Jan 2022

LINDA 4.1.0 - RELEASE NOTES

LINDA 4.1 provides an easy and convenient way to interface with the Microsoft Flight Simulator 2020 (MSFS) by supporting a wide variety of joystick devices, VRInsight Combo panels and aircraft add-ons with sophisticated functions in the easy to learn LUA programming language.

This version is only compatible with MSFS2020 using FSUIPC7 7.1.15 or later.

It is not compatible with other Flight Simulators like FSX or P3D. It will not run with FSUIPC4, FSUIPC5 or FSUIPC6.

This version provides access to available Lvars and FSUIPC offsets for reading and setting data together with a range of events in the form of FSUIPC Controls, Hvars and Events to trigger actions with the simulator. These variables and events can be monitored, set and activated by way of the Tracer panel. Users should refer to the FSUIPC documentation for additional information. It is essential for the FSUIPC WASM and WAPI interfaces to be activated.

LINDA provides full compatibility with all variants of the VRInsight Combo panel - the original MCP1, the Combo II MPC (Boeing) and Combo FCU (Airbus), VRInsight CDU2/3 and the Logitech/Saitek Flight Panels.

All bug and issues should be reported on the project thread on the **LINDA Support sub-forum**.

NO RESPONSIBILITY OR LIABILITY CAN BE TAKEN FOR ADVERSE AFFECTS ON YOUR INSTALLATION.

This release contains functionality to carry out backup and installation automatically.

Installation

Unzip the file. Install FSUIPC7 7.2.15 or later in a root directory separate of MSFS or Program Files. The LINDA files and folders should be copied into into that folder. This can be done semi-automatically by using the Maintenance page of your existing version.

The correct installation should look like:

> */FSUIPC7*
>
> > ***/linda***
> >
> > ***/linda-cfg***
> >
> > *FSUIPC7.exe*
> >
> > *FSUIPC7.ini*
> >
> > *FSUIPC7.key*
> >
> > ***ipcReady.lua***
> >
> > ***linda.exe***
> >
> > ***linda.lua***

You must have also installed the VRInsight software and drivers for the correct operation of the VRInsight Combo 2 Boeing or Airbus FCU from http://vrinsight.com/devel_shot/ under the link "Install Base Package VRiSim". *However, once installed you **should not** run the VRiSim software at the same time as LINDA.*

Starting MSFS, FSUIPC7 and LINDA

The order users start the applications is important to get everything working correctly.

Start MSFS and LINDA first in any order. Once MSFS is running in cockpit mode then start FSUIPC7 ensuring that it displays the title '**FSUIPC7: Simulator is available: Connected'**. If not Connected, either click on Start/Connect or Options/Auto-connect to FS. LINDA should be Sync-ed to Sim and displaying *MSFS Default" outline in orange. The LINDA LUA engine will automatically restart when the connection is established.

FSUIPC7 runs initially in the System Tray. You need to right-click on icon and click Show for the window to be displayed. After you close the FSUIPC7 window you need to Exit the application in the System Tray.

There is a delay after starting MSFS and loading an aircraft before the Lvars, Hvars and Events are correctly loaded and accessible. It may be necessary to **Reload LUA Engine** after a couple of minutes to ensure all facilities are available.

Notes on Core Features

A number of changes have been made to the core LINDA EXE and LUA files:

Creating New Aircraft Modules

Users may wish to create their own individual aircraft modules so that specific functions can be developed and different button assignments can be made for each aircraft.

Where a module has been issued users should use the corresponding user.lua for writing and testing their own functions. This avoids any damage to existing functionality. Functions written in the user.lua file with override functions of the same name in the main module actions.lua file.

The procedure is detailed at Annex A.

Fault Diagnosis Mode

LINDA provides detailed error logging to aid fault diagnosis when problems are reported. An automated Fault Diagnosis Mode has been added to ensure that full detailed (VERBOSE) logging is switched on.

When reporting problems click on the *Maintenance* link on the main LINDA GUI page and click *Turn ON Fault Diagnosis Mode.* Copy the resulting FSUIPC.LOG file and email to LINDA@awginfosys.net.

Turn off the Fault Diagnosis Mode when no longer required.

Improved Module Selection

An improved module selection method has been added to allow more accurate discrimination between different loaded aircraft. This can be used in the Edit Aircraft Module form.

Two new tags (* = asterisk and # = hash/pound) can be used to 'and' and 'not' parts of the search string in Aircraft Search String. For example, "PMDG 737*NGX#NGXu allows LINDA to reference the PMDG 737 NGX but exclude the NGXu variants.

Joystick HAT Handle

A fix was required to correctly handle Joystick HAT changes. The HAT is the thumb operated control normally used to change the point of view (POV) or for trimming. The POV can be assigned in MSFS options or in FSUIPC axis assignment (Pan View). LINDA can also be used to assign functions to the 4- or 8-positions. The positions a highlighted as lines H1 to H8 where H1 is up (N), H3 is right (E), H5 is down (S) and H7 is left (W). The even numbers are the intermediate position

(NE, SE, SW, NW). If discrete functions (ie. elevator trim) are being assigned, is recommended that only the odd (N/E/S/W) positions are used and the even (NE/SE/SW/NW) positions are left unassigned/empty.

Note: For CH HATs there is an issue with the operation of position H8 (NW) where the position is not recognised by LINDA and cannot be used.

AircraftTimer10Hz() Function

A new timer function can be added to the aircraft user.lua file to add functionality called at 10Hz. This can, for example, be used to synchronise the Saitek panel inputs for sophisticated aircraft.

Automatic Installation, Backup and Restore Functionality

A new Maintenance page has been added providing access with functionality to automatically install new LINDA core software releases and to Backup and Restore the entire \modules folder.

Full instructions are provided at Annex B.

FSUIPC7 Configuration

The operation of FSUIPC7 and how LINDA interfaces with it are significantly different than previous version and flight simulators. Extra features and functions have been added to allow control of MSFS. These require some additional setting up as detailed in Annex C.

Configuration Backup

All HID and MCP configuration files (config-hid and config-mcpX) are now moved and saved to a folder BACKUP in the aircraft configuration folder (/linda-cfg/aircrafts/{your aircraft}/).

Combo MCP Boeing and Airbus - LAMP Button

The VRInsight Combo LAMP button has been moved to USER block from the RADIO block for Boeing and Airbus panels. This means that the LAMP assignment can be made in all 3 modes. One effect of this change is that previous assignment like Lights_Default_Panel may be lost when an aircraft is first selected. The user will need to re-assign the desired function for each mode.

Configuration Files

The standard installation will not overwrite your existing VRInsight Combo MCP panel and HID configuration files (config-mcp*.lua, config-cdu2.lua and config-hid.lua respectively) or your LINDA system setup options.

If the config-mcp*.lua files are missing they will be created automatically using .default files issued with the aircraft module. The config-mcpX.default files contains the basic configuration of functions for the aircraft in use and the Combo MCP in use. These basic assignments may not suit all users. If the .default files are not present, LINDA will create them from basic templates.

The config-hid.lua files are created for the user's own joysticks and devices. It is for the user to make their own assignments for these devices to suit personal need. It is important that these are created for the MSFS Default aircraft and each aircraft in use. Otherwise errors may be reported. Go to the Joystick page and make at least one assignment (ie. zoom in/out) on at least one device.

A user.lua for each add-on aircraft allows users to modify existing or add new functions to their setup. The aim is to avoid changing the aircraft specific and common function files and allow easy update in future. See User Functions below.

Additionally, a config-user.lua file has been added which defines a range of parameters which will enable the aircraft state to be saved automatically when the conditions are met. For example, when the aircraft is shutdown. See Autosaving Flights below.

VRInsight Combo Panel Setup

Start MSFS 2020 and LINDA.

Select 'Setup MCP Combo'. Under 'MCP Combo settings' tick Enabled, select the appropriate MCP Combo (MCP1 - Original, MCP2 - Boeing MCP and MCP2a - Airbus FCU Airbus) in the Type field and the COM Port is set to your com port (usually COM 3). Then click SAVE. Make sure that the VRinsight MCP Combo is connected to LINDA (ie. Device enabled, COM Port assigned and FSUIPC setup done). Normally, the Panel can be found on COM3 (check Windows Device Manager if not). After setting the MCP type, close and re-open MSFS and LINDA.

FSUIPC Program Shutdown Options

When setting the option to start LINDA automatically with your MSFS 2020 Flight Simulator, you will be offered the option of setting how closing the Flight Simulator will affect LINDA. You can opt to close LINDA normally (CLOSE), immediately stop LINDA processing (KILL) or leave LINDA running. The CLOSE option is recommend as it ensures LINDA saves its configurations on closing. In some cases LINDA may generate an error on exit, this only occurs after all processing complete but you may wish to set the KILL option. This option automatically writes the correct entry into the fsuipc4.ini file and can be reset by deselecting and reselecting the LINDA Starts with Flt Sim checkbox in LINDA Setup.

User Functions

User module functions are now accessible from the button/knob assignment popup menu. User-written functions should be placed in either \modules\linda\aircrafts\{your aircraft}\user.lua or \modules\linda\libs\lib-user.lua. These functions apply to individual aircraft or all aircraft respectively. Functions can use unique names or those of existing functions which will override (replace) the existing ones. Users are recommended not to modify the core LUA files directly because these will be overwritten when the next LINDA version is installed.

System HID Configuration

Users with many Joysticks/HID devices should have all plugged when first starting LINDA. Otherwise, errors may be reported in the Console log and prevent correct operation. A new check and on-screen is displayed if unrecognised devices are found in the selected aircraft configuration. You need to copy your backup copy of the system HID configuration file (config-hid.lua) from \modules\system\ folder to the new one. Alternatively, you need to edit the file to remove the conflicting device blocks.

Full Logitech/Saitek Panel Integration

Support and handling of Logitech/Saitek Panels is now provided within the LINDA GUI to provide more responsive operation and use. **Note: the operation of the Multi-Panel is based on the default aircraft and may not reflect user expectations for more sophisticated aircraft like Airbus A320.**

The new functionality requires the user to tick the **Saitek Panels** checkbox on the Setup LINDA page. Also user need to disable the Radio and Multi Panels on the Setup Joystick page. With the checkbox unticked the slower LUA can be used. In this case the panels need to be set up as defined in Annex D.

The switches for the Logitech/Saitek Switch Panel should be programmed as required using LINDA Joystick page. The On and Off functions needs to be assigned to the OnPress and OnRelease actions respectively.

On starting or restarting LINDA, there is a need to operate at least one button/switch on each panel for their current state to be recognised. To prompt the user, the Switch Panel Gear Lights with flash green/red, the Multi Panel AP lights will cycle and Radio Panel will display dashes. These warnings will disappear when a button in operated.

Users wishing to use SpadNXT to control their Saitek panels need to untick the Saitek Panels checkbox (on Setup LINDA page) **AND** _disable each panel on the Setup Joysticks page by unticking the checkbox._

Splash Screen

A new LINDA splash screen has been added. Users can deselect this in the LINDA Setup page.

Uniquely Identifying Multiple HIDs of Same Type

Many users are using USB interface cards to build their own cockpits. Although LINDA could identify multiple cards of the same type, if these were to become unplugged the assignments made could be misallocated to the wrong card. LINDA now uses the serial number allocated to these cards (like the Leo Bodnar USB cards) to uniquely identify the cards so that the assignment remain consistent if unplugged and reconnected. The serial number is displayed in the Setup Joystick page.

Enable/Disable Joystick Buttons

The buttons on a connected joystick HID device can now be disabled by unticking the checkbox on the Setup Joystick page.

Dynamic Devices Connection/Disconnection

A facility to allow the limited dynamic connection and disconnection of HID Devices/joysticks has been added. This switchable function avoids the display of the popup warning dialog when USB devices are added or removed from your system. The mode can be switched on by ticking the Dynamic HID box on the Setup LINDA page.

This change is aimed at those users with USB keyboard switches and similar devices that repeatedly connect/disconnect during a flight. It will also allow joysticks to be removed or added. However, certain devices will not reconnect and operate correct following their or other device removal (notably the Saitek Throttle Quadrant is affected in this way).

Users are strongly recommended not to regularly connect/disconnect joysticks during a flight. Should a device adversely affect operations then LINDA should be restarted.

Global and Local Multiple Shift

The multiple shift function has been extended to apply globally across all HID devices/joysticks as well as locally. The shifted functions are assigned on pages controlled by radio buttons at the bottom of the Joysticks page.

This is aimed at owner's of the CH Eclipse Yoke and Saitek Yoke with a mode switch. These consist of a 3 position switch that appears as 3 buttons which can be assigned to UNSHIFTED, SHIFTED_ONE and SHIFTED_TWO. A confirm beep will sound when selecting SHIFTED_ONE and SHIFTED_TWO and a double beep on return to UNSHIFTED. _The Apply Shift Globally must be ticked and LINDA restarted for all devices to be shifted._

A SHIFT_CYCLE option is provided for users who wish to use the global shift by pressing a single button to cycle through the 3 shifted modes. Note there is no visual feedback so users with will need to manually check the current shifted state.

For functions that are required at all times (eg. trim, view), these must be assigned on all shift pages to be available at all times.

Note: Saitek Pro Flight Yoke users may find that the Mode Switch (right-hand front top selector switch) is not visible to LINDA due to problem with Saitek driver software. To solve this issue go to ..Windows\System32 and search for SaiD0BAC.pr0 and rename it SaiD0BAc.pr0.off.

Global and Local Shift

The normal single Global and Local shifts have been modified to ensure correct operation.

Global Shift is a latching mode with a one push required to activate it and one to cancel. If the user wishes it to only be in shift mode while a trigger or button in held pressed, the GLOBAL SHIFT must be assigned to both OnPress and OnRelease.

Local Shift is non latching and will only operate while the trigger or button is held pressed.

Saving 2D Window Positions and Hiding Windows Titles

The use of HotKeys to save the position of MSFS 3D windows (such as Airbus MCDU) has been reintroduced. The following key combinations are available:

- CTRL+SHIFT+ALT+F1 - saves the positions and sizes of 2D panels that have been opened in a separate (detached) windows and moved to a new location or screen. The next time the 2d Panel is detached or Windows is opened, it will be placed in the saved position. This is aircraft specific with the positions and sizes saved in \linda-cfg\linda-gui.ini.

- CTRL+SHIFT+ALT+F2 - removes the MSFS top title bar similar to full screen mode but with windows features (ie. resize). Caution: this function also hides MSFS menu. Right-click on main window to unhide titles.

- CTRL+SHIFT_ALT+F3 - hides the Windows frame and titles of all detached panels and views. Caution: this function also hides MSFS menu. Right-click on main window to unhide titles and menues. It can also blank open 2D windows.

List of Current Aircraft Modules and Assignments

Three types of report can be generated for the selected aircraft detailing the functions contained in the currently selected Aircraft module and the button/knob assignments to the HID/Joysticks and VRInsight MCP panels. The List Functions report is generated by clicking on the label of the same name on the Settings/Summary page. The HID and MCP assignments reports are generated by clicking on the appropriate buttons under the respective Setup pages. The resulting text files can be found in the Aircraft folder located in \fsuipc7\linda\aircraft\{current aircraft}\{current aircraft}-Functions.txt.

Autosaving Flights

The facility has been added to allow the Autosaving of flights when certain conditions are met.

A new user configuration file (\linda-cfg\system\config-user.lua) has been added where constants can be set to enable Autosave and set up to 5 conditions that need to be met for the aircraft state to be saved. The parameters and triggers that can set by the user for each aircraft are:

AUTOSAVE_ENABLE	Set to 1 to enable Autosave, 0 to disable.
AUTOSAVE_DEFAULT_FLIGHT	Set to 1 to force LINDA to save the flight as a default (named "_linda_default") so that it will load in the same place when the Flt Sim is restart. **Note:** This is not recommended for sophisticated aircraft add-ons.
AUTOSAVE_PLANE_FLIGHT	Set to 1 to force LINDA to save the aircraft as a default (named "_linda_lastpos_AircraftID") so that it will load in the same place and state when the Flt Sim is restart. ***Note:*** *This is not recommended for sophisticated aircraft like Aerosoft Airbus or PMDG 737NGX where the developer recommends starting with a default MSFS aircraft.*
AUTOSAVE_EACH_AIRFIELD	Set to 1 to force LINDA to save separate files for each airport (logfile mode)
AUTOSAVE_ENGINE_CHECK	Set to 1 to trigger the autosave action when the engines are set to off.
AUTOSAVE_MAGNETO_CHECK	Set to 1 to trigger the autosave action when the magnetos are set to off.
AUTOSAVE_BATTERY_CHECK	Set to 1 to trigger the autosave action when the battery is set to off.
AUTOSAVE_LIGHT_CHECK	Set to 1 to trigger the autosave action when the lights are set to off.
AUTOSAVE_PARKING_CHECK	Set to 1 to trigger the autosave action when the parking brake is applied.

These settings can be overridden for specific aircraft by copying the config-user.lua to the corresponding aircraft's configs folder (ie.\linda-cfg\aircrafts\Cessna 172\config/user.lua). A blank template file can be found at \linda\templates\users. If no user configuration file is present for the loaded aircraft one will be generated from the templates folder.

Functions for SaveFlight and SaveDefaultFlight are available in MSFS Default library module.

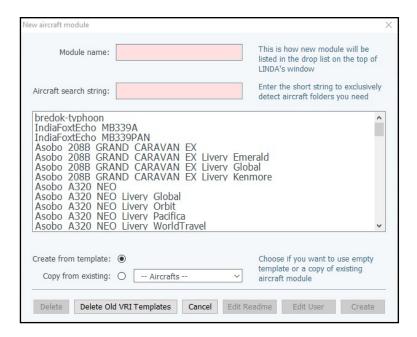Autosaved flights can be loaded by going to the MSFS Flights/Load menu.

Acknowledgements

I fully acknowledge the excellent work done by Artem Crum, Günter Steiner and others for bringing LINDA out many years ago to support Flight Simmers. I am grateful to them for LINDA GUI and the existing Lua coding which I have freely copied and modified.
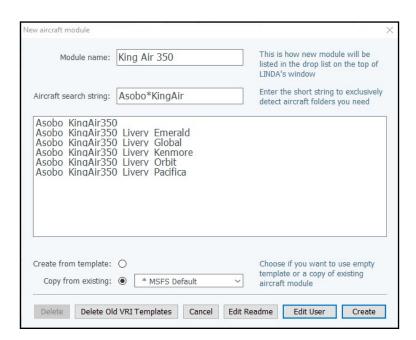
ANNEX A - NEW AIRCRAFT MODULE

Aircraft Module can be created or edited to meet users requirements.

Click on New beside the Aircraft Selector (top line) to open the New Aircraft Module window. This lists all installed aircraft and variants.

Enter a short name for the module. This will be used to display the loaded aircraft when Sync-ed to Sim.

Enter a unique Aircraft Search String that selects those aircraft and variants that you wish to match. Use the special asterisk character to 'AND' different parts of the string.

You can create the new module based on default templates or an existing aircraft.

Click Create to generate a new module. Then restart LINDA to load the new module.

ANNEX B - MAINTENANCE PAGE

A Maintenance page has been added to provide users with the facility to automatically install new LINDA software releases and aircraft modules. It also allows users to backup and restore their / Modules folder (including FSUIPC, LINDA, LINDA configurations and associated files).

This Annex describes how to use this new functionality. The Maintenance page is accessed by clicking on the Maintenance tab on the Settings page.

NOTE: For these maintenance functions to be used **Sync to Sim** must be turned off (no orange box) and no aircraft selected (— Aircraft —). Otherwise, the functionality and buttons will be disabled.

Installing LINDA Core Software

Updates to LINDA are downloadable from the AVSIM LINDA Community forum. The zip file should be expanded onto the computer Desktop (or other suitable location on the computer main drives).

The LINDA core software is issued in a folder containing the following example top level structure:

> — \LINDA x.x.x\
>   — \Install Location (FSUIPC7 Folder)
>   — ipcReady.lua
>   — LINDA.exe
>   — linda.lua
>   — linda\
>   — linda-cfg\

This has traditionally been (and still can be) installed manually. ***This is required for the initial installation of this update.*** See explanation at bottom.

The automatic installation requires LINDA to be running, **Sync to Sim** to be turned off (no orange box) and — Aircraft — (no aircraft) selected.

Open the ***Maintenance*** page and click on the ***Select LINDA Source*** button. This opens up an Explorer window to allow you to select the LINDA Installation folder (either LINDA x.x.x Standard vX or Your Flt Sim Folder). Make sure the folder appears in the Filename box and click Select.

If a valid folder is selected, the ***Install Main LINDA Core Software*** button is enabled. The old installed version and new version details are displayed. Click on the button to start the installation.

A dialog box will appear asking whether you wish to delete the current LINDA installation to provide a clean 'vanilla' install. Make sure you make a backup before you do this otherwise you will lose all your aircraft configurations. It is recommended that you answer No to this dialog to carry out a update to your existing setup. None of your configuration will be overwriting.

On completion, you will need to close LINDA and do a little file editing. You need to open the \modules folder and delete the old LINDA.EXE file and rename the LINDAxxx.EXE (eg. LINDA401.EXE to LINDA.EXE).

You can now restart LINDA and use as normal.

Import Aircraft Module

New and updated LINDA aircraft modules (available on the AVSIM LINDA Community Download sub-forum) can be installed automatically.

Ensure the **SYNC TO SIM** is turned off (no orange box) and — Aircraft — (no aircraft) is selected.

Open the *Maintenance* page and click on the *Select Source Folder* under Import Aircraft Module. This opens an Explorer window so that you can select the downloaded aircraft module folder. Locate the download aircraft module folder (eg. Aerosoft Airbus 4.4) and select. The name, version and date of the module should be displayed and the *Import Module* button enabled. If the button is not enabled, click on the *Select Source Folder* button again and drill down one further level to the folder containing **\linda** and **\linda-cfg**.

Clicking on the *Import Module* will automatically install the selected module overwriting the existing module if already installed.

Backup/Restore Modules Folder

Before installing any new LINDA core software or aircraft modules it is strongly recommended that you make a backup of the \modules folder.

The Backup/Restore Modules Folder function will make a full copy of the \modules folder and contents including FSUIPC, LINDA, LINDA configurations and associated files.

Click on the *Select Backup Target* to define where you wish to place the backup. It is recommended that you create a new folder called *LINDA Backup* on your local or network drive. If a valid target folder is selected, the *Backup Modules Folder & LINDA* button will be enabled. Clicking on this button will create a new date/time stamped folder entitled LINDA-XXX-YYMMDDHHMM (eg. LINDA-294-1705041230) and copy the entire contents of \module folder. The XXX is the version of LINDA which created the backup.

Clicking on *Select Backup Target* button and selecting the date/time stamped backup folder (eg. LINDA-400-2005051730) will enable t*he Restore Modules Folder & LINDA* button. Clicking on this button will restore the **\modules** folder overwriting all files except **LINDA.exe**, **LINDA2.log** and **Fonts**. You have the option to delete the existing \modules folder before restoring.

A warning is displayed requiring you to close LINDA to do the final part manually. Exit LINDA and delete the *LINDA.exe* and rename the file *LINDA_XXX.exe* (eg. LINDA_4_0_0_21.exe) to *LINDA.exe*. *This step is not required if the version of LINDA has not changed from the version backed up.*

Then start LINDA and use as normal.

Manual Installation

LINDA can be installed manually by opening the LINDA installation folder and selecting the files and folders and dragging them into your FSUIPC7 installation folder. You then need to reply YES to all requests to overwrite the existing files.

ANNEX C - FSUIPC7 ADVANCED SETUP

Significant changes have been made to FSUIPC7 to exploit MSFS and users are guided to the FSUIPC7 documentation for details.

LINDA requires certain FSUIPC7 settings to be used to fully exploit these advanced capabilities.

FSUIPC7.INI

The following entries are recommended to be made to FSUIPC7.ini:

[General]

UseAirLocForProfiles=Yes

[WAPI]

EnableWAPI=Yes

Event and Macro Files

FSUIPC7 identifies Event (.EVT) and Macro (.MCRO) files found in the /FSUIPC7 root directory. These are listed in the FSUIPC7.INI file under the headings [EventFiles] and [MacroFiles] respectively. LINDA searches the [EventFiles] block to determine the FSUIPC Control code values. It may be necessary to Reload LUA Engine if there are multiple .EVT files present.

The Events are translated to a FSUIPC control number. The Event (.EVT) files control number is calculated according to the .EVT index value from the base value (32768) using this formula:

*Event Control value = 32768 + (event file index * 256) + event index*

Where *Event File Index* is the numbered position in the FSUIPC7 [EventFiles] block and *event index* is the position of the event in the .EVT file.

Some Events are derived using MobiFlight and require additional software to be purchased and installed. Such Events include "*MobiFlight.*" in the name. Under the LINDA Tracer / Events this is shortened to *"mb."* to save space.

Hvar Files

Hvar files contain a list of predefined Hvar events. The name of .hvar file is matched to the aircraft name using a subset of the FSUIPC profile name or the AirFile name. For example, A320.hvar will match to both the Asobo A320 Neo and FlyByWire A320 NX. It is important therefore that only one matching .hvar file is present.

Due to the way MSFS manages different liveries (as variations of the loaded aircraft), FSUIPC7 7.2.15 has been modified to allow the base aircraft AirFile name to be used for matching with the .hvar file. This requires the **UseAirLocForProfiles=Yes** switch to added to the [General] block of FSUIPC7.INI. For example, the FlyByWire_A320_NEO.hvar file will match the FBW A32NX base model and any livery variants.

ANNEX D - SAITEK RADIO PANEL AND MULTI PANEL CONFIGURATIONS

LINDA provides support for the Saitek Panels in one of 2 ways - using LUA or GUI. The GUI implementation is more responsive.

Users wishing to use the LUA Saitek Panel implementation should use the following configurations assigned to the Saitek Radio, Multi and Switch Panels either manually or cutting-and-pasting these lines into your config-hid.lua file. Users also need to untick the Saitek Panels checkbox on the LINDA Setup page and enable all panels on the Setup Joystick page.

Users wishing to use the GUI Saitek Panel implementation should only use the Switch Panel assignments below. In this case, the Saitek Panels checkbox on the LINDA Setup page should be ticked and the Radio and Multi Panels disabled on the Setup Joystick page.

These settings can also be found in file config-hid-saitek.lua in folder /linda/aircrafts/MSFS Default. Functions may be changes except for those beginning SAI_ which can be found in the Saitek Library file (lib-saitek.lua).

-- ## Radio Panel ## (06A30D050) #############

JSTK["06A30D050"][1]="SAI_RADIO1_MODE_com1"

JSTK["06A30D050"][2]="SAI_RADIO1_MODE_com2"

JSTK["06A30D050"][3]="SAI_RADIO1_MODE_nav1"

JSTK["06A30D050"][4]="SAI_RADIO1_MODE_nav2"

JSTK["06A30D050"][5]="SAI_RADIO1_MODE_adf"

JSTK["06A30D050"][6]="SAI_RADIO1_MODE_dme"

JSTK["06A30D050"][7]="SAI_RADIO1_MODE_xpdr"

JSTK["06A30D050"][8]="SAI_RADIO2_MODE_com1"

JSTK["06A30D050"][9]="SAI_RADIO2_MODE_com2"

JSTK["06A30D050"][10]="SAI_RADIO2_MODE_nav1"

JSTK["06A30D050"][11]="SAI_RADIO2_MODE_nav2"

JSTK["06A30D050"][12]="SAI_RADIO2_MODE_adf"

JSTK["06A30D050"][13]="SAI_RADIO2_MODE_dme"

JSTK["06A30D050"][14]="SAI_RADIO2_MODE_xpdr"

JSTK["06A30D050"][15]="SAI_RADIO1_toggle"

JSTK["06A30D050"][16]="SAI_RADIO2_toggle"

JSTK["06A30D050"][17]="SAI_RADIO1_kHz_inc"

JSTK["06A30D050"][18]="SAI_RADIO1_kHz_dec"

JSTK["06A30D050"][19]="SAI_RADIO1_MHz_inc"

JSTK["06A30D050"][20]="SAI_RADIO1_MHz_dec"

JSTK["06A30D050"][21]="SAI_RADIO2_kHz_inc"

```
JSTK["06A30D050"][22]="SAI_RADIO2_kHz_dec"

JSTK["06A30D050"][23]="SAI_RADIO2_MHz_inc"

JSTK["06A30D050"][24]="SAI_RADIO2_MHz_dec"



-- ## Multi Panel ## (06A30D060) #############

JSTK["06A30D060"][1]="SAI_MULTI_MODE_alt"

JSTK["06A30D060"][2]="SAI_MULTI_MODE_vs"

JSTK["06A30D060"][3]="SAI_MULTI_MODE_ias"

JSTK["06A30D060"][4]="SAI_MULTI_MODE_hdg"

JSTK["06A30D060"][5]="SAI_MULTI_MODE_crs"

JSTK["06A30D060"][6]="SAI_MULTI_increase_value"

JSTK["06A30D060"][7]="SAI_MULTI_decrease_value"

JSTK["06A30D060"][8]="Autopilot_MASTER_toggle"

JSTK["06A30D060"][9]="Autopilot_HDG_hold"

JSTK["06A30D060"][10]="Autopilot_NAV_hold"

JSTK["06A30D060"][11]="Autopilot_AIRSPEED_hold"

JSTK["06A30D060"][12]="Autopilot_ALT_hold"

JSTK["06A30D060"][13]="Autopilot_VS_hold"

JSTK["06A30D060"][14]="Autopilot_APR_hold"

JSTK["06A30D060"][15]="Autopilot_LOC_hold"

JSTK["06A30D060"][16]="Autopilot_ATHR_arm"

JSTKrl["06A30D060"][16]="Autopilot_ATHR_disarm"

JSTK["06A30D060"][17]="Flaps_decr"

JSTK["06A30D060"][18]="Flaps_incr"

JSTK["06A30D060"][19]="Elevator_Trim_dn"

JSTKrp["06A30D060"][19]="Elevator_Trim_dnfast"

JSTK["06A30D060"][20]="Elevator_Trim_up"

JSTKrp["06A30D060"][20]="Elevator_Trim_upfast"
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-- ## Switch Panel ## (06A30D670) #############

JSTK["06A30D670"][1]="Battery_on"

JSTKrl["06A30D670"][1]="Battery_off"

JSTK["06A30D670"][2]="Alternator_on"

JSTKrl["06A30D670"][2]="Alternator_off"

JSTK["06A30D670"][3]="Avionics_MASTER_on"

JSTKrl["06A30D670"][3]="Avionics_MASTER_off"

JSTK["06A30D670"][4]="ALL_FuelPumps_on"

JSTKrl["06A30D670"][4]="ALL_FuelPumps_off"

JSTK["06A30D670"][6]="DeIce_PITOT_on"

JSTKrl["06A30D670"][6]="DeIce_PITOT_off"

JSTK["06A30D670"][8]="Lights_PANEL_on"

JSTKrl["06A30D670"][8]="Lights_PANEL_off"

JSTK["06A30D670"][9]="Lights_BEACON_on"

JSTKrl["06A30D670"][9]="Lights_BEACON_off"

JSTK["06A30D670"][10]="Lights_NAV_on"

JSTKrl["06A30D670"][10]="Lights_NAV_off"

JSTK["06A30D670"][11]="Lights_STROBE_on"

JSTKrl["06A30D670"][11]="Lights_STROBE_off"

JSTK["06A30D670"][12]="Lights_TAXI_on"

JSTKrl["06A30D670"][12]="Lights_TAXI_off"

JSTK["06A30D670"][13]="Lights_LANDING_on"

JSTKrl["06A30D670"][13]="Lights_LANDING_off"

JSTK["06A30D670"][14]="Engine_stop"

JSTK["06A30D670"][15]="ENG1_magneto_R"

JSTK["06A30D670"][16]="ENG1_magneto_L"

JSTK["06A30D670"][17]="ENG1_magneto_Both"

JSTK["06A30D670"][18]="ENG1_start"

JSTKrp["06A30D670"][18]="ENG1_start"

JSTK["06A30D670"][19]="Gears_up"

JSTK["06A30D670"][20]="Gears_down"
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