



PA-38 TOMAHAWK



ELECTRONIC FLIGHT BAG (EFB)

Just Flight

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Electronic Flight Bag (EFB)

This manual is specifically for the Electronic Flight Bag (EFB) installed in the Just Flight and Thranda Design PA-38 Tomahawk for X-Plane 12.

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EFB OVERVIEW

The PA-38 Tomahawk for X-Plane 12 is equipped with a tablet computer that houses the controls of a vast array of configuration options to customise your experience.

Hidden clickspots in the 3D cockpit and on the tablet's bezel allow you to place the tablet on either side of the windscreen. Clicking on the left windscreen clickspot when the tablet is in that position will hide the tablet entirely.



The bezel around the tablet has four clickspots:



1. Left-click the left bezel to toggle the 2D pop-up window of the tablet. This can be 'popped out' and moved to a different monitor if desired.
2. Left-click and drag the top bezel to rotate and tilt the tablet.
3. The Home button can be used to return to the Home screen. Alternatively, with an app in the EFB open, you can click on the app name at the top left corner of the page to return to the Home screen.
4. Left-click the bottom bezel to cycle the tablet through its various cockpit positions.

The Home page displays a list of apps that are available for use. Left-clicking on one of the app icons will open the respective app. The brightness can be adjusted by using the setting in the top right-hand corner, using the mouse wheel to change the values between 0.00-1.00.



AIRCRAFT OPTIONS

Selecting the AIRCRAFT OPTIONS icon on the Home page will launch the Aircraft Options app, which allows you to control various aircraft options via the toggles or on the aircraft schematic. These options include:

PILOT DOOR CLOSED/OPEN – opens and closes the pilot side door.

COPILOT DOOR CLOSED/OPEN – opens and closes the co-pilot side door.

PITOT COVER – toggles the pitot probe covers.

TIE-DOWN L – toggles the left wing tie-down, preventing aircraft movement.

TIE-DOWN R – toggles the right wing tie-down, preventing aircraft movement.

TIEDOWN T – toggles the tail tie-down, preventing aircraft movement.

CHOCKS N – toggles the nose-wheel chock, preventing aircraft movement.

CHOCKS L – toggles the left main wheel chock, preventing aircraft movement.

CHOCKS R – toggles the right main wheel chock, preventing aircraft movement.

PARKING BRAKE – toggles the parking brake.

TOW – toggles the tow bar on the nose gear.

ALL STATIC ELEMENTS – toggles all of the above features on/off.

NAV LIGHT L/R/TAIL – switches on/off the NAV lights.

LANDING LIGHT – switches on/off the landing light.

BEACON – switches on the beacon light.

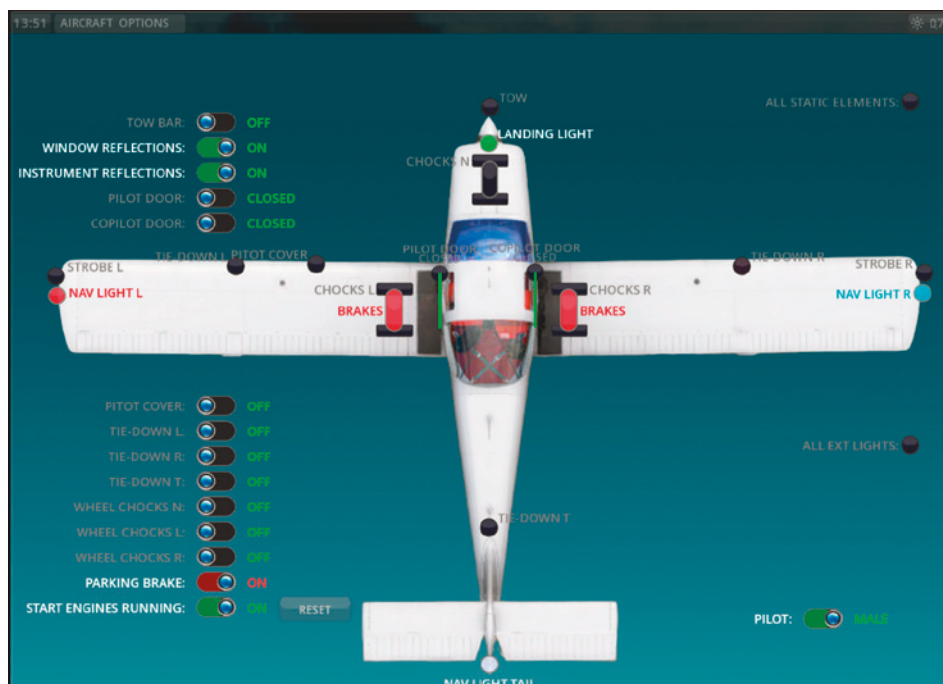
ALL EXT LIGHTS – switches on all external lights.

WINDOW REFLECTIONS – toggles the window reflections on/off.

INSTRUMENT REFLECTIONS – toggles the reflective glass faces of the individual instruments on/off.

PILOT: MALE/FEMALE – swaps between the male and female pilot models in the cockpit.

START ENGINES RUNNING – determines whether the engine will be running when at the start of the flight (reset to confirm).



WEIGHT & BALANCE

Left-clicking the WEIGHT & BALANCE icon on the Home page will launch the Weight & Balance app, which allows you to control the aircraft's fuel load and payload.

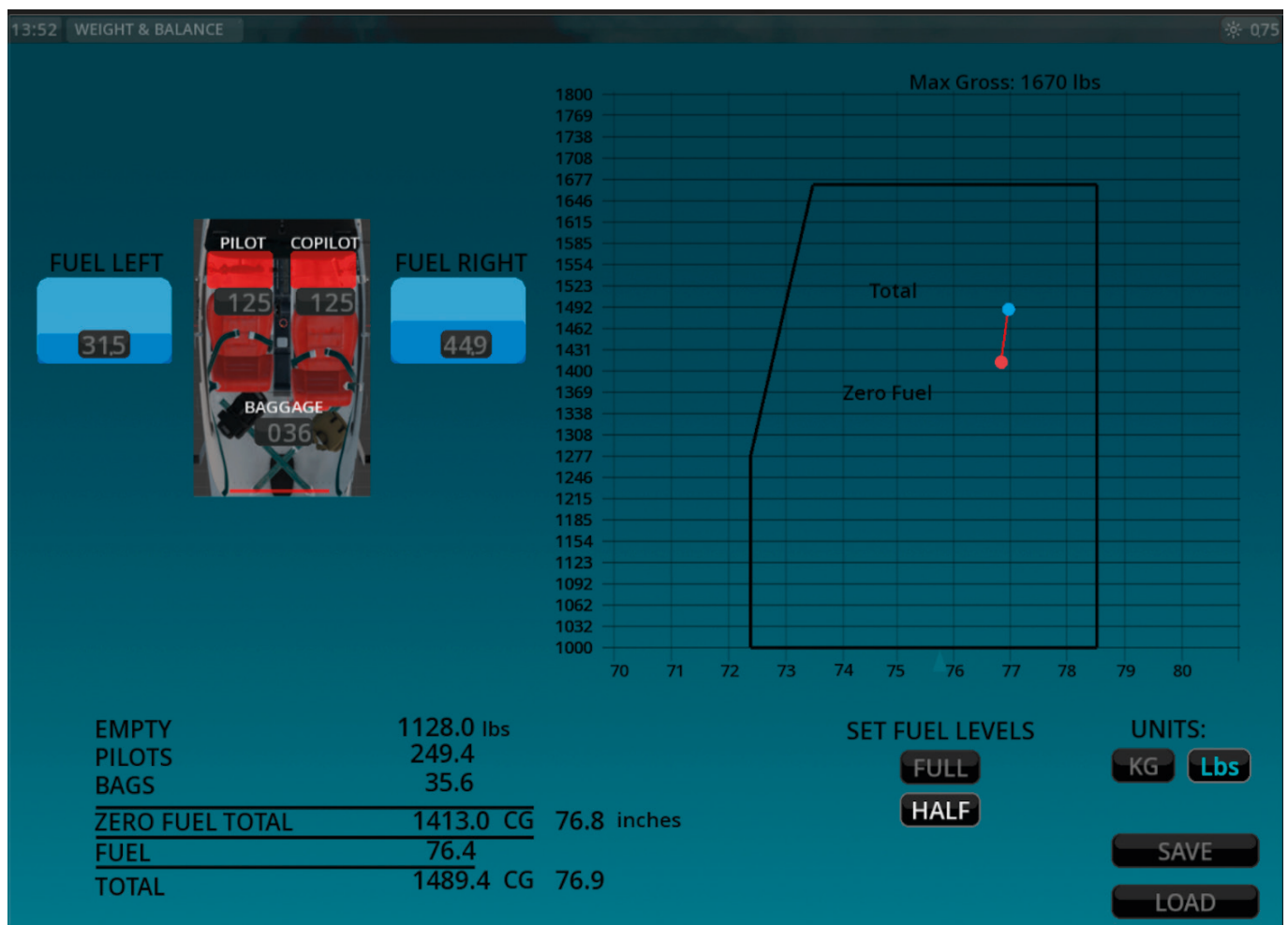
This app opens the X-Plane Weight & Balance configuration page which allows you to control the load in the aircraft via the aircraft image on the left side of the page. It also displays a loading envelope graph and loading data which update automatically based on the aircraft's current fuel and payload.

The weight in each seat and in the baggage area can be adjusted by using the mouse scroll wheel to adjust the weight. Changes are applied to the aircraft immediately.

Fuel levels in each tank can be set in the same way or by clicking the FULL and HALF buttons to set the total fuel level.

The displayed units can be toggled between kilograms and pounds in the lower right corner.

Clicking the SAVE button will save the current configuration settings to disk. Clicking the LOAD button will load the previously saved configuration.



INSTRUMENT OPTIONS

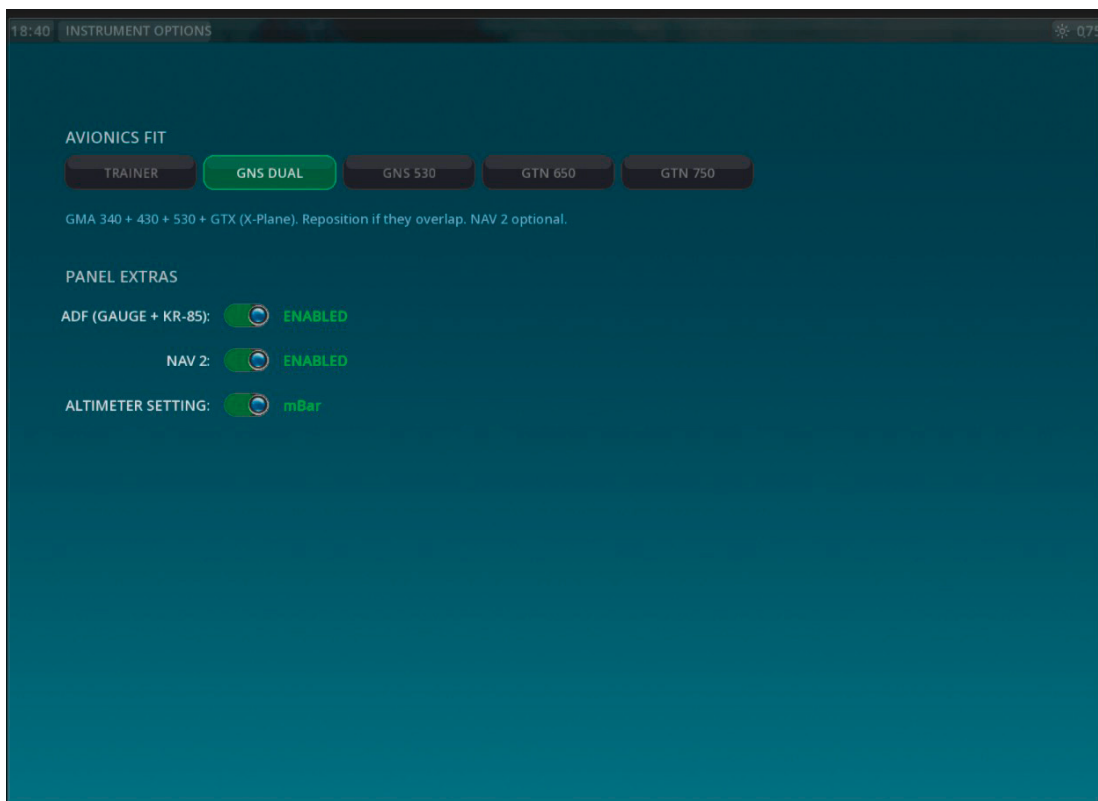
Left-clicking the INSTR OPTIONS icon on the Home page will launch the Instrument Options app.

AVIONICS FIT – toggles between the different avionics configurations available. See the AVIONICS CONFIGURATIONS section in the main Operations Manual for further details.

ADF (GAUGE + KR-85) – toggles the KR-85 ADF and associated gauge.

NAV 2 – toggles on/off the NAV 2 CDI.

ALTIMETER SETTINGS – toggles the Kollsman window units (inHg/mBar) on the altimeter.



ENGINE CONFIGURATION

Left-clicking the ENGINE CONFIG icon on the Home page will launch the Engine Configuration app, which allows you to view data on the aircraft's electrical system and engine as well as providing various options such as enabling advanced engine simulation.

Clicking the REFILL button will automatically fill all fuel tanks and clicking the RECHARGE button will top up the battery voltage.

In addition to supporting X-Plane's own failures system, our simulations include a few of the more common failures found on these aircraft:

Spark plug fouling – this can occur if the engine is kept at low RPM for prolonged periods and symptoms include rough running with a subsequent increase in cockpit vibration. If fouling occurs, increase engine RPM and aggressively lean the mixture. This can be done at low power settings on the ground without harming the engine.

Vapour lock – this can occur for up to approximately 30 minutes after the engine has been shut down. After shutdown, fuel vapour can remain within the fuel lines as the result of high temperatures. This vapour disrupts the operation of the fuel system and creates an incompatible mix of air and fuel, so you might need a few attempts at starting the engine before ignition occurs. This problem is more likely to occur when operating in high temperatures. If vapour lock is suspected, operate the electric fuel pump for 20-30 seconds with the mixture in the idle cut-off position, then repeat the engine starting attempt.

Battery failure – the battery can be quickly drained, either by leaving electrical systems switched on without the engine (and therefore alternator) running, or by repeated attempts to start the engine. The battery can be recharged using the RECHARGE button.

These failures can be enabled/disabled by clicking on SIMULATE SPARK PLUG FOULING AND VAPOUR LOCK.

The symbol in the upper right corner allows this page to be popped out into its own separate 2D window.

AUTO FUEL SELECTOR – this system will only function when either the left or right wing tank is selected and will automatically swap to the other wing tank every 20 minutes. The automatic fuel selector does not take effect when the centre main tank is selected.



STATIC LIVERIES

Left-clicking the STATIC LIVERIES icon on the Home page will launch the Static Liveries app, which allows you to cycle through and apply the various liveries that are included in the 'Liveries' folder of the aircraft.

Scrolling the mouse wheel over the aircraft image or clicking the PREV and NEXT buttons at the bottom of the page cycles through the available liveries, and clicking APPLY will load the selected livery. There may be a pause of several seconds during loading.

The DIRT value can be adjusted by hovering the mouse cursor over the value and scrolling the mouse wheel. Clicking on the value toggles it between 0 and 100. This adjusts how clean or dirty the exterior of the aircraft appears to be. The SCRATCHES value adjusts the level of wear and tear which is applied to the paintwork.

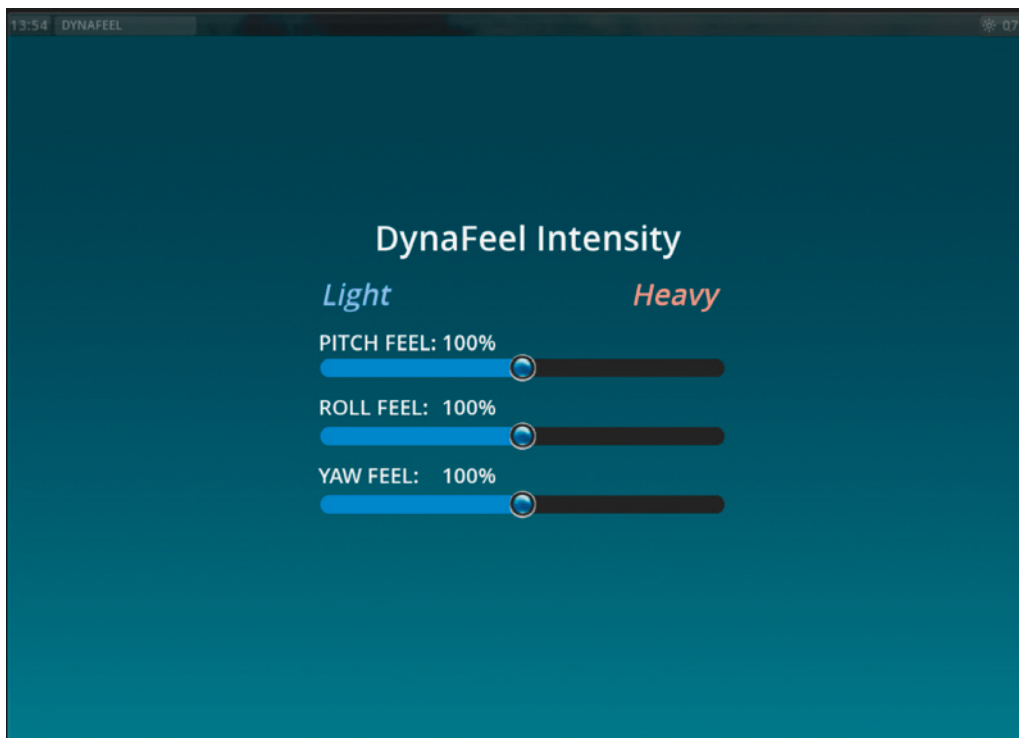


THRANDA DYNAFEEL

Thranda's DynaFeel system simulates the 'heaviness' of the controls in flight, while still allowing you to deflect the controls fully. X-Plane already allows us to limit the total control deflections as speed increases, which helps simulate the 'heaviness' of the controls in the real aircraft, but this limitation means it is not possible to reach full control deflection at speed, which affects the ability to perform slips and accelerated stalls.

The DynaFeel system dynamically adjusts the rate at which the controls deflect, based on airspeed and how much the control is deflected. This means that the controls will feel light and responsive at low speeds and with small deflections, but will get progressively heavier as airspeed increases.

The controls in the pop-up control the intensity of this effect and can be adjusted in real time as you fly. The aircraft has been carefully tuned to respond correctly at 100%, but the intensity can be adjusted anywhere between 0% and 200%. 0% disables the system entirely and causes the controls to always feel light, while 200% will have an exaggerated heavy effect.



LOG BOOK

Left-clicking the LOG BOOK icon on the Home page will open the Log Book app, which allows you to view your recently logged flights in the simulator. This mirrors X-Plane 12's own log book window.

DATE	FROM	TO	AIRCRAFT	REG	TIME	LDG	NIGHT	IFR	XC
2026-09-04	EGCM	EGCM	JF_PA_38_Tomahawk	G-BNKH	0.3h	0	0.0h	0.0h	0.0h
2026-09-04	EGCM	EGCM	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-09-03	EGCM	EGCM	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-09-02	EGTG	EGTG	JF_PA_38_Tomahawk	G-BNKH	0.4h	0	0.0h	0.0h	0.0h
2026-09-02	EGTG	EGTG	JF_PA_38_Tomahawk	G-BNKH	0.2h	0	0.0h	0.0h	0.0h
2026-09-02	EGGD	EGGD	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-09-02	EGGD	EGGD	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-09-02	EGGD	EGGD	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-09-01	EGGD	EGGD	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-09-01	EGGD	EGGD	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-09-01	EGGD	EGGD	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-09-01	EGGD	EGGD	JF_PA_38_Tomahawk	G-BNKH	0.6h	0	0.0h	0.0h	0.0h
2026-08-26	LGKR	LGKR	F35_732_TwinJet	C-IGAR	0.1h	0	0.0h	0.0h	0.0h
2026-08-26	LESB	LESB	F35_732_TwinJet	C-IGAR	0.1h	0	0.0h	0.1h	0.0h
2026-08-26	LEPA	LESB	F35_732_TwinJet	C-IGAR	0.2h	1	0.0h	0.0h	0.1h
2026-08-26	EGNJ	EGNJ	JF_PA_38_Tomahawk	G-BNKH	0.3h	0	0.0h	0.0h	0.0h
2026-08-26	EGNJ	EGNJ	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-08-25	EGNJ	EGNJ	JF_PA_38_Tomahawk	G-BNKH	0.3h	0	0.0h	0.0h	0.0h
2026-08-24	LEMG	LEMG	JF_Robin_DR400	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-08-24	LEMG	LEMG	JF_Robin_DR400	G-BNKH	0.2h	0	0.0h	0.0h	0.0h
2026-08-24	LEMG	LEMG	JF_Robin_DR400	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-08-24	LEMG	LEMG	JF_PA_38_Tomahawk	G-BNKH	0.1h	0	0.0h	0.0h	0.0h
2026-08-22	LEMG	LEMG	B742_PW_Felis_XP12	FP742	0.1h	0	0.0h	0.0h	0.0h
2026-08-22	LEMG	LEMG	Baron_58	N45XS	0.1h	0	0.0h	0.0h	0.0h
2026-08-22	LEMG	LEMG	B742_PW_Felis_XP12	FP742	0.1h	0	0.0h	0.0h	0.0h
2026-08-21	LEPA	LEPA	737_80NG	B738	0.1h	1	0.0h	0.0h	0.0h
2026-08-21	LEMG	LEMG	F35_732_TwinJet	C-IGAR	0.2h	1	0.0h	0.0h	0.0h
2026-08-21	EGQS	EGQS	737_80NG	B738	0.2h	0	0.0h	0.0h	0.0h

CHECKLIST

Left-clicking the CHECKLIST icon on the Home page will launch the Checklist app, which will open an interactive checklist covering the aircraft's procedures.

Each item can be clicked to turn it green as a visual reminder that it has been completed.

The arrow buttons at the bottom of the page navigate to the previous and next pages.

The screenshot shows a digital checklist application titled "Pre-Flight". The interface has a dark teal background with white text. At the top left, a status bar shows "13:56" and "CHECKLIST". At the top right, it shows a signal strength icon and "Q75". The checklist consists of 24 items, each with a checkbox on the left and a status on the right. Items 1 through 12 are checked (checkboxes are green), while items 13 through 24 are unchecked (checkboxes are white). The status for each item is listed on the right side of the checklist. At the bottom, it says "PAGE 1/1" and has a right-pointing arrow button.

Item	Status
1. Parking brake -	SET
2. Avionics -	OFF
3. Mixture -	IDLE CUT-OFF
4. Ignition -	OFF
5. Master switch -	ON
6. Fuel quantity gauges -	CHECK
7. Alternator warning light -	CHECK
8. Master switch -	OFF
9. Flight controls -	CHECK OPERATION
10. Flaps -	CHECK OPERATION
11. Flap and aileron -	CHECK
12. Wing tip and lights -	UNDAMAGED
13. Tie-down -	REMOVED
14. Fuel tank -	CHECK LEVEL
15. Chocks -	REMOVED
16. Towbar -	REMOVED (NOSE GEAR)
17. Oil -	CHECK LEVEL
18. Propeller -	GOOD CONDITION
19. Air inlets -	CLEAR
20. Landing light -	CHECK
21. Fin -	CHECK CONDITION
22. Rudder -	CHECK CONTROLS
23. Stabiliser and elevator -	CHECK CONTROLS
24. Tail cone -	CHECK CONDITION

PAGE 1/1

GROUND HANDLING

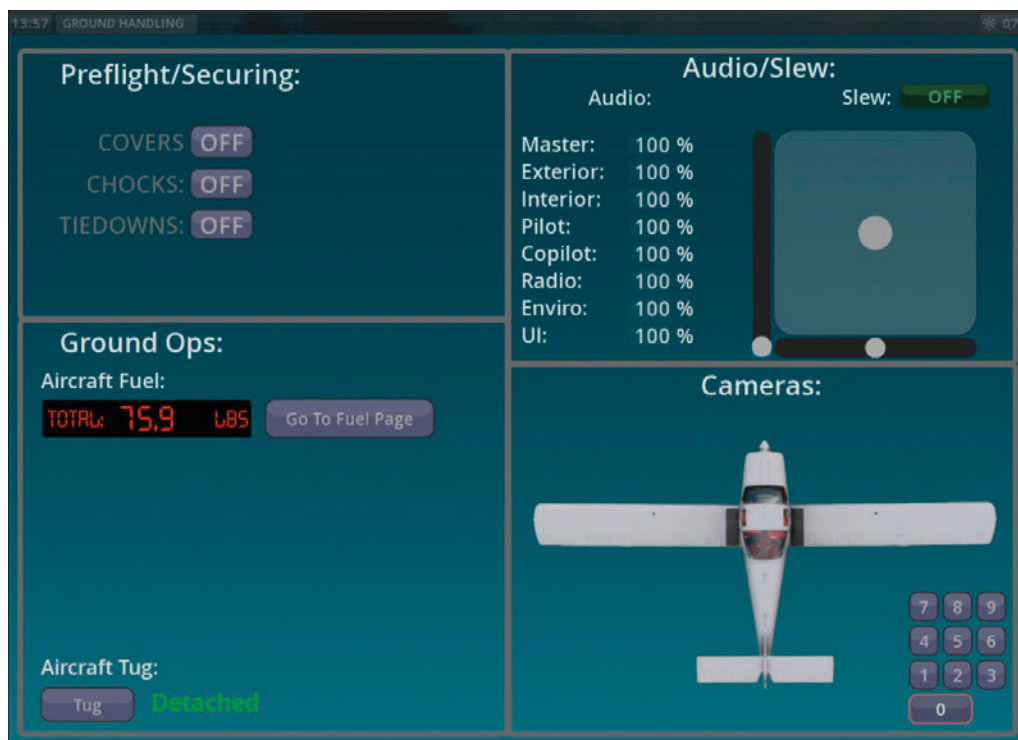
Left-clicking the GROUND HANDLING icon on the Home page will launch the ground handling app. It contains several sections:

Preflight/Securing – allows you to toggle on/off the pitot cover, chocks and tie-downs.

Ground ops – allows you to monitor fuel quantity, toggle and connect to the ground power unit and attach the aircraft tug.

Audio/Slew – allows you to change sound volume levels and slew the aircraft in yaw, altitude and position.

Cameras – allows you to swap between the pre-saved camera positions.



DYNAMIC LIVERIES

Liveries have long been an enjoyable and accessible way for users to express creativity in flight simulation, but modern tools and complex workflows have made it harder for casual users to get involved. To make livery creation easier again, the **Dynamic Liveries** app was developed and offers an intuitive, non-technical way to customise aircraft paint schemes.

Left-clicking the DYNAMIC LIVERIES icon on the Home page will launch the Dynamic Liveries app.

A visual preview of the current scheme is prominently displayed in the window.

Left-clicking NEXT and PREV in the Template field allows you to toggle between two different templates: WAVES and REGAL.

The paint scheme is divided into multiple different sections of the aircraft, which are listed on the right side of the page. Clicking on a section will select it, indicated by a blue highlight.

Once a section is selected, the colours can be adjusted via the colour wheel or the 'R', 'G' and 'B' clickspots on the left by left-clicking and using the mouse scroll wheel. A preview of the colour is shown in the adjacent large square. The selected colour can be copied and pasted into another section by using the buttons next to the preview.

Additionally, the metallicity and roughness of the section can be set via the 'Metal' and 'Rough' clickspots to the right of the colour preview. For best results we recommend keeping the 'Metal' values less than about 26 for non-metallic materials and above about 245 for metallic materials.

The REGISTRATION No field allows you to select the registration / tail number for editing, just like the above items. Additionally, the text field can be used to edit the current registration / tail number. Press the 'Enter' key on your keyboard after typing in the registration and then click APPLY to set it.

The 'Dirt' value can be adjusted by hovering your mouse cursor over the value and scrolling the mouse wheel. Clicking on the value toggles it between 0 and 100. This adjusts how clean or dirty the exterior of the aircraft appears to be.

At the bottom of the page there are several options:

Delay – controls how many frames X-Plane waits between creating texture files. A higher delay helps prevent errors and gives the simulator time to process tasks smoothly. Most systems work best with a delay of over 100 frames. Lowering it may speed things up but could cause issues – adjust with caution!

CPU/GPU – controls whether texture processing is handled by your computer's CPU or GPU. While GPU processing is usually faster, it can sometimes cause issues with certain graphics systems such as Zink or Vulkan/Metal. If problems occur, switching to CPU processing is recommended.

AA – controls the amount of Anti Alias applied to the livery, from 0-4.

Texture Size – allows you to control the resolution of the new livery output:

- 8k – highest quality, large file size.
- 4k – balanced quality and performance.
- 2k – lower quality, better FPS.
- 1k – fastest export, ideal for a quick preview.

RGB Mode – swap between RGB mode 0-100 or standard 255 scale.

Four options at the bottom right of the page allow you to add, save and remove liveries:

SAVE – saves any changes you have made to the current livery configuration.

-DEL – deletes the current livery preview configuration from the list.

+ADD – adds a new blank livery index to the end of the list.

COPY PR – copies the current livery configuration into a new livery index at the end of the list.

Other controls allow you to cycle to the previous (< PREV) and next (NEXT >) livery configurations in the list.

Clicking APPLY at the bottom of the page will save the current livery configuration and generate the paint scheme. Please note this can take up to a few minutes due to the large size of the livery textures that must be generated. Between steps, pop-up windows will become visible, giving useful information about the process, and optional settings.

After applying a dynamic livery successfully, a pop-up window will prompt the user to save or discard the dynamic livery as a static livery. If 'Yes' is selected, the plugin will automatically create a sub-folder in the 'liveries' folder, give it the name of the tail number given to this livery, and store the textures in their appropriate sub-folder. X-Plane may show a warning when you change planes or exit the simulator, due to issues with registering new liveries mid-flight. This warning is harmless and can be resolved by simply restarting the simulator.

The list of dynamic livery configurations is saved in the X-Plane 12 aircraft folder in the following file directory: '...\liveries\DynamicLiveryResources\DynLivPresets.json'.



FLIGHT COMPUTER

Left-clicking the FLIGHT COMPUTER icon on the Home page will launch the Flight Computer app. This lets you view a variety of information:

- Outside air temperature (OAT) – Celsius and Fahrenheit
- Groundspeed (GS) – nautical miles per hour, statute miles per hour and kilometres per hour
- Endurance – hours and minutes
- Range – nautical miles, statute miles, kilometres
- Nautical miles per gallon and statute miles per gallon
- Density altitude and pressure altitude (feet)
- TAS – true airspeed (knots), track (degrees) and drift (degrees)
- Fuel flow – kilograms/litres/pounds/gallons per hour
- Fuel used – kilograms/litres/pounds/gallons
- Headwind component (knots)
- Crosswind component (knots)

The total fuel burn can be reset by clicking on the RESET FUEL BURN button.

The symbol in the upper right corner allows this window to be popped up into its own separate 2D window.

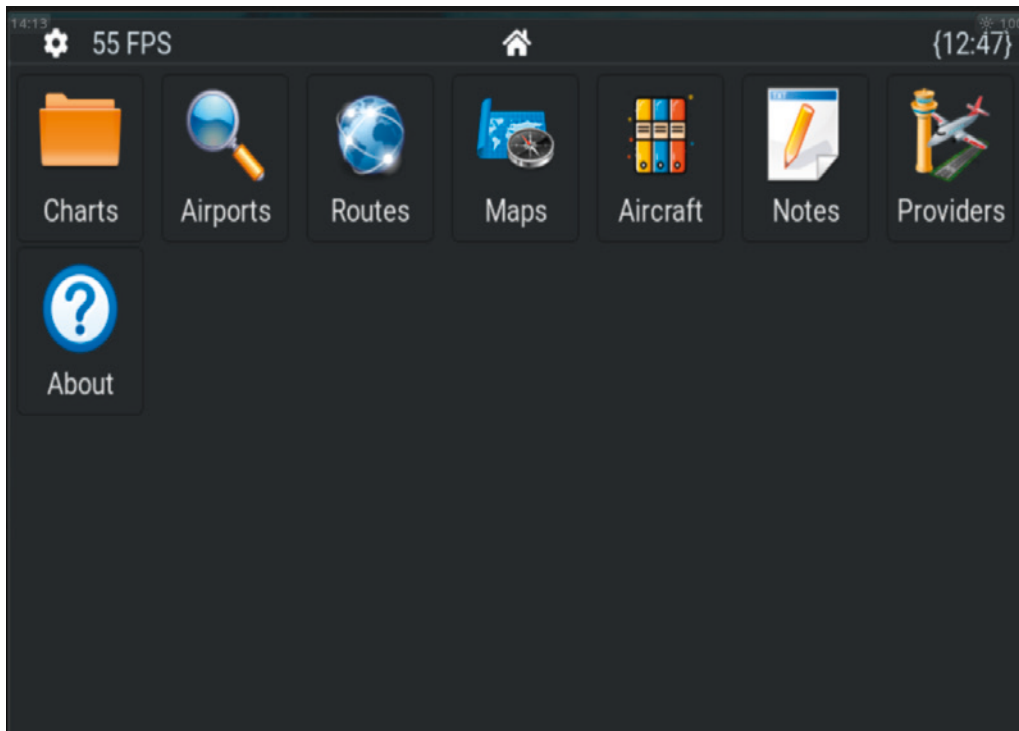
The screenshot shows the Flight Computer app interface with a dark blue background and white text. The top status bar displays '13:59' and 'FLIGHT COMPUTER' on the left, and a window icon and '075' on the right. The main display area contains the following data:

OAT:	14.9°C	58.9°F			
GS:	0 (KTS)	0 (MPH)	0 (KPH)		
ENDURANCE (H/M):	10:44				
RANGE:	0 NM	0 SM	0 KM		
NMPG:	0.0	SMPG:	0.0		
DALT:	-83 FT	PRESS ALT:	30 FT		
TAS:	0 KTS	TRACK:	054 °	DRIFT:	+0 °
FUEL FLOW:	3.2 KG/HR	4.4 L/HR	7.1 Lbs/HR	0.97 GAL/HR	
FUEL USED:	0.0 KG	0.0 L	0.00 Lbs	0.00 GAL	
HEADWIND COMPONENT:	0.0 KTS				
CROSSWIND COMPONENT:	0.0 KTS				

At the bottom, there is a red button labeled 'RESET FUEL BURN'.

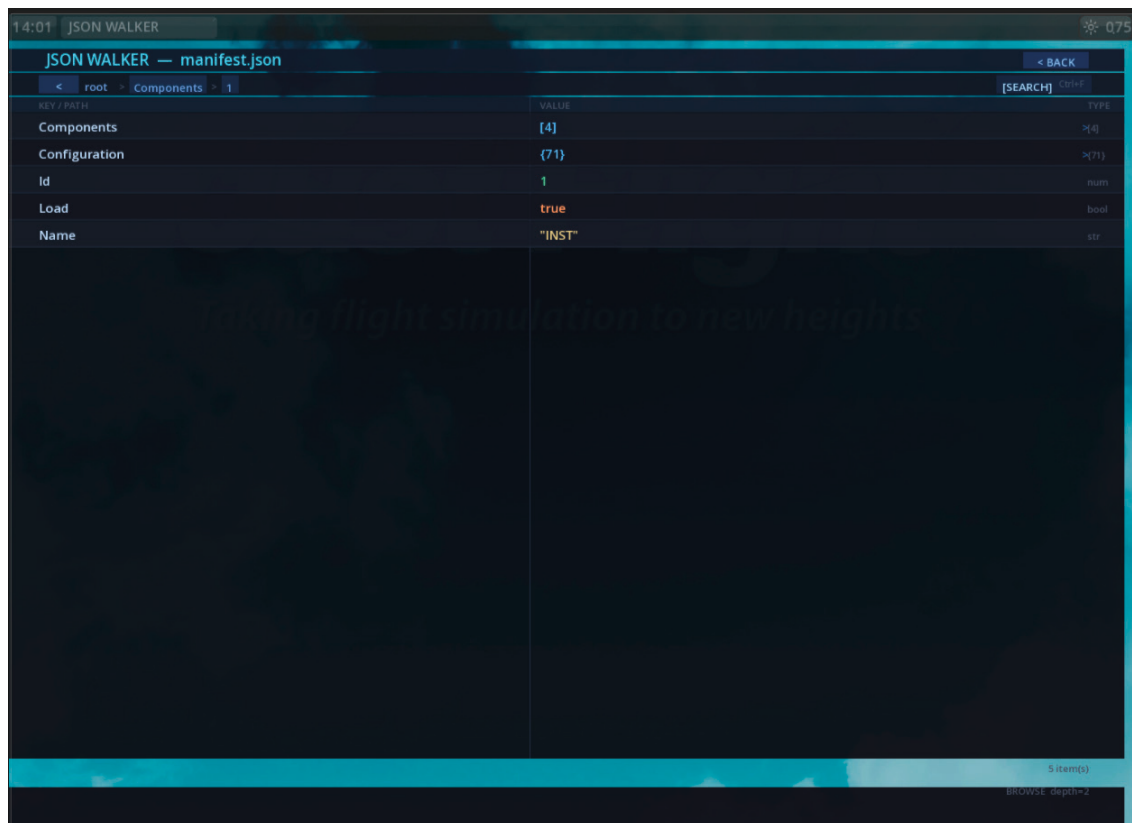
AVITAB (IF INSTALLED)

If the AviTab plugin has been installed in the user's X-Plane 'plugins' folder, an additional app will become available on the Home page, allowing access to the entire AviTab feature set.



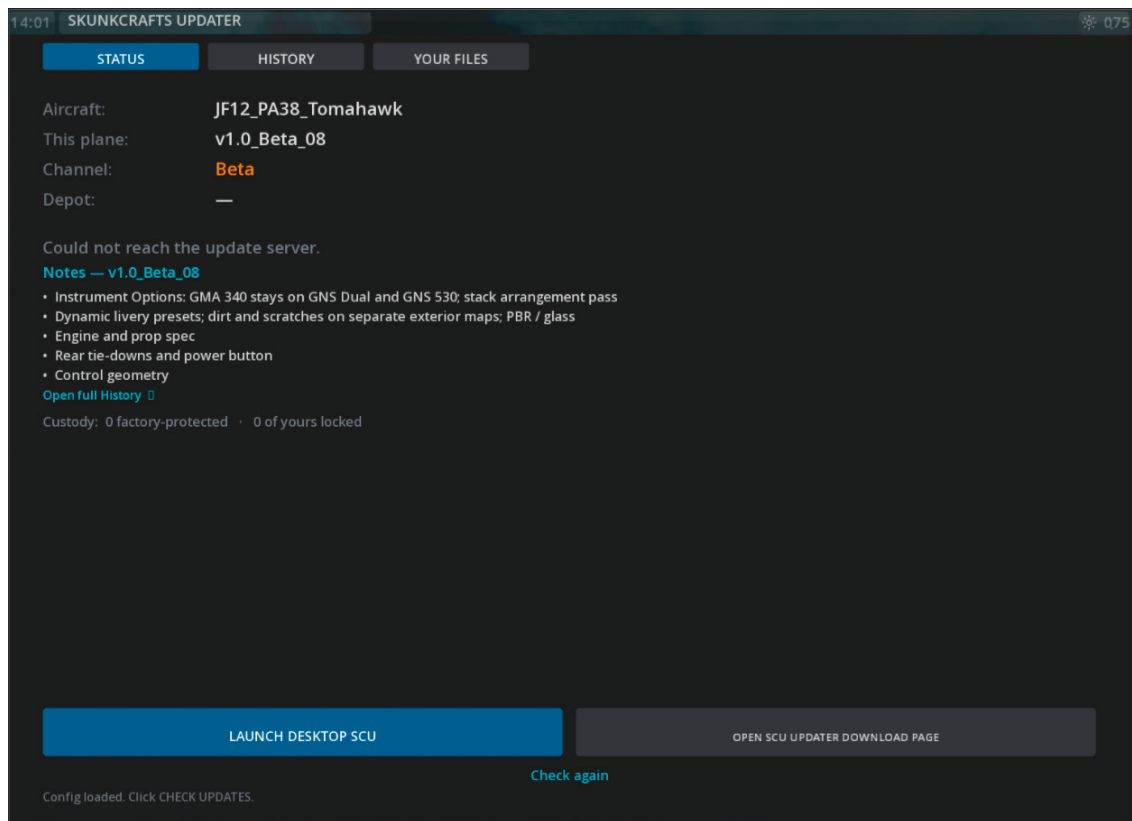
JSON WALKER

This allows you to browse and edit configuration files directly in the sim without the need to open external text editors.



SKUNKCRAFTS UPDATER

This is a limited version of the SkunkCrafts updater which allows you to check for and to download product updates.



CREDITS

Just Flight

Project management	Mark Allison, John Hodgson, Martyn Northall
Manual	Mark Allison, John Hodgson
Design	Fink Creative

Thranda Design

Project management	Daniel Klaue
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