

**CMDR Clicker's**

**Elite Dangerous Target Script**

**User Reference Guide**

**(v4.2.0)**

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## Introduction

### PURPOSE:

My script package has been written for a dual purpose.

First, to enhance immersion and control within the game of Elite Dangerous.

Secondly, is to provide [TARGET](#) Script code examples to complement and extend beyond what is covered in the Thrustmaster Scripting guide.

### HISTORY:

Inspiration for this script started with [Aussiedoid's comprehensive Elite Dangerous script](#) (v3.1.0). I then created my own script to mimic my old Saitek X-55 basic configuration. I have since learned and used the advanced abilities of TARGET Script to create a "smart" configuration and have studied and lifted ideas and methods from Aussiedroid and others including Elite Dangerous Forum members, CMDRs Touille, Darkcyde and others.

### PHILOSOPHY:

Whilst convenient, I tend not to use the [HOTAS](#) for non-HOTAS functions (eg I do not currently issue chat macros or fighter instructions etc via TARGET).

I've written the functions to suit my preferences, my play style and my hardware, however I have made a few concessions here to cater to users who may not have an EDTracker or rudder pedals.

### My HARDWARE:

The script and supporting files are written and maintained to work with my current hardware setup. This includes a [Thrustmaster Warthog HOTAS](#), [Thrustmaster TFRP Pedals](#) and an [EDTracker Pro](#) (wireless). Keyboard and mouse usage is very limited but still required for certain functions. As it is, my script potentially does not suit playing with a [VR Headset](#).

### COMPATIBILITY:

This script has been designed and tested to work with version 3.7 of [Elite Dangerous Horizons](#)/Fleet Carriers. This script will also work with the non-Horizons version of the game, however, quite obviously, Horizons based features then become somewhat redundant.

I have supplied a 'full' [bind file](#) which will work with or without the pedals, and an additional bind file which excludes the ED Tracker bindings. These should just work 'out of the box'.

### NOTE:

The script uses extensive state tracking via the [status.json](#) journal file which is created and updated whilst the game is running. If this file becomes unreadable or unavailable, the script will abort.

The script requires Thrustmaster's TARGET Script editor ([v3.0.18.328](#)) to load, edit, compile and run and the formatting used suits the GUI console, not the script editor. Therefore, if you intend to edit this software, be careful changing the printf() formatting as output from this script displays differently due to font differences between the two.

I hope you enjoy this script and that it suits your requirements and playstyle. I look forward to any feedback and suggestions you may have for improvement.

Fly dangerously commanders!

[CMDR Clicker](#) o7

## Acknowledgements and credits

Elite Dangerous is a copyright of Frontier Developments plc

T.A.R.G.E.T. and Thrustmaster are copyrights of Guillemot Corporation S.A.

Original script inspiration and functionality by Aussiedroid.

<https://forums.frontier.co.uk/members/aussiedroid.21601/>

<https://forums.frontier.co.uk/threads/aussiedroids-enhanced-thrustmaster-warthog-script.293027/>

<https://github.com/Aussiedroid/AD-EDWarthogEnhancedScript>

Contribution and ideas lifted from Touille and Darkcyde.

<https://forums.frontier.co.uk/members/cmdr-touille.110127/>

<https://github.com/Touille/ED-Warthog-Target-Script>

<https://forums.frontier.co.uk/members/darkcyde.26482/>

Modified target.tmh (if included) was sourced from Sedenion.

<https://forums.eagle.ru/showthread.php?t=171098>

Analogue Slew Controller hardware upgrade – get rid of that crappy ‘mouse nub’ on the Throttle!

<https://deltasimelectronics.com/products/thumbstick-slew-sensor-adapter>

Last but not least, a lot of my learning came from assistance, directly or indirectly by several key people in particular;

On HOTAS/HOSAS/SIMPIT Discord...

@sYfte

@hon0

@dar|{cyde

Over on DCS World forums <https://forums.eagle.ru/> ...

@ivanwfr <https://forums.eagle.ru/member.php?u=82172>

@Sgt Coyle <https://forums.eagle.ru/member.php?u=88210>

@Drakoz <https://forums.eagle.ru/member.php?u=108387>

If you like my work and wish to contribute a small donation, please consider spotting me the price of a coffee!

<https://www.patreon.com/user?u=36436459>

Proceeds will go toward acquiring a T16000 TWCS so I can create a version of this script for the T16000 crowd.

## Script Package Contents

When publishing or sharing this script the following should be included in the zipped package;

- The readme file
- The license file
- This reference manual
- ED\_Main.tmc, ED\_Functions.tmh, ED\_Macros.ttm, ED\_Toggles.tmh, ED\_StateTracker.tmh,
- ED\_MapKeyAssignment.tmh, ED\_Defines.ttm, ED\_GlobalVars.tmh, ED\_UserSettings.tmh
- Voice.exe (users can find this on github and check out the source if they wish)
- sounder.exe (users can find this on github via the same author as voice.exe)
- Windows batch file (SAMPLE\_Launcher.cmd) to use to launch Elite Dangerous, my TARGET script and supporting apps)
- The Elite Dangerous .bind files created to support this script
- The image files created to summarise the Joystick and Throttle button assignments
- The image files created to summarise keyboard key utilisation
- The change log for this version

## Installation

- a. Copy the correct .bind file in the package's 'Bindings' folder to your Elite Dangerous bind file folder. This is usually at ...  
"c:\users\%username%\AppData\Local\Frontier Developments\Elite Dangerous\Options\Bindings"  
As 'AppData' can usually be hidden you may need to unhide it via the folder view options in Windows if navigating via the windows explorer. Or, you should be able to cut/paste the path above into a run box or address bar

**NOTE:**

- You should use the bind file in Bindings\Full folder within the zip package even if you don't have a TFRP Pedal controller
  - If you do not have an EDTracker use the bind file present in the Bindings\No EDTracker\ folder
- b. Unzip the script files anywhere on your disk that you can easily find/get to  
Example used in this document is c:\Thrustmaster\ED\_TargetScript  
Substitute your path within this document if you decide to save to somewhere else.
  - c. Copy voice.exe and sounder to c:\Thrustmaster\ED\_TargetScript\ and set correct path in the ED\_UserSettings.tmh file for both VoicePath and VoiceCMD variables
  - d. Copy Sounds folder to c:\Thrustmaster\ED\_TargetScript\sounds\ and set correct path in ED\_UserSettings file
  - e. Print out and study the image files within the 'Maps' folder.
  - f. Before you run the script open the ED\_UserSettings.tmh file in notepad (I recommend using Notepad++) and ensure;
    - the path definitions for 'StatusFile', 'MyStatusFile', 'VoicePath' , 'SoundPath' and 'WAVPath' are all correct
    - 'VoiceCMD' is set correctly (you can remove -n \"Microsoft Catherine\" if you have not installed this MS Voice)
    - Set 'EnableTFRPRudder' to = 0 if you do not have this rudder controller
  - g. The Preferred method of running the script is via a Windows batch file.  
ED\_Launcher.cmd batch file is included in this package and is best copied to wherever you copied the scripts to in "step 2" above.  
I recommend you create a shortcut to this batch file on your desktop and run it as administrator. Please read the comments in this batch file for more information
  - h. The script MUST be running before you start the game.
  - i. When you run the game for the first time, go to Options | Controls and select the .bind file profile included in the zip package. (example: "Clicker-Warthog-v420")
  - j. If you do not have a TFRP Rudder controller you will need to correct the bindings for the following in game functions;
    - Ship yaw
    - SRV Steering
    - Camera yaw, FSS Camera yaw & SAA (DSS) Third-Person yaw
  - k. If you do not have an EDTracker, you will need to add bindings for Head look Pitch and Yaw if you intend to use this feature

## Features

- 4 firing modes for both primary and secondary triggers
  - [Pulse Wave Scanner](#) mode (fires a pulse every 7 seconds)
  - Normal (press to fire, release to stop)
  - [Discovery Scanner](#) mode (holds trigger for 6.1 seconds)
  - [Mining Laser](#) Mode (press to fire, press to stop)
- 3 user customisable, change on the fly curve profiles for Joystick and Rudder selectable via the autopilot switch
- [FA-OFF](#) automatically applies custom curves to joystick and rudder
- User customisable curve profiles for slew control and slider
- Different flight modes tracked resulting in slider curves (for Radar) to be applied
- Advanced PIP Manager includes 6 PIP modes, all selectable on the fly
- Advanced Counter measures control includes single [SCB](#), SCB with auto [heatsink](#) and 'Double Bank' (2 x SCB + 1x heatsink) modes.
- Text-To-Speech engine provides additional voice feedback which can be turned on/off (+volume control), all on the fly (includes a training mode which speaks each switch/button function)
- Sound effects engine to add extra feedback in game
- Advanced state processor, which reads status.json twice per second and detects when key flags are changed.
- Additional flags tracked, saved to file and loaded when required, automatically
- Comprehensive print to console messages by most functions
- Turn the Throttle base LEDs on or off on the fly + user customisable brightness.
- Status LEDs accurately synchronised with game states for 5 key ship systems
- Accurate game start and stop detection
- Macros included for;
  - Docking request with auto PIPs to shields
  - [Wing Beacon](#) On/Off
  - [Report Crimes](#) On/Off
  - Deploy and Recover the SRV
  - Dismiss/Recall Ship
  - [Station services](#) which can be set to auto on dock, or via switch
  - Launch+lift off+retract landing gear+25% throttle
  - Fast Game Mode switching (includes [anti-clog](#) code)
- Simple, logical target designator functions including system module targeting
- Speed brake function using timed landing gear deployment/retraction
- Advanced Super cruise / Hyper jump tracking with drop detection
- Fully documented and commented code
- Comprehensive ED\_UserSettings File
- Comprehensive Key Bind Sheet file detailing standard and combo keyboard keys
- 2x comprehensive custom key bind files included
- Joystick Map, Throttle Map and Keyboard Utilisation images
- ...and more!

## Usage

All user configurable settings are in the ED\_UserSettings.tmh file.  
Avoid changing anything in ED\_GlobalVars or ED\_Defines files.

Feel free to use the ideas and methods for your own use in your own scripts and I encourage you to share these with other like-minded players.

This software uses the [MIT license](#), which can be found at the root of this package/repository.

### Intent

Most buttons and switches do 'something' other than just send a simple keystroke or a [Direct-X](#) (DX#) command to the game.

Likewise, most of the axes available have different profiles (behaviours) depending on a user setting, or a specific combination of button presses, or, indeed something, that happens in game.

This guide is intended to describe what each button/switch does and how the different Joystick, Throttle, slider and Slew Control (mini stick) axes behave depending on situation or user definable configuration and in game actions.

This document is not intended to teach TARGET Script or walk you through my code. I will try to keep the scripting (code) description to an absolute minimum. Saying that, the script itself should provide to be an excellent resource in itself and provides many comments that can help you if you wish to learn TARGET Script, or modify mine to suit your needs.

### Console

The script will output to the Target Script GUI console the result of many commands. It is not strictly speaking required to play the game, however you can use this feature to ensure you are hitting the correct switch/button or sequence.

Likewise, the script will output error messages to the console and speech engine when you select an invalid button. Example: trying to lower the landing gear when in Super cruise

### Text-To-Speech

I have included a voice feedback feature that uses a Text-To-Speech engine and Microsoft's Voice capability to add more immersion and feedback when you select certain actions.

Many of the console messages are also converted to speech.

For this to work you need to copy voice.exe to your script folder and correctly set the path inside the ED\_UserSettings.tmh file.

The volume for the Text-To-Speech function can be changed on the fly via FLAPU and FLAPD switch and the feature can be turned off completely via BSF (Boat Switch-Forward).

Refer to the individual switch references in the below chapters for more detail.

## Elite Dangerous Configuration

Additional configuration items I have set in game via Options/Control;  
(included in the bind files – here as a short reference for note)

- Throttle Axis Range = Forward Only
- Flight assist button mode = Toggle
- Rotational Correction = Toggle
- Firing Deploys Hard points = OFF
- Silent Running Button Mode = Toggle
- Cargo Scoop Button Mode = Toggle
- Microphone Mute Button Mode = Toggle
- Mute Button Mode = Toggle
- Microphone State Mode = Toggle
- Enable Context Menu = OFF
- UI Focus Mode = Cycle
- Autofocus on Text Input = OFF
- Looking at \* Panel = Does Nothing
- Show CQC Score Screen Button Mode = Toggle
- Head look Button Mode = Toggle
- Centre when Head look Inactive = ON
- Head look Smoothing = ON
- Drive Assist Button Mode = Toggle
- Handbrake Button Mode = Toggle
- Drive Throttle Axis Range = Forward Only
- Drive Throttle Reverse Button Mode = Toggle
- Free Camera Throttle Axis Range = Forward Only
- DSS Front/Back Button Mode = Toggle

## Modifiers

The script uses modifiers which do much the same thing as the 'SHIFT' or 'CTRL' keys do on a keyboard...they change or extend the use of the switch or button.

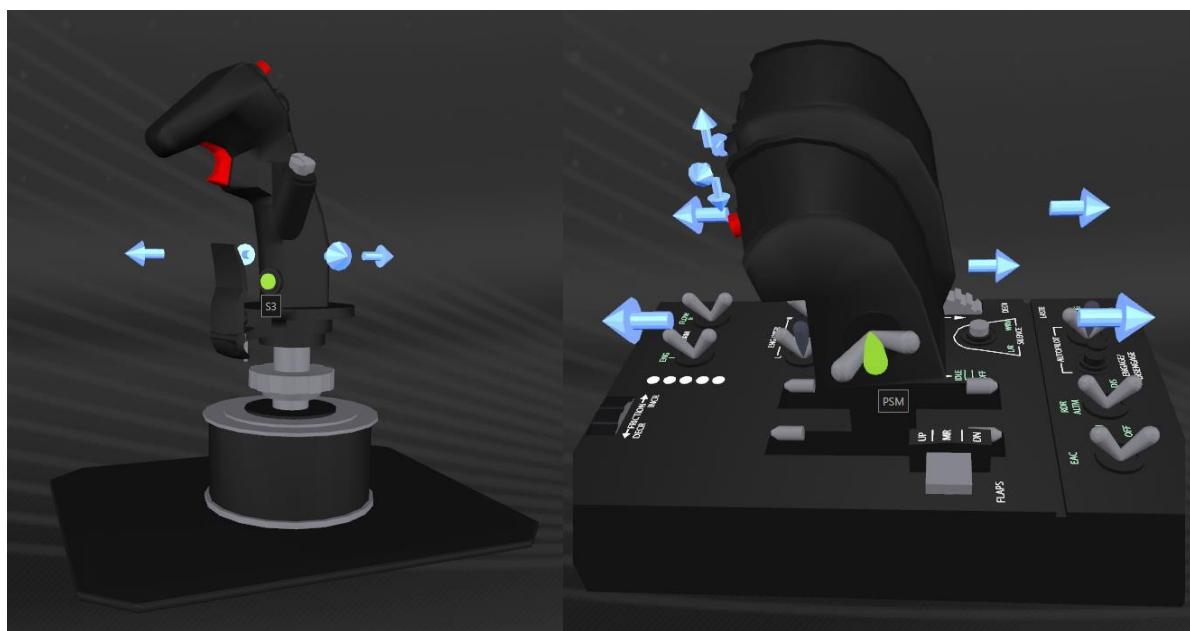
Using modifiers, each button or switch can have up to six different functions.

It is worth noting that I do not use modifiers on all switches and buttons ... only about half of the buttons I have mapped use modifiers.

The modifiers use the form I, O, U, M, D. The letters stand for 'In', 'Out', 'Up', 'Middle' and 'Down'

The script uses the Joystick S3 ('Nose wheel') button as the IO modifier. When pressed we are using the 'I' layer. 'O' layer is being used when it isn't pressed.

The script uses the Throttle PSF, PSM, PSB ('Pinky Switch') as the UMD modifier (layers). PSF is the 'U' layer, PSM is the 'M' layer and PSB is the 'D' layer (F=Forward, M=Middle, B=Back)



Joystick S3 'Nosewheel' switch

Throttle PSF/PSM/PSB 'Pinky' switch

In the ED\_MapKeyAssignment.tmh file, you will see each switch and button mapped via a MapKey statement. This defines what we want to do when the switch is pressed.

It may look like one of the following four examples;

- MapKey(&Joystick, TG1, <action>);  
No modifiers used. Press the trigger to do 'action'
- MapKeyIO(&Joystick, TG1, '<I' action>, '<O' action>);  
Modifier 'IO' in play.  
Press and hold S3, then the trigger to do 'action for I'  
Press the trigger without pressing S3 to do 'action for O' (ie no modifier)

- c. MapKeyUMD(&Joystick, TG1, <'U' action>, <'M' action>, <'D action'>);  
Modifiers 'UMD' in play.  
Flick Pinky Switch Forward (PSF) and press the trigger to do 'U action'  
Leave or move Pinky Switch to Middle (PSM) and press the trigger to do 'M action'  
Flick Pinky Switch Back (PSB) and press the trigger to do 'D action'
- d. MapKeyIOUMD(&Joystick, TG1, <IU>, <OU>, <IM>, <OM>, <ID>, <OD>);  
The most complex mapping as you can see and has 6 separate actions depending on both S3 being pressed and/or position of the Throttle pinky switch!

In this user guide, I will list each switch position used in the script and if modified, will use the following example terminology;

<u>Switch</u>	<u>Usage</u>	<u>Means...</u>
TG1 – IU	S3+PSF+TG1	Press+hold S3 (I), Flick PSF (U), then press the main trigger
TG1 – OM	TG1	Just press the Joystick main trigger (no effective modifier) (S3 not pressed and Throttle Pinky Switch in the middle position)
S1 – U	PSF+S1	Flick PSF (U), then press the Joystick S1 ('Master Mode') button
H4P – D	PSB+H4P	Flick PSB (D), then press the Joystick CMS Switch
S4	S4	(no modifiers) ... just press the Joystick S4 switch (pinky lever)

In other words, I will only describe the modifiers where they are used for that switch mapping in script.

I will then go on to describe the 'action' or function of each switch in use and I will include a reference picture of the switch being described.

To further complicate matters, the script does make use of the ability to detect when a switch/button is released in cases where I need this...I will avoid using these references here for simplicity. Refer to the MapKeyAssignment file and look for 'MapKeyR', 'MapKeyRIO', 'MapKeyRUMD' or 'MapKeyRIOUMD' statements.

## Training Mode

Enable 'AnnounceTraining' in ED\_UserSettings file to announce via Voice feedback the selected Training mode status when the script starts or when the game stops.

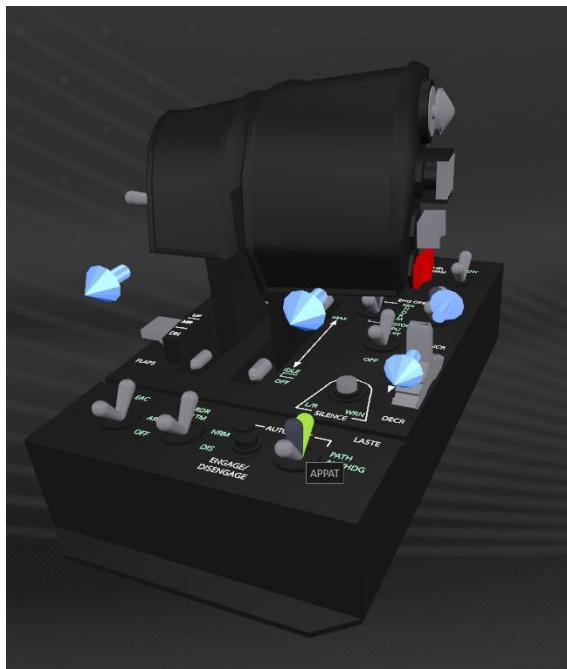
Enable 'TrainingEnabled' in the ED\_UserSettings file to take advantage of a training mode.

When the game is not running, pressing any of the buttons or switch combinations described in the following chapters will result in both Voice feedback, as well as a console printout of the mapped function. Make sure you also check out the modified buttons and switches!

## Axis Curves and Curve Control

By default, I use a small amount of S-Curve for the X and Y axes on the joystick and Z axis on the rudder. You can turn the curves off via the Throttle APPAT switch as shown below.

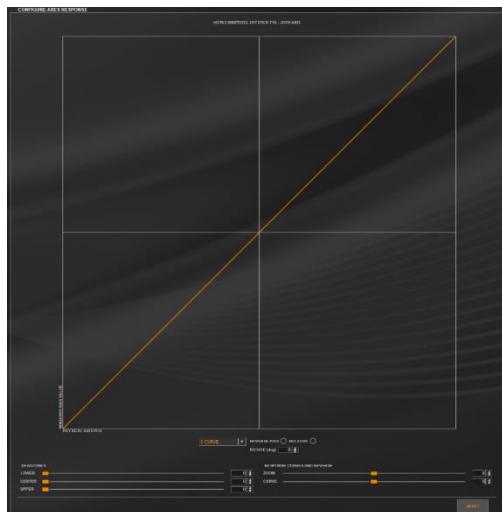
<u>Switch</u>	<u>Usage</u>	<u>Action</u>
APPAT	APPAT	Set Joystick and Rudder curves to OFF (0)



Throttle APPAT (Autopilot Path)

No curves means that the joystick and rudder axes have a linear response. That is, it increases the roll or pitch rate in a consistent manner as you move the stick all the way left, right, up, or down.

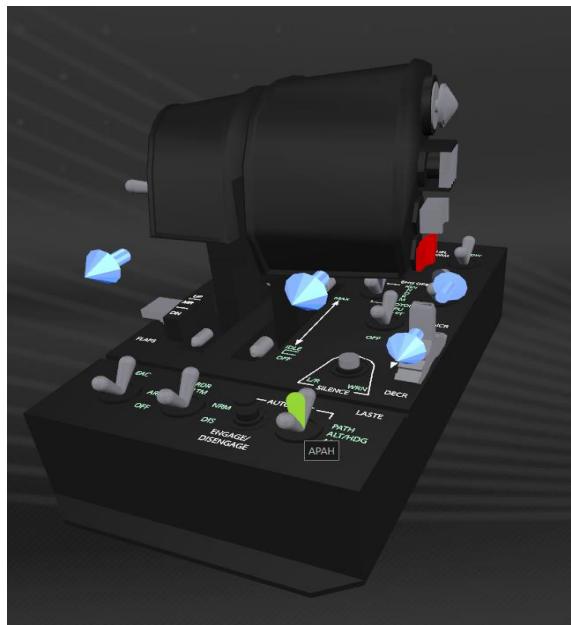
As the script applies the same curve profiles to the joystick and rudder when switching, the same theory applies to the rudder.



Joystick Curves set to 0 (linear response)

(...curves continued)

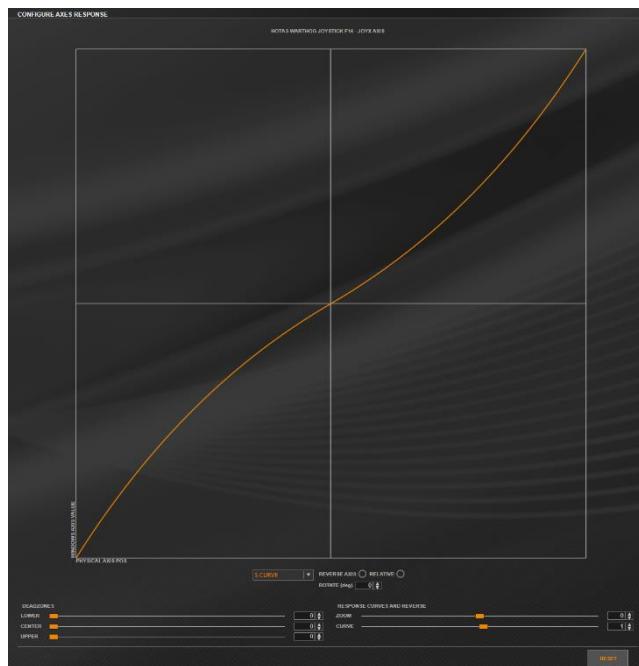
<u>Switch</u>	<u>Usage</u>	<u>Action</u>
APAH	APAH	Set Joystick and Rudder curves to MILD (1)



Throttle APAH (Autopilot ALT/HDG)

Default position for this switch. I use a small amount of curves applied to the joystick and rudder. The joystick and rudder have a slight non-linear rate of response.

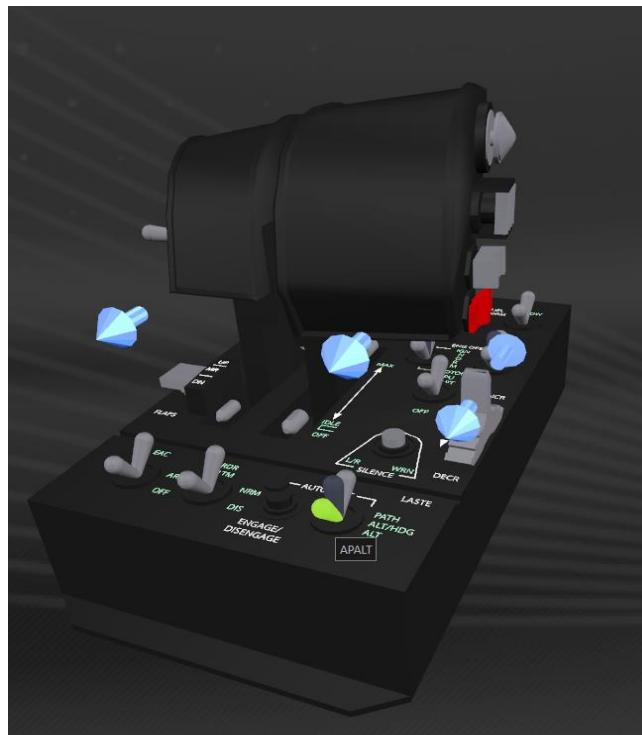
The S-Curve causes the response to be slightly slower at the beginning of travel away from centre and gets faster the further from centre you move the stick (or rudder).



Joystick Curves set to 1 (Non-Linear Response)

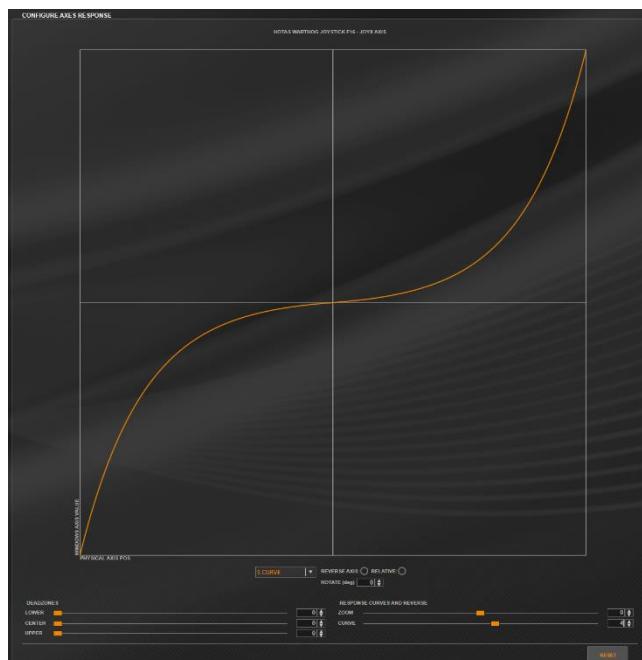
(...curves continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
APALT	APALT	Set Joystick and Rudder curves to MEDIUM (3)



Throttle APALT (Autopilot ALT)

At a curve profile of 'MEDIUM' (3) or 'SLOW' (4), the Joystick/Rudder response starts quite a bit slower and then gets a fair bit faster the more you move the throttle or rudder from the centre position. This is most useful when learning and using Flight Assist Off (FA-OFF).



Joystick Curves set to 4 (non-linear response)

(...curves continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
S4	S4	1 <sup>st</sup> press - Toggles FA-OFF and sets joystick & rudder curves to the value you choose in the UserSettings file (eg MEDIUM or SLOW) 2 <sup>nd</sup> press - Toggles FA-ON and resets curve profile to the associated autopilot switch setting



Joystick S4 (Pinky lever)

FA-OFF:              Status LED 1

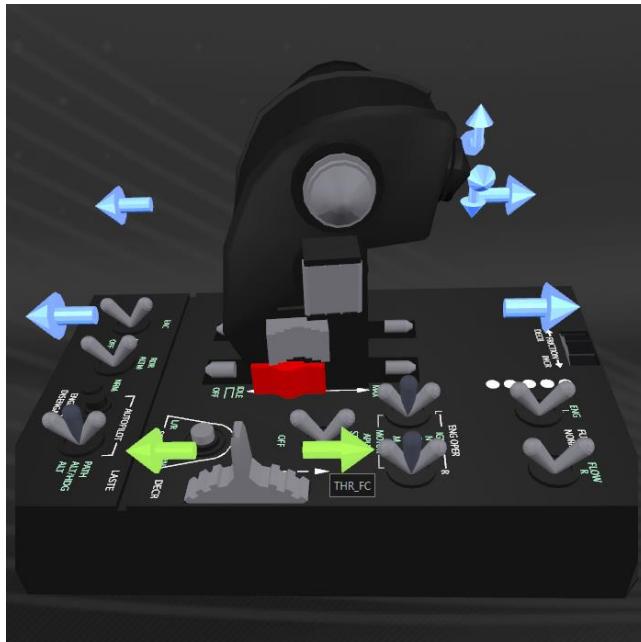
The curves that FA-OFF will use can be set via the 'FAOFFCurves' variable within the ED\_UserSettings.tmh file. Valid settings are 'OFF', 'MILD', 'MEDIUM' or 'SLOW'

Console printout each time curves change can be enabled via 'CurveInfo' variable within ED\_UserSettings.tmh file. Valid settings are 'PRINT' or 'NOPRINT'

Note: The above settings are case sensitive.

(...curves continued)

<u>Axis</u>	<u>Usage</u>	<u>Action</u>
THR_FC	THR_FC	Used to adjust radar range



THR\_FC

This axis requires 'SetCustomCurve' that is selected automatically depending on flight mode. Flight mode is detected in the script each time your flight mode changes from normal, super cruise, FSS Scanner or DSS Scanning (surface probes, front/rear planet view).

Mode 0: linear. Used for FSS Mode Radar  
Curve Profile 0 = (0,0, 25,25, 50,50, 75,75, 100,100)

Mode 1: non-linear. Used for normal flight and SRV  
Curve Profile 1 = (0,0, 40,25, 75,50, 85,75, 100,100)  
i.e. When slider is at 40%, Windows DX value is at 25% etc.

Mode 2: non-linear. Used for Super cruise  
Curve profile 2 = (0,0, 50,10, 75,30, 90,50, 100,100)

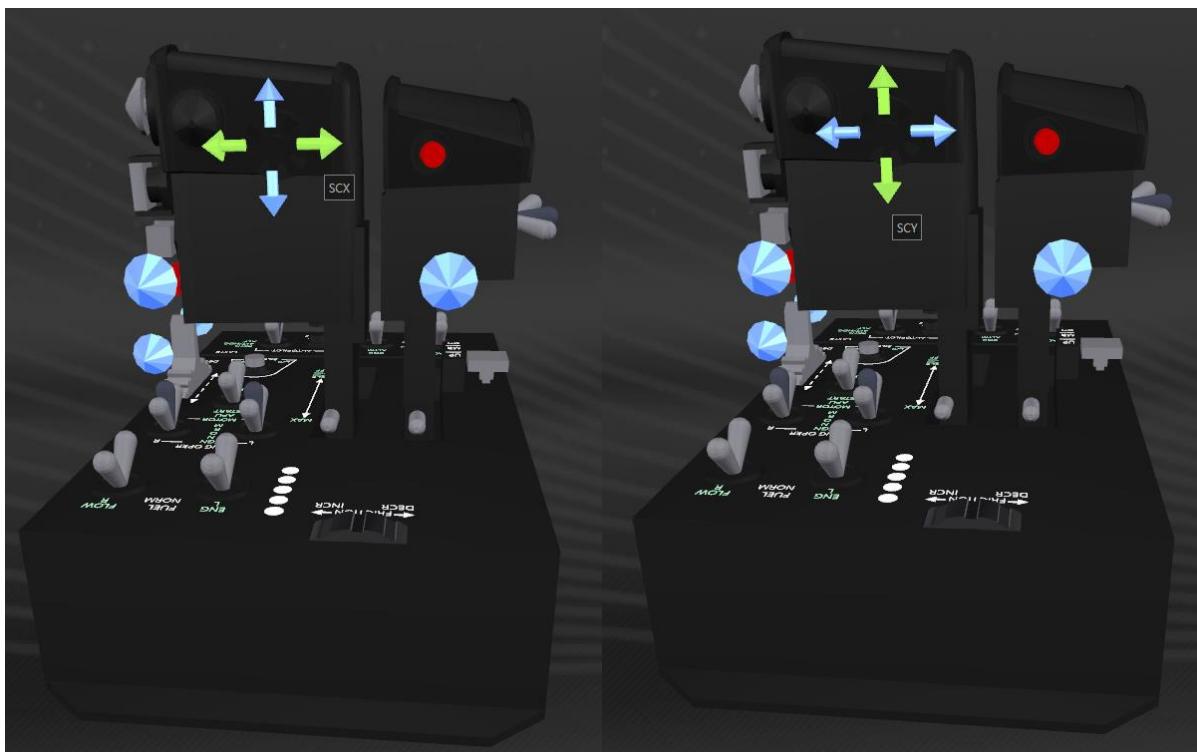
Note: J-Curve settings (via 'SetJCurve' statement in script) do not work as well as 'SetCustomCurve'

Most of the settings for each of the curve functions can be found within the ED\_UserSettings.tmh file under the 'Axis Curves' section, or in the ED\_Functions file (look for fnSetJoystickCurves() and fnSetSliderCurve() functions).

Refer 'Axes' chapter starting on p27 in the [Target Script Editor Basics Manual v1.5](#) for more details on 'S', 'J' and 'Custom' curves.

(...curves continued)

<u>Axis</u>	<u>Usage</u>	<u>Action</u>
SCX	SCX	Slew Control X-Axis. Used for Lateral Thrusters
SCY	SCY	Slew Control Y-Axis. Used for Vertical Thrusters



Throttle SCX (Slew Control)

Throttle SCY (Slew Control)

Curves for the Slew Control are also set when we change the Joystick curves.  
The three profiles are all set the same (linear) but can be changed via curve arrays within ED\_UserSettings.tmh.

I use a slight centre dead zone, as this control is quite sensitive.

NOTE: I have modified my WARTHOG HOTAS by replacing the slew control 'nub' with an analogue control replacement that I obtained from:

<https://deltasimelectronics.com/products/thumbstick-slew-sensor-adapter>

This is a fantastic upgrade to the HOTAS, which I heartily recommend.  
It turns what I consider a relatively useless control that I did not/would not use, into something supremely useable which I cannot do without!

## Joystick Controller

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
TG1-IU	S3+PSF+TG1	(not mapped)
TG1-OU	PSF+TG1	Primary trigger fires once every 7 seconds. Useful for Pulse wave scanner Press PSF+TG1 again to stop
TG1-IM	S3+TG1	(not mapped)
TG1-OM	TG1	Primary trigger default action (press to fire, release to stop)
TG1-ID	S3+PSB+TG1	Toggle (PSB) Trigger action between 'disco scan' and 'mining laser'
TG1-OD	PSB+TG1	Disco scan. Press+Release to fire. Trigger released after 6.1 secs Mining laser. Press to fire, press to stop



Joystick TG1 (Primary Fire)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
TG2	TG2	(not mapped)
S1-U	PSF+S1	Toggle HUD between Analysis and Combat Modes
S1-M	S1	Toggle Hard points (normal flight mode) Toggle HUD Mode (in Super Cruise flight mode)
S1-D	PSB+S1	Toggle Joystick X-Axis between ROLL and YAW



Joystick S1 (Master Mode Control)

NOTE: When in Super cruise, S1-M toggles HUD mode automatically

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
S2-IU	S3+PSF+S2	(not mapped)
S2-OU	PSF+S2	Secondary fire trigger fires once every 7 seconds. Useful for Pulse wave scanner Press PSF+S2 again to stop
S2-IM	S3+S2	(not mapped)
S2-OM	S2	Secondary fire trigger default action (press to fire, release to stop)
S2-ID	S3+PSB+S2	Toggle (PSB) Trigger action between 'disco scan' and 'mining laser'
S2-OD	PSB+S2	Disco scan. Press+Release to fire. Trigger released after 6.1 secs Mining laser. Press to fire, press to stop



Joystick S2 (Secondary Fire/Weapons Release)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H1U-U	PSF+H1U	Toggle FSS Mode
H1U-M	H1U	Select Next Fire Group
H1U-D	PSB+H1U	Turn off DSS Mode



Joystick H1U (China Hat – Up)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H1D	H1D	Select Previous Fire Group



Joystick H1D (China Hat – Down)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H1L	H1L	Tempo. Press and hold for 0.5 seconds toggles landing gear Short press does nothing.



Joystick H1L (China Hat – Left)

Landing Gear: Status LED 5

Press and hold H1L for 0.5 Seconds to toggle the landing gear.

This prevents accidental deployment during combat if you accidentally hit H1L instead of H1U (Next Fire group) or H1D (Previous Fire group)

The 0.5-second delay can be changed via the 'LongPress' variable defined in the UserSettings file.

The landing gear is also used as an auto speed brake via hitting 'Reverse' when in normal flight. This will automatically deploy the landing gear, then retract 5 seconds later.

[Boost-bleeding](#) can be accomplished by hitting boost, then Reverse.

Refer to Throttle Lever Control – SPDF/SPDB (Speed brake switch) in Section 8

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H1R-U	PSF+H1R	Toggle Night Vision ON/OFF
H1R-M	H1R	Tempo. Press and hold for 0.5 seconds toggles lights Short press does nothing. Prevents accidental toggle of lights
H1R-D	PSB+H1R	(not mapped)



Joystick H1R (China Hat – Right)

Toggle Lights: Status LED 2

Ship Lights simply toggle ON/OFF

SRV lights cycle ON/HI BEAM/OFF

The 0.5-second delay can be changed via the 'LongPress' variable defined in the UserSettings file.

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H2U-U	PSF+H2U	Toggle Planet View, Front/Back (Must be in FSS Mode)
H2U-M	H2U	Select Target Ahead
H2U-D	PSB+H2U	Select Target Ahead



Joystick H2U (Target Designator – Up)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H2D-U	PSF+H2D	(not mapped)
H2D-M	H2D	Select Highest Threat
H2D-D	PSB+H2D	Select Wing Man's Target



Joystick H2D (Target Designator – Down)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H2L-U	PSF+H2L	(not mapped)
H2L-M	H2L	Select next ship
H2L-D	PSB+H2L	Select next wingman (sequences each wingman in turn)



Joystick H2L (Target Designator – Left)

(... JOYSTICK continued)

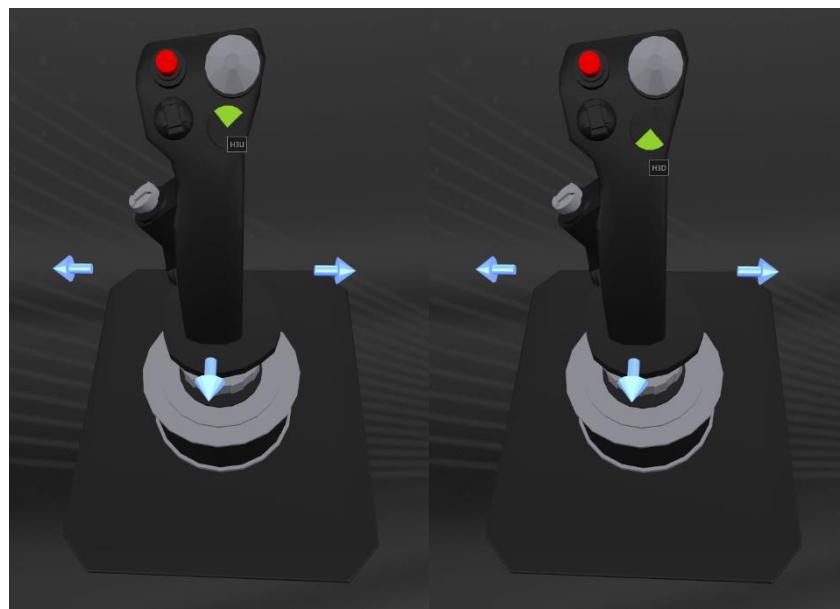
<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H2R-U	PSF+H2R	(not mapped)
H2R-M	H2R	Select next hostile ship
H2R-D	PSB+H2R	Select Wingman's NAV Lock



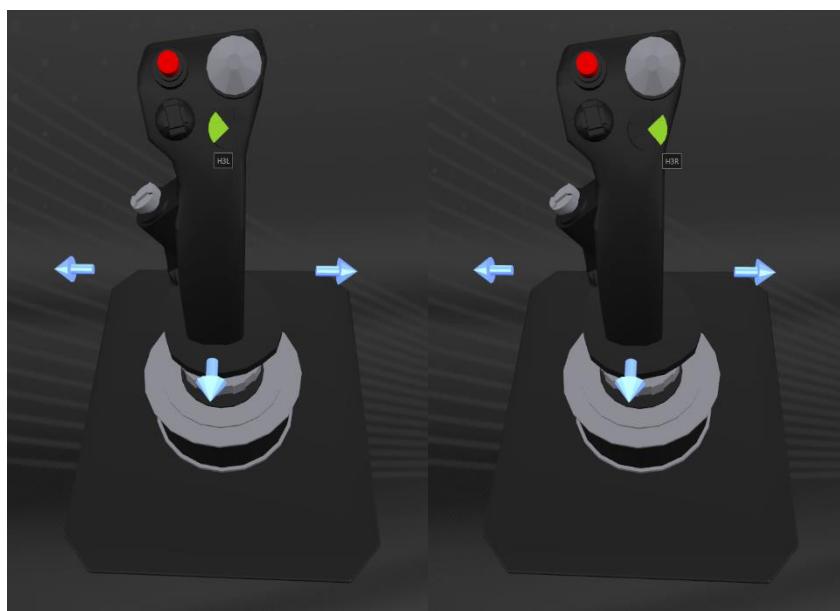
Joystick H2R (Target Designator – Right)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H3U	H3U	PIP Management – PIPs to Engines
H3D	H3D	Balance PIPs
H3L	H3L	PIPs to Systems (Shields)
H3R	H3R	PIPs to Weapons



Joystick H3D (Data Mgmt – Up)   Joystick H3U (Data Mgmt – Down)



Joystick H3L (Data Mgmt – Left)   Joystick H3R (Data Mgmt – Right)

The script has six PIP Modes selectable via H4P (see below)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H4P-U	PSF+H4P	Reset PIP Mode to DefaultPIPMode (set in ED_UserSettings.tmh)
H4P-M	H4P	Select Next PIP Mode. (0 - 5) (5 wraps to 0)
H4P-D	PSB+H4P	Select Previous PIP Mode (5 - 0) (0 wraps to 5)



Joystick H4P (Countermeasures – Press)

PIP Mode 0:	Single PIPs	1 press = 1 PIP
PIP Mode 1:	Double PIPs	1 press = 2 PIPs
PIP Mode 2:	Attack	SYS = [4 0 2], ENG = [0 4 2], WEP = [0 2 4]
PIP Mode 3:	Defend	SYS = [4 2 0], ENG = [2 4 0], WEP = [2 0 4]
PIP Mode 4:	Recharge	SYS = [4 1 1], ENG = [1 4 1], WEP = [1 1 4]
PIP Mode 5:	3+3	SYS = [3 3 0], ENG = [0 3 3], WEP = [3 0 3]

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H4U-U	PSF+H4U	'Double Bank' Fire 2x Shield Cell Banks (SCB) + 1x Heatsink
H4U-M	H4U	Tempo. Short Press = Fire 1x SCB, Long Press = 1x SCB + 1x Heatsink
H4U-D	PSB+H4U	FSS or Camera Zoom - IN



Joystick H4U (Countermeasures – UP)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H4D-U	PSF+H4D	(not mapped)
H4D-M	H4D	Fire 1x Heatsink
H4D-D	PSB+H4D	FSS or Camera Zoom – OUT



Joystick H4D (Countermeasures – DOWN)

(... JOYSTICK continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H4L-U	PSF+H4L	(not mapped)
H4L-M	H4L	Electronic Countermeasures (ECM). Hold to charge, Release to Fire
H4L-D	PSB+H4L	Camera Blur – OUT



Joystick H4L (Countermeasures – LEFT)

(... JOYSTICK continued)

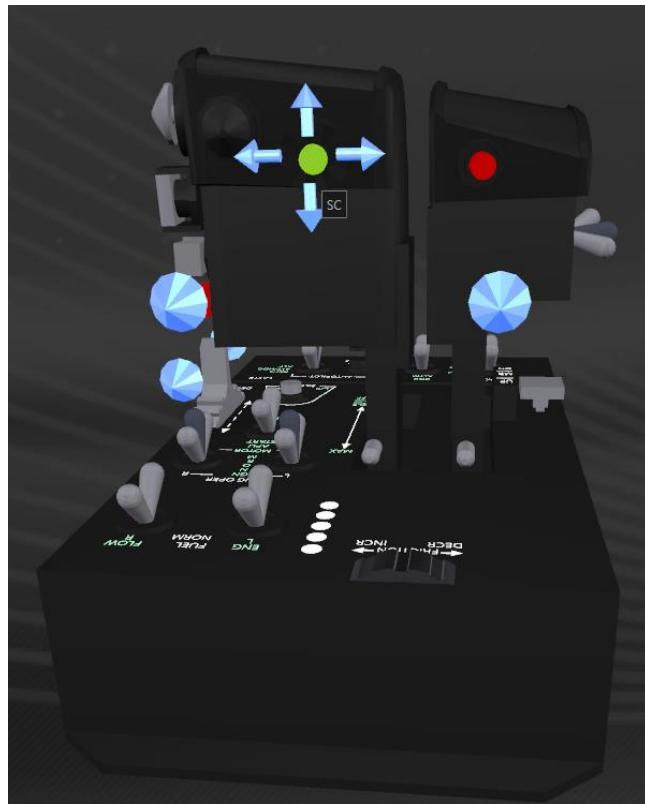
<u>Switch</u>	<u>Usage</u>	<u>Action</u>
H4R-U	PSF+H4R	(not mapped)
H4R-M	H4R	Fire 1x Chaff
H4R-D	PSB+H4R	Camera Blur – IN



Joystick H4R (Countermeasures – RIGHT)

## Throttle Control Lever

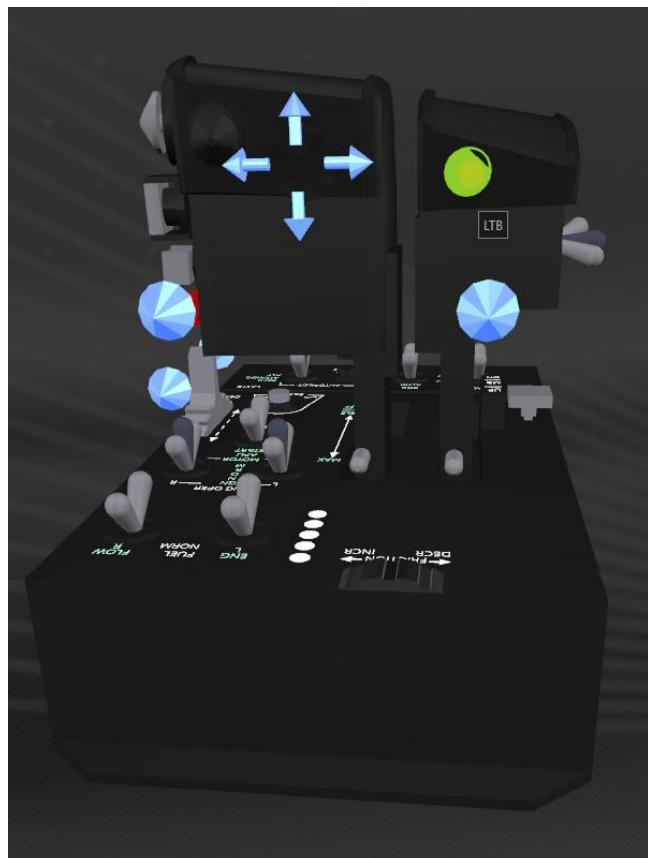
<u>Switch</u>	<u>Usage</u>	<u>Action</u>
SC-U	PSF+SC	Toggle Connection status. Shows Bandwidth counter
SC-M	SC	Centres EDTracker
SC-D	PSB+SC	(not mapped)



Throttle SC (Slew Control Press Button)

(... Throttle LEVER continued)

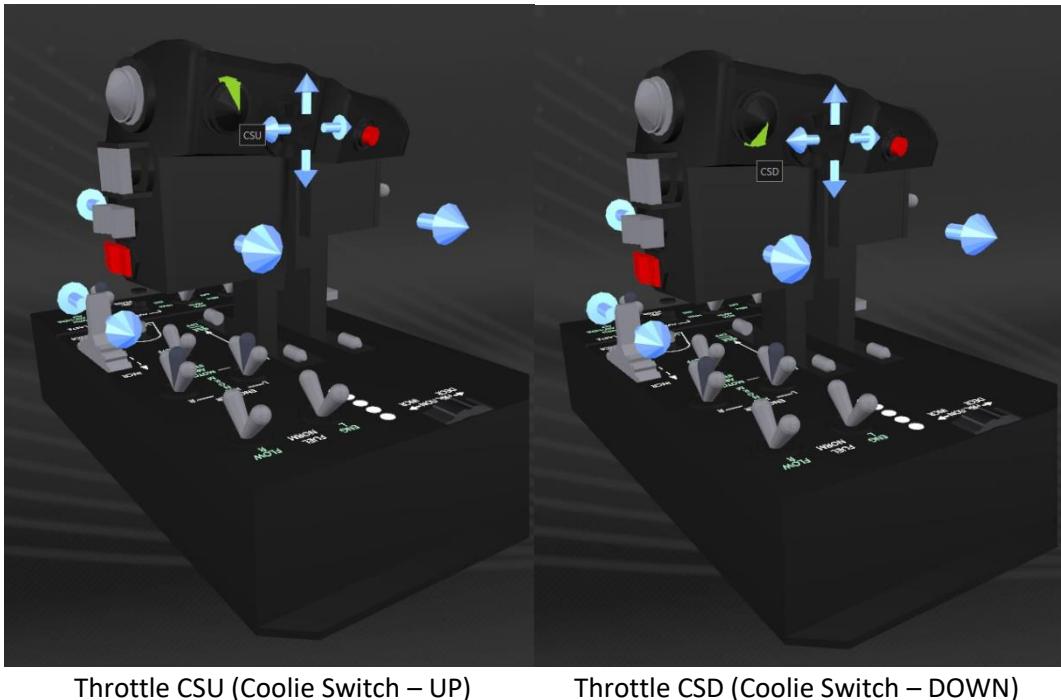
<u>Switch</u>	<u>Usage</u>	<u>Action</u>
LTB-U	PSF+LTB	Toggles external 'free camera view' and turn off GUI
LTB-M	LTB	Toggle Head look ON/OFF
LTB-D	PSB+LTB	(not mapped)



Throttle LTB (Left Throttle Button)

(... Throttle LEVER continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
CSU	CSU	Engage/Cancel/Disengage Super cruise
CSD	CSD	Engage/Cancel System Jump (Hyperspace)



The script can detect a wide range of game states via status.json including if we are in Super cruise versus Hyper jump, when we are Mass Locked, when the FSD is cooling down or charging up.

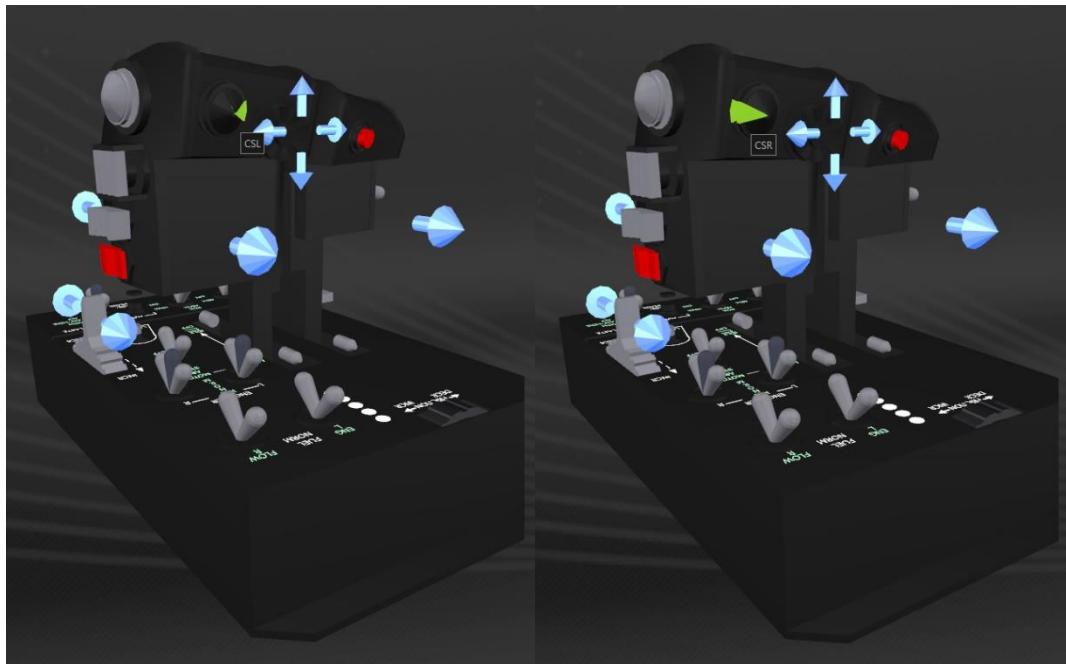
The script also detects when we drop out of Super cruise and if this was initiated or we have dropped out via interdiction, hyperdicted, or drop from orbital cruise etc.

When we Charge the FSD, the script will automatically retract the hard points, landing gear and cargo scoop if needed.

When interdicted, as soon as we drop from Super cruise, the script will automatically select Combat HUD mode, deploy hard points and endeavour to select the highest threat.

(... Throttle LEVER continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
CSL	CSL	Select Next System in route
CSR	CSR	Toggle Orbit Lines ON/OFF

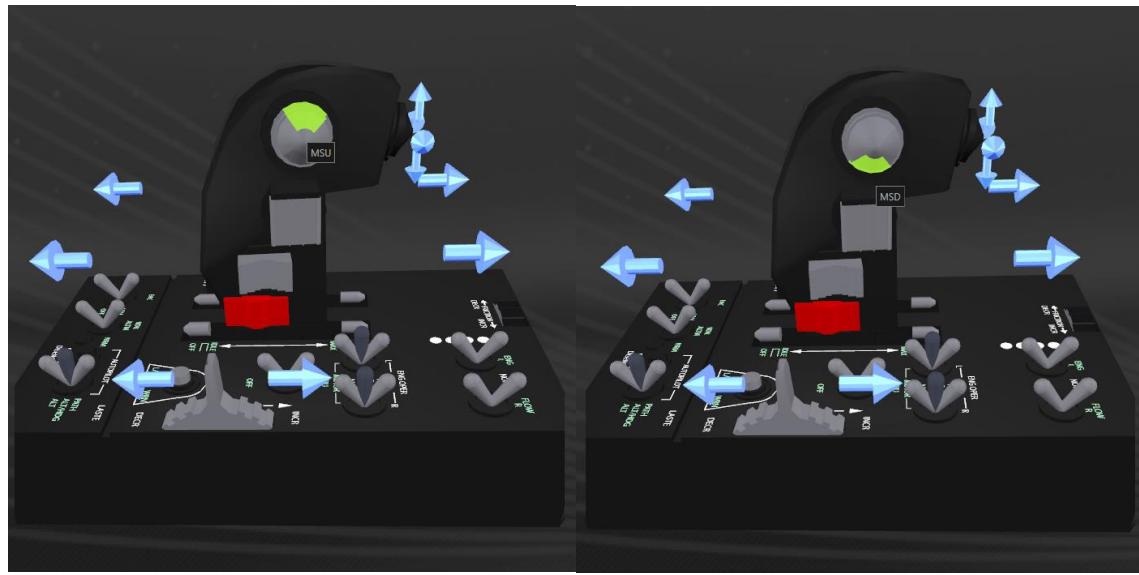


Throttle CSL (Coolie Switch – LEFT)

Throttle CSR (Coolie Switch – RIGHT)

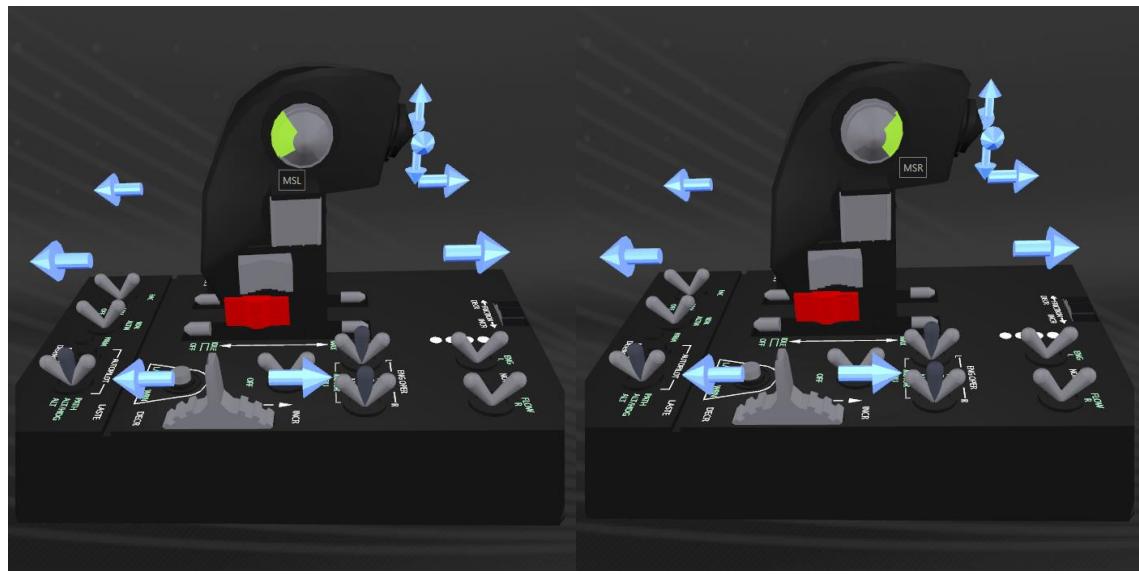
(... Throttle LEVER continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
MSU	MSU	If TFRPRudder = 0, Alternate Roll Control (Counter clockwise)
MSD	MSD	If TFRPRudder = 0, Alternate Roll Control (Clockwise)
MSL	MSL	If TFRPRudder = 0, Alternate Yaw Control (Right)
MSR	MSR	If TFRPRudder = 0, Alternate Yaw Control (Left)



Throttle MSU (Mike Switch – UP)

Throttle MSD (Mike Switch – DOWN)

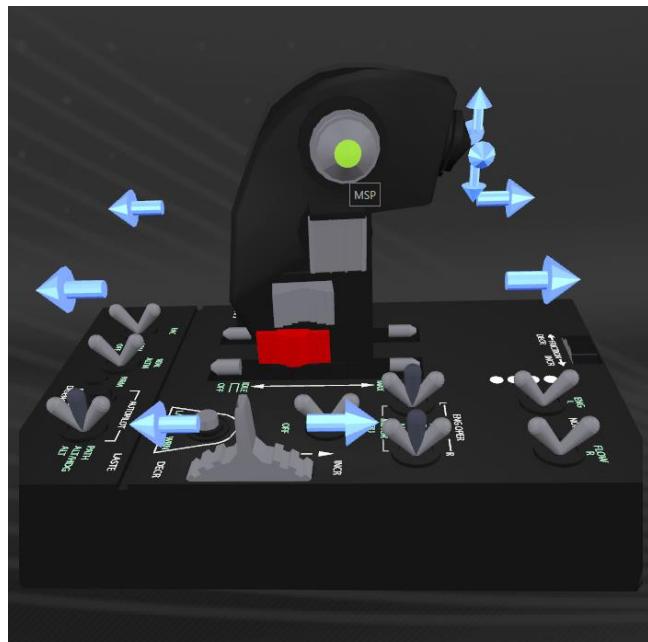


Throttle MSL (Mike Switch – LEFT)

Throttle MSR (Mike Switch – Right)

(... Throttle LEVER continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
MSP	MSP	(not mapped)



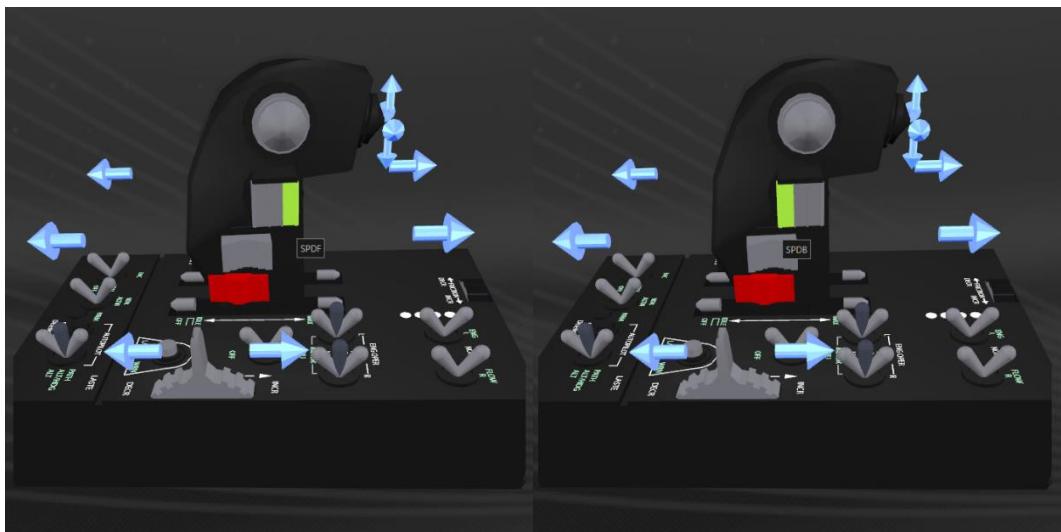
Throttle MSP (Mike Switch – PRESS)

(... Throttle LEVER continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
SPDF-U	PSF+SPDF	Reverse Thrust (no speed brake)
SPDF-M	SPDF	Reverse Thrust (+Speed brake if hard points are deployed)
SPDF-D	PSB+SPDF	Re-align switch to action if out of synch

Speed brake function: Landing gear lowered then retracted 5 seconds later  
 Reverse thrust turned off when switch returned to middle position.

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
SPDB	SPBD	Boost (momentary action switch)



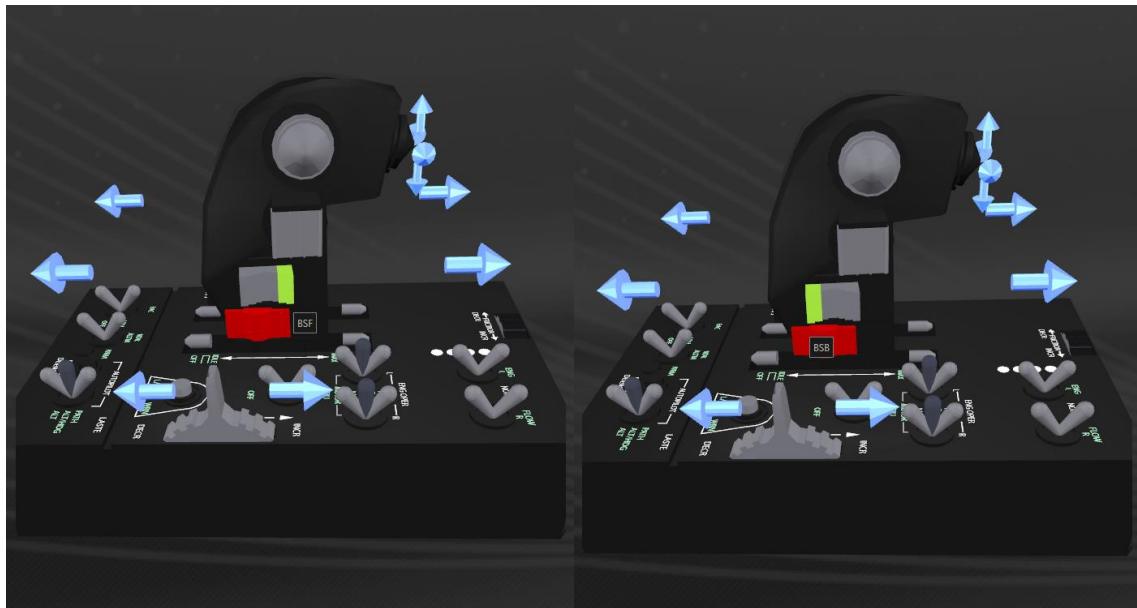
Throttle SPDF (Speed Brake – FORWARD)

Throttle SPDB (Speed Brake – BACK)

(... Throttle LEVER continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
BSF-U	PSF+BSF	Macro: Toggles Wingman Beacon WING/OFF (Right Panel must be at home position or this won't work)
BSF-M	BSF	(not mapped)
BSF-D	PSB+BSF	Toggle Text-To-Speech feedback ENABLED/DISABLED

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
BSF-F	PSF+BSB	Toggle 'Report Crimes against me' ON/OFF (Right panel must be at home position or this won't work)
BSB-M	BSB	(not mapped)
BSB-D	PSB+BSB	(not mapped)



#### NOTE:

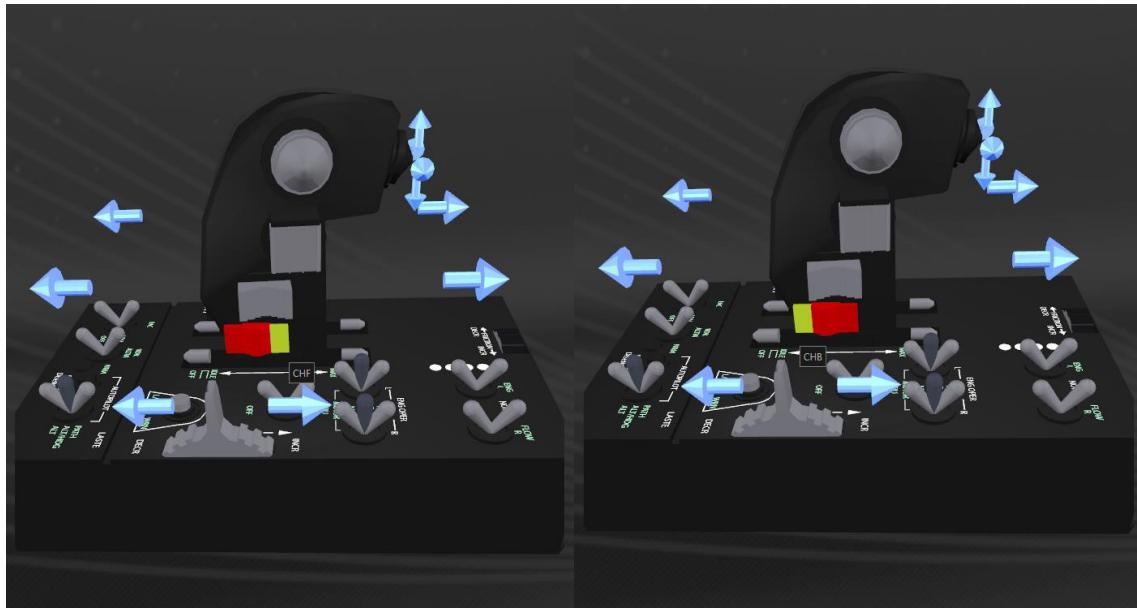
These macros require the SYSTEM Panel (Right Panel) is at home position or undesired/random results will happen. Home position is Left TAB, Top Left position.

If you use the panels frequently, consider not using these functions, or, get in the habit of returning to the home position manually each time.

This also applies to the 'Docking Request' function from the NAV (Target) Panel (Left Panel)

(... Throttle LEVER continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
CHF	CHF	Select next subsystem on targeted ship (momentary action switch)
CHB	CHB	Select previous subsystem on targeted ship (momentary action)



Throttle CHF (China Hat – FORWARD)

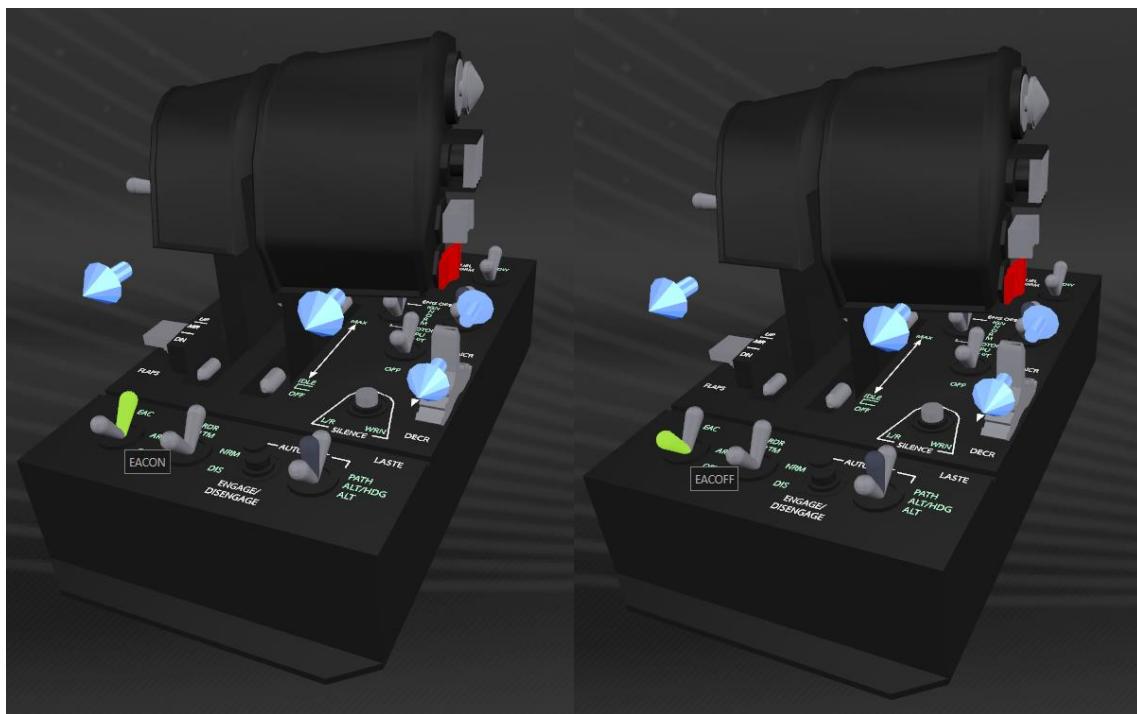
Throttle CHB (China Hat – BACK)

## Throttle Control Base

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
APPAT	APPAT	Set Joystick/Rudder curves to NONE
APAH	APAH	Set Joystick/Rudder curves to MILD
APALT	APALT	Set Joystick/Rudder curves to MEDIUM

Refer to Axis Curves and Curve Control

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
EACON	EACON	Toggle Silent Running – ON
EACOFF	EACOFF	Toggle Silent Running – OFF



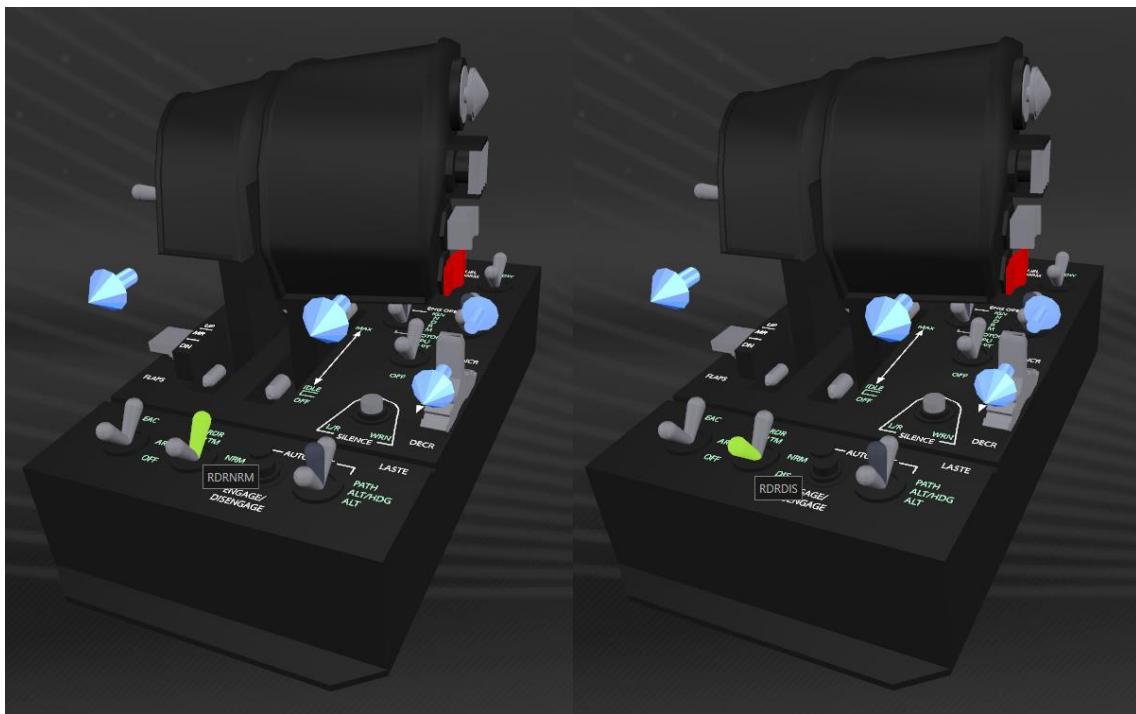
Throttle EACON (Enh Attitude Control – ON)

Throttle EACOFF (Enh Attitude Control – OFF)

Silent Running: Status LED 3

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
RDRNRM-IU	S3+PSF+RDRNRM	Jettison Cargo
RDRNRM-OM	RDRNRM	Deploy Cargo Scoop
RDRDIS	RDRDIS	Retract Cargo Scoop



Throttle RDRNRM (Radar Altimeter – NRM)

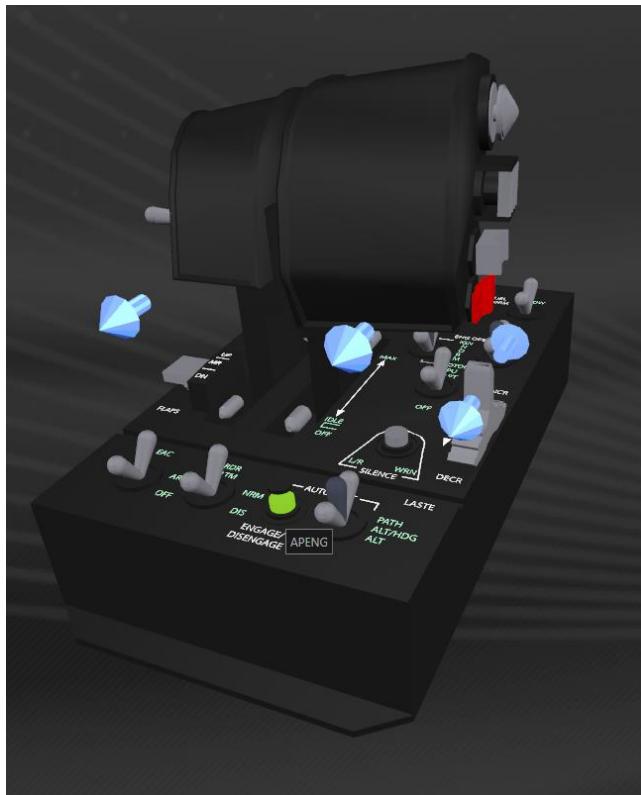
Throttle RDRDIS (Radar Altimeter – DIS)

Cargo Scoop: Status LED 4

Jettison Cargo: Jettisons all cargo in cargo hold.

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
APENG-I	S3+APENG	Enter Hanger and go to Hanger Services
APENG-O	APENG	Request docking permission (NAV/Target Panel must be in home position or this will not work)



Throttle APENG (Autopilot Engage Button)

Request docking macro fires a sequence of keystrokes to request docking then returns the selector back to the main NAV panel. When you move within the panels manually, there is no tracking mechanism and my code will not know if we are starting from the 'home' position.

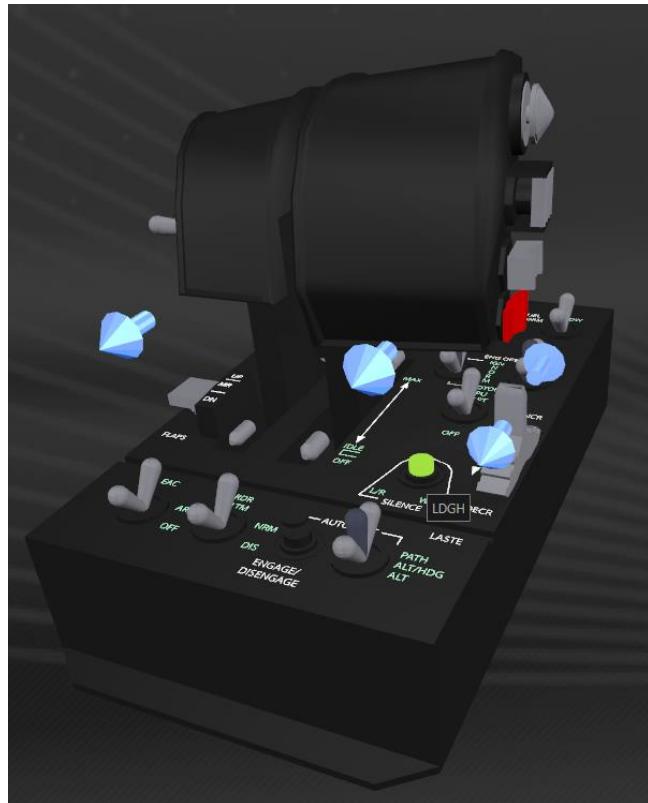
The macro will also set 4x PIPs, to SYS and 2x PIPs to ENG. If 'AutoGear' is set in ED\_UserSettings the landing gear will deploy automatically.

The script also detects when you touch down and will balance PIPs one second after you touch down.

If 'AutoGear' is set in ED\_UserSettings, the landing gear will automatically retract when you lift off.

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
LDGH-I	S3+LDGH	Clear all three Chat box windows
LDGH-O	LDGH	Clear currently selected Chat box



Throttle LDGH (Landing Gear Horn Silence Button)

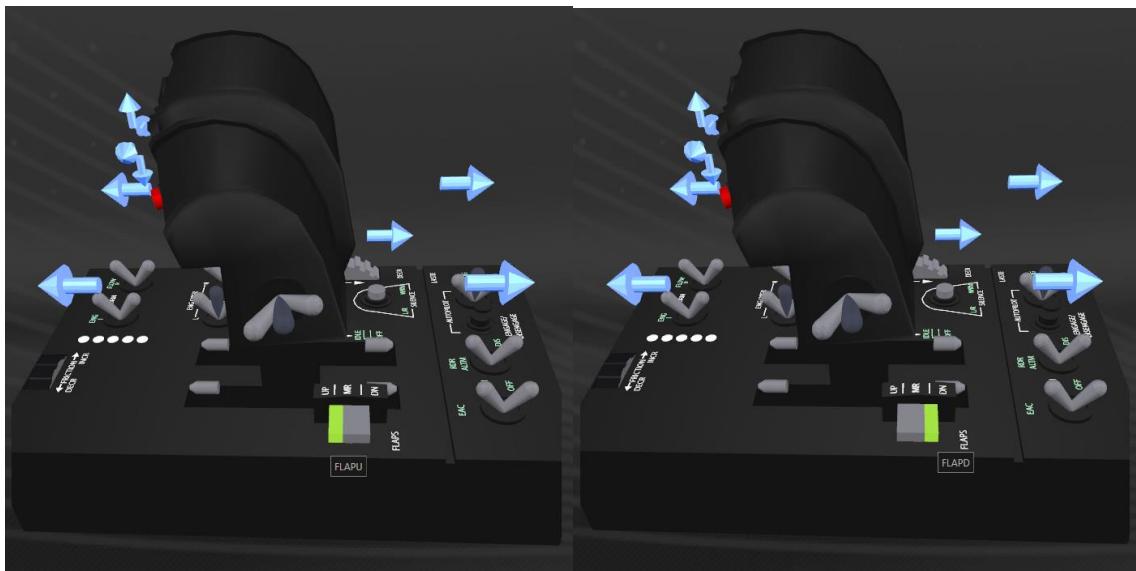
(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
FLAPU-U	PSF+FLAPU	Increase Text-To-Speech Volume
FLAPU-M	FLAPU	Go to Galaxy Map
FLAPU-D	PSB+FLAPU	(not mapped)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
FLAPD-U	PSF+FLAPD	Decrease Text-To-Speech Volume
FLAPD-M	FLAPD	Go to System Map
FLAPD-D	PSB+FLAPD	Turn Throttle LEDs OFF
FLAPDR-D	PSB+FLAPDR	Turn Throttle LEDs back ON

Increase and decrease Text-To-Speech Volume changes volume of the Voice feedback in increments of 5%. Example: To lower the volume by 10%, use PSF+FLAPD twice. (Lowest volume = 5%)

Turn LEDs OFF by PSB+FLAPD. If you move PSF back to its default PSM position then move the Flaps switch back to M, the LEDs stay off. To turn them back on, simply toggle PSB+FLAPD and back to middle.

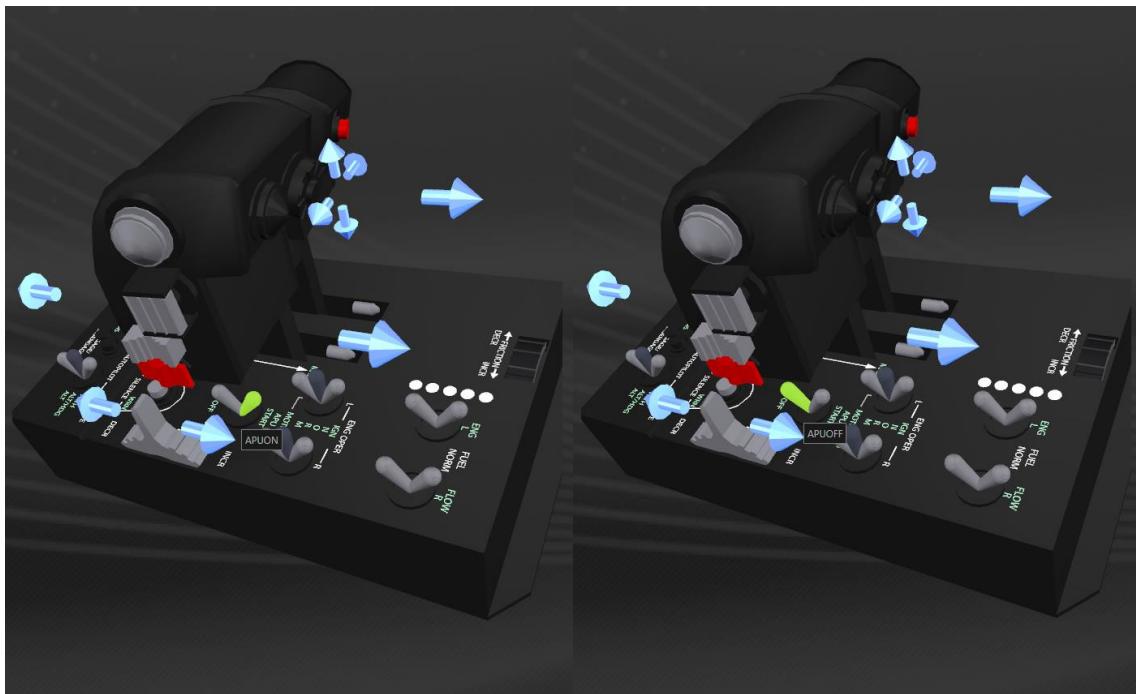


Throttle FLAPU (Flaps UP)

Throttle FLAPD (Flaps Down)

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
APUON	APUON	Deploy SRV ROLE Panel must be in home position or this will not work
APUOFF	APUOFF	Recover SRV ROLE Panel must be in home position or this will not work



Throttle APUON (Aux Power Unit – START)

Throttle APUOFF (Aux Power Unit – OFF)

#### DEPLOY SRV:

The script cannot check the presence of an SRV.

If you use this function with no SRV, unpredictable results will happen.

The ROLE Panel (lower panel) must be in the Home position for this macro to work.

The script checks that you are landed, however, make sure you have an SRV!

#### RECOVER SRV:

The script cannot currently detect when you are directly under the ship ('boarding light' on).

It will check when the turret is stowed (which means you are close).

If you use this function when not directly under the ship, unpredictable results will happen.

The ROLE Panel (lower panel) must be in the Home position for this macro to work.

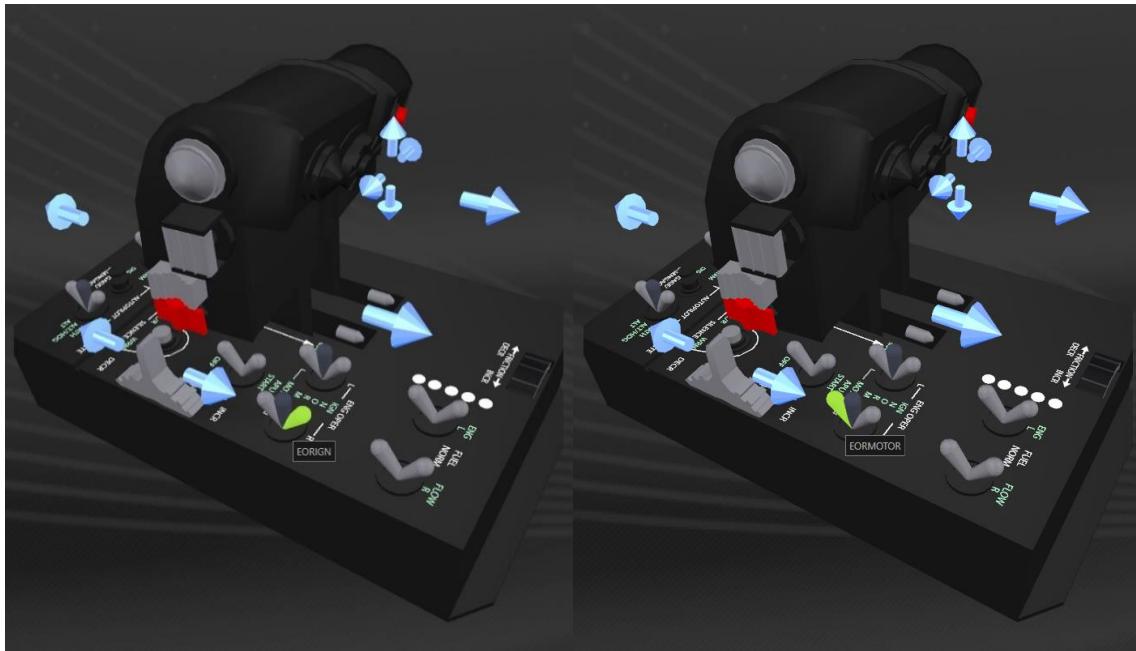
Make sure the 'Boarding Light' is lit before flicking the APUOFF switch.

#### WARNING:

I've seen some unpredictable behaviour in the RECOVER macro at times and am yet to make this macro 100% reliable.

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
EORIGN	EORIGN	Dismiss/Recall Ship (momentary action)
EORMOTOR	EORMOTOR	Toggle Ship GUI OFF/ON



Throttle EORIGN (Engine Operate – IGNITION) Throttle EORMOTOR (Engine Operate – MOTOR)

Dismiss/Recall Ship:

This function is only useful if you are not planning to stray too far away from your landed ship, or if you are in the habit of dismissing your ship every time you deploy the SRV.

The Flags key value in status.json does not have a bit representing if the Ship is landed nearby or if it was dismissed. I have implemented my own status variable for this, however if you manually dismiss the ship via keyboard or mouse interaction, or if the ship flies off after you wander far enough away, this variable will not be able to be tracked.

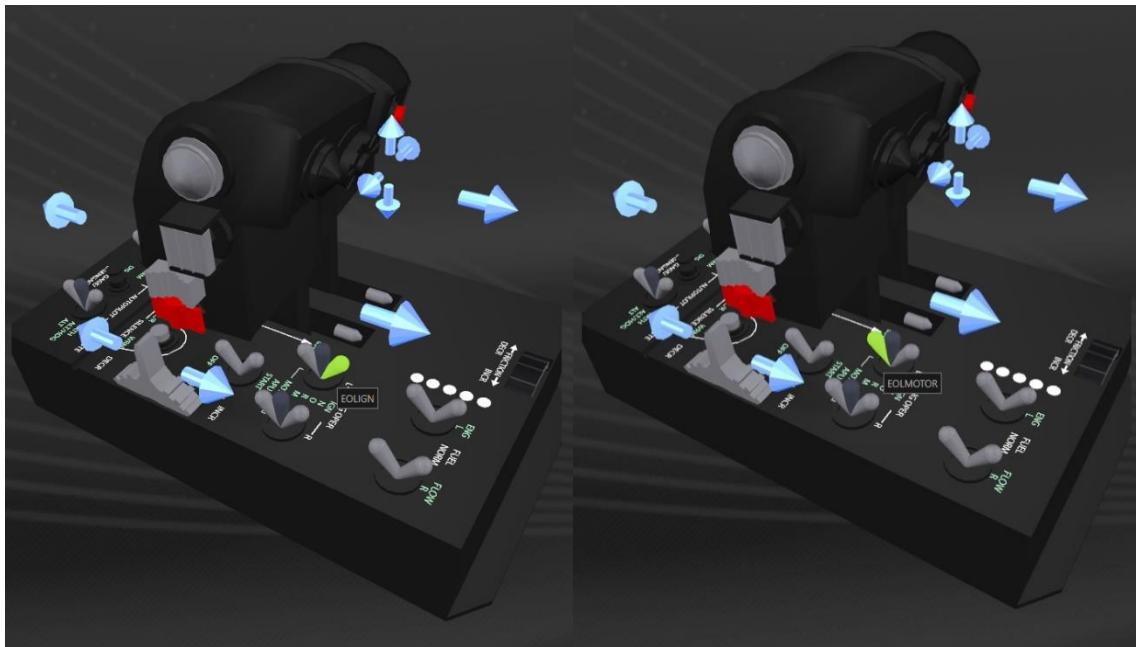
This results in the voice feedback potentially being wrong.

I have turned off voice feedback for this function for now, however the code still exists.

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
EOLIGN-U	PSF+EOLIGN	Game Mode Switch to OPEN
EOLIGN-M	EOLIGN	Game Mode Switch to PRIVATE GROUP
EOLIGN-D	PSB+EOLIGN	Game Mode Switch to SOLO

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
EOLMOTOR	EOLMOTOR	(not mapped)



Throttle EOLIGN (Engine Operate – IGNITION)    Throttle EOLMOTOR (Engine Operate – MOTOR)

#### Game Mode Switch:

This macro exits the game to the main menu and logs back in to which ever mode you selected via the PSF/PSM/PSB switch.

The script checks for and resets various ship systems that are reset as part of a Menu log or game restart.

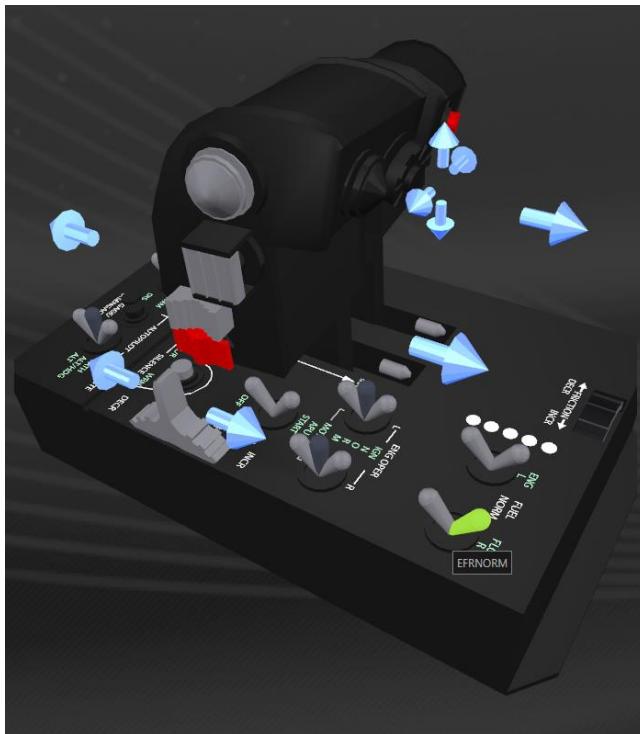
These include the Cargo Scoop, Reverse Thrust and Silent Running.

Last time I checked, FA-OFF and the condition of the lights, are not reset.

**NOTE:** This Mode Switching feature is not designed for, nor can it be used to Combat Log (CLOG) during a fight.

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
EFRNORM-U	PSF+EFRNORM	Reset 'GameLoaded' variable (see note below)
EFRNORM-M	EFRNORM	Reset Status LEDs (see note below)
EFRNORM-D	PSB+EFRNORM	Print Status Page banner to console



## Throttle EFRNORM (Fuel Flow Right – NORMAL)

## **GameLoaded Variable:**

Script Variable that checks when/if the game is loaded.

This is a legacy function used when Game Mode switching sometimes did not work as expected.

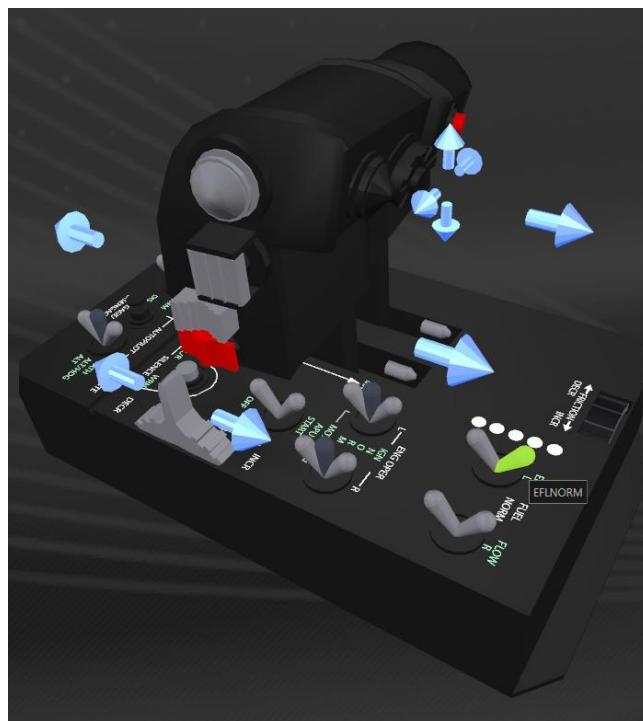
## **Reset Status LEDs:**

If the Status LEDs are toggled in quick succession, they can occasionally go out of synch. Using EFRNORM will force the script to align the LEDs to the values of status.json ‘Flags’ bits.

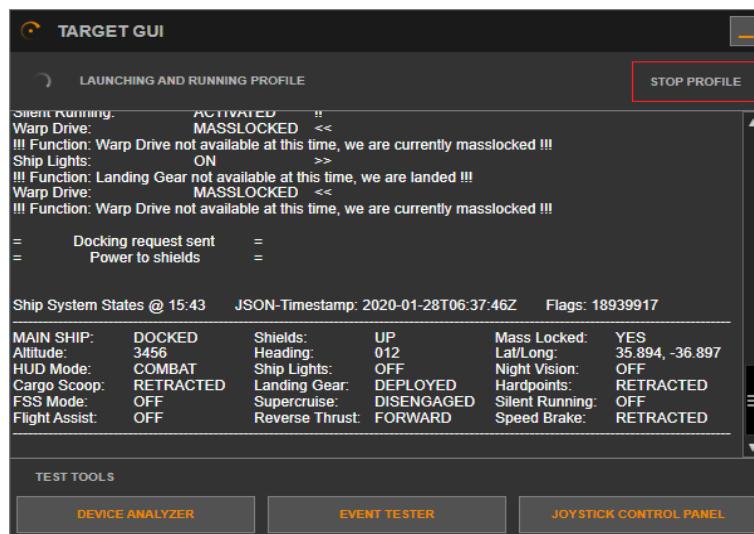
LED	Status	LED on	flag bit variable
LED1	Flight Assist	OFF	fFAOff
LED2	Ship/SRV Lights	ON	fLights
LED3	Silent Running	ON	fSilentRunning
LED4	Cargo Scoop	DEPLOYED	fCargoScoop
LED5	Landing Gear	DEPLOYED	fLandingGear

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
EFLNORM-U	PSF+EFLNORM	Debug Tool. Turn 'ShowFlags = ON'
EFLNORM-M	EFLNORM	Debug Tool. Turn 'Debug = ON'
EFLNORM-D	PSB+EFLNORM	Debug Tool. Turn 'Debug' and 'ShowFlags' = ON
EFLOVER	EFLOVER	Debug Tool. Turn 'Debug' and 'ShowFlags' = OFF



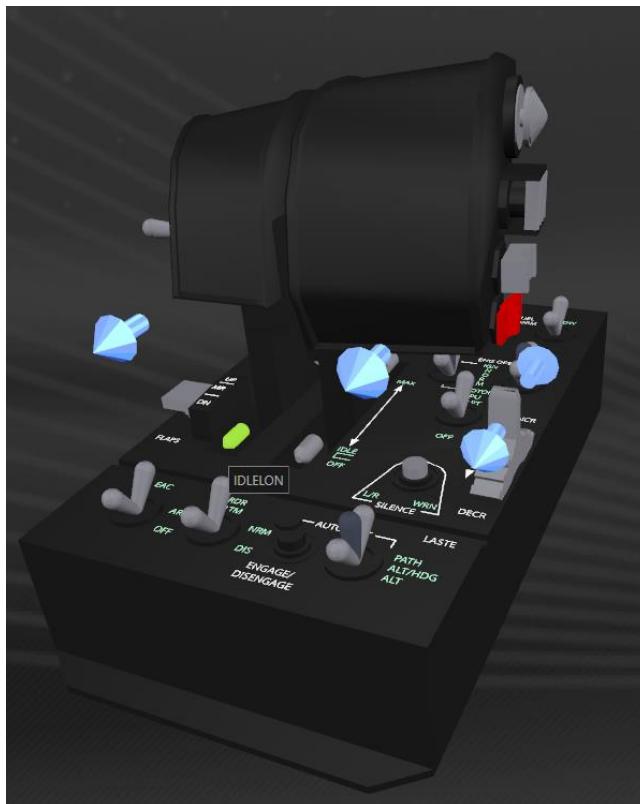
Throttle EFLNORM (Fuel Flow Left – NORMAL)



Example of Status Page

(... Throttle BASE continued)

<u>Switch</u>	<u>Usage</u>	<u>Action</u>
IDLELON	IDLELON	Ship: Enter Hanger and Station Services SRV: Toggle hand brake on
IDLEOFF	IDLEOFF	Ship: Exit Hanger and Lift off (retract landing gear) SRV: Toggle hand brake off



Throttle IDLELON (Engine Idle – LEFT)

Engine Idle ON LEFT/RIGHT:

To engage Engine Idle Switch, from the Throttle all the way back position, LIFT and move back over the notch.

Engine Idle OFF LEFT/RIGHT:

From the Engine Idle ON position (lifted + all the way back), move the Throttle lever forward until it drops back off the notch.

## TFRP Rudder Controller

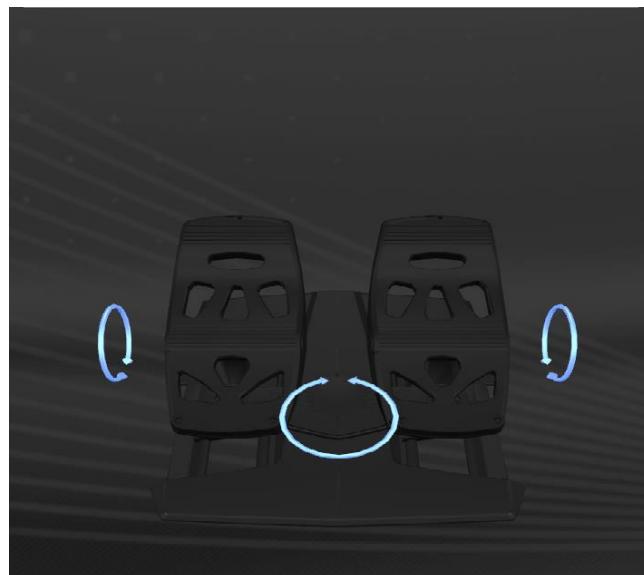
The rudder pedals provide yaw for the ship and steering for the SRV and are programmed with a mild curve whilst the autopilot LASTE switch is in the middle (default) position (APAH).

This curve can be turned off by flicking the Autopilot switch to the 'PATH' position (APPAT).

Further, a medium curve profile can be applied by moving the autopilot switch to the 'ALT' position (APALT).

These curves are linked to the Joystick curve profile.

Refer Axis Curves and Curve Control.



TFRP Rudder Pedals

Note:

The Toe Brakes are not currently mapped in this script.

## Keyboard Key Binds

Notable keys (generally no script function mapped):

<u>Key</u>	<u>Label</u>	<u>Action</u>
RSHIFT+W	RollLeft	Alternate Roll Control – Left (mapped if no rudders)
RSHIFT+S	RollRight	Alternate Roll Control – Right (mapped if no rudders)
RSHIFT+Q	YawLeft	Alternate Yaw Control – Left (mapped if no rudders)
RSHIFT+E	YawRight	Alternate Yaw Control – Right (mapped if no rudders)
NP-3	SetSpeed75	Sets Throttle to 75% (Blue Zone)
X	SetSpeed0	Set Throttle to 0 (or SRV Handbrake)
NP-Enter	SwapRollYaw	Swaps Roll axis and Yaw Axis (Mapped to S1-D)
LALT+B	FighterDock	Send Dock order to fighter
LALT+D	FighterDefend	Send Defend order to fighter
LALT+A	FighterAggr	Send Aggressive order to fighter
LALT+T	FighterAttack	Send Attack order to fighter (focus on my target)
LALT+H	FighterNoFire	Send Hold fire order to fighter
LALT+S	FighterHold	Send hold position order to fighter
LALT+F	FighterFollow	Send follow me order to fighter
LALT+O	FighterOpen	Send open orders to fighter
LALT+W	WeaponColour	Swaps Weapon Colour On/Off
LALT+E	EngineColour	Swaps Weapon Colour On/Off
RALT+F11	GalNetPlay	Toggle Play/Pause GalNet Audio
RALT+F10	GalNetPrev	Select previous GalNet item to play
RALT+F12	GalNetNext	Select next GalNet item to play
RALT+F9	GalNetClear	Clear the GalNet Audio Queue
LCTRL+1-9	CameraPreset1-9	Cycle Camera pre-sets

Note: Multicrew key binds not used in script nor control bind files

(... Keyboard Keybinds continued)

Full Keybind Listing Refer to following files;

<u>File</u>	<u>Location</u>
ED_Defines.ttm	Script folder
KeyBinds.xls	Maps folder
Keyboard Usage.png	Maps folder

...or the below pages;

Page Heading

Keyboard Utilisation

Key Bind Sheet

## ED\_UserSettings File

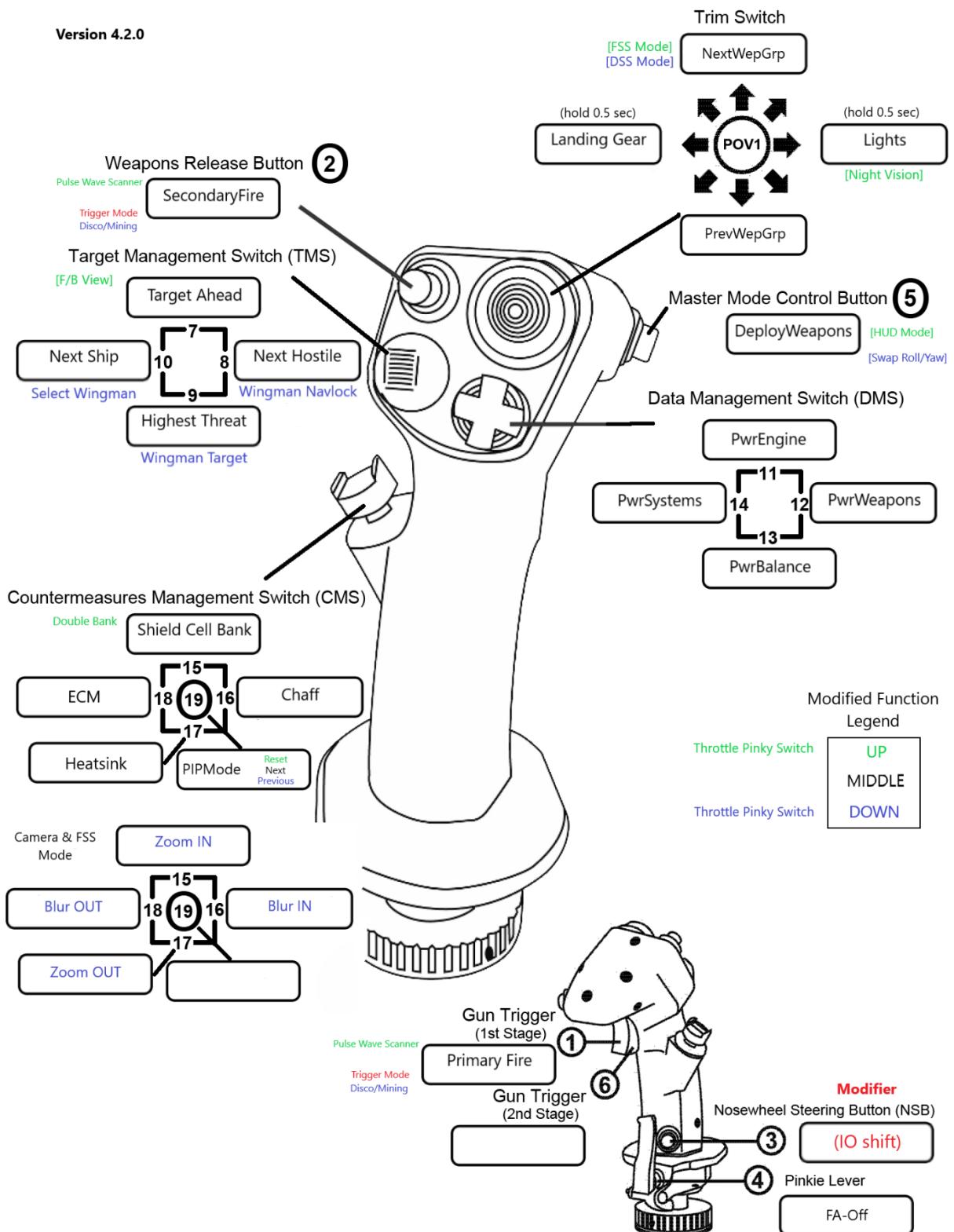
\*See the ED\_UserSettings.tmh file for additional information

<u>Variable</u>	<u>Default</u>	<u>Use</u>
SetLED	43	Sets the LED brightness level on the Throttle base
StatusFile	*	Pathname for Elite Dangerous 'status.json' file
StatusReadRate	500	Loop timer (in msec) that the script will read status.json
MyStatusFile	*	Pathname for extra state flags to be saved
EnableVoice	1	Enables the TextToSpeech engine (voice feedback)
VoicePath	*	Pathname to 'voice.exe'
VoiceVolume	75	Default volume for TextToSpeech Voice
VoiceCMD	*	Command line options for voice.exe
TrainingEnabled	1	Enables 'training mode'. When game is not running, pressing a button or switch will announce what it does
AnnounceTraining	1	Announces if Training Mode is available/active
EnableSoundFX	1	Enables the SoundFX Engine (.wav file player)
SoundPath	*	Pathname to 'sounder.exe'
WAVPath	*	Pathname to wav files for SoundFX
SoundCMD	*	Command line options for sounder.exe
DefaultPIPMode	3	Select your choice of 6 PIPModes as the default
PulseTime	33	Key press (hold down) time (in msec)
DelayTime	75	Delay between releasing one key and press the next (msec)
LongPress	500	Used for 'TEMPO' delay (msec). Hold key for 'LongPress' to trigger second action
DiscoDelay	6100	Trigger mode for Discovery Scanner. Holds trigger for 'DiscoDelay' milliseconds then releases (6.1 seconds)
AutoHanger	0	When enabled will enter hanger and select station services automatically when you dock
AutoGearUP	0	Raises Landing Gear automatically when you lift off
AutoGearDOWN	0	Lowers the Landing gear when you request docking perm
CommsModule	0	Future feature – currently in test
CurveInfo	NOPRINT	Will print curve profile settings to console if = PRINT

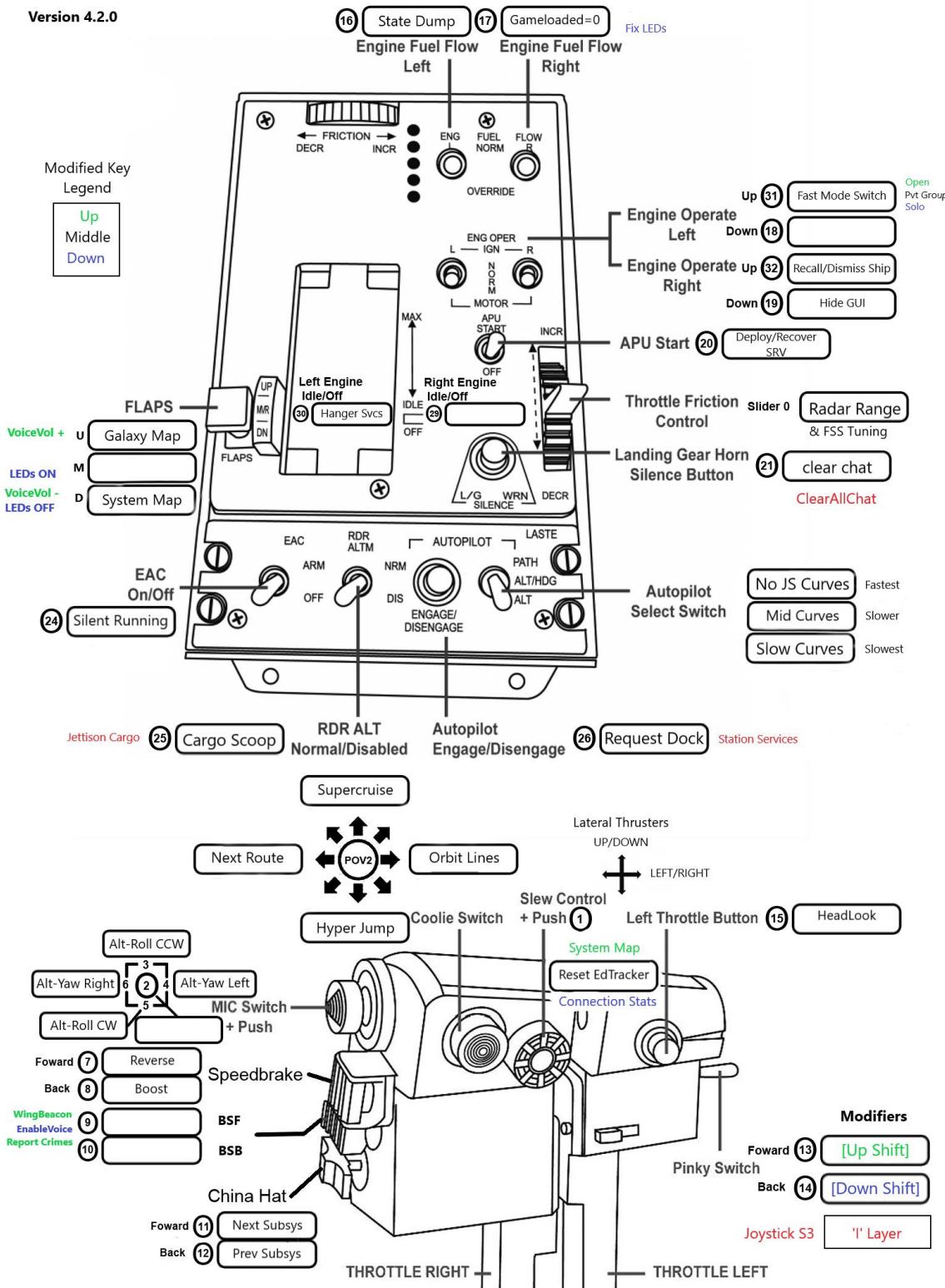
(... Ed\_UserSettings File continued)

EnableTFRPRudder	1	Set this to '0' if you do not have these rudder pedals Alternate Roll and Yaw will then be available via Mike Switch
SwapRoll4Yaw	0	Set to 1 to swap the Roll and Yaw axes on Joystick/Rudder
Joystick_*	*	Joystick dead zone and zoom settings (for curves)
Rudder_*	*	Rudder dead zone and zoom settings (for curves)
Slew_*	*	Slew control dead zone and zoom (for curves)
FAOFFCurves	MEDIUM	Set your desired curve profile when you go FA-OFF
Joystick_Curve[]	*	Joystick Curve array settings (0-3)
Rudder_Curve[]	*	Rudder Curve array settings (0-3)
Slew_Curve[]	*	Slew Curve array settings (0 – 3)

## Joystick Map



## Throttle Map

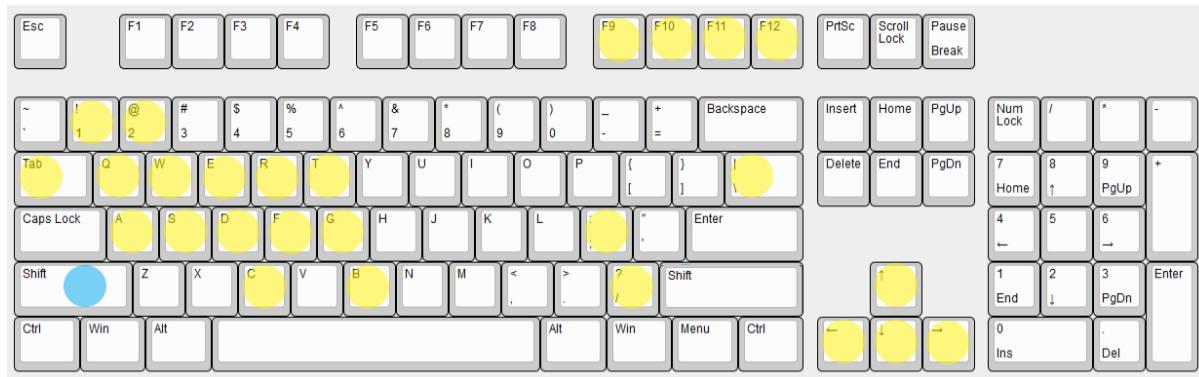


## Keyboard Utilisation

Normal (straight) Keypress



Modified Keypress



Modified Keypress



Modified Keypress



## Key Bind Sheet

Standard Unmodified Keys - v4.2.0											
A	UI-LEFT	Q	Thrust Left/Prev Tab	6	Wing NavLock	/	HUD Mode	DEL	Silent	NP-	
B	Previous Ship	R	Thrust Up	7		ENTER	Quick Comms	ESC		NP-ENTER	Swap Roll/Yaw
C	Chaff/CameraBlurIn	S	Reverse Thrust	8	Wing 1	F1	Cam CockpitFront	PGUP	Inc Sensor Range	NP-PLUS	100% Throttle
D	UI-Right	T	Target Ahead	9	Wing 2	F2	Cam CockpitBack	PGDN	Dec Sensor Range	NP-MINUS	100% Reverse
E	Thrust Right/Next Tab	U	Hardpoints	0	Wing 3	F3	Cam Commander 1	HOME	Cargo Scoop	NP-DIV	Supercruise
F	Thrust Down	V	Heatsink/FSSStepZoomOut	-	FSS Honk	F4	Cam Commander 2	END	Eject All Cargo	NP-MULT	Reverse
G	Next Contact	W	Forward Thrust	=	Orbit lines	F5	Cam Co-Pilot 1	NP-1	25% Throttle		
H	Next Hostile	X	Stop	BACK		F6	Cam Co-Pilot 2	NP-2	50% Throttle	<up>	UI-Up
I	Next Subsystem	Y	Highest Threat	TAB		F7	Alt Controls/Cam Front	NP-3	75% Throttle	<down>	UI-DOWN
J	Supercruise/HyperJ	Z	FAOff	[	CamZoomIN	F8	Cam Back	NP-4		<left>	UI-LEFT
K	Previous Subsystem	'	Reset EDTracker	]	CamZoomOUT	F9	Cam Low	NP-5		<right>	UI-RIGHT
L	Landing Gear/Prev Cam	1	NAV Panel	\	Front/Back	F10		NP-6	External Camera		
M	Next System in Route	2	Comms Panel	;	System Map	F11		NP-7	25% Reverse	SPACE	UI-Select
N	Previous Hostile	3	Role Panel	-	SCB/ZoomIn	F12	Reset Headlook	NP-8	50% Reverse		
O	Headlook	4	System Panel	,	Previous Firegroup	INS	Lights/Next Cam	NP-9	75% Reverse		
P	Main Menu	5	Wing Target	.	Next Firegroup	PRTSCR		NP-0	Free Camera On/Off		
L-CTRL			L-ALT			L-Shift			R-Shift		
B			X			Recall/Dismissship			;		
F			Connection Status			FighterDock			Galaxy Map		
F			FrameRate			FighterDefence			T		
A			FighterAggressive			FighterFocusTarget			G		
T									Q		
H			FighterHoldFire			FighterHoldPos			YawLeft/CamYawLeft		
S			FighterFollowMe			FighterOpenOrders			E		
F			WEP-Colour			WEP-Colour			W		
O			Eng-Colour			Eng-Colour			S		
E			NightVision			NightVision			A		
I			G			FreeCam Toggle HUD			D		
									R		
									F		
External									TAB		
F9			GPU/Video Save (15mins)?						PrevPanel		
F10			GPU Screen shot?						F9		
External									GalnetCLFQueue <td data-kind="ghost"></td> <td data-kind="ghost"></td>		
F11			GalnetSKipBWD						F10		
GalnetPlay									F11 <td data-kind="ghost"></td> <td data-kind="ghost"></td>		
F12			GalnetSKipFWD						F12		
<up>			PIP-ENG			<right>			PIP-WEP		
<left>			PIP-SYS			<down>			PIP-RST		
1			PrimaryFire (ALT)						B		
2			SecondaryFire (ALT)						/		
FSS Mode On/Off			B			Boost			C		
ECM+ZoomOut											

## HOTAS Switch and Button Reference

HOTAS - Quick reference - v4.2.0														
Joystick				Throttle (stick)				Throttle (base)						
Switch	Mode	Function	Use for	Switch	Mode	Function	Use for	Switch	Mode	Function	Use for			
TG1	IU			PSF	M	SetShiftButton (UMD - U)		APAT	U					
	OU	Primary Fire	PWS		M	SetShiftButton (UMD - U)			M	fnSetJoystickCurves(NONE)				
	IM				M	SetShiftButton (UMD - M)			D					
	OM	fnAdvFireControl(0)	Normal	PSM	M	SetShiftButton (UMD - M)		APAH	U					
	ID	tgTriggerMode(1)			M	SetShiftButton (UMD - D)			M	fnSetJoystickCurves(MILD)				
TG2	OD	fnAdvFireControl(1)	Disco/Mining	PSB	M	SetShiftButton (UMD - D)		APALT	U					
	U				M	SetShiftButton (UMD - D)			M	fnSetJoystickCurves(MEDIUM)				
	M				D				D					
S1	U	tgHUDMode()		SC	U	ShowConnectionStatus		EAON	U					
	M	tgHardPoints()			M	ResetHeadOrientation			M	tgSilentRunning(ON)				
	D	SwapRollYaw			D				D					
S2	IU			LTB	U	tgExtCamera()		EACOFF	U					
	OU	Secondary Fire	PWS		M	LookOnOff			M	tgSilentRunning(OFF)				
	IM				D				U					
	OM	fnAdvFireControl(2)	Normal	CSU	U			RDRNRM	M	tgCargoScoop(DEPLOY)				
	ID	tgTriggerMode(2)			M	tgWarpDrive(0)	Supercruise		D					
S3	OD	fnAdvFireControl(3)	Disco/Mining	CSD	U			RDRDIS	U					
	U				M	tgWarpDrive(1)	Hyperjump		M	tgCargoScoop(RETRACT)				
	M	SetShiftButton (IO - I)			D				D					
S4	D			CSR	U			LDGH	I	mClearAllChatBox				
	M	tgEnhancedFAOFF()			M	SelectNextSystemInRoute			O	mClearChatBox				
	D				U									
H1U	U	tgFSSMode()		MSU	I			APENG	I	fnHangerServices(1)				
	M	NextFireGroup			O	Alternate Roll Control (CCW)			O	fnRequestDock()				
	D	DSSModeOFF			I									
H1D	U			MSD	O	Alternate Roll Control (CW)		FLAPU-R	U	fnVoiceVolume(INCREASE)				
	M	PrevFireGroup			I				M	Galaxy Map	ON			
	D				O	Alternate Yaw Control (Left)			D					
H1L	U			MSL	I			FLAPM	U					
	M	tgLandingGear()	tempo		O	Alternate Yaw Control (Right)			M	Galaxy Map	OFF			
H1R	D				I				D					
	U	tgLights(1)	Night Vision	MSR	O			FLAPD	U	fnVoiceVolume(DECREASE)				
	M	tgLights(0)	tempo		I				M	SystemMap	ON			
H2U	D				O				D	SetLED OFF				
	U	tgPlanetView()		MSP	I				U	SetLED ON				
	M	SelectTargetAhead			O				M	SystemMap	OFF			
H2D	D	SelectTargetAhead		SPDF	U	tgReverseThrust(0)	No Speedbrake	APUON	U					
	M	SelectHighestThreat			M	tgReverseThrust(1)	Speedbrake		M	fnDeploySRV(DEPLOY)				
H2L	D	WingmanTarget			D	tgReverseThrust(2)	fix LED	APUOFF	D					
	M	SelectNextShip		SPDF-R	U	tgReverseThrust(1)	Forward		U					
H2R	D	SelectWingMan1, 2, 3			M				M	fnDeploySRV(RECOVER)				
	M	SelectNextHostileShip		SPDB	M	EngineBoost			D					
H3U	D	WingManNavlock			D			EORIGN	U					
	U			BSF	M	mNAVBeaconWingON/OFF			M	fnDRShip()	Dismiss/Recover			
	M	fnPIPManager(ENG)			D	tgText2Speech()	EnableVoice ON/OFF		D					
H3D	D			BSM	U			EORNORM	U					
	U				M				M					
H3L	M	BalancePower			D			EORMOTOR	U					
	D			BSB	U	mReportCrimesToggle			M	HideShipGUI	GUI OFF			
H3R	U				M				D					
	M	fnPIPManager(SYS)			D			EORMOTOR-R	U					
H4U	D			CHF	U				M					
	U	fnAdvancedSCB(2)	2xSCB, 1xHS		M	TargetNextSubsystem			D					
	M	fnAdvancedSCB(0)/(1)	SCB, SCB+HS		D			EOLIGN	U	fnModeSwitch(0)	Open			
H4D	D	CameraZoomIN		CHB	U				M	fnModeSwitch(1)	Private Group			
	M	fnHeatsink()			M	TargetPrevSubsystem			D	fnModeSwitch(2)	Solo			
	D	CameraZoomOUT			D			EOLNORM	U					
H4L-R	U			EOLMOTOR	M				M					
	M	ChargeECM (DOWN)	Charge ECM		D				D					
	D	CameraBlurOUT			U			EFRNORM	U					
H4R	U	0		EFROVER	M				M	GameLoaded = 0				
	M	ChargeECM (UP)	Fire ECM		D				D	fnSetLEDs()	Reset Status LEDs			
	D	0			U			EFLNORM	U					
H4P	U	fnChaff()		EFLOVER	M				M	fnDebugStates(DebugON)				
	M	CameraBlurIN			D				D	fnDebugStates(DebugOFF)				
	D	fnPIPMode(0)	Reset		U			IDLEON	U					
H4P	M	fnPIPMode(1)	Increment	IDLEOFF	M				M	fnHangerServices(1)	Enter			
	D	fnPIPMode(2)	Decrement		D				U					
	U				M				M	fnHangerServices(0)	Launch			

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