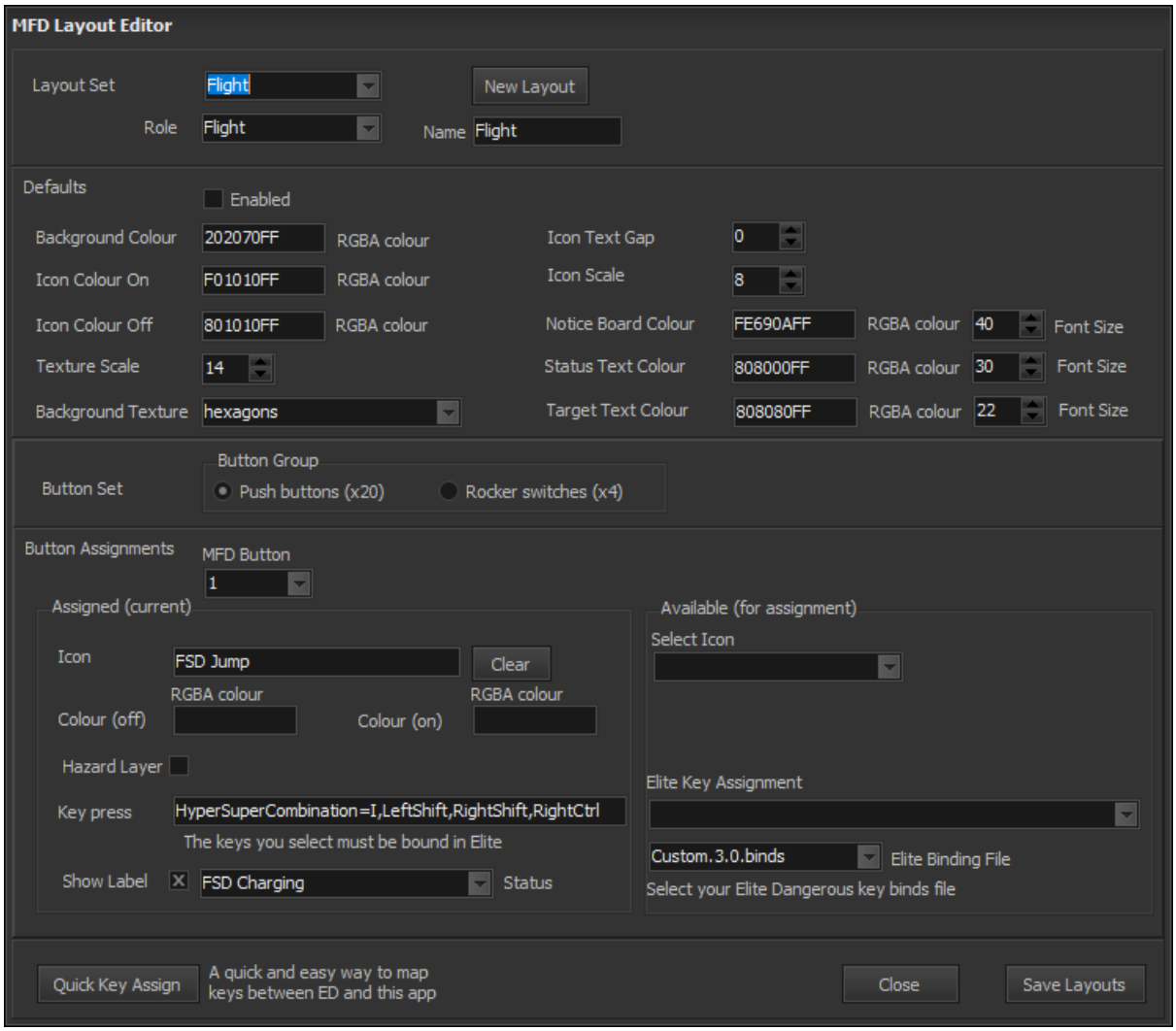
The Gamma Control section gives the ability to fine tune the application's tone mapping output to give the best possible display on the USB / additional monitor.

Customisable Cockpit Displays

From the main screen, the **Cockpit Layout Editor** can be used to make customisations.



Using the built-in tools, the layouts and icons can be customised, down to the colour and sizes of the font.



Layout Set

This is the layout options for a particular screen.

Role option. One of the following roles can be assigned to the layout. (Flight, Weapons, Supercruise, Planetary Landing, Exploration, SLF, SRV, Galaxy).

Some roles are designed to be on the MFD #0, others for MFD #1. At some point the future, the role assignments will become flexible.

Defaults

The defaults section applies common values to the following sections:

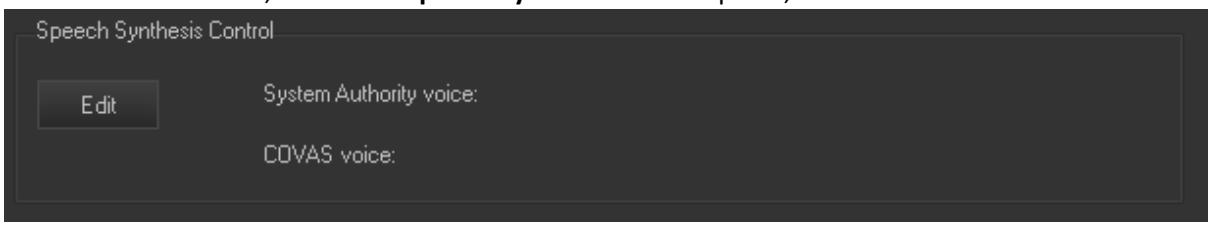
- Colour and texture scaling of the background images
- Gap size between the icons and labels
- Text colour and font size for the notice board display
- Text colour and font size used by the status flags (cargo hatch, landing gear, mass lock, etc)
- Text colour and font size of the selected target text (weapons console)

Quick Key Assign button – Elite has hundreds of possible key bindings. With one click, Elite can be configured to recognise the Cougars and match the layouts specified in the editor.

Text to Speech Synthesis

Brings Elite Dangerous to life by making NPCs 'talk'. Multiple pirates (up to 5 simultaneously) are given different (user defined) voices for automatic speech synthesis – assuming your Windows system has suitable voice packs available.

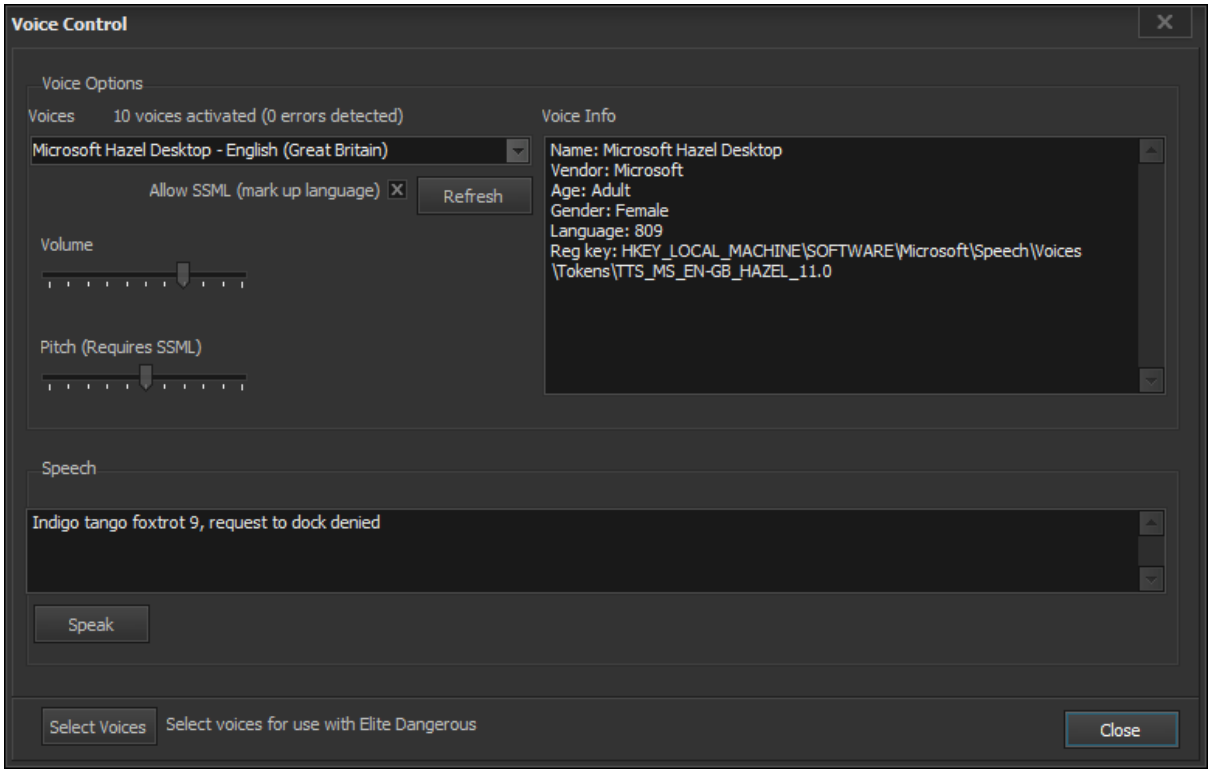
From the main screen, locate the **Speech Synthesis Control** panel, and click **Edit**.



You can assign a unique synthetic voice as an assistant to your Elite COVAS voice, as well as assign a unique synthetic voice to use used by system authorities / police.

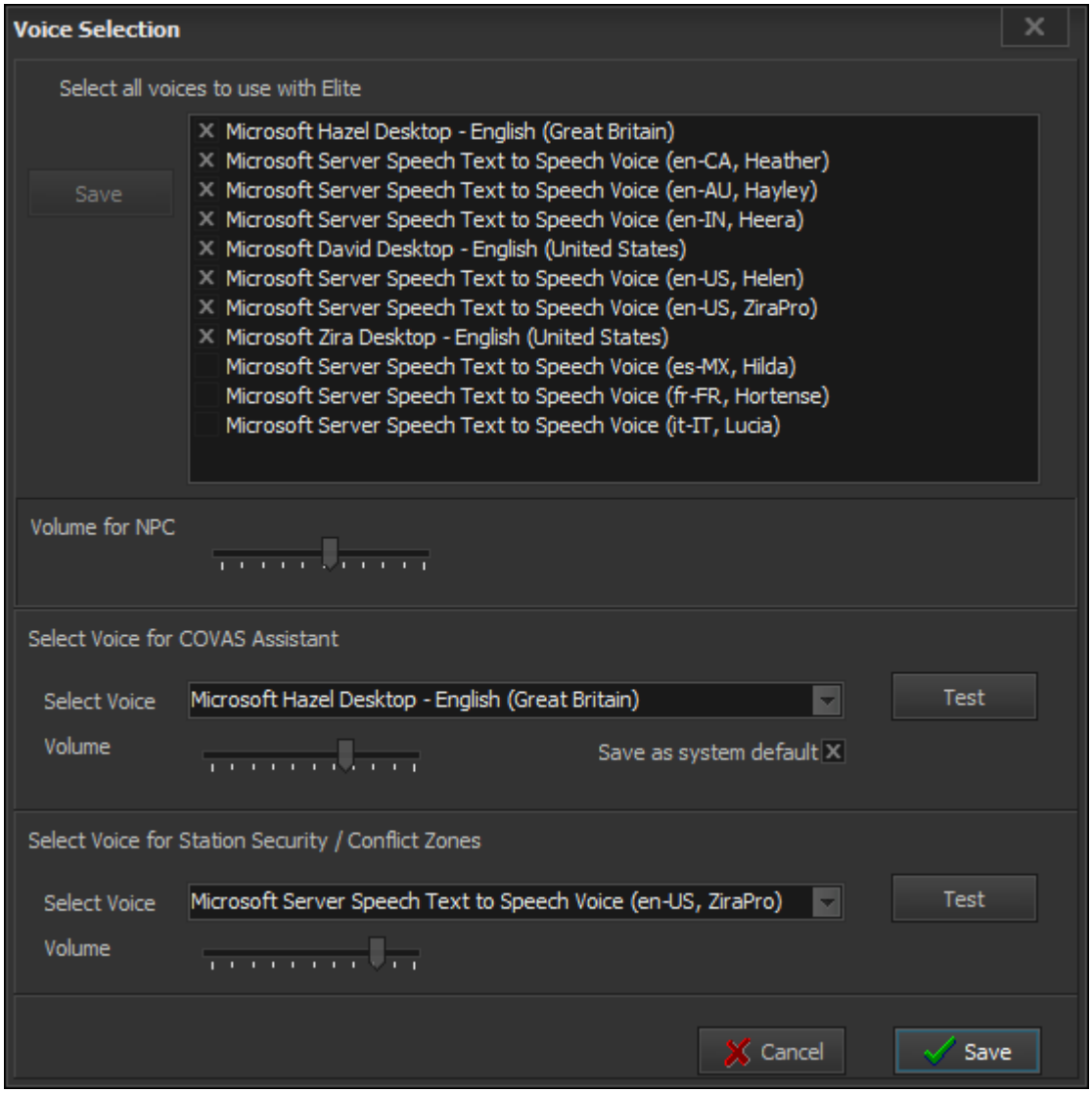
Voice Control

The Voice Control screen is used to get a list of all the supported SAPI TTS voices on your system. Each voice can be selected ad tested with a sample phrase.



Voice Selection

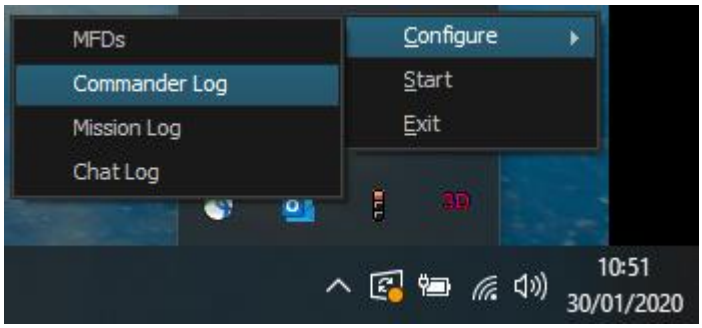
The **Select Voice** button is used to select and assign available voices for use within the application.



The enumeration of the system voices, along with the selected voices and volume levels are recorded in the “SAPI.ini” file in the application root folder.
The list shown in this screen are all the voices which have passed the enumeration and SAPI tests, so all of them should work in the application.
The SAPI voices are enumerated when the application is first executed. If this list is out-of-date (following a Windows update), then delete the SAPI.ini file and the application will re-create the file on the next run.

Viewing Other Application Windows

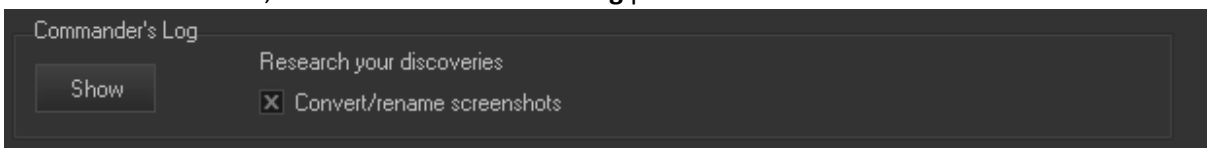
By default, the Commander's Log, Mission Explorer and Chat Log windows are displayed on start up. These can be closed or minimised at any time. To reactivate these windows, use the system tray applet:



Commander's Log

A complete application built-in.
The commander's Log is a comprehensive set of hooks and rules designed to capture the names and bodies in the Elite universe where strange and interesting stellar peculiarities exist.

From the main screen, locate the **Commander's Log** panel and click **Show**.



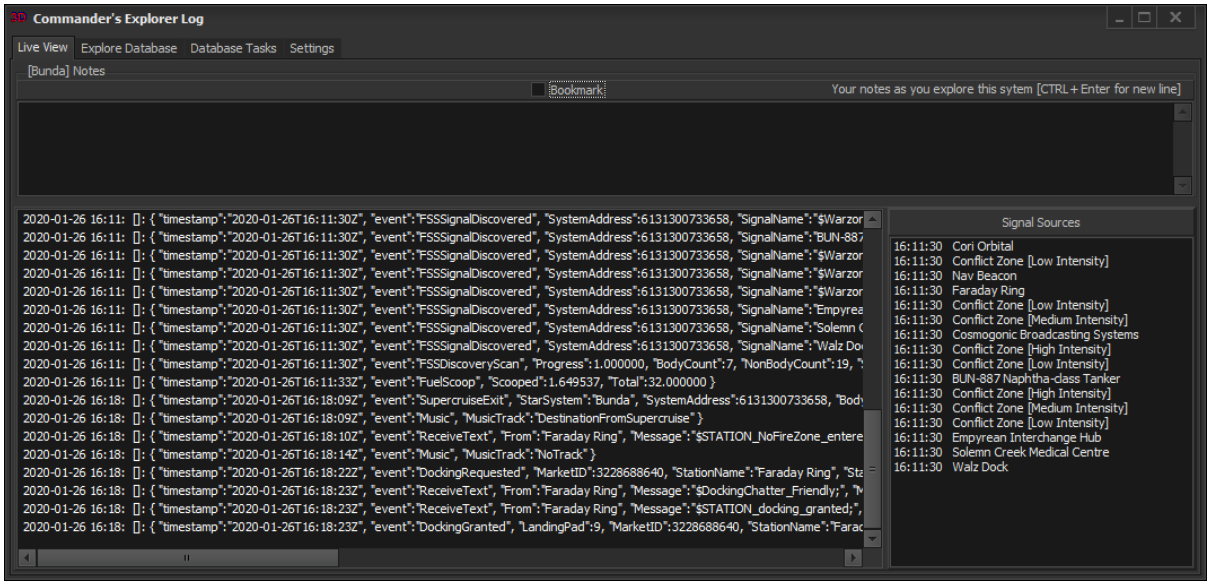
Ticking the option Convert/rename screenshots activates the feature to convert bitmap images to png images in the folder Elite uses to capture images. Additionally, the file is renamed to something more useful which includes the date/time, system and body name.

Once open, the Commander's Log has four tabs across the top to perform the following functions:

- Live view of the journal logs
- Live view of signal sources
- Explore the database of previous events
- Download EDDB database updates, import journal logs
- Configure which events are written to the database

Live View

Live view is linked to the current system in Elite and shows any notes you have recorded for this system. You can bookmark this system for your easy reference at a later date.



When a commander jumps to a new system, the Commander's log module will analyse the results of a DSS scan and report back any features of interest which are categorised and stored in a local database for later analysis.

Stellar features of interest include:

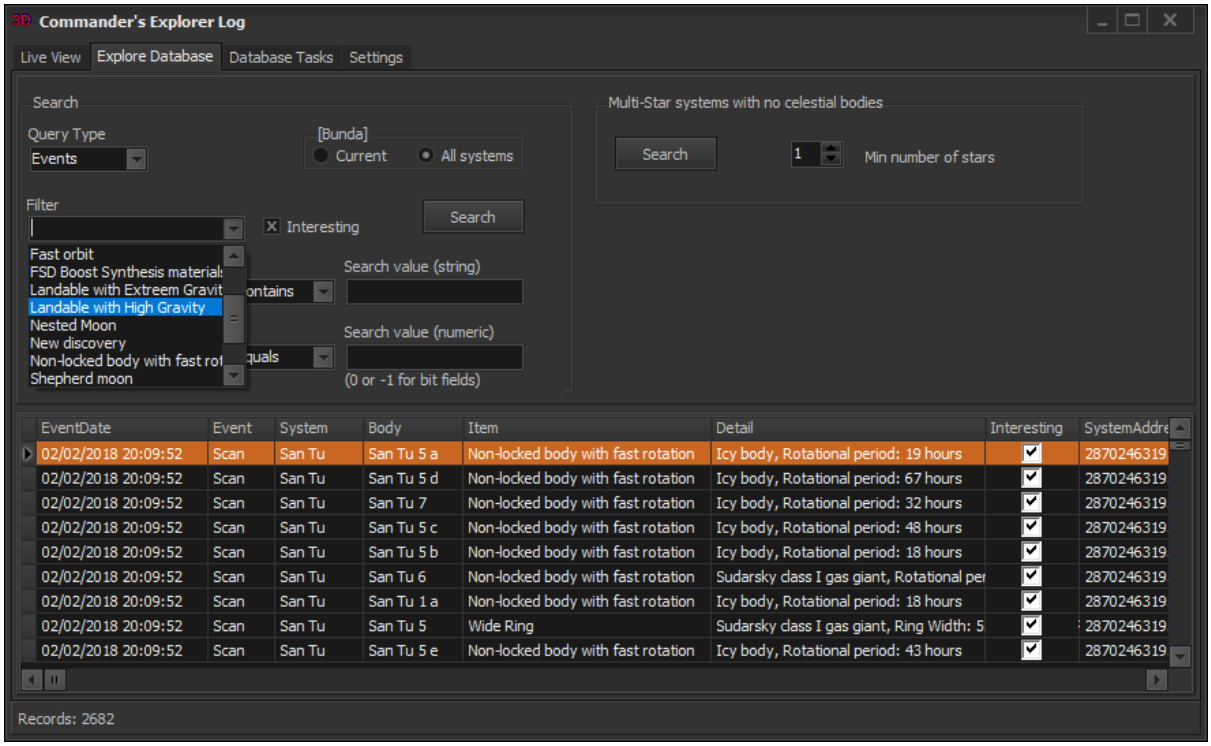
- Systems containing 5 or more of the materials needed for FSD jumps (jumponium)
- Landable planets with a terraform state
- Landable planets with an atmosphere
- Landable high gravity planets
- Landable large planets
- Planets with wide rings
- Planets in close orbit
- Planets with moons in the rings
- Moons with moons (nested)
- Really small bodies
- Bodies with fast rotation
- Bodies with fast orbits
- Bodies with high eccentricity
- Stars - close binary pairs
- Stars - colliding
- Stars with rings
- Systems where a codex discovery was made

Additional Features

Display of the signal sources in the system.
Add your own notes and bookmark the system.

Exploring the Commander's Database

The database contains a rich set of information which can be searched.



The Commander can:

- Look for any of the "items of interest" features (nested moons, colliding binaries, etc)
- Look for codex entries
- Search in the scan events for Stars, planets and rings of interest (radius, atmosphere composition, etc).
- Search for a multi-star system with zero bodies which is something I know from the forums that some Commanders would like to find

Database tasks

Clear Database

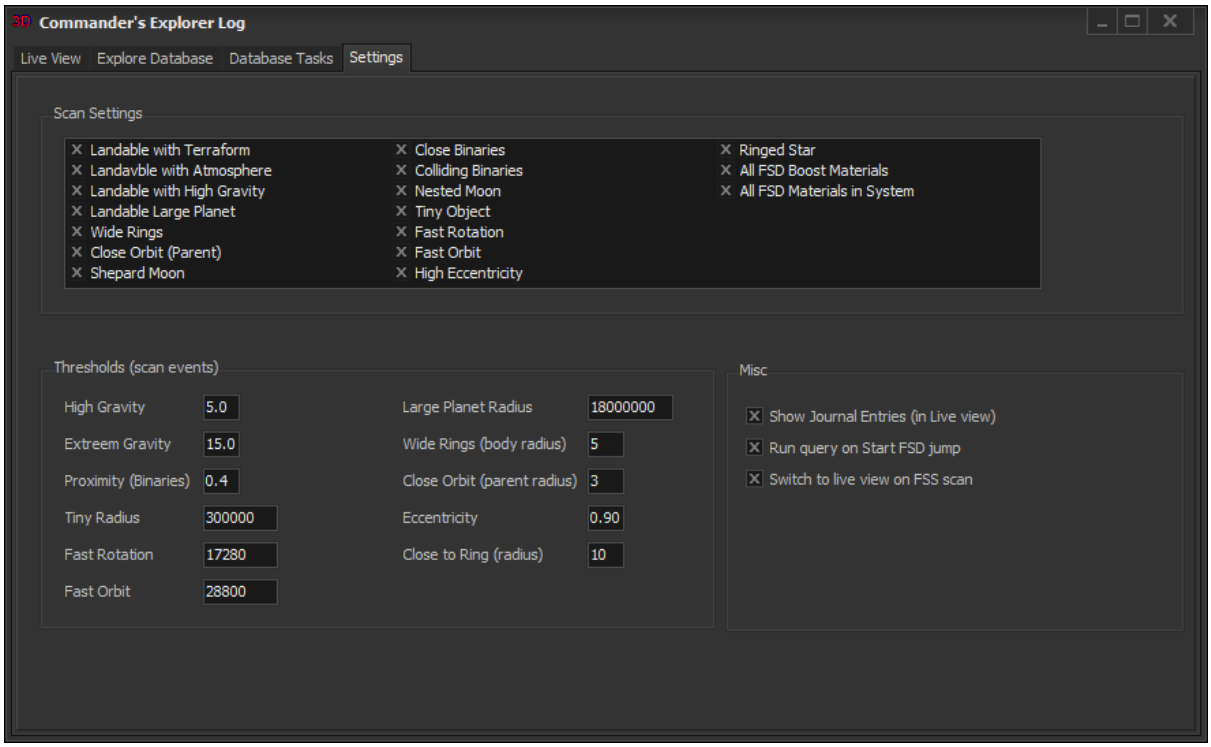
Database tasks tab allows the commander to clear out the portion of the database relating to journal scan events. This is useful so that a re-read/refresh of the journal logs can be performed. This is a safe operation and bookmarks, system notes are not affected.

Import Elite Dangerous Journal Logs

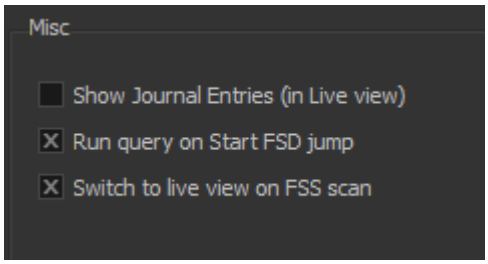
This option populates a local database with all the codex and scan events found in the journal logs. There is a wealth of information contained in these logs and some of it is very useful to collect – ie for mission route optimisation.

Commander Log Settings

The Commander can also tweak the settings of the module so that he can define what an “interesting” item means.



Misc Option



Show Journal Entries (in Live View)

This option acts like a debug view – it shows the journal entries as they are written by Elite.

Run query on Start FSD Jump

This option runs a database query and shows a summary of the new system you are about to jump to. The **Explore Database** tab is activated.

Switch to live on FSS scan

This option switches and activates the Live view tab so that signal sources can be seen, as well as the results of the scan analysis looking for “interesting” items.

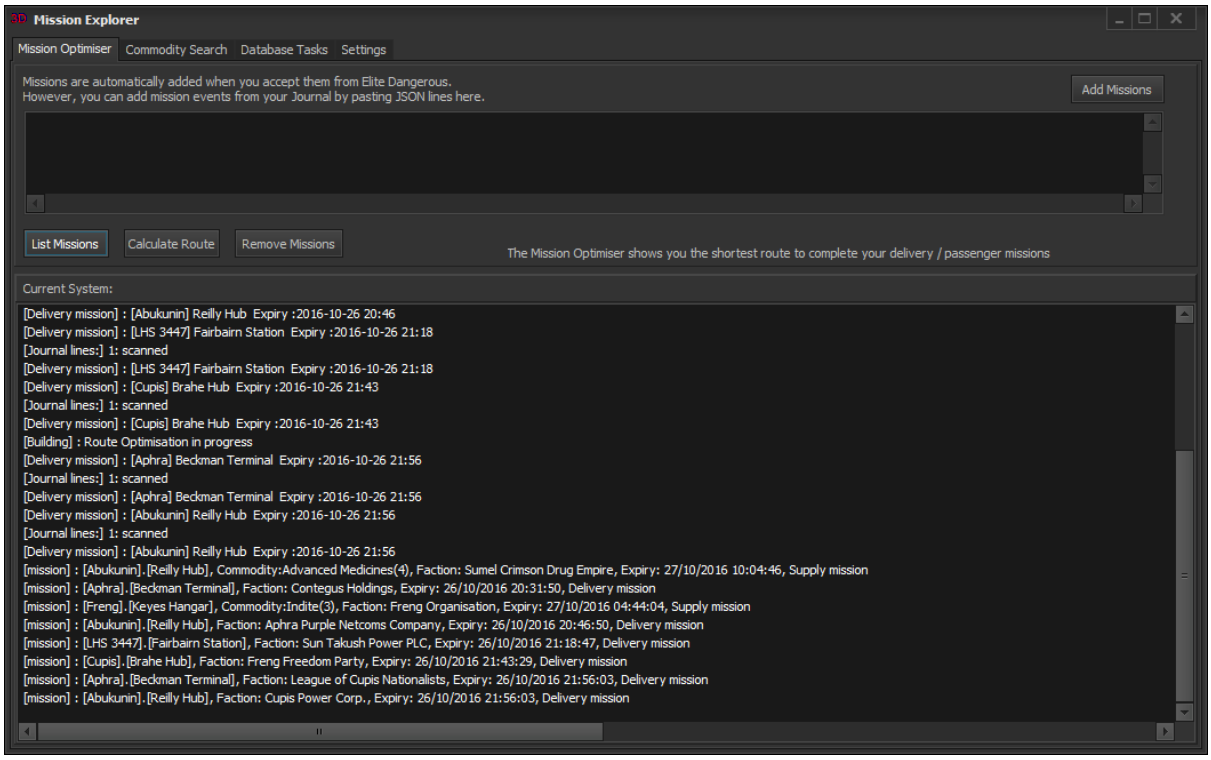
Mission Explorer

The Mission Explorer module consists of:

- Mission Optimiser
- Commodity Search

Mission Optimiser

This module can help a Commander plan his routes from station to station. On each new mission accepted, the system builds a list of known missions and calculates the most efficient route between star systems. The computed route is based only on the systems in the missions and performs distance/jump calculations based on a lookup to a cached copy of EDDB's database. As part of the supply/demand missions, the system will add stations you must visit to buy goods (using the commodity search module functionality). Note, however, it doesn't take into account available cargo space at any one time – so this is something you'll need to manage for yourself!



List Missions

This button lists the known, active, missions in the database. Usually, these are identical to Elite's mission list – but there is an option (see below) to add historical missions.

Calculate Route

This button calculates the best possible route through the star systems listed as part of the mission list. If the route optimiser discovers a disconnected route, then the degree of confidence is listed which basically means the number of times a system is disconnected – ie no real optimisation for this system.

The system automatically recalculates the route on every FSD Jump.

Remove Missions

This means that the missions table is cleared.

Add Missions

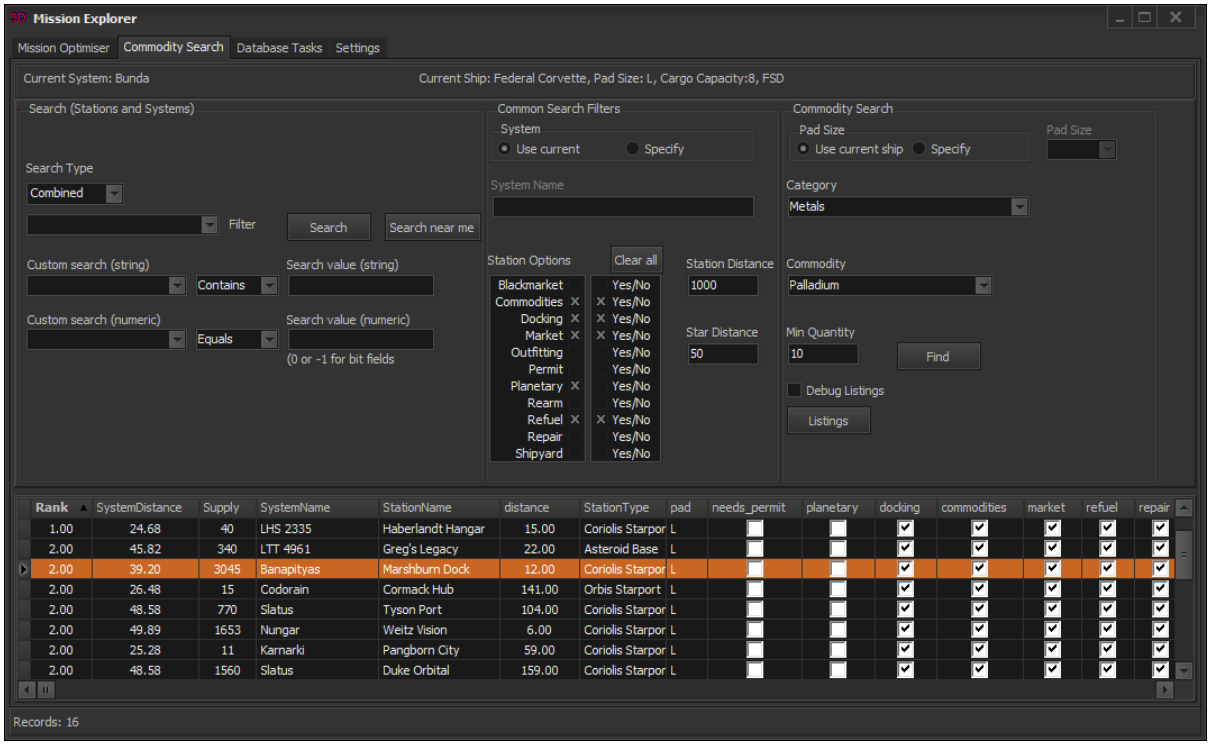
This is an advanced user feature available so that Commanders can cut/paste an entry from the journal file and have the mission optimiser process that entry to add/delete/update an available mission.

Commodity Search

The Commodity Search tab contains live in-game information for the current system, your ship and it's FSD jump range.

This module allows a commander to:

- Browse the database for systems and stations
- Search for specific in-game commodities and locate a station with a certain quantity
    - Can also search within a distance from a specified system, or the current system.
- Results are ranked for the most efficient use of time (considers number of jumps, distance of station from star, quantity of commodity, requires permits, landing pad size)



Screen organisation

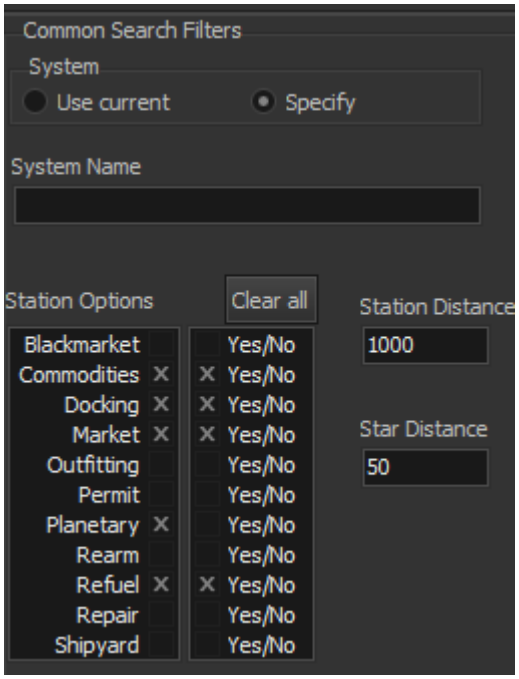
The Commodity Search screen is vertically split into three sections. On the left are the search options for Systems and stations; on the right are the options for commodity searching and in the middle are options applicable to both types of searching.

Common Search Options

These options are additional criteria to reduce the number of stations returned in a given search.

Of particular interest is the reference system and the permit and planetary requirements.

Note: The current UI values (common search options) are also used by the mission route optimiser when it runs in the background).



Station Distance

This value is the distance from the main sequence star. By using this option, you are reducing the travel time needed to visit stations in the list.

Star Distance

This value is the distance from your current location (or reference system). By using this option, you are reducing the jump of jumps needed (and reducing travel time).

Station Options

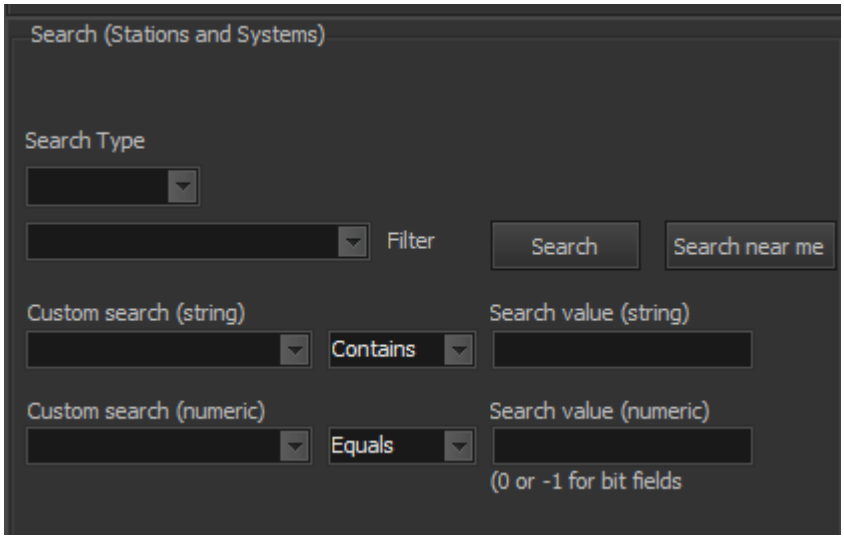
There are two sets of check boxes.

The left set (Blackmarket, Commodities, etc) is a toggle to include or exclude the option from the search.

- If unticked, then the Yes/No option is disabled as the option is not used.
- If ticked, then the Yes/No option on the right becomes available. Yes means that the option must be available at the station, no means the option must not be available (or required).

Station and System Searching

Different search types can be applied so that either systems, stations or a combined view of both can be displayed in the grid.



There are two further filters which can be applied, and you can select the field and its possible values from the drop-down lists provided.

Note: Boolean values are expressed as 0 for false, or -1 for true.

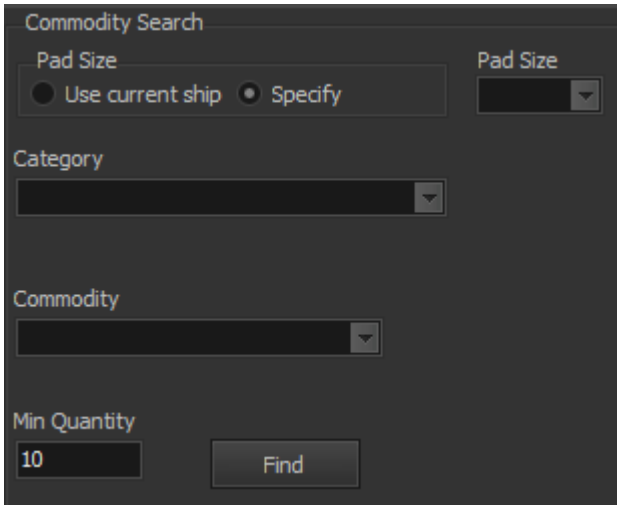
Additionally, the commander can search for specific combinations of BGS state.

Commodity Search

The Commodity Search options are heavily dependant upon the common search options.

- Select the category (or all) and the corresponding commodity item from the lists.
- Select to either specify the landing pad size, or use the ship size.
- Select the minimum quantity to search for.

Clicking Find will run numerous queries in the database, first looking for systems within the specified star distance, which also match the station selection criteria. After that, stations with the commodity, with the right quantity are grouped together and ranked according to number of jumps, distance from arrival star (ie supercruise travel time), permit access, refuel available, pad size, etc.



Database Tasks

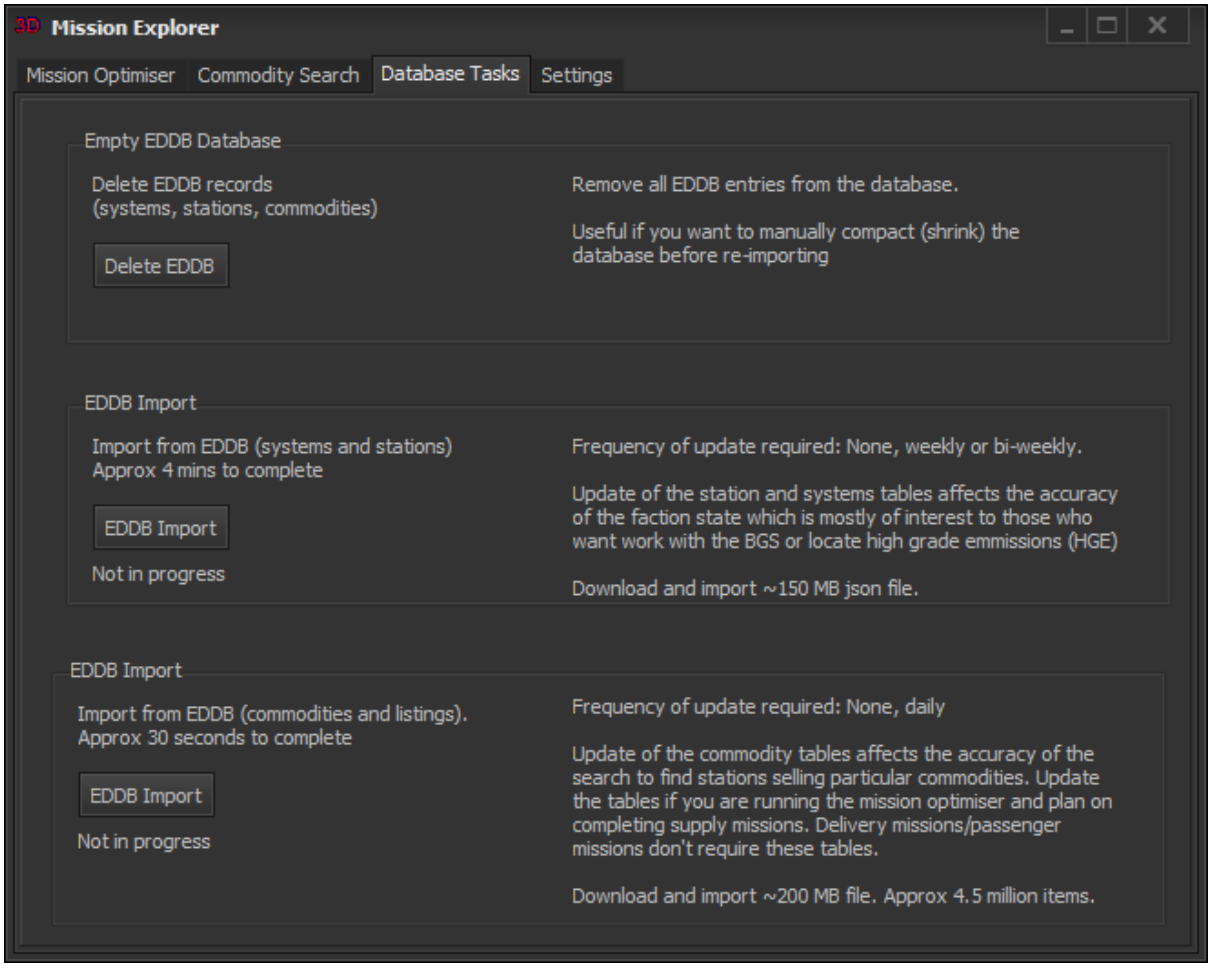
Empty EDDB Database

This section deletes the EDDB imported records. The only time to perform this action is to compact the database.

EDDB Import

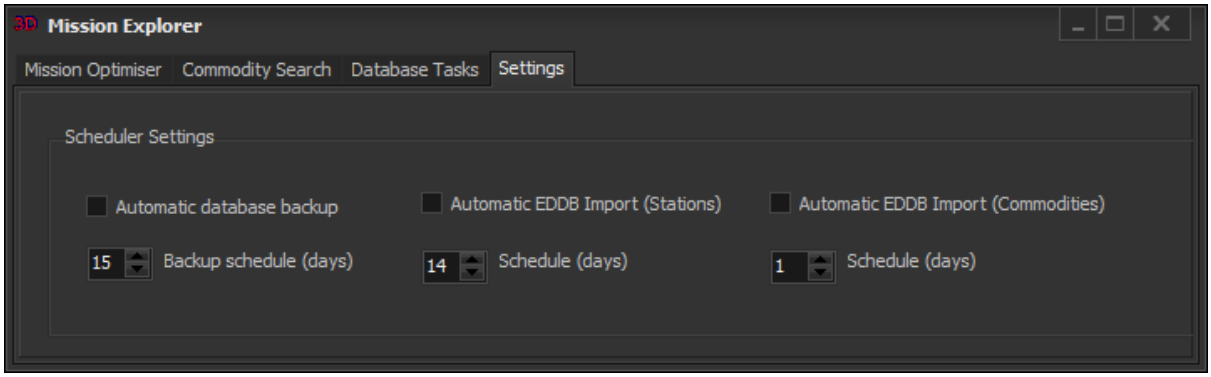
This section downloads systems and station JASON files from EDDB and imports them into the database. This task can be automated and the update frequency would usually be every couple of weeks for the causal gamer.

The Commodities and Listings section downloads additional JASON files from EDDB and imports them into the database. This task can be automated and the update frequency would usually be either zero, for the casual gamer, or daily if you are running the mission optimiser or commodity search.



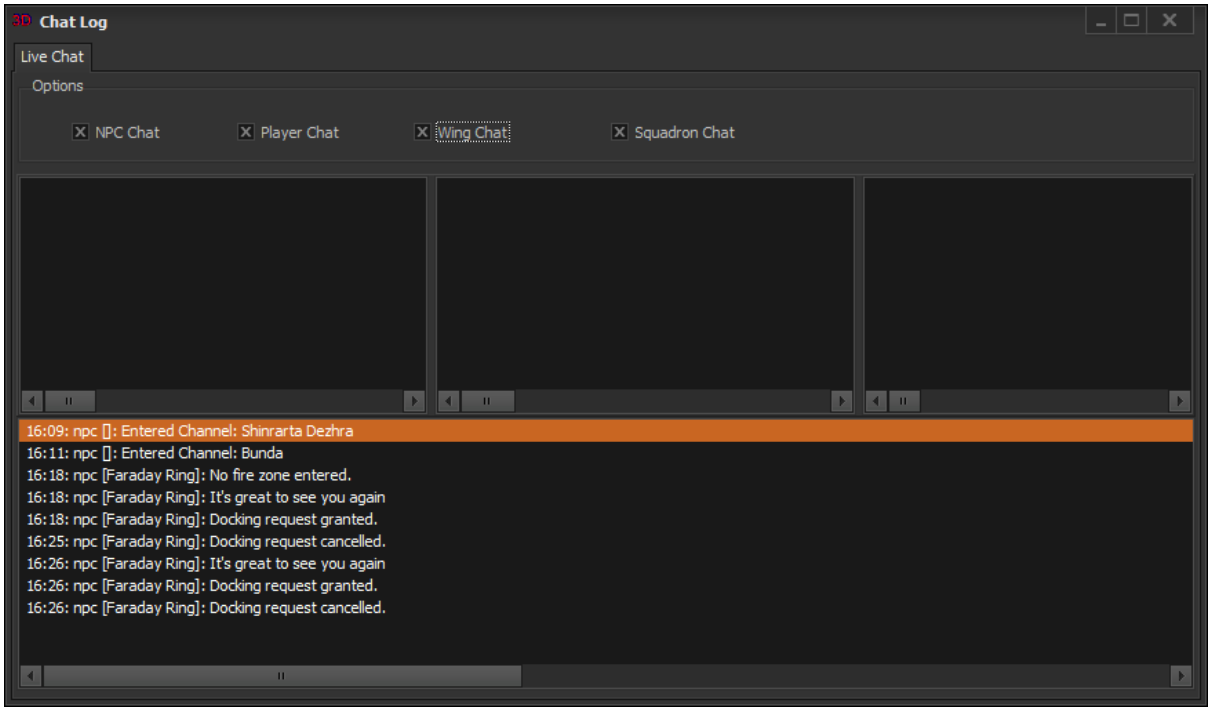
Settings

Settings allows you to specify the frequency for automatic backups and EDDB updates.



Chat Viewer

A window with views to separate and display NPC chat, player chat, wings and squadron messages. Simplifies the display of messages be resizing the space for viewing them to make them more readable.



Each of the panels can be resized, and using the check boxes, panels can be hidden. If the window is not needed it can be closed or minimised to the task bar.