V2.63 from V2.62

• Updated X-Plane window recognition to allow support for X-Plane 12.2.0-r1 +

V2.62 and earlier will not recognise the new version of X-Plane and will instead run with MSFS settings. This may cause unusual behaviours.

CL Background Process

V2.157 from V 2.156

• Support for external stall vibration disable shared memory instruction.

27 June 25

V2.62 from V2.59

- · Added current config file name to software title bar
- Added Latched/Non-Latched load disengage handling to allow auto load re-engage in some circumstances.
- Made available additional engine related offset definitions in the Offsets.ini file.
- Added A/P position reporting trapping to catch XPUIPC induced glitches in feeds used for axis position whilst A/P following is active.
- Added new option for X-Plane 12 A/P position following modes to use XP reported elevator position reporting directly. See Config Mngr Tab 4 Item 36
- Added A/P following option to use predefined elev/speed position curves. See Tab 4 Item 37. Mainly for Cirrus aircraft in MSFS.
- Added additional logging for A/P activity and loading activity.

CL Background Process

V2.156 from V 2.153

- Added support for A/P following glitch trapping.
- Tidy to standard elev trim direction settings.

BFF CL Configuration Manager

V2.25 from V2.23

Added Tab 4 Items 36 & 37

XPUIPCOffsets.cfg

To V3 from previous

Added substitute offset 0x2E98 Elevator Deflection in Radians – hardcoded offset

does show any data change.

 Added substitute offset - 0x0BFC Flaps handle position - hardcoded one doesn't work

10/1/25

V2.59 from V2.58

- Added code to trap Aileron Deflection feed discontinuities from XPUIPC which might introduce "knocks" into the aileron axis A/P following movements with X-Plane.
- Also added support for corrected XPUIPC Offset aileron deflection 0x2EA8 to return radians and make symmetrical in the XPUIPCOffsets file.

If you use X-Plane the above two changes may require your Aileron axis A/P following scaler (Config Mngr Tab 4 Item 3) to be adjusted upwards by a factor of approx x10). This should bring this setting inline with MSFS settings.

XPUIPCOffsets.cfg

To V2 from previous

 Added substitute for offset 0x2EA8 – Aileron Deflection - to return deflection in radians and make symmetrical. This brings it inline with the FSUIPC offset behaviour.

The XPUIPC hardcoded offset is assymetrical and returns what appears to be radians * 10 units.

Added Offsets file version offset 0x66F9.

10/9/24

V2.58 from V2.54

 Added support for migration of background process settings from separate Background.ini file into the aircraft.cfg settings file for CL Background V2.153+

All settings are now held in the selected aircraft.cfg file – there are no shared settings across files. Please use Config Mngr V2.23+ to migrate previous cfg files to the new format (just open and then save the file).

- On program startup previous session logs now moved to folder Previous in Logs folder – to remain available for debugging etc. NOTE the new Previous folder can be manually cleared out periodically.
- Added option to set override text font size in WinPos.ini file, eg [FONT]
 Size=8
- Current config file name now displayed in window title bar.
- Added logging of elevator and aileron command inputs in FS whilst A/P is engaged.
- Added further management of A/P following position feeds if FSUIPC/XPUIPC sends intermittent zero/null position.

CL Background Process

V2.153 from V 2.147

Background process settings now read from selected aircraft.cfg file. If the
background settings are not found in the current aircraft.cfg file then they will be
read from any existing Background.ini file in the Config Mngr folder, or a default set
will be used.

Please use Confgi Mngr V2.23+ IMPORT button to migrate previous cfg files to the new format..

- Added A/P follow elevator axis auto-trim for CTRM
- Added ability to invert auto-trim direction in event trim appears to run-away in wrong direction when A/P is engaged – see Config Mgr Tab 7 Item 16.
- Added further logging of CL card status changes to dsPIC_Abs & _Joy will be recorded as they happen.

BFF CL Configuration Manager

V2.23 from V2.22

• Shared (Maroon colour) settings are now held in each individual aircraft.cfg file and are no longer held in a shared Background.ini file.

As a consequence there are no shared settings now – each aircraft.cfg file contains all the required settings for the CL software.

IMPORTANT: To update your aircraft.cfg files to this new format use the IMPORT button in the Config Mngr app.

CL Controller App

V 1.23 from V1.21

- Added APUC mode = 8 for continuous running mode
- Removed BLDRV3 card firmware registration support not required.

3/9/24

CL Background Process

V2.147 from V 2.146

• Fixed bug on CTRM control offset bit reads.

XPUIPCOffsets.cfg

Added definition for custom offset 0x66F8 for NFS CTRM control.

15/6/24

V2.54 from V2.52

• Changes to support new Cirrus Trim Mode settings for Trim Servo Override and FSUIPC control offset.

CL Background Process

V2.146 from V 2.142

 Changes to support new Cirrus Trim Mode settings for Trim Servo Override and FSUIPC control offset.

BFF CL Configuration Manager

V2.22 from V2.21

• Added additional Cirrus Trim Mode settings Tab 7 Items 29 & 30

23/5/24

V2.52 from V2.51

- Added Cirrus Trim Mode (For R51B08 BLDRV3 firmware)
- Added setting to disable axis position feed inhibit when A/P is active.

CL Background Process

V2.142 from V 2.140

- · Changes to support new Cirrus Trim Mode
- Updated to latest FTDI FT260 libraries for CL SPU comms

CL Controller App

V 1.21 from 1.20

Updated to latest FTDI FT260 libraries for CL_SPU comms

BFF CL Configuration Manager

V2.21 from V2.10

- Added Cirrus Trim Mode settings Tab 7 Item 28
- Added Position Feed Inhibit Disable Tab 4 Item 35
- Fixed bug in Import feature which caused failure to find previous Control_Loader exes in selected import folder.

27/4/24

V2.51 from V2.50

• Fixed bug which prevents FS Trim adjustment using FS internal trim buttons when in Heavy Jet Mode. (Normally only CL trim buttons would be used in this mode but this keeps option for users to use FS internal trim buttons.)

CL Background Process

V2.140 from V 2.130

Changes to support new R51 BLDRV3 and R41 CL_SPU microcontroller firmware.
 This firmware adds card registration and unlock features to better support 3rd party manufacture of the cards.

CL Controller App

V 1.20 from 1.01

 Added support for new R50 BLDRV3 and R41 CL_SPU microcontroller firmware registration and unlock features. The new REGI button handles the card firmware report and unlock features.

Use these features to first read and report the unique ID's of the BLDRV3 cards to be unlocked, then to perform the card unlock using matching unlock keys provided by BFF Design Ltd. Once unlocked the cards will run without time limit. Whilst in their default locked mode the R51 cards will run with full function for 15 minutes demo period.

Other small code tidies.

23/3/24

V2.50 from V2.34

- Removed all registration requirements to simplify upkeep for existing users.
- Added some GUI branding options and small tidy up.

Background Process

V2.130 from V 2.125

• Added some GUI branding options and small tidy up.

CL Controller App

V 1.01 from 0.95

• Added some GUI branding options and small tidy up.

25/1/23

V2.34 from V2.31

- Bug fix on display of card internal force demand.
- Improved GUI LED function.
- Added user select option to use standard lower accuracy internal timers or higher accuracy timers which use more CPU resource.

This is via parameter Timer_CPU_Use=Low in the [Timer] section of the winpos.ini file. Set =High to use higher accuracy higher CPU use timers.

Timer_CPU_Use=Low is the default but may give lower loop speeds than =High. =High however will use more CPU resource.

· Added some additional logging data.

Background Process

V2.125 from V 2.121

 Added joystick hot button to centre rudder axis CL trim. This may be useful in some heavy jet setups.

The button is set in the Background.ini file using parameters in the [Parameters] section:

```
Rud_Trim_Cent_Stick=0
Rud_Trim_Cent_But=0
```

 Added user select option to use standard lower accuracy internal timers or higher accuracy timers which use more CPU resource.

This is via parameter Timer_CPU_Use=Low in the [Timer] section of the winpos.ini file. Set =High to use higher accuracy higher CPU use timers.

Timer_CPU_Use=Low is the default but may give lower loop speeds than =High. =High however will use more CPU resource.

 Fixed bug which prevented CL software from running at same time as CL Controller when 2 independent CL SPU's are present on same PC.

CL Controller App

V 0.95 from 0.92

 Added user select option to use standard lower accuracy internal timers or higher accuracy timers which use more CPU resource.

This is via parameter Timer_CPU_Use=Low in the [Timer] section of the winpos2.ini file. Set =High to use higher accuracy higher CPU use timers.

Timer_CPU_Use=Low is the default but may give lower loop speeds than =High. =High however will use more CPU resource.

- Fixed bug which prevented CL software from running at same time as CL Controller when 2 independent CL SPU's are present on same PC.
- Improved data logging for APUC Monitor. User choice now available to add new logging data to existing log files. Fixed bug which deleted some logs before APUC had finished.

19/4/21

V2.31 from V2.30

• Added experimental Rudder Auto-Trim (RAT) feature. This feature simulates the rudder auto-trim behaviour of Air Bus aircraft. If A/P is engaged whilst significant thrust imbalance and balancing rudder trim is present the feature will automatically adjust rudder position if airspeed or engine thrust changes whilst A/P is engaged.

See Config Mngr V2.10 Tab 4 Items 29-34.

 Added user settings for stick hard-over auto-release checks carried out by the software. See Config Mngr V2.10 Tab 6. Previously these force/position/duration checks were hard-coded and would cause loading auto-release if any axis was held at load near end of stroke for the trigger period. They are now user definable.

Background Process

V2.121 from V 2.118

- Changes to support RAT feature (see above)
- Added main axis posiiton adjustment when trim button keyboard override is active (
 -1 set as trim button joystick number). In this case holding the Alt key down will adjust main axis posiiton rather than trim axis position see Config Mngr Trim Tab.
- Fixed bug on CL_SPU card opening when CP_Ignore override is set. This is used
 to force the CL software to ignore any Co-Pilot assigtned CL_SPU card and allows
 the CL Controller software to drive the CP assigned CL_SPU separately for, for
 example, tiller operation. Previously the software was wrongly closing the I2C
 device associated with the Pilot card.

BFF CL Configuration Manager

V2.10 from V2.05

Added support for items listed above in main CL Software section

See Tabs 4 & 6

CL Controller App

V 0.92 from 0.91

• Cleaned up CL_SPU close functions when two CL_SPU cards are present.

http://bffsimulation.com/CL_Controller.php

27/11/20

V2.30 from V2.21

• Adjusted FSUIPC detection to support new FSUIPC V7

Background Process

No change

CL Controller App

V 0.91 from 0.8

 Added APUC Monitor feature. This feature allows logging of the APUC movement process to support flight control hardware debugging. This needs BLDRV3 cards with firmware R50 Build 84 or later to operate.

http://bffsimulation.com/CL_Controller.php

20/8/20

V2.21 from V2.18

- Improved parsing of Sim-A A/P offset to better identify CWS mode.
- Improved registration key code to handle changes to recent Windows OS names.
- Improved display of force components in Show_Elev etc windows to better reflect the force limits present in the on-board calcs carried out on the driver cards.

Background Process

V2.118 from V 2.114

- Bug fix on handling of Neutral Position offset on elevator axis. The force neutral position and the shifted zero displacement position were not aligning properly. (Config Mngr Tab 5 Item 9)
- Added additional logging on USB comms

CL Controller App

V 0.8 from 0.5

- Added parameter Force_CL_SPU to ini file to enable specified CL_SPU card to be connected if both Pilot and Co-Pilot cards are present. Force_CL_SPU=1 chose Pilot card, =0 chose Co-Pilot card.
- Alt+D keypress displays new data window showing the CL_SPU return bytes.
- Added Parameters 20 and 21 to EEPROM settings. These define the new two stage spring rate response available in recent drive card firmware. This can be used to set soft stops, or a uni-direction response mode such as for toe brakes.
- Various small code tidying.

http://bffsimulation.com/CL Controller.php

6/2/20

V2.18 from V2.16

Corrected bug in reading aircraft COG data from cfg file at startup for X-Plane. This
affected the Alpha loading component.

Background Process

V2.114 from V 2.113

 Improved Alpha and Beta loading effects in event of stall – previously AoA could rise unrealistically high during extreme stall which affected stall loading. AoA is now limited to a more realistic maximum.

BFF Driver Test Application

V 1.21 from V1.2

Corrected bugs in position following mode.

CL Controller App

V0.5 First beta release. See web page for more details -

http://bffsimulation.com/CL Controller.php

8/7/19

V2.16 from V2.15

 Added support for Heli-mode in FSX/P3D. Previously this was available only for X-Plane.

Background Process

V2.113 from V 2.112

- Added support for items listed above in main CL Software section.
- Added specialised parameter CP_Ignore to Background.ini file. When set =1 this instructs the CL software to ignore any CL_SPU_USB card which is jumper set as the Co-Pilot station.

2/4/19

V2.15 from V2.14

- Added 2nd elevator trim buttons see Tab 7. This allows two pairs of buttons to be assigned for elevator trim eg pilot and copilot trim buttons.
- Added parameters to give user control of the rate and resolution of axis position data write to FSUIPC. See Tab 5 Items 27 & 28. This allows the user to reduce the rate and resolution at which position is written to balance control response and sim resource consumption.
- Fixed bug reading parameter PortS from cfg files. Previously a blank value read was not automatically corrected it now is.

Background Process

V2.112 from V 2.111

Added support for items listed above in main CL Software section

BFF CL Configuration Manager

V2.05 from V2.04

Added support for items listed above in main CL Software section

See Tab 7 Items 26 & 27 Tab 5 Items 27 & 28

21/2/19

V2.14 from V2.1

 Added telemetry UDP output and UDP Data Receiver application. This allows live axis position and force data to be recorded. See Tab 8 in Config Mngr V2.04+

NOTE this feature is active for commercial-use registrations only.

- Added APUC Go-Ahead joystick button option. This allows calibration movement go-ahead to be given without access to the CL software GUI. See Tab 6 Items 19&20 of the Config Mngr.
- Added experimental A2A Comanche A/P mode see Cnfig Mngr Tab 5 Item 22
- Added offsets.in file containing FSUIPC offsets mappings used in the CL software.
 This can allow custom offsets to be used.
- CL software now runs whilst waiting for active cards, previously the software would wait for active cards before proceeding. This allows the software to be operated without hardware present.

Background Process

V2.111 from V 2.009

Added support for items listed above in main CL Software section

BFF CL Configuration Manager

V2.04 from V2.02

Added support for items listed above in main CL Software section

See Tab 4 Item 28 Tab 5 Item 22 Tab 6 Items 19 & 20 Tab 8 Items 7 to 11

V2.1

First release

Background Process

V 2.009

First release

BFF CL Configuration Manager

V2.02

First release

BFF Driver Test Application

V 1.2

First release

31/10/18