

**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). Rationale behind this is that I do not currently use VR.

I've written the functions to suit my preferences, my play style and my hardware.

### 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 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
  - Normal (press to fire, release to stop)
  - Discovery Scanner mode (simple press/release effectively holds trigger down 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 says what each switch/button does)
- 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
  - NAV Beacon On/Off
  - Report Crimes On/Off
  - Deploy and Recover the SRV
  - Dismiss/Recall Ship
  - Hanger/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
- Boost bleed function using timed landing gear deployment/retraction
- Advanced Supercruise / Hyperjump tracking with drop detection
- Fully documented and commented code
- Dedicated User Settings file
- Comprehensive Keyboard map file detailing standard and combo keyboard keys
- 2x comprehensive custom key bind files included
- Joystick, Throttle and Keyboard Image Maps and keyboard usage tables
- ...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 a lot of comments which 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've included a voice feedback feature which uses a Text-To-Speech engine and Microsoft's Voice capability to add more immersion and feedback when you select certain actions.

A lot 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/reset in game;  
(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 Hardpoints = 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
- Headlook Button Mode = Toggle
- Centre when Headlook Inactive = ON
- Headlook 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.

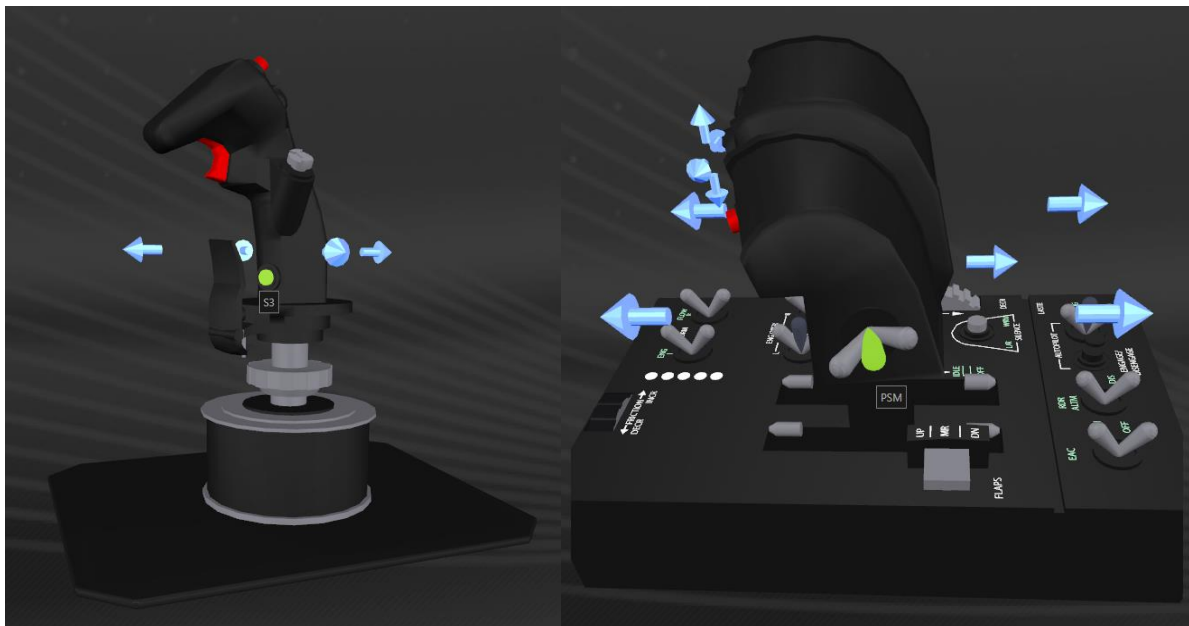
Using modifiers, each button or switch can have up to 6 different functions.

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 ('Nosewheel') 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;

- a. `MapKey(&Joystick, TG1, <action>);`  
No modifiers used. Press the trigger to do 'action'
- b. `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>This 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)<br>(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'll only describe the modifiers where they are used for that switch mapping in script.

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

## Training Mode

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

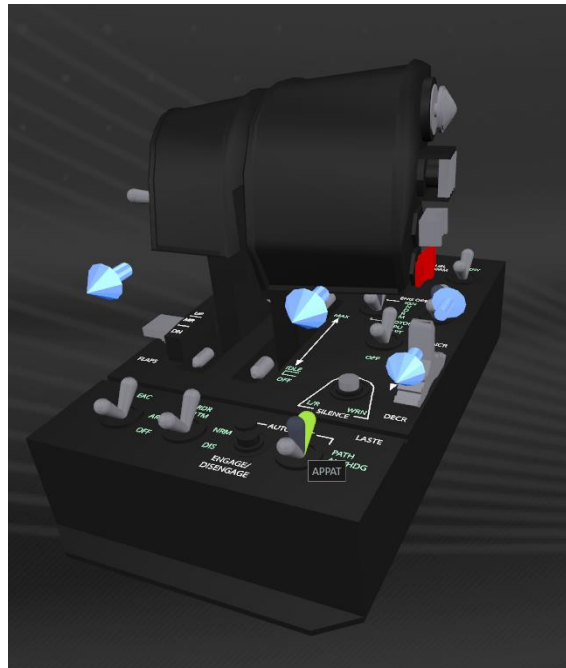
Enable 'TrainingEnabled' in the ED\_UserSettings file to take advantage of a training mode.

When the game is not running, pressing any of the button 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 axis on the joystick and rudder. You can turn the curves off via the Throttle APPAT switch as shown below.

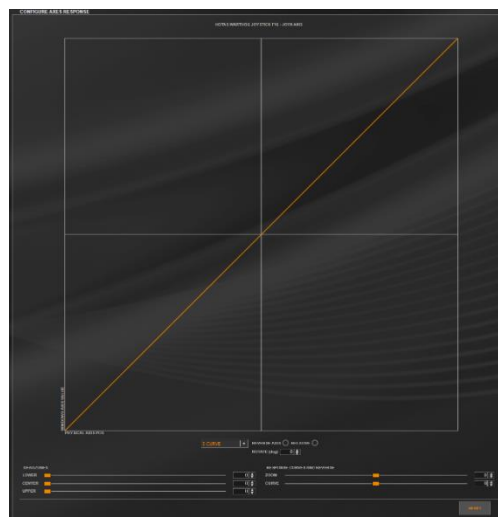
| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                             |
|---------------|--------------|---|
| APPAT         | APPAT        | Set Joystick and Rudder curves to OFF (0) |



### 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.

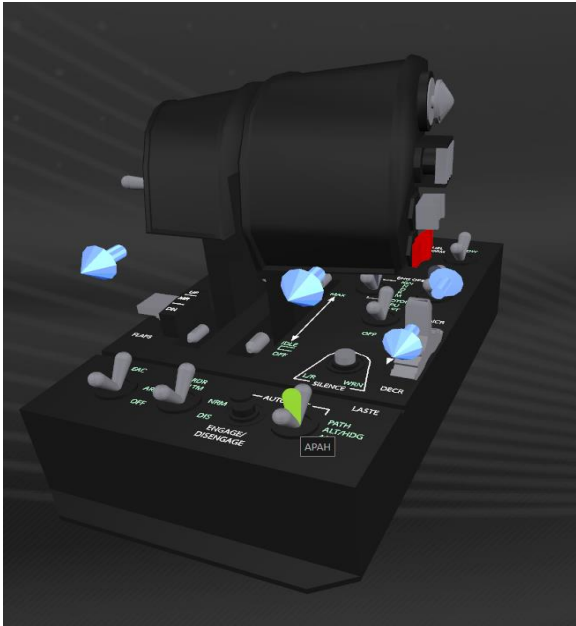
As the script applies the same curve profiles to the joystick and rudder when switching, the same theory applies to the rudder.



Joystick Curves set to 0 (linear response)

(...curves continued)

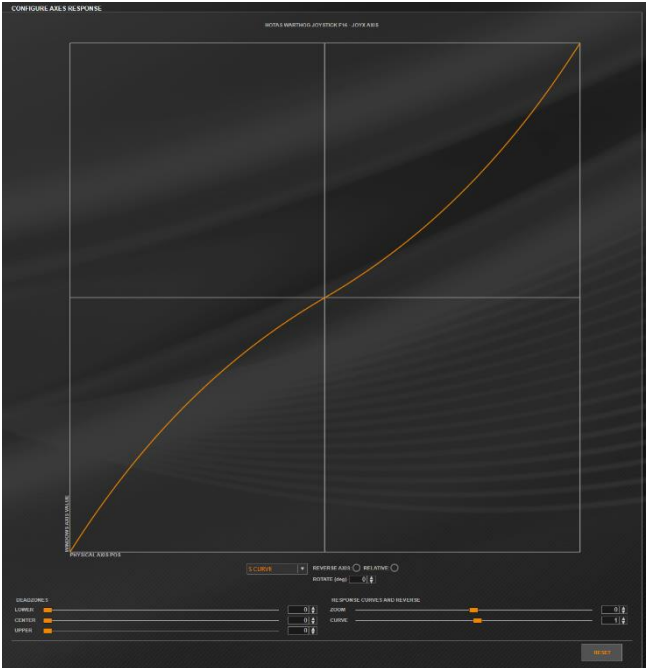
| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                              |
|---------------|--------------|--|
| APAH          | APAH         | Set Joystick and Rudder curves to MILD (1) |



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.

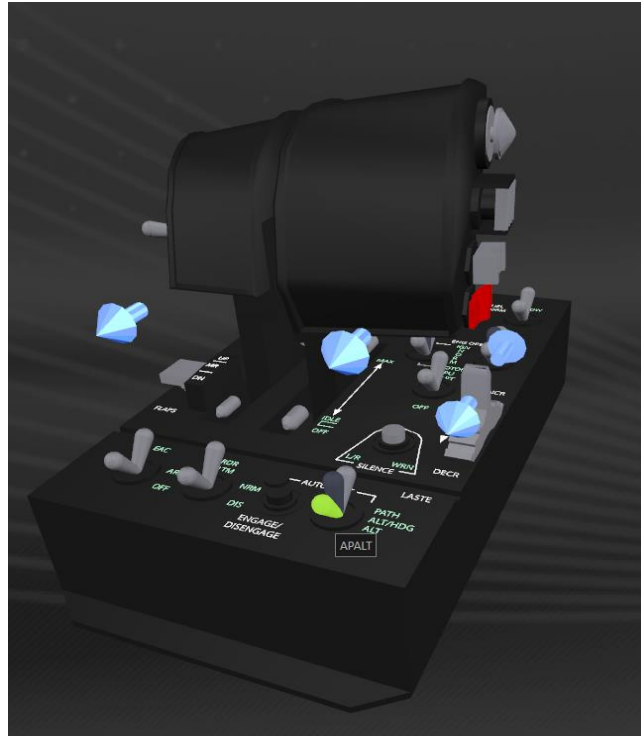
The S-Curve causes the response to be slightly slower at the beginning of travel away from centre and gets faster the further from centre you move the stick (or rudder).



Joystick Curves set to 1 (Non-Linear Response)

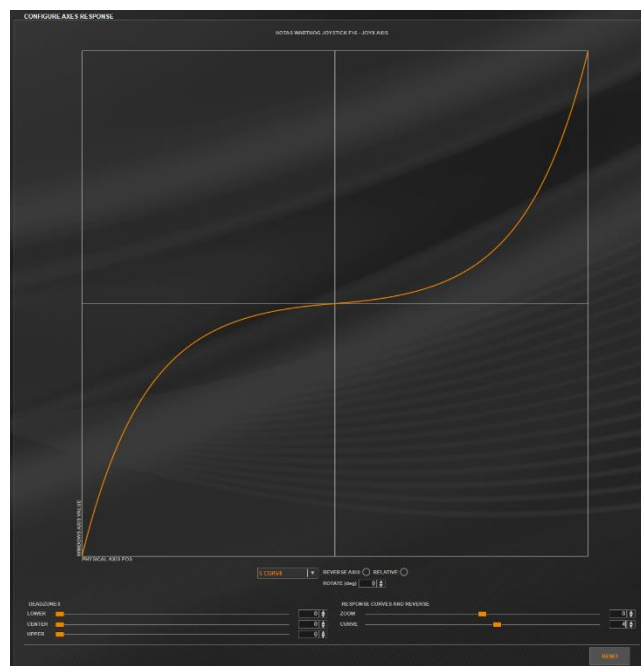
(...curves continued)

| <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 '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 & pedal curves to 4<br>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

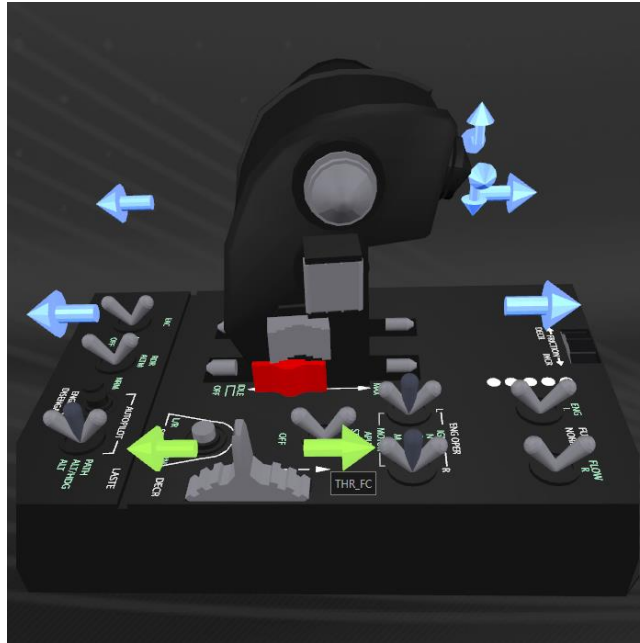
The curves that FA-OFF will use can be set via the 'FAOFFCurves' variable within the ED\_UserSettings.tmh file. Valid settings are 'OFF', 'MILD', 'MEDIUM' or 'SLOW'

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 custom curves which are set 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)  
ie. When slider is at 40%, Windows DX value is at 25% etc.

Mode 2: non linear. Used for Supercruise  
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 Custom Curves

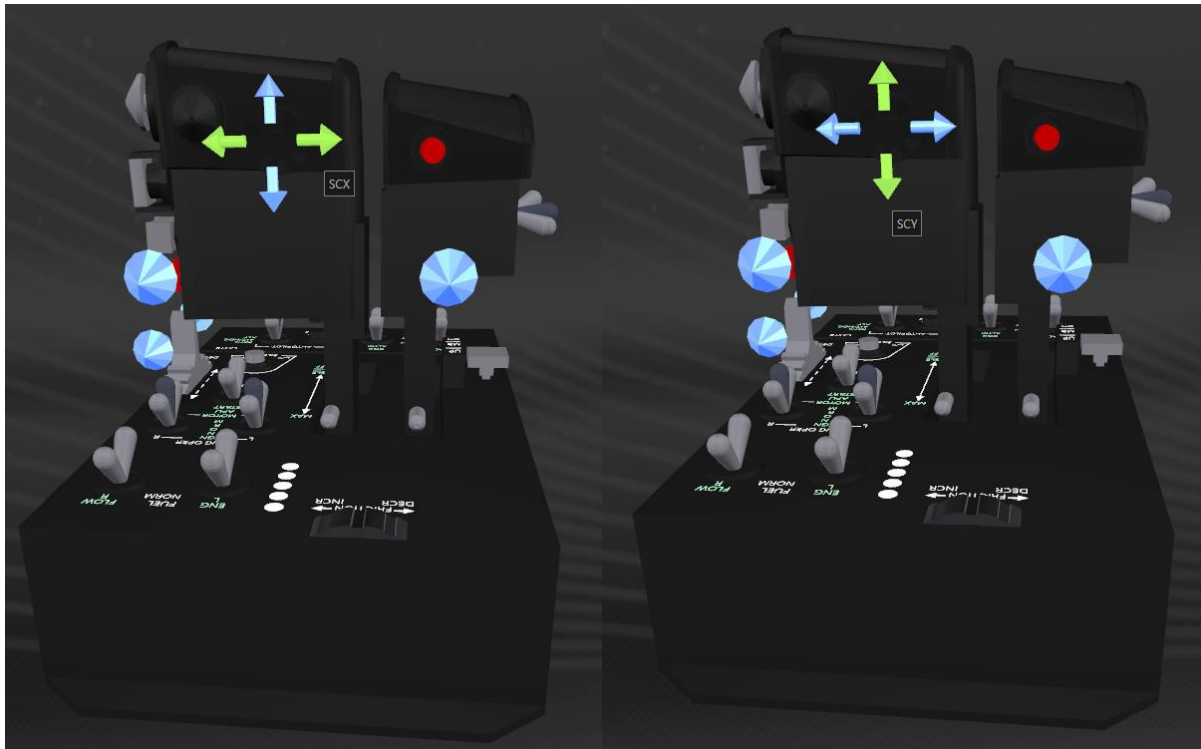
Most of the settings for each of the curve functions can be found within the ED\_UserSettings.tmh file under the 'Axis Curves' section.

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 3 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 which 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 to be 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.<br>Useful for Pulse wave scanner<br>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 to fire. Script releases trigger after 6.1 secs<br>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)  |

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                                |
|---------------|--------------|--|
| S1-U          | PSF+S1       | Toggle HUD between Analysis and Combat Modes |
| S1-M          | S1           | Toggle Hardpoints (normal flight mode)       |
| S1-D          | PSB+S1       | (not mapped)                                 |



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.<br>Useful for Pulse wave scanner<br>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 to fire. Script releases trigger after 6.1 secs<br>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<br>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 Firegroup) or H1D (Previous Firegroup)

The landing gear is also used as an auto speedbrake 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 (Speedbrake 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<br>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



(... 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)

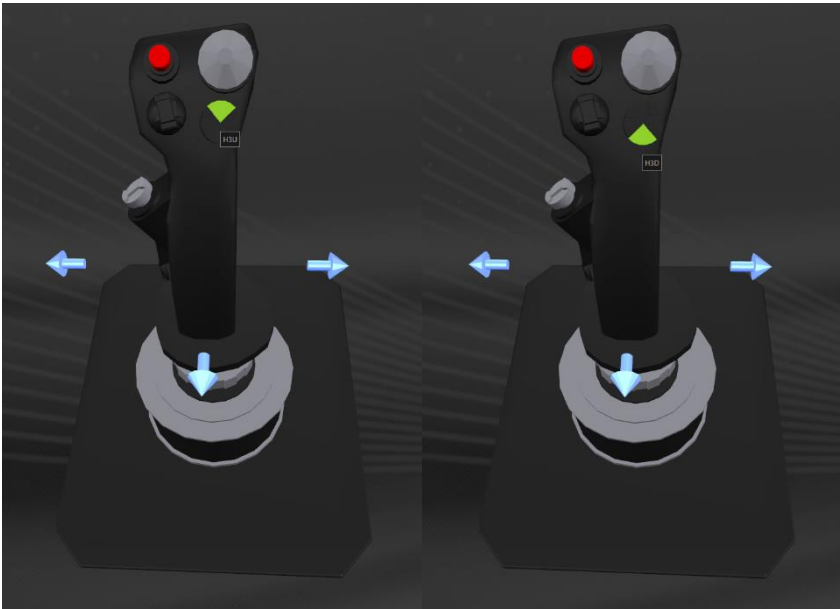
| <u>Switch</u> | <u>Usage</u> | <u>Action</u>             |
|---------------|--------------|---------------------------|
| H2R-U         | PSF+H2R      | (not mapped)              |
| H2R-M         | H2R          | Select next hostile ship  |
| H2R-D         | PSB+H2R      | Select Wingman's NAV Lock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



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 6 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)<br>(5 wraps to 0)               |
| H4P-D         | PSB+H4P      | Select Previous PIP Mode (5 - 0)<br>(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)

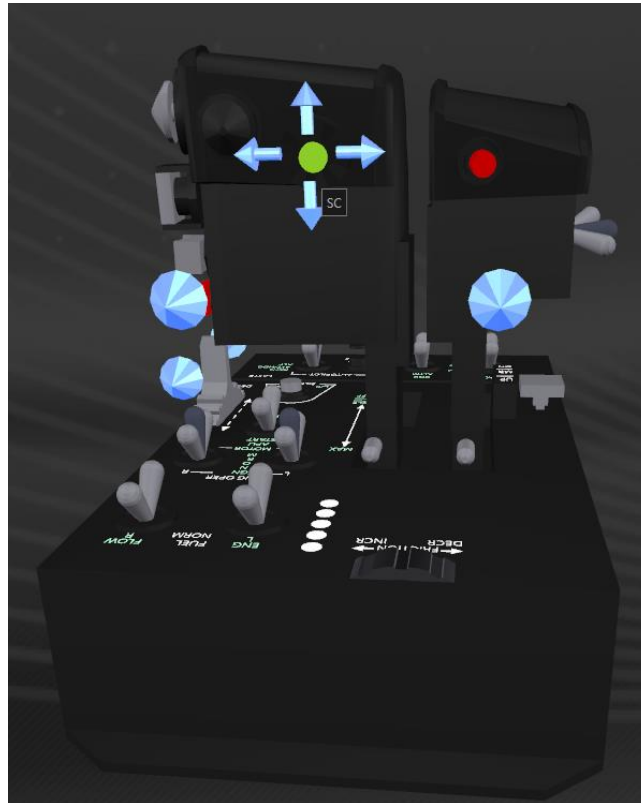
| <u>Switch</u> | <u>Usage</u> | <u>Action</u>    |
|---------------|--------------|------------------|
| H4R-U         | PSF+H4R      | (not mapped)     |
| H4R-M         | H4R          | Fire 1x Chaff    |
| H4R-D         | PSB+H4R      | Camera Blur – IN |



Joystick H4R (Countermeasures – RIGHT)

## Throttle Control Lever

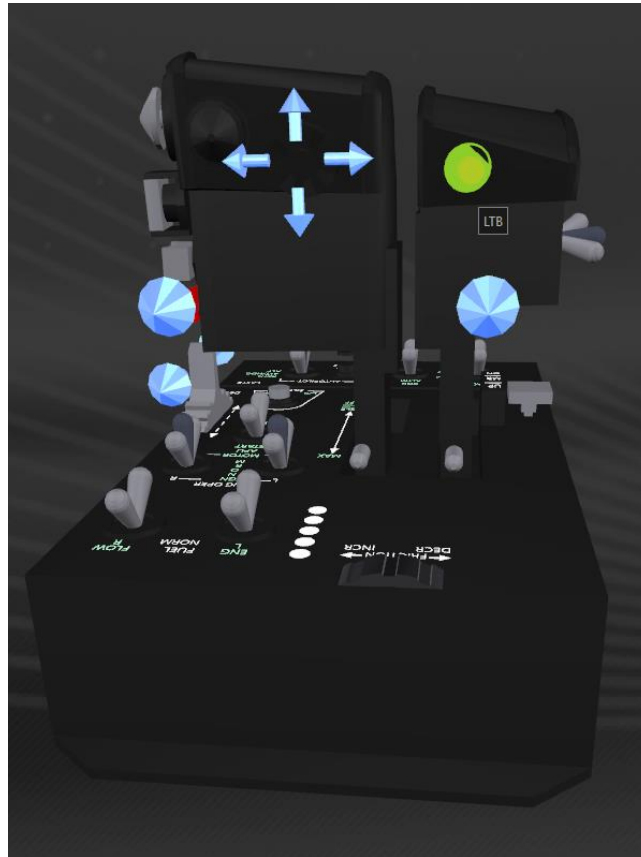
| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                                     |
|---------------|--------------|---|
| SC-U          | PSF+SC       | Toggle Connection status. Shows Bandwidth counter |
| SC-M          | SC           | Centres EDTracker                                 |
| SC-D  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



Throttle SC (Slew Control Press Button)

(... Throttle LEVER continued)

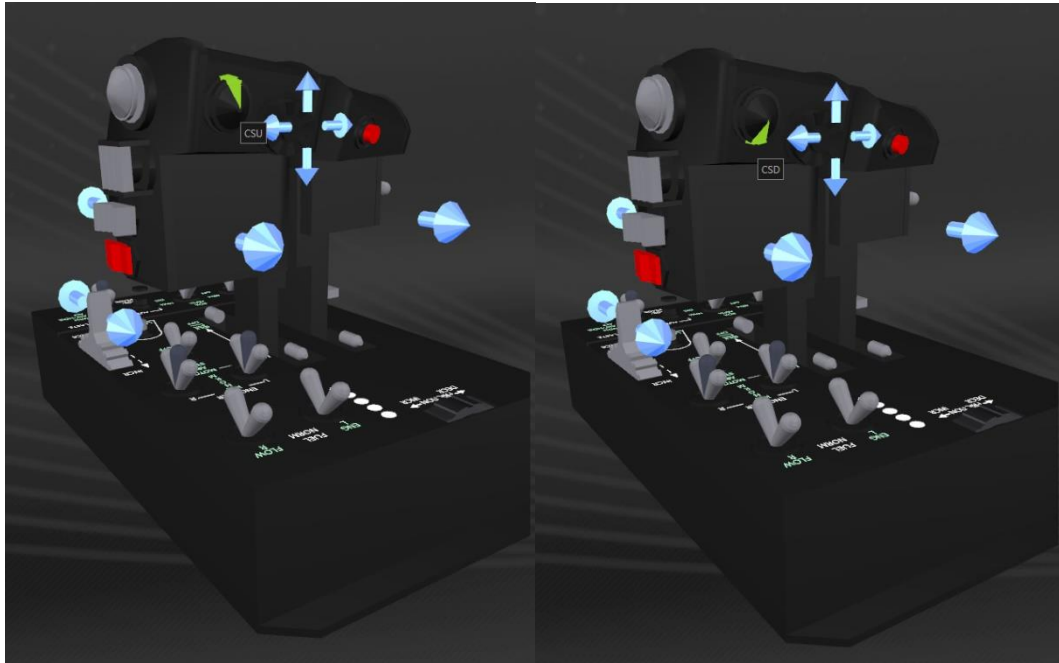
| <u>Switch</u> | <u>Usage</u> | <u>Action</u>  |
|---------------|--------------|--|
| LTB-U         | PSF+LTB      | Toggles external 'free camera view' and turn off GUI |
| LTB-M         | LTB          | Toggle Headlook ON/OFF                               |
| LTB-D         | PSB+LTB      | (not mapped)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



Throttle LTB (Left Throttle Button)

(... Throttle LEVER continued)

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                          |
|---------------|--------------|--|
| CSU           | CSU          | Engage/Cancel/Disengage Supercruise    |
| CSD           | CSD          | Engage/Cancel System Jump (Hyperspace) |



Throttle CSU (Coolie Switch – UP)

Throttle CSD (Coolie Switch – DOWN)

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

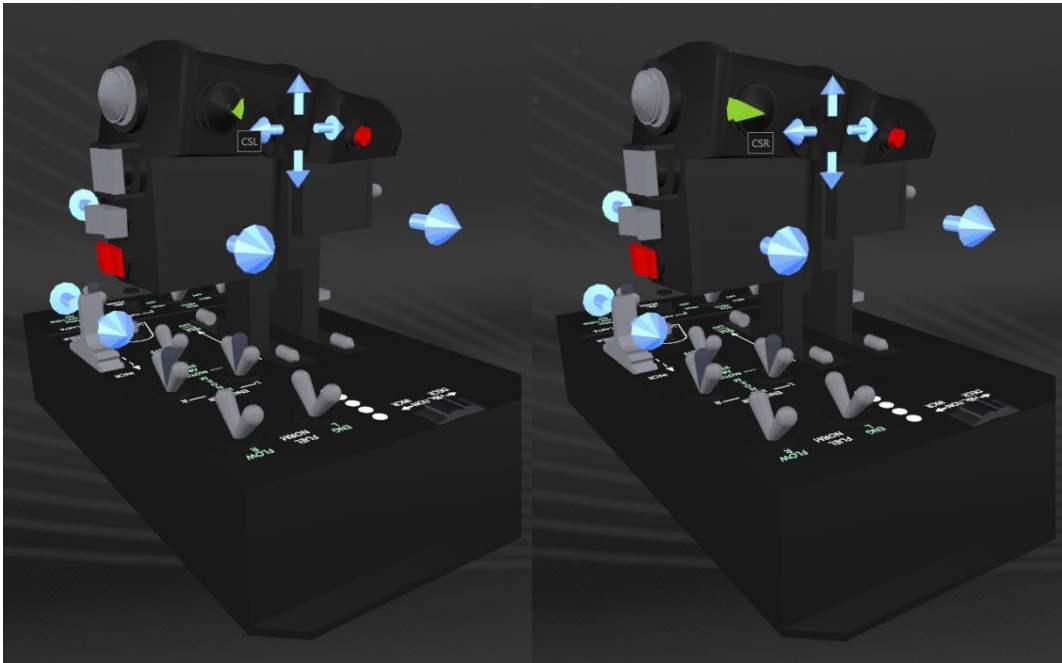
The script also detects when we drop out of Supercruise and if this was initiated or we have dropped out via interdiction, hyperdicted, or drop from orbital cruise etc.

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

When interdicted, as soon as we drop from Supercruise, the script will automatically select Combat HUD mode, deploy hardpoints 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   |

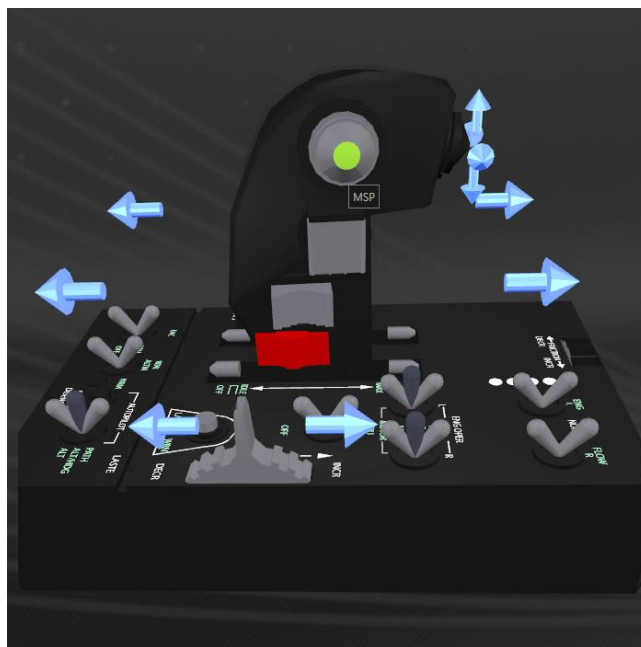


Throttle CSL (Coolie Switch – LEFT)

Throttle CSR (Coolie Switch – RIGHT)

(... Throttle LEVER continued)

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                       |
|---------------|--------------|-------------------------------------|
| MSU           | MSU          | (reserved for Voice Communications) |
| MSD           | MSD          | (reserved for Voice Communications) |
| MSL           | MSL          | (reserved for Voice Communications) |
| MSR           | MSR          | (reserved for Voice Communications) |
| MSP           | MSP          | (reserved for Voice Communications) |



Throttle MSP (Mike Switch – PRESS)

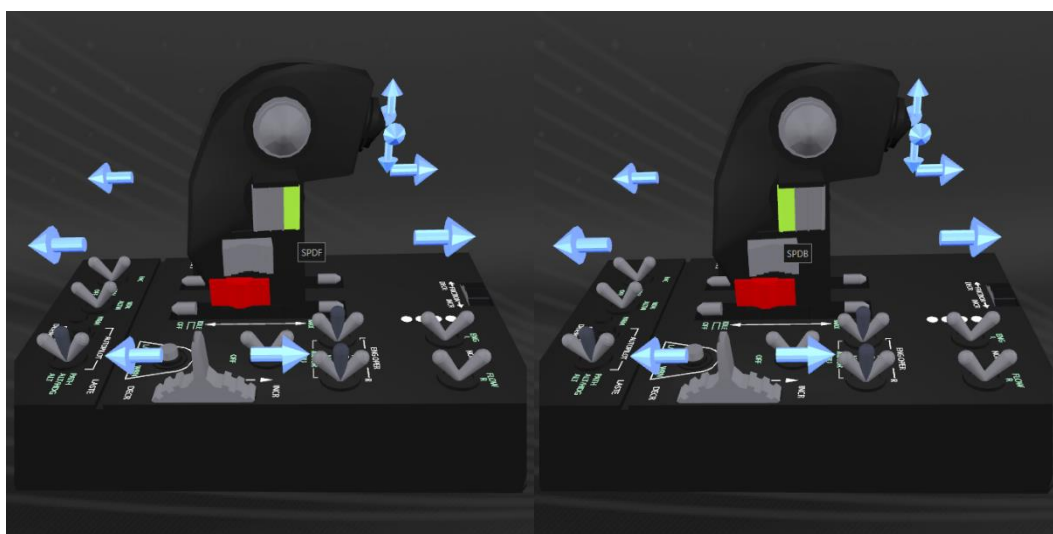
MSU/MSD/MSL/MSR on same switch but not shown

(... Throttle LEVER continued)

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>   |
|---------------|--------------|---|
| SPDF-U        | PSF+SPDF     | Reverse Thrust (no speedbrake)                          |
| SPDF-M        | SPDF         | Reverse Thrust (+Speedbrake if hardpoints are deployed) |
| SPDF-D        | PSB+SPDF     | Re-align switch to action if out of synch               |

Speedbrake 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 (Speedbrake – FORWARD)

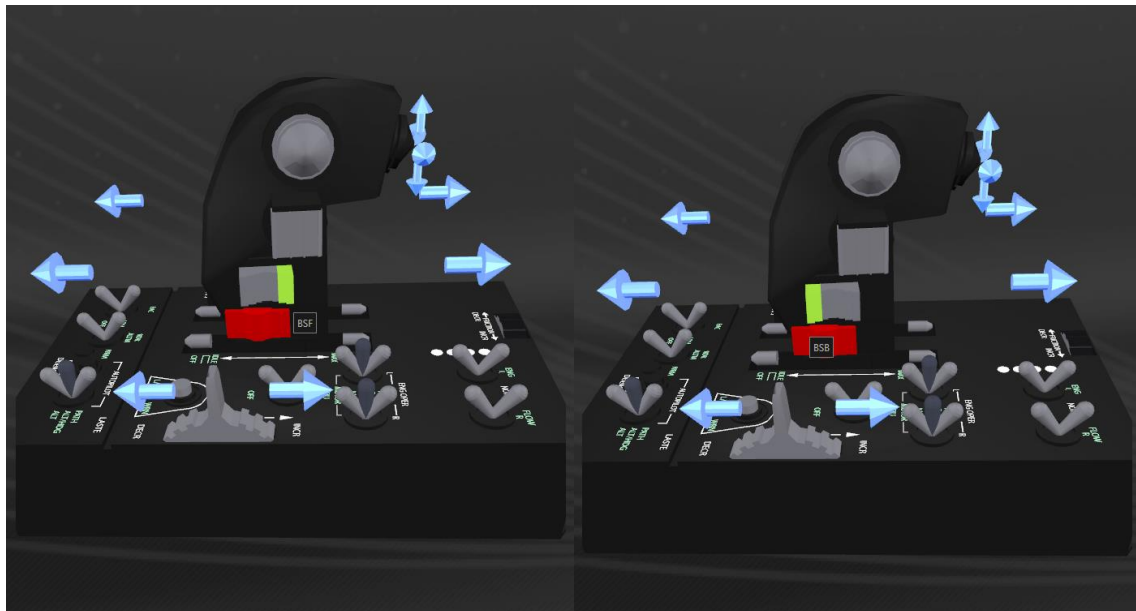
Throttle SPDB (Speedbrake – BACK)



(... Throttle LEVER continued)

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>   |
|---------------|--------------|---|
| BSF-U         | PSF+BSF      | Macro: Toggles NAV Beacon WING/OFF<br>(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<br>(Right panel must be at home position or this won't work) |
| BSB-M         | BSB          | (not mapped)  |
| BSB-D         | PSB+BSB      | (not mapped)  |



Throttle BSF (Boat Switch – FORWARD)      Throttle BSB (Boat Switch – BACK)

**NOTE:**

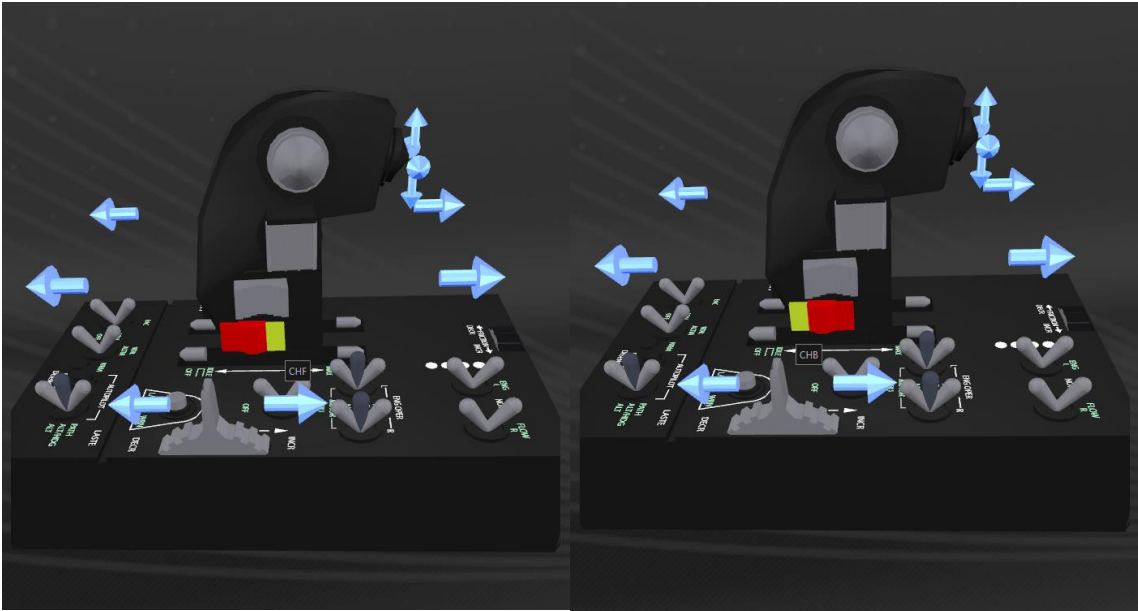
These macros require the SYSTEM Panel (Right Panel) is at home position or undesired/random results will happen. Home position is Left TAB, Top Left position.

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)

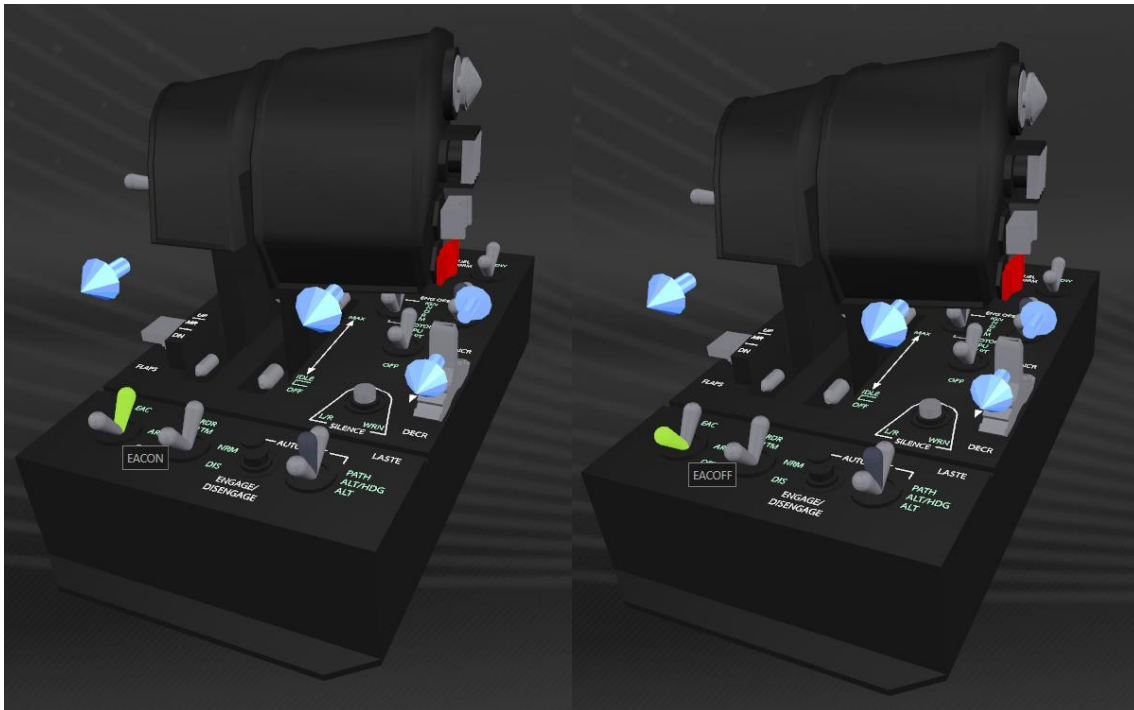
Throttle CHB (China Hat – BACK)

## 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 |



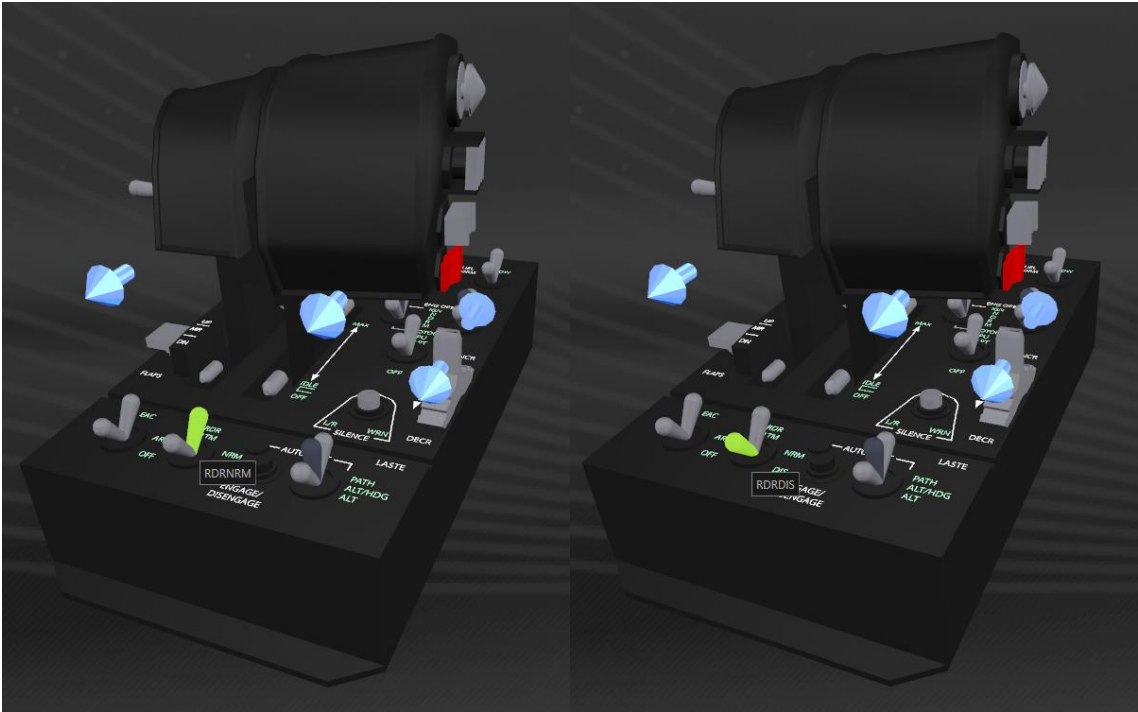
Throttle EACON (Enh Attitude Control – ON)

Throttle EACOFF (Enh Attitude Control – OFF)

Silent Running: Status LED 3

(... Throttle BASE continued)

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>       |
|---------------|--------------|---------------------|
| RDRNRM        | RDRNRM       | Deploy Cargo Scoop  |
| RDRDIS        | RDRDIS       | Retract Cargo Scoop |



Throttle RDRNRM (Radar Altimeter – NRM)

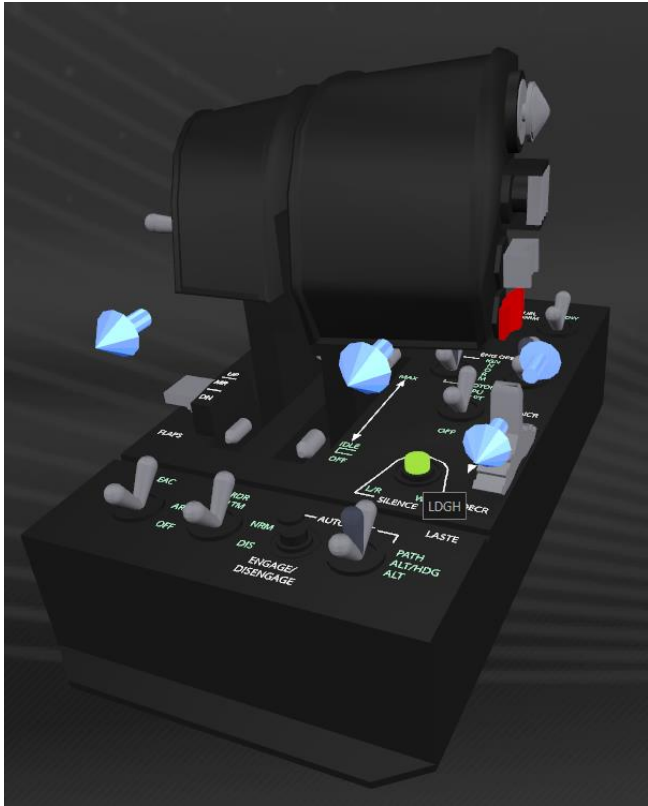
Throttle RDRDIS (Radar Altimeter – DIS)

Cargo Scoop:    Status LED 4

45

(... Throttle BASE continued)

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                    |
|---------------|--------------|----------------------------------|
| LDGH-I        | S3+LDGH      | Clear all 3 Chatbox windows      |
| LDGH-O        | LDGH         | Clear currently selected Chatbox |



Throttle LDGH (Landing Gear Horn Silence Button)

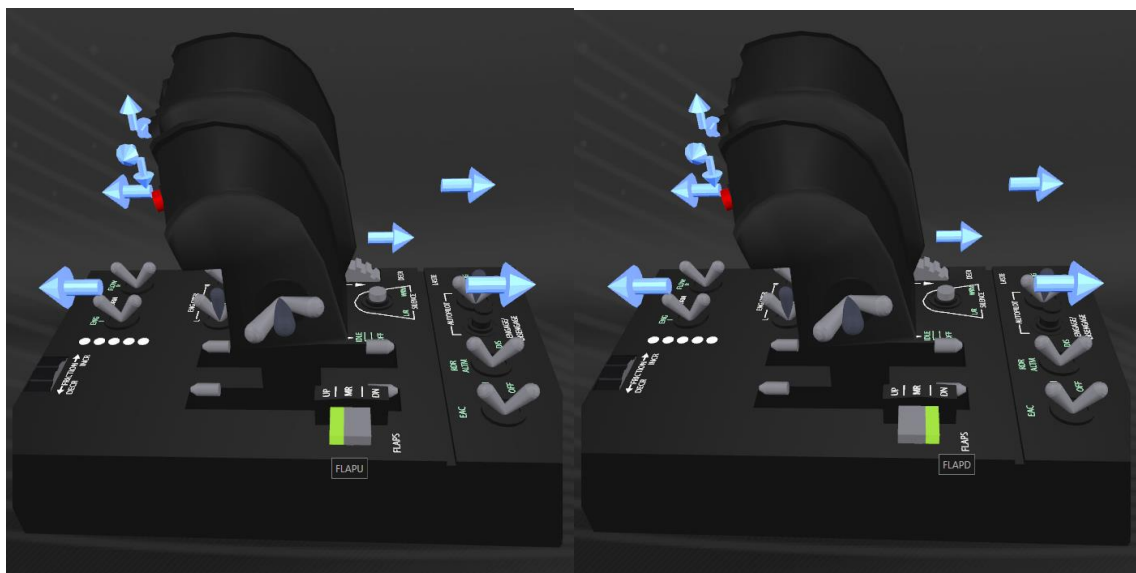
(... Throttle BASE continued)

| <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)

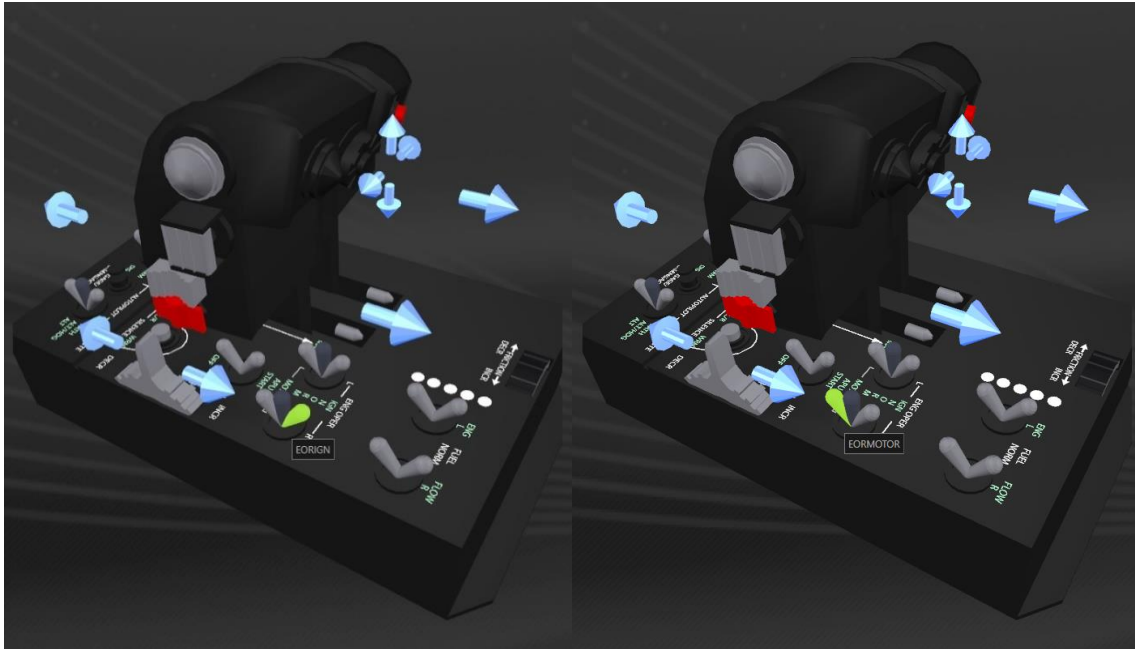
Throttle FLAPD (Flaps Down)





(... Throttle BASE continued)

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                          |
|---------------|--------------|--|
| 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:

The `Flags` key value in `status.json` does not have a bit representing if the Ship is landed nearby or if it was dismissed (or flew off because we wandered far enough away).

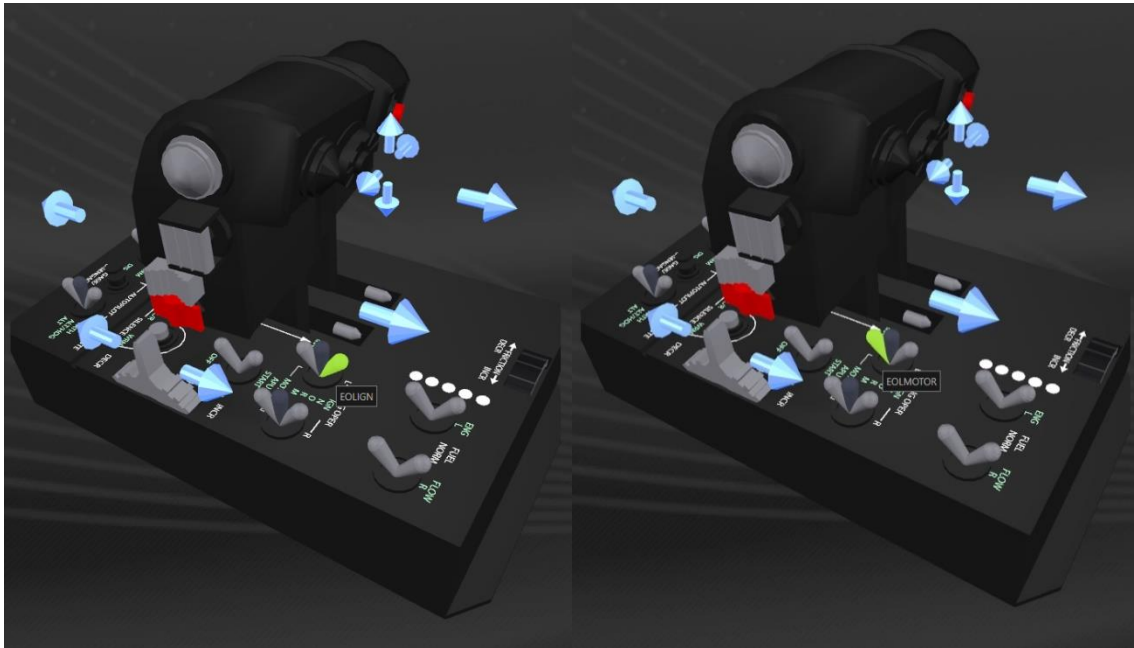
This results in the voice feedback potentially being wrong.

I've 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 get reset as part of a Menu log or game restart.

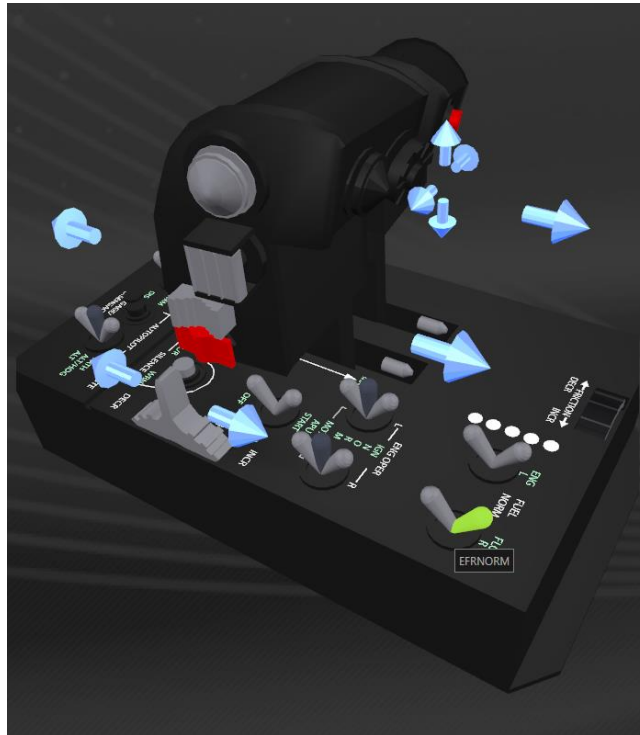
These include the Cargo Scoop, Reverse Thrust and Silent Running.

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 Console 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.

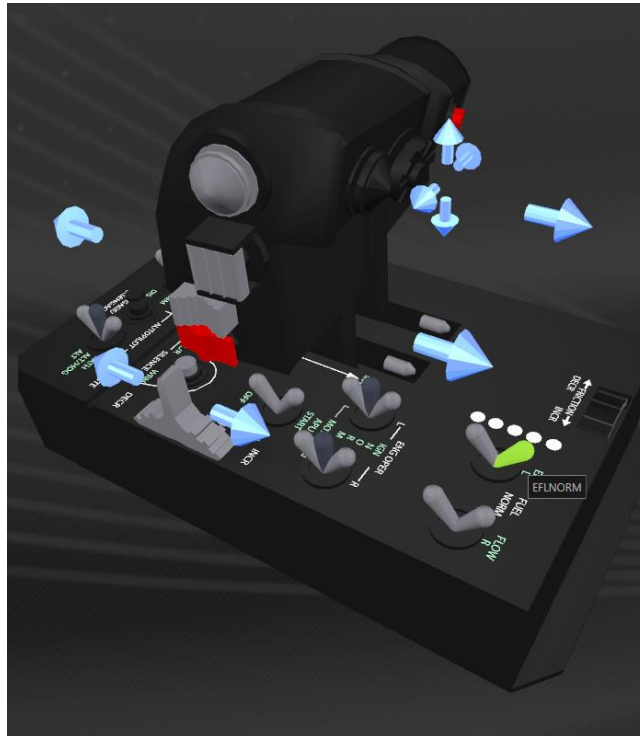
### Reset Status LEDs:

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.

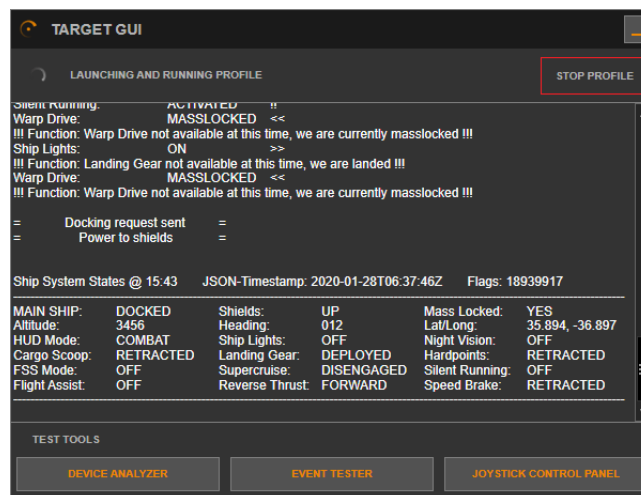
| LED    | Status          | LED on   | flag bit       |
|--------|-----------------|----------|----------------|
| LED1 = | Flight Assist   | OFF      | fFAOff         |
| LED2 = | Ship/SRV Lights | ON       | fLights        |
| LED3 = | Silent Running  | ON       | fSilentRunning |
| LED4 = | Cargo 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 |



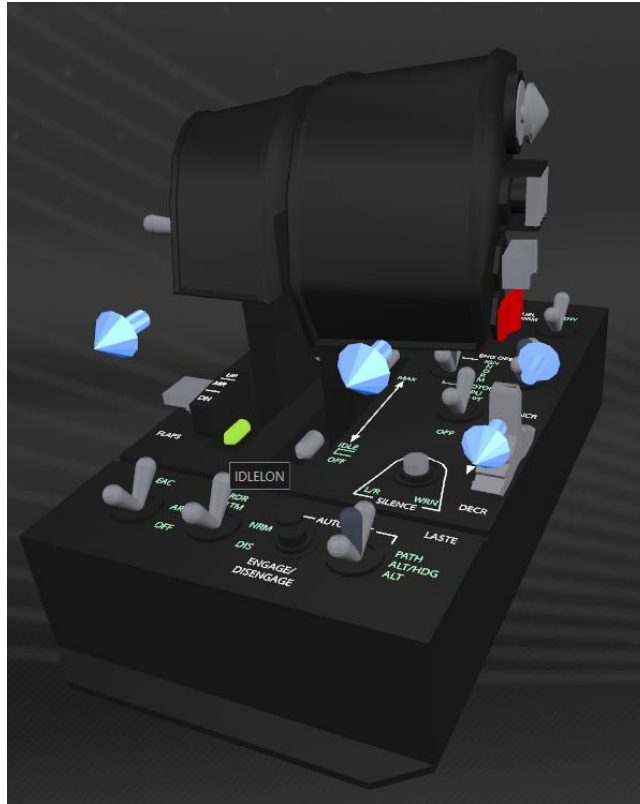
Throttle EFLNORM (Fuel Flow Left – NORMAL)



Example of Status Page

(... Throttle BASE continued)

| <u>Switch</u> | <u>Usage</u> | <u>Action</u>                                   |
|---------------|--------------|---|
| IDLELON       | IDLELON      | Enter Hanger and Station Services               |
| IDLEOFF       | IDLEOFF      | Exit Hanger and Lift off (retract landing gear) |



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.

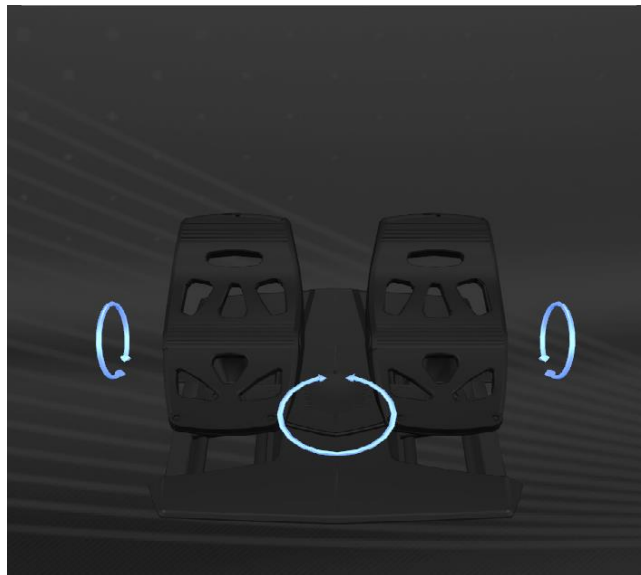
## TFRP Rudder Controller

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 also to the Joystick. Refer to Section 6 on Axis Curves and Curve Control.



TFRP Rudder Pedals

Note:

The Toe Brakes are not currently mapped in this script.

## Glossary of terminology and acronyms

## Disclaimer

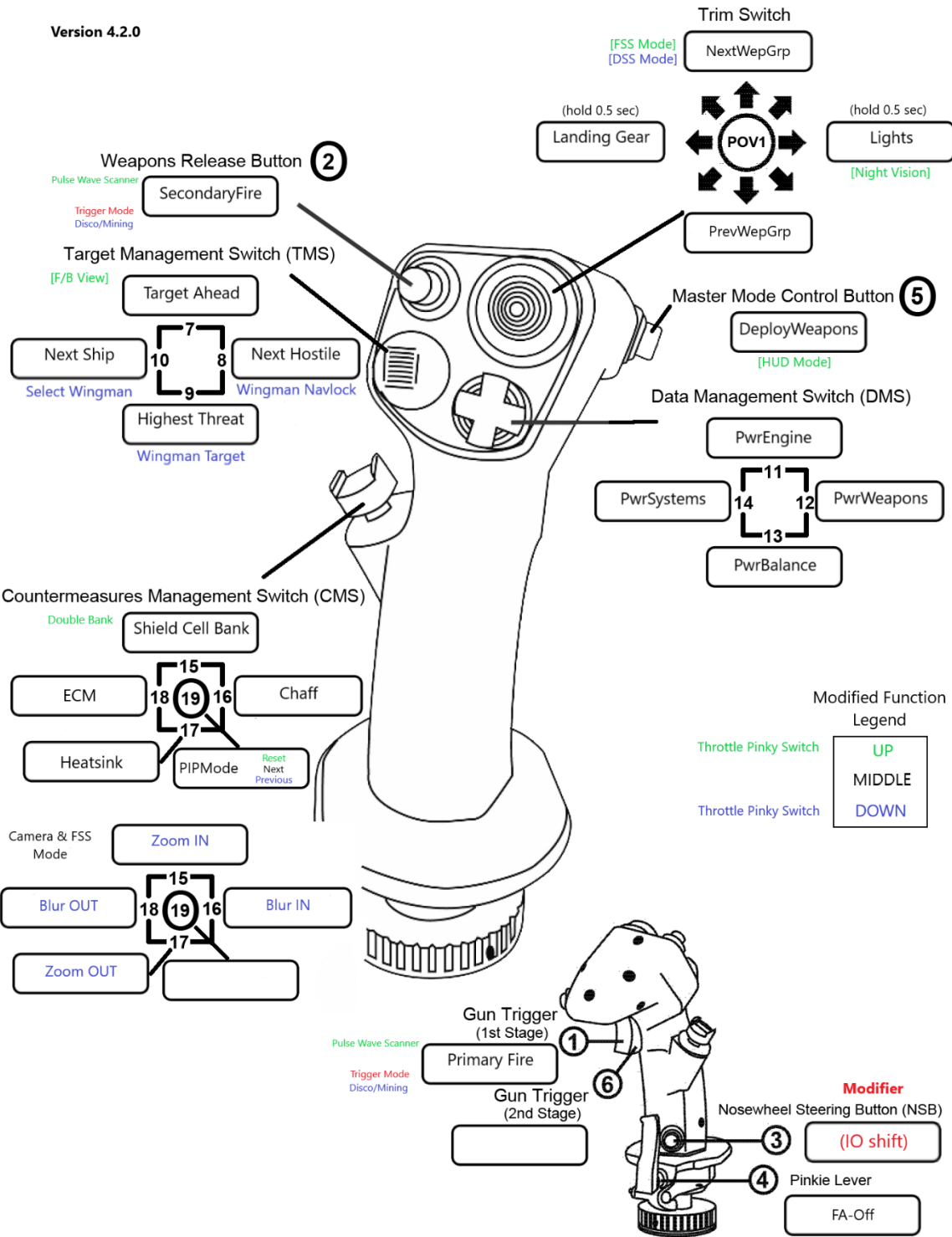
This software is a work in progress.

No warranties are stated or implied and no responsibility will be accepted for any damage this software may cause to your hardware, sanity or marital status.

By downloading, installing and using this software, you agree this is at your own risk.



Joystick Map



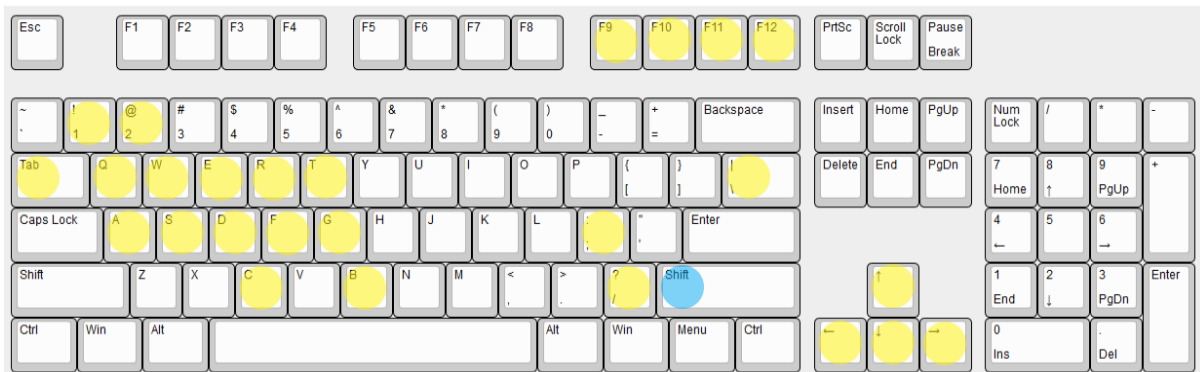


## Keyboard Utilisation

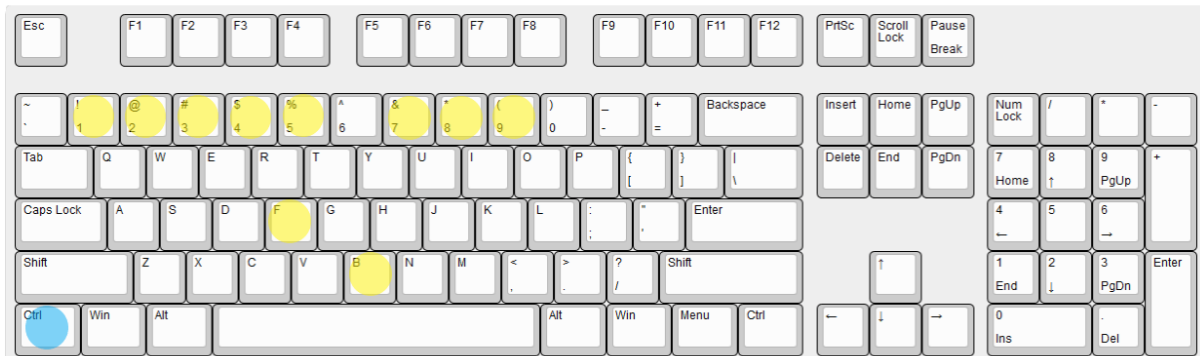
Normal (straight) Keypress



Modified Keypress



Modified Keypress



Modified Keypress



## Key Bind Sheet

| Standard Unmodified Keys - v4.2.0 |                          |     |                         |         |                    |         |                        |       |                    |          |               |  |
|-----------------------------------|--------------------------|-----|-------------------------|---------|--------------------|---------|------------------------|-------|--------------------|----------|---------------|--|
|                                   | UI-LEFT                  | Q   | Thrust Left/Prev Tab    | 6       | Wing NavLock       | /       | HUD Mode               | DEL   | Silent             | NP-      |               |  |
| A                                 | Previous Contact         | R   | Thrust Up               | 7       |                    | ENTER   | Quick Comms            | ESC   |                    | NP-ENTER |               |  |
| B                                 | Chaff/FSSStepZoomIn      | S   | Reverse Thrust          | 8       | Wing 1             | F1      | Cam CockpitFront       | PGUP  | Inc Sensor Range   | NP-PLUS  | 100% Throttle |  |
| C                                 | UI-Right                 | T   | Target Ahead            | 9       | Wing 2             | F2      | Cam CockpitBack        | PGDN  | Dec Sensor Range   | NP-MINUS | 100% Reverse  |  |
| D                                 | Thrust Right/Next Tab    | U   | Hardpoints              | 0       | Wing 3             | F3      | Cam Commander 1        | HOME  | Cargo Scoop        | NP-DIV   | Supercruise   |  |
| E                                 | 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       |          | UI-Up         |  |
| H                                 | Next Hostile             | X   | Stop                    | BACK    |                    | F6      | Cam Co-Pilot 2         | NP-2  | 50% Throttle       | <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     | PRTSR   |                        | NP-0  | Free Camera On/Off |          |               |  |
|                                   |                          |     |                         |         |                    |         |                        |       |                    |          |               |  |
| L-CTRL                            |                          |     | L-ALT                   | L-Shift |                    |         | R-Shift                | R-ALT |                    |          | R-CTRL        |  |
|                                   |                          | X   | Recall/DismissShip      |         |                    | ;       | Galaxy Map             |       |                    |          |               |  |
| B                                 | Connection Status        | B   | ReqDock                 |         |                    | T       | PitchUp/CamPitchUp     |       |                    |          |               |  |
| F                                 | Framerate                | D   | FighterDefence          |         |                    | G       | PitchDown/CamPitchDown |       |                    |          |               |  |
|                                   |                          | A   | FighterAggressive       |         |                    | Q       | YawLeft/CamYawLeft     |       |                    |          |               |  |
|                                   |                          | T   | FighterFocusTarget      |         |                    | E       | YawRight/CamYawRight   |       |                    |          |               |  |
|                                   |                          | H   | FighterHoldFire         |         |                    | W       | CamTxlateFWD           |       |                    |          |               |  |
|                                   |                          | S   | FighterHoldPos          |         |                    | S       | CamTxlateBWD           |       |                    |          |               |  |
|                                   |                          | F   | FighterFollowMe         |         |                    | A       | CamTxlateLeft          |       |                    |          |               |  |
|                                   |                          | O   | FighterOpenOrders       |         |                    | D       | CamTxlateRight         |       |                    |          |               |  |
|                                   |                          | W   | WEP-Colour              |         |                    | R       | CamTxlateUp            |       |                    |          |               |  |
|                                   |                          | E   | Eng-Colour              |         |                    | F       | CamTxlateDown          |       |                    |          |               |  |
|                                   |                          | Ins | Night Vision            |         |                    |         |                        |       |                    |          |               |  |
|                                   |                          | G   | FreeCam Toggle HUD      |         |                    |         |                        |       |                    |          |               |  |
|                                   |                          |     |                         |         |                    | TAB     | PrevPanel              |       |                    |          |               |  |
|                                   |                          | F3  | Mute Microphone         |         |                    | F9      | GalnetCLQueue          |       |                    |          |               |  |
|                                   |                          |     |                         |         |                    | F10     | GalnetSkipBWD          |       |                    |          |               |  |
|                                   |                          |     |                         |         |                    | F11     | GalnetPlay             |       |                    |          |               |  |
|                                   |                          |     | External                |         |                    | F12     | GalnetSkipFWD          |       |                    |          |               |  |
| F9                                | GPU Video Save (15mins)? |     |                         |         |                    | <up>    | PIP-ENG                |       |                    |          |               |  |
| F10                               | GPU Screen shot?         |     |                         |         |                    | <right> | PIP-WEP                |       |                    |          |               |  |
| F2                                | Mute Voice Attack        |     |                         |         |                    | <left>  | PIP-SYS                |       |                    |          |               |  |
| F5                                | Mute Discord etc         |     |                         |         |                    | <down>  | PIP-RST                |       |                    |          |               |  |
|                                   |                          |     |                         |         |                    | 1       | PrimaryFire (ALT)      |       |                    |          |               |  |
|                                   |                          |     |                         |         |                    | 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    | fnSetJoystickCurves(NONE)   |                   |
|          | IM   |                         |              |                                  |      |                          |                    |                 | D    |                             |                   |
|          | OM   | fnAdvFireControl(0)     | Normal       | PSM                              | M    | SetShiftButton (UMD - M) |                    | APAH            | U    |                             |                   |
|          | ID   | tgTriggerMode(1)        |              |                                  |      |                          |                    |                 | M    | fnSetJoystickCurves(MILD)   |                   |
| TG2      | OD   | fnAdvFireControl(1)     | Disco/Mining |                                  | D    |                          |                    |                 | D    |                             |                   |
|          | U    |                         |              | PSB                              | M    | SetShiftButton (UMD - D) |                    | APALT           | U    |                             |                   |
|          | M    |                         |              |                                  |      |                          |                    |                 | D    | fnSetJoystickCurves(MEDIUM) |                   |
| S1       | D    |                         |              | SC                               | U    | ShowConnectionStatus     |                    |                 | D    |                             |                   |
|          | U    | tgHUDMode()             |              |                                  | M    | ResetHeadOrientation     |                    | EACON           | U    |                             |                   |
|          | M    | tgHardPoints()          | Retract ALL? |                                  | D    |                          |                    |                 | M    | tgSilentRunning(ON)         |                   |
| S2       | IU   |                         |              | LTB                              | U    | tgExtCamera()            |                    |                 | D    |                             |                   |
|          | OU   | Secondary Fire          | PWS          |                                  | M    | LookOnOff                |                    | EACOFF          | U    |                             |                   |
|          | IM   |                         |              |                                  | D    |                          |                    |                 | M    | tgSilentRunning(OFF)        |                   |
|          | OM   | fnAdvFireControl(2)     | Normal       | CSU                              | U    |                          |                    | RDRNRM          | U    |                             |                   |
|          | ID   | tgTriggerMode(2)        |              |                                  | M    | tgWarpDrive(0)           | Supercruise        |                 | M    | tgCargoScoop(DEPLOY)        |                   |
| S3       | OD   | fnAdvFireControl(3)     | Disco/Mining |                                  | D    |                          |                    |                 | D    |                             |                   |
|          | U    |                         |              | CSD                              | U    |                          |                    | RDRDIS          | U    |                             |                   |
|          | M    | SetShiftButton (IO - I) |              |                                  | M    | tgWarpDrive(1)           | Hyperjump          |                 | M    | tgCargoScoop(RETRACT)       |                   |
| S4       | D    |                         |              |                                  | D    |                          |                    |                 | D    |                             |                   |
|          | U    |                         |              | CSL                              | U    |                          |                    | LDGH            | I    | mClearAllChatBox            |                   |
|          | M    | tgEnhancedFAOFF()       |              |                                  | M    | SelectNextSystemInRoute  |                    |                 | O    | mClearChatBox               |                   |
|          | D    |                         |              |                                  | D    |                          |                    | APENG           | U    |                             |                   |
| H1U      | U    | tgFSSMode()             |              | CSR                              | U    |                          |                    |                 | M    | fnRequestDock()             |                   |
|          | M    | NextFireGroup           |              |                                  | M    | OrbitLines               |                    |                 | D    | fnHangerServices(1)         |                   |
|          | D    | DSSModeOFF              |              | MSU                              | I    |                          |                    | FLAPU           | U    | fnVoiceVolume(INCREASE)     |                   |
| H1D      | U    |                         |              |                                  | O    |                          |                    |                 | M    | Galaxy Map                  | ON                |
|          | M    | PrevFireGroup           |              |                                  | O    |                          |                    |                 | D    |                             |                   |
| H1L      | U    |                         |              | MSD                              | I    |                          |                    | FLAPU-R         | U    |                             |                   |
|          | M    | tgLandingGear()         | tempo        |                                  | O    |                          |                    |                 | M    | Galaxy Map                  | OFF               |
|          | D    |                         |              |                                  | O    |                          |                    |                 | D    |                             |                   |
| H1R      | U    | tgLights(1)             | Night Vision | MSL                              | I    |                          |                    | FLAPM           | U    |                             |                   |
|          | M    | tgLights(0)             | tempo        |                                  | O    |                          |                    |                 | M    |                             |                   |
|          | D    |                         |              |                                  | O    |                          |                    |                 | D    |                             |                   |
| H2U      | U    | tgPlanetView()          |              | MSR                              | I    |                          |                    | FLAPD           | U    | fnVoiceVolume(DECREASE)     |                   |
|          | M    | SelectTargetAhead       |              |                                  | O    |                          |                    |                 | M    | SystemMap                   | ON                |
|          | D    | SelectTargetAhead       |              |                                  | O    |                          |                    |                 | D    | SetLED OFF                  |                   |
| H2D      | U    |                         |              | MSP                              | I    |                          |                    | FLAPD-R         | U    |                             |                   |
|          | M    | SelectHighestThreat     |              |                                  | O    |                          |                    |                 | M    | SystemMap                   | OFF               |
|          | D    | WingmanTarget           |              |                                  | O    |                          |                    |                 | D    | SetLED ON                   |                   |
| H2L      | U    |                         |              | SPDF                             | U    | tgReverseThrust(0)       | No Speedbrake      | APUON           | U    |                             |                   |
|          | M    | SelectNextShip          |              |                                  | M    | tgReverseThrust(1)       | Speedbrake         |                 | M    | fnDeploySRV(DEPLOY)         |                   |
|          | D    | SelectWingMan1, 2, 3    |              |                                  | D    | tgReverseThrust(2)       | fix LED            |                 | D    |                             |                   |
| H2R      | U    |                         |              | SPDF-R                           | U    | tgReverseThrust(1)       | Forward            | APUOFF          | U    |                             |                   |
|          | M    | SelectNextHostileShip   |              |                                  | M    |                          |                    |                 | M    | fnDeploySRV(RECOVER)        |                   |
|          | D    | WingManNavlock          |              |                                  | D    | EngineBoost              |                    |                 | D    |                             |                   |
| H3U      | U    |                         |              | BSF                              | U    | mNAVBeaconWingON/OFF     |                    | EORIGN          | U    |                             |                   |
|          | M    | fnPIPManger(ENG)        |              |                                  | M    |                          |                    |                 | M    | fnDRShip()                  | Dismiss/Recover   |
|          | D    |                         |              |                                  | D    | tgText2Speech()          | EnableVoice ON/OFF |                 | D    |                             |                   |
| H3D      | U    |                         |              | BSM                              | U    |                          |                    | EORNORM         | U    |                             |                   |
|          | M    | BalancePower            |              |                                  | M    |                          |                    |                 | M    |                             |                   |
|          | D    |                         |              |                                  | D    |                          |                    |                 | D    |                             |                   |
| H3L      | U    |                         |              | BSB                              | U    | mReportCrimesToggle      |                    | EORMOTOR        | U    |                             |                   |
|          | M    | fnPIPManger(SYS)        |              |                                  | M    |                          |                    |                 | M    | HideShipGUI                 | GUI OFF           |
|          | D    |                         |              |                                  | D    |                          |                    |                 | D    | HideShipGUI                 | GUI ON            |
| H3R      | U    |                         |              | CHF                              | U    |                          |                    | EOLIGN          | U    | fnModeSwitch(0)             | Open              |
|          | M    | fnPIPManger(WEP)        |              |                                  | M    | TargetNextSubsystem      |                    |                 | M    | fnModeSwitch(1)             | Private Group     |
|          | D    |                         |              |                                  | D    |                          |                    |                 | D    | fnModeSwitch(2)             | Solo              |
| H4U      | U    | fnAdvancedSCB(2)        | 2xSCB, 1xHS  | CHB                              | U    |                          |                    | EOLNORM         | U    |                             |                   |
|          | M    | fnAdvancedSCB(0)/(1)    | SCB, SCB+HS  |                                  | M    | TargetPrevSubsystem      |                    |                 | M    |                             |                   |
|          | D    | CameraZoomIN            |              |                                  | D    |                          |                    |                 | D    |                             |                   |
| H4D      | U    |                         |              |                                  | U    |                          |                    | EOLMOTOR        | U    |                             |                   |
|          | M    | fnHeatsink()            |              |                                  | M    |                          |                    |                 | M    |                             |                   |
|          | D    | CameraZoomOUT           |              |                                  | D    |                          |                    |                 | D    |                             |                   |
| H4L      | U    |                         |              |                                  | U    |                          |                    | EFRNORM         | U    |                             |                   |
|          | M    | ChargeECM (DOWN)        | Charge ECM   |                                  | M    |                          |                    |                 | M    | GameLoaded = 0              |                   |
|          | D    | CameraBlurOUT           |              |                                  | D    |                          |                    |                 | D    | fnSetLEDs()                 | Reset Status LEDs |
| H4L-R    | U    | 0                       |              |                                  | U    |                          |                    | EFROVER         | U    |                             |                   |
|          | M    | ChargeECM (UP)          | Fire ECM     |                                  | M    |                          |                    |                 | M    |                             |                   |
|          | D    | 0                       |              |                                  | D    |                          |                    |                 | D    |                             |                   |
| H4R      | U    |                         |              |                                  | U    |                          |                    | EFLNORM         | U    | fnDebugStates(DebugON)      |                   |
|          | M    | fnChaff()               |              |                                  | M    |                          |                    |                 | M    | fnDebugStates(DebugOFF)     |                   |
|          | D    | CameraBlurIN            |              |                                  | D    |                          |                    |                 | D    |                             |                   |
| H4P      | U    | fnPIPMMode(0)           | Reset        |                                  | U    |                          |                    | EFLOVER         | U    |                             |                   |
|          | M    | fnPIPMMode(1)           | Increment    |                                  | M    |                          |                    |                 | M    |                             |                   |
|          | D    | fnPIPMMode(2)           | Decrement    |                                  | D    |                          |                    |                 | D    |                             |                   |
|          | U    |                         |              |                                  | U    |                          |                    | IDLELON         | U    | fnHangerServices(1)         | Enter             |
|          | M    |                         |              |                                  | M    |                          |                    |                 | M    |                             |                   |
|          | D    |                         |              |                                  | D    |                          |                    |                 | D    |                             |                   |
|          | U    |                         |              |                                  | U    |                          |                    | IDLELOFF        | U    |                             |                   |
|          | M    |                         |              |                                  | M    |                          |                    |                 | M    | fnHangerServices(0)         | Launch            |
|          | D    |                         |              |                                  | D    |                          |                    |                 | D    |                             |                   |