AVRO VULCAN

B MK. 2, K.2 & MRR

ELECTRONIC FLIGHT BAG (EFB)

Just Flight™

AVRO VULCAN B MK. 2, K.2 & MRR

Electronic Flight Bag (EFB)

Please note that this manual is specifically for the Electronic Flight Bag (EFB) installed in the Just Flight Vulcan B Mk. 2, K.2 & MRR add-on for Microsoft Flight Simulator.

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EFB OVERVIEW

The aircraft is equipped with a tablet computer which is divided into two main areas:

1. An ‘Electronic Flight Bag’ (EFB) which can be used for viewing your simBrief operational flight plan (OFP), monitoring your position on a moving map, viewing your Navigraph charts and making notes.
2. An Aircraft screen for controlling various aircraft options and payloads.

The tablet can be switched on/off with the physical ‘Home’ button on its right bezel. The ‘Home’ button can also be used to return to the EFB menu from the Aircraft screen.

The EFB can be hidden by using a clickspot on the cupholders on the left and right cockpit side walls.

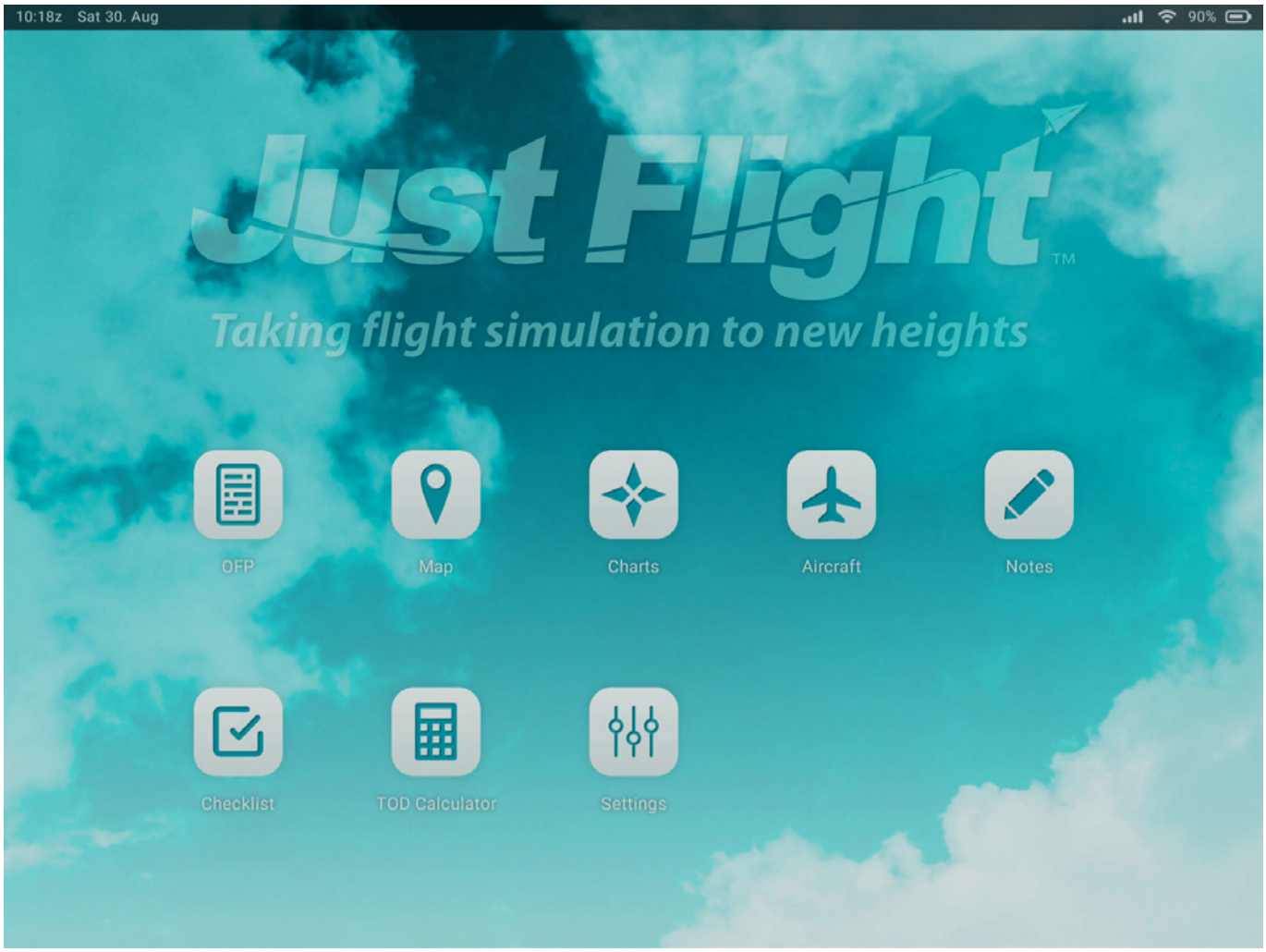
The Home screen of the EFB shows the icons of the various applications that are available to use. Pressing one of these icons will open the respective application.

The top bar of the EFB shows the current simulator time and date in the top left corner, as well as the current battery status of the tablet in the top right corner. The battery will drain over time if the aircraft's electrical power is switched off and will recharge once it is powered on again.

The tablet will automatically move between the first pilot and co-pilot positions, depending on the selected camera view.

The tablet can also be moved to two locations at each pilot position by using clickspots on the outer edge (bezel) of the EFB tablet. The default position of the tablet is lying flat on the base of the ejector seat; the alternative position is attached to the left or right side windows.

The background on the EFB can be changed to an image of your choice by replacing the wallpaper.jpg file in the following file directory: …Community\justflight-aircraft-vulcan\html_ui\Pages\VCockpit\Instruments\Airliners\JF_Vulcan\EFB\img.



OPERATIONAL FLIGHT PLAN (OFP)

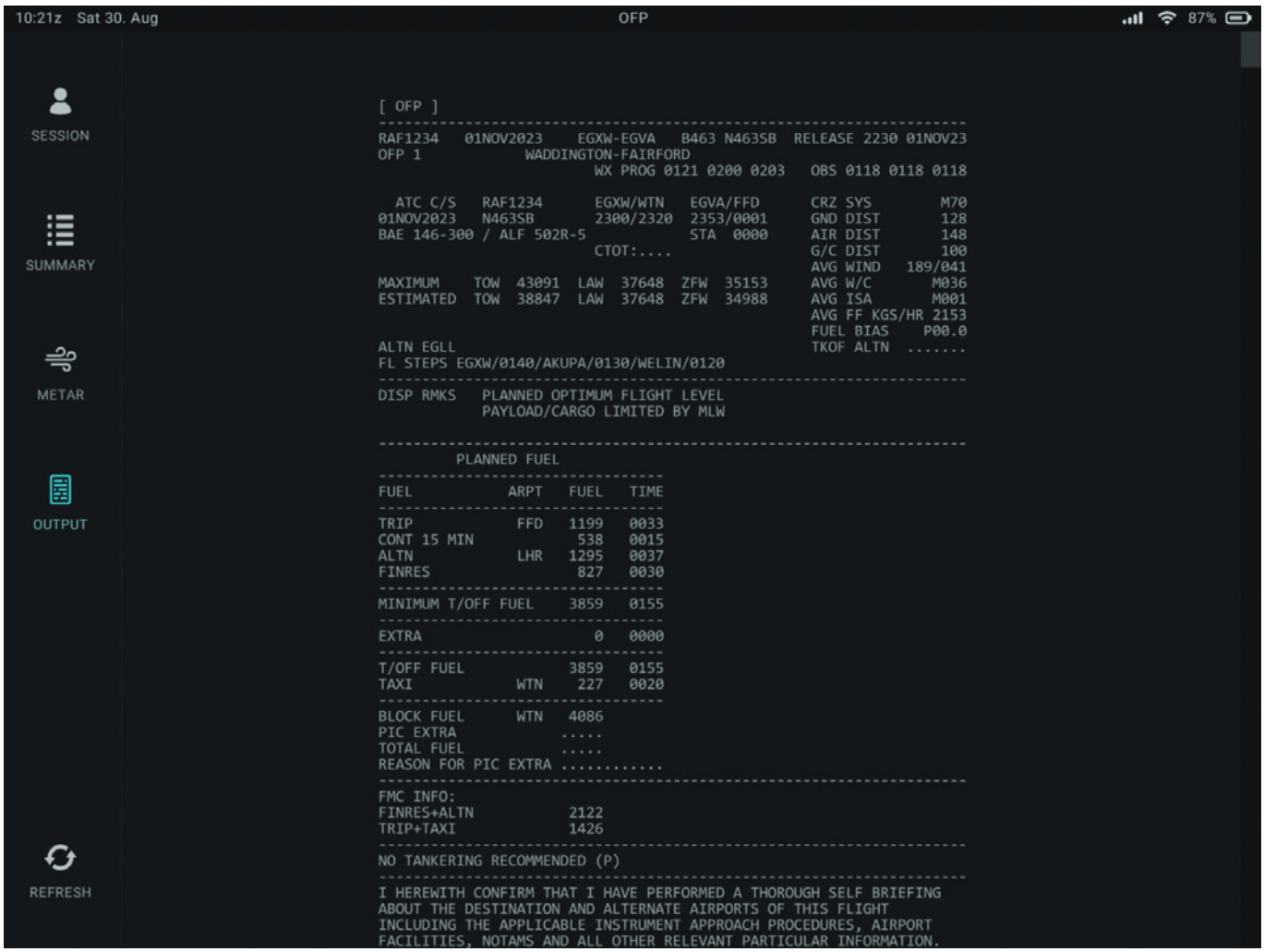
The OFP screen allows you to view your latest simBrief OFP and display its information conveniently within the simulator.

On selecting the simBrief screen you will be prompted to enter your simBrief pilot ID to access your data. Alternatively, you can choose to identify yourself via your simBrief username by enabling the ‘simBrief Username Login’ setting in the EFB settings.

Once you have entered your simBrief identification and pressed the ‘Continue’ button, you are presented with a summary of your active OFP, including airport codes, times, route information, fuel weight etc.

Pressing the METAR button allows you to view the wind information for your origin, destination and alternate airports. This information is shown in both raw and simplified forms.

To view the full OFP, press the OUTPUT button. Your entire flight plan will then be shown in text form, which can be scrolled as desired by using the scrollbar to the right of the OFP output area.



The OFP data can be refreshed at any time by pressing the REFRESH button in the left sidebar; this will update the data to your latest simBrief flight plan.

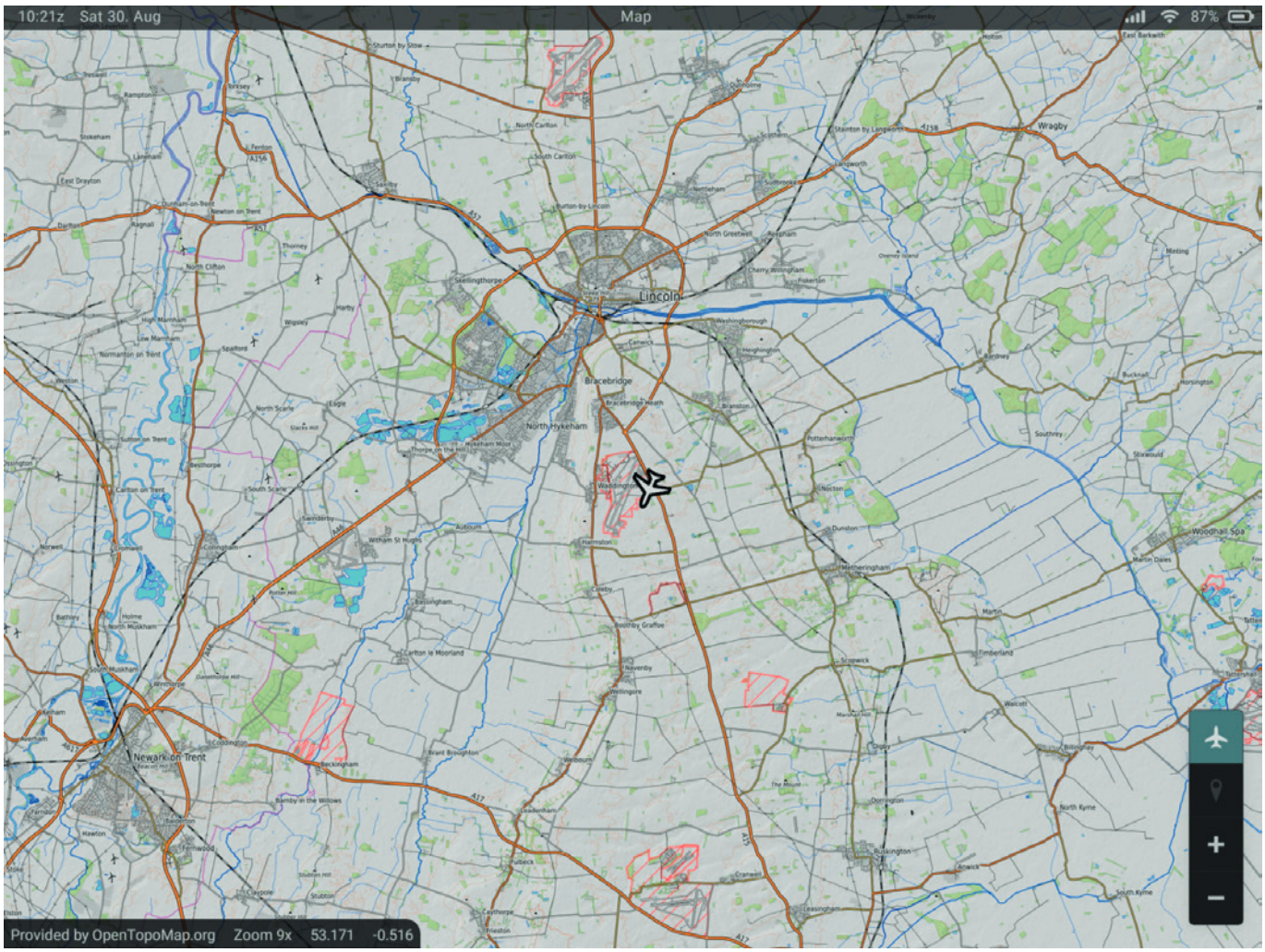
Note: *A simBrief account is required for this functionality.*

MAP

The Map app provides you with a moving map based on visual data from OpenTopoMap.org.

By default, the map is set to track the aircraft's current position (this is highlighted by the icon in the bottom right corner). It is also possible, however, to move the map manually by pressing the aircraft icon in the bottom right corner of the display and then simply clicking and dragging anywhere on the map. Pressing the location pointer icon will centre the view back to the aircraft's current position.

The map's zoom level can be adjusted via the '+' and '-' buttons.



CHARTS

The Charts app allows you to browse aviation charts provided by Navigraph as part of an active Navigraph subscription. A login (via external link or QR code) is required to link the EFB to your Navigraph account. Follow the instructions on the EFB and your external internet browser to complete the linking process.

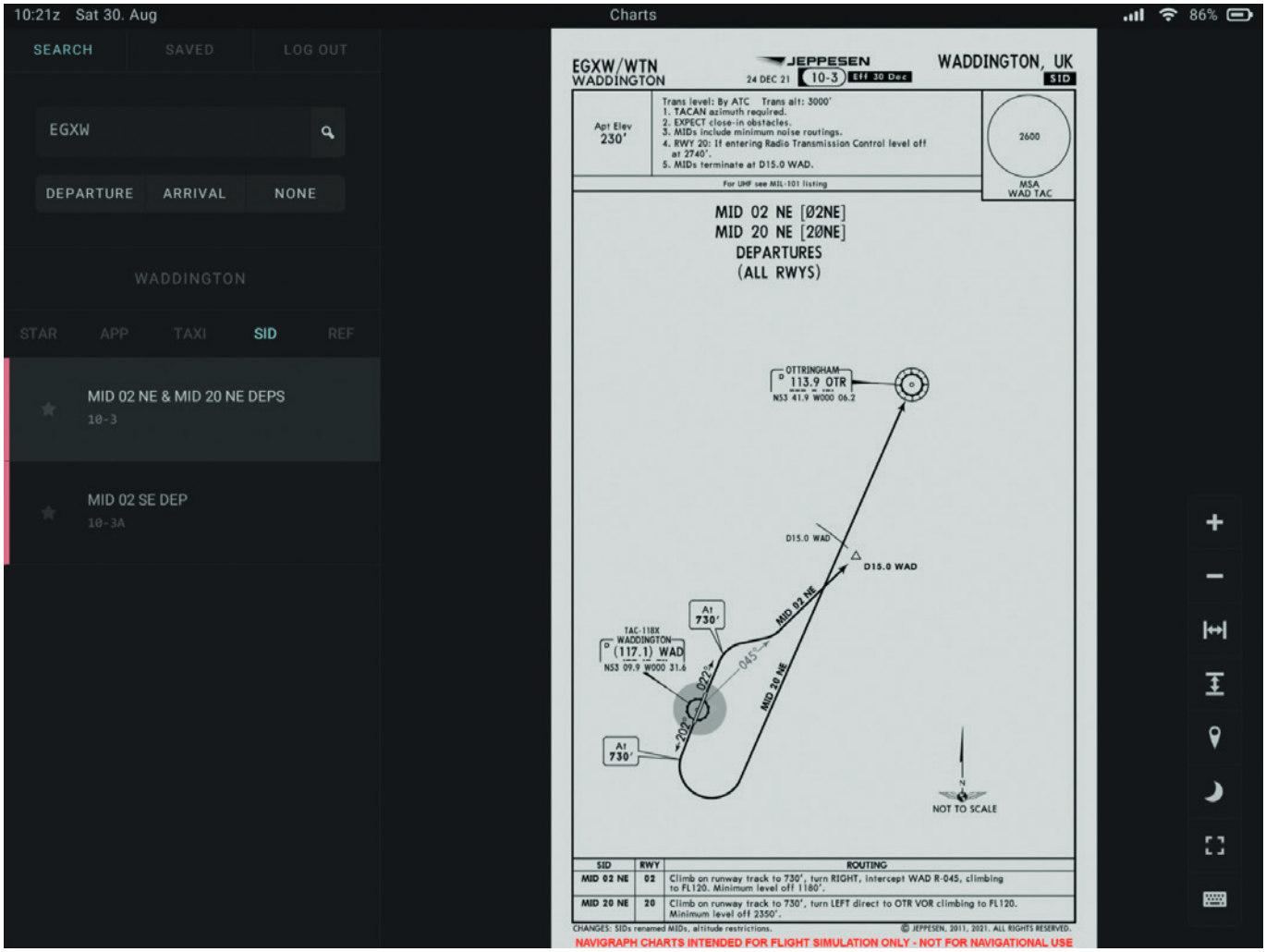
With your Navigraph account linked, you can then enter an ICAO code in the ICAO code search field to view the various associated STAR/APP/TAXI/SID/REF charts for that airport.

If you have a simBrief OFP loaded on the OFP page, you can quickly access the charts for the departure and arrival airports by pressing the respective DEPARTURE and ARRIVAL tabs. This will list all relevant charts for that airport under the STAR/APP/TAXI/SID/REF headings.

To view a chart, simply press the relevant tab and the chart will appear on the right side of the page. The active chart can be moved/resized/fitted as needed by using the controls at the right of the document window. Charts that provide georeferenced data may additionally display the aircraft's current position as an overlay icon if applicable.

Charts can be saved for quick reference by pressing the star icon to the left of the chart's name. You can quickly access all of your saved charts by pressing the SAVED button at the top of the page.

To unlink your Navigraph account from the EFB, press the LOG OUT button at the top of the page.



Note: *A Navigraph account is required for this functionality.*

AIRCRAFT

Selecting the Aircraft app from the Home page will launch the Aircraft page, which allows you to control various aircraft options and payloads.

The screen brightness can be adjusted with the plus and minus controls in the top right corner. The tablet battery status is also shown; this will drain over time if the aircraft's electrical power is switched off and will recharge once it is powered on again. A speaker icon can be clicked to toggle the EFB sounds on/off.

The outside air temperature is shown on the top bar of the EFB in Fahrenheit or Celsius, depending on the selected MSFS unit of measurement.

The tablet can be moved between two positions, the base of the ejector seat or above the left console, by using a clickspot on the outer edge (bezel) of the EFB tablet.

Please refer to the sections below for further information on the individual functions of the Aircraft page. You can return to the EFB from the Aircraft screen by clicking the physical 'Home' button on the left side of the tablet.

Aircraft states

Three aircraft states can be selected to quickly configure the aircraft:

READY FOR TO – the aircraft is fully configured for take-off, with the parking brake on.

READY FOR START – the aircraft is configured in a ready-for-engine-start state with the engines off, ground power connected, bomb bay closed, crew door closed and the chocks and engine covers removed.

COLD & DARK – the aircraft is fully cold and dark, with engines off, bomb bay open, crew door open and the chocks and engine covers fitted.

The aircraft will automatically be configured in the COLD & DARK state when a flight is started at a parking/ramp/gate position, otherwise the READY FOR TO state will be selected. Restoration of a saved state, if enabled before exiting the previous flight by clicking the STATE SAVING button, will then occur.

Payload

The aircraft can be fitted with various payloads by clicking on the relevant boxes. Blue boxes indicate that that specific payload can be loaded at that bay, and black boxes indicate that that specific payload cannot be loaded at that bay. A red mark will be displayed whenever a payload is loaded.

Seven payloads can be loaded on the payload table:

BLUE STEEL – nuclear stand-off missile

MK13 BOMBS – unguided 1000lb bombs

WE.177 – nuclear bomb

MRR-PODS – Maritime Radar Reconnaissance pods

SADDLE TANKS – two internal fuel tanks fitted in the forward and aft bays, designed to be used in conjunction with the Blue Steel nuclear stand-off missile.

CYLINDER TANKS – three internal fuel tanks primarily fitted to the K.2 tanker variant.

SHRIKE – AGM-45 Shrike anti-radiation missiles

An UNLOAD ALL button is included at the top right of the payload menu and is used to unload weapons from all stations.

Doors and equipment

Various options for fitting and operating external equipment, and for opening and closing the various doors, are available to the right of the payload table:

GND POWER – toggles on/off the Houchin Ground Power Unit (GPU) used to provide electrical power to the aircraft while on the ground.

PALOUSTE – toggles on/off the Palouste compressor used to provide compressed air to the engine air starter motors, facilitating engine starting while on the ground.

CHOCKS – toggles the wheel chocks on/off.

COVERS – toggles on/off the engine intake and exhaust covers. A white ‘do not’ symbol will appear when the engines are running and preventing the covers from being fitted.

BOMB DOORS – opens/closes the bomb bay doors.

CREW DOOR – opens/closes the crew access door.

K2 HOSE – extends/retracts the air-to-air refuelling hose if the K2 TANKER option is enabled. A white ‘do not’ symbol will appear when the aircraft is on the ground, preventing the operation of the hose.

RESET BRAKE CHUTE – stows the braking parachute ready for use. This option will only appear if the braking parachute has been streamed.

Camera controls

Four camera positions can be quickly accessed by pressing the respective option at the bottom of the Aircraft page:

1ST PILOT – moves the camera to the 1st pilot's position in the forward cockpit.

2ND PILOT – moves the camera to the co-pilot's position in the forward cockpit.

AEO – moves the camera to the Airborne Electrical Operator's position in the rear cockpit.

NAVIGATOR – moves the camera to the Navigator's position in the rear cockpit.

The EFB remains available at each of these camera positions and can be brought into view by clicking on the tablet's bezel.

Settings menu

The Settings menu can be accessed by clicking on the cog icon at the top left corner of the Aircraft page. This menu provides general simulation and quality-of-life options, allowing you to customise your Vulcan experience:

SYNC ALTIMETERS – automatically synchronises 1st pilot and co-pilot altimeter barometric settings ('master setting' is based on camera selection).

STATE SAVING – enables/disables aircraft state saving. The aircraft state can be saved and reloaded automatically between flights, allowing you to always return to your cockpit in the same state that you last left it.

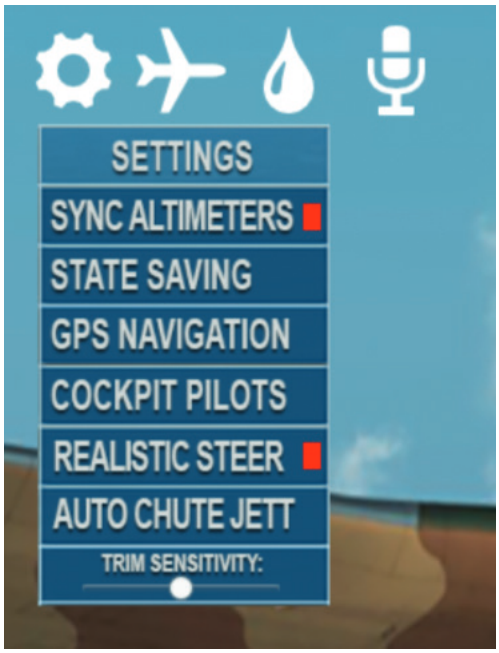
GPS NAVIGATION – enables/disables the GPS unit.

COCKPIT PILOTS – enables/disables the visible 1st pilot and co-pilot with interior camera selected.

REALISTIC STEER – enables/disables the realistic steering logic. With this option enabled, the nose-wheel steering button at the bottom of the control column must be depressed in order for the nose-wheel steering to function. With this option disabled, the nose-wheel steering will always be active.

AUTO CHUTE JETT – enables/disables the automatic braking parachute jettison logic. With this option enabled and the braking parachute streamed, the chute will be jettisoned automatically at 60 knots. With this option disabled, the chute will be need to be manually jettisoned.

TRIM SENSITIVITY – slider controls the sensitivity of the elevator trim. Moving the slider left will decrease the elevator trim sensitivity. Moving the slider right will increase the elevator trim sensitivity.



Configuration menu

The Configuration menu can be accessed by clicking on the aircraft icon at the top left corner of the Aircraft page. This menu provides options for adding or removing equipment from the Vulcan's exterior:

K2 TANKER – configures the aircraft in a K2 Tanker configuration, including fitting the HDU (Hose Drum Unit) to the rear of the aircraft.

201 ENGINES – toggles between the 201 Olympus engine exhaust nozzles and the 301 Olympus engine exhaust nozzles.

NOSE PROBE – toggles on/off the air-to-air refuelling probe on the nose of the aircraft.

TFR DOME – toggles on/off the TFR (Terrain Following Radar) dome on the nose of the aircraft.

ECM – toggles on/off the various ECM (Electronic Countermeasure) panels on the tail and between engines 3 and 4.

Note: *A second ECM panel will be fitted between engines 1 and 2 when the BLUE STEEL missile is fitted.*

MRR AERIALS – configures the aircraft with the aerials fitted to the MRR variant.

558 AERIALS – configures the aircraft with the aerials fitted to XH558 in its final display season.

Fuel menu

The Fuel menu can be accessed by clicking on the droplet icon at the top left corner of the Aircraft page. This menu provides options for adjusting the amount of fuel in the Vulcan's internal and bomb bay fuel tanks, as well as options to simulate air-to-air refuelling.

PRESETS – set a 25% / 50% / 75% / 100% fuel load.

TOTAL WT – displays the total weight of the aircraft, including fuel and payload.

FUEL WT – displays the current fuel weight of the aircraft. This field can be edited by left-clicking on the field and then typing a new value, either by using an external keyboard or the on-screen keyboard.

A2A REFUEL – simulates an air-to-air refuelling procedure by taking on fuel from a tanker. Clicking the START/STOP button once will begin the onload of fuel from a tanker aircraft. Click the START/STOP button again to stop the air-to-air refuelling procedure.

K2 OFFLOAD – simulates an air-to-air refuelling procedure by offloading fuel to a receiver aircraft. Clicking the START/STOP button once will begin the offload of fuel to a receiver aircraft. Click the START/STOP button again to stop the air-to-air refuelling procedure.

Radio menu

The Vulcan is a complex military aircraft designed in the 1960s to fly with a crew of five. With controls located on various panels around the cockpit and other controls not featured and/or not supported by the simulator, this means that the Vulcan can demand a high workload for a single pilot.

One such high workload system is the radios, which are spread across three separate panels in the forward and rear cockpits. As a quality of life feature, we have decided to include a Radio menu on the EFB where you can view and edit the active frequencies on various radios.

Note: *This feature is in addition to the standard radio equipment located around the cockpit.*

The Radio menu can be accessed by clicking on the microphone icon at the top left corner of the Aircraft page.

TACAN – edit the active CHANNEL and MODE of the TACAN radio.

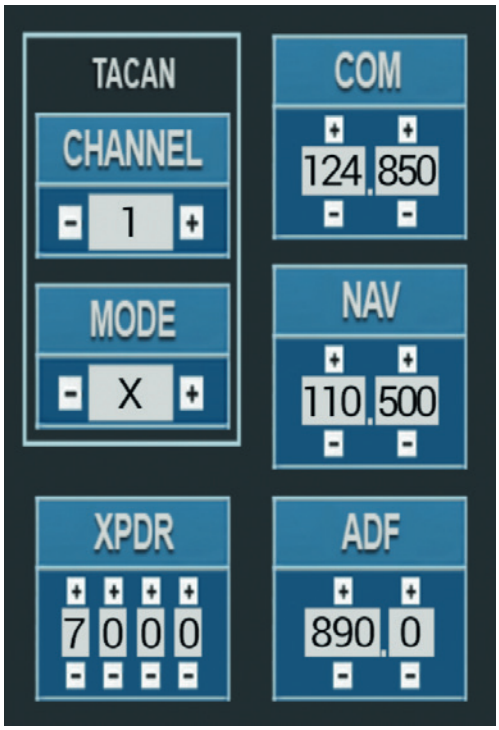
XPDR – edit the active squark code on the transponder.

COM – edit the active COM 1 radio frequency.

NAV – edit the active NAV 1 radio frequency.

ADF – edit the active ADF 1 radio frequency.

A NO POWER message will appear over this menu if the aircraft's radios are not powered.



NOTES

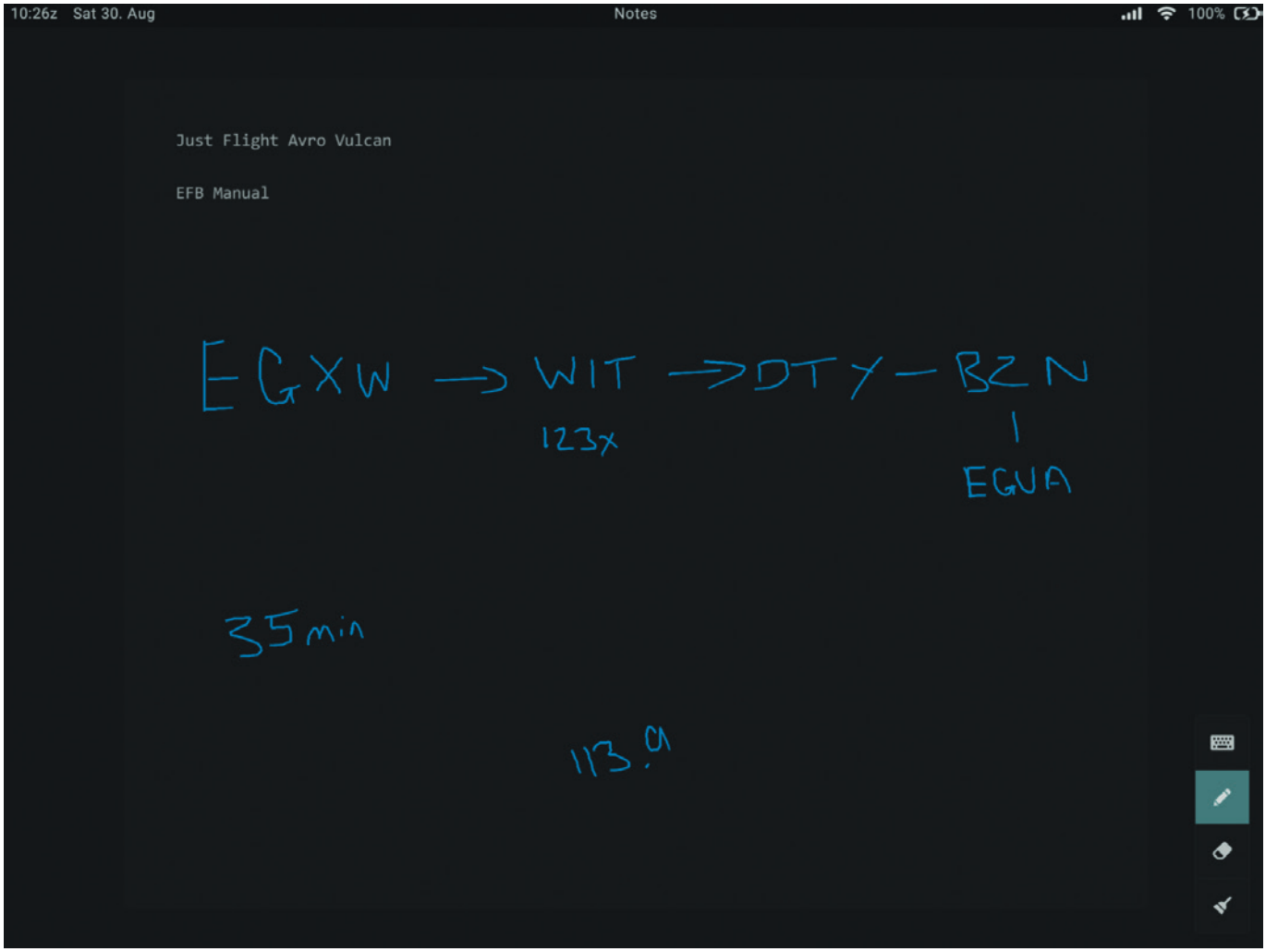
The Notes app acts as a virtual notepad for the pilot, allowing you to take text-based and handwritten notes on the fly (particularly useful for noting clearances and taxi instructions).

The Notes app supports standard keyboard inputs and will automatically display a scrollbar once the content exceeds the height of the input area.

An on-screen keyboard is also available. This can be toggled on/off by pressing the keyboard icon at the bottom right of the page. Once open, the keyboard can be moved freely to any position on the display by pressing and holding the top bar of the keyboard. To hide the keyboard, simply press the keyboard icon again (this feature is particularly useful for VR users).

To make handwritten notes, press the pen icon at the bottom right of the page and then left-click with your mouse and drag the pen to write on the screen. To erase text, press the eraser icon and, again with your mouse, left-click and drag to erase what you have written.

To erase all handwritten notes from the page, simply press the paintbrush icon at the bottom right of the page.



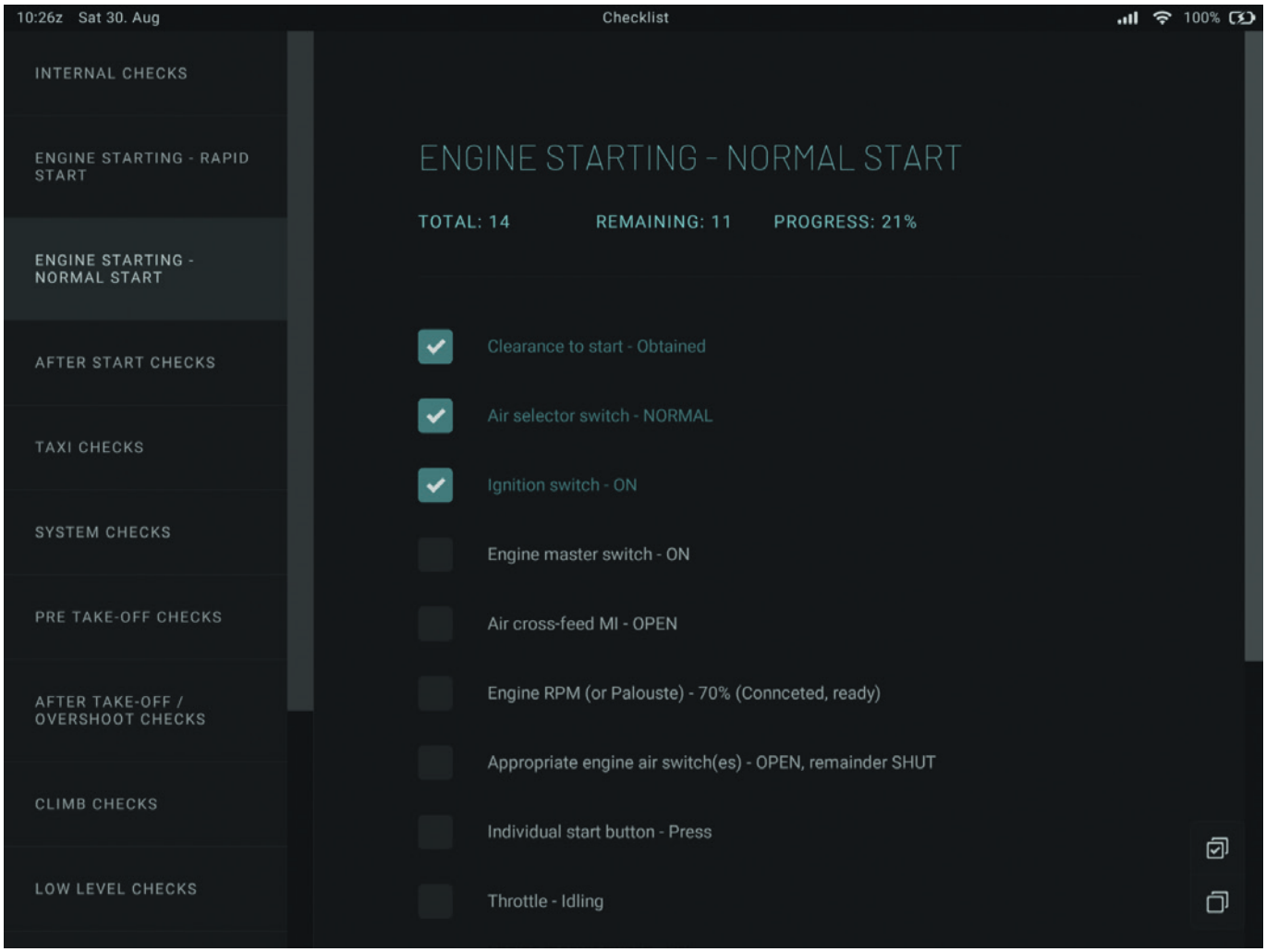
CHECKLIST

The Checklist app allows you to view all the aircraft's checklists on one easy-to-navigate page. The title of each checklist is shown on the left side of the page. Pressing the title of a checklist will open the respective checklist on the right side of the page.

Each step of a checklist has an item, action and a tick box which can be manually ticked to allow you to keep track of your progress. You can see your progress through the checklist at the top of the page.

Two controls at the bottom right of the page allow you to tick all boxes on the page or to untick all boxes.

Note: *The Checklist page on the EFB is intended to be used as a guide only. For automated checklists please use the interactive checklist menu within MSFS.*



TOD CALCULATOR

The top of descent (TOD) calculator is a useful tool which allows you to calculate and view the exact point at which you should begin your descent.

The distance of your descent can be calculated based on the following four factors:

- Current altitude (feet)
- Ground speed (knots)
- Target altitude (feet)
- Desired angle (degrees)

Each of these factors is shown on this page, where text can be entered into each of these fields either via an external keyboard or via the on-screen keyboard which can be toggled from the lower right corner of the page.

Once values have been entered into each of these four fields, the calculator will then produce two outputs:

Desired TOD distance – the ground distance covered between the start of your descent and your target altitude.

Desired vertical speed – the vertical speed that the aircraft will have to descend at to meet the distance stated.

Note: *Desired distance, Desired vertical speed and Desired angle are all interchangeable values and can be toggled by pressing the arrow buttons in the fourth field.*

For ease of use, the CURRENT ALTITUDE (FT) and GROUND SPEED (KT) fields both have a SYNC feature; once active, this continuously inputs the aircraft's current altitude and ground speed into their respective fields. With this feature active, the calculator's outputs will be constantly updated as the aircraft's altitude and speed change during its descent.

SETTINGS

The Settings screen offers several options to adjust the look and behaviour of the EFB:

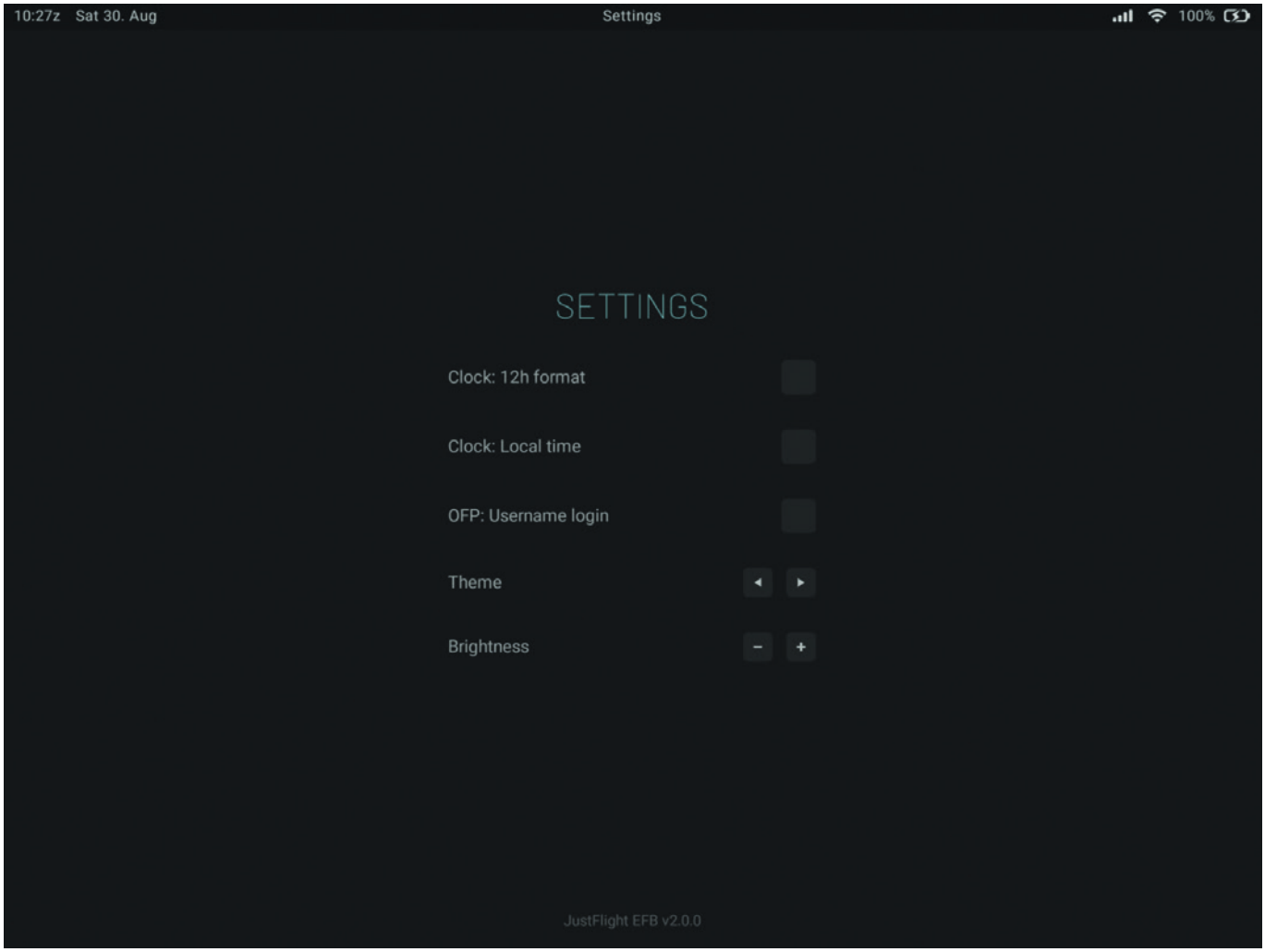
Clock: 12h format – toggles the 12/24-hour format of the top bar clock.

Clock: Local time – toggles between UTC and local time on the top bar clock.

OFP: Username login – allows simBrief identification via username instead of pilot ID.

Theme – switches the EFB's colour scheme.

Brightness – increases/decreases the EFB's brightness.



CREDITS

Project management	Martyn Northall
EFB modelling and design	Mark Griffiths
EFB programming	Omniwise, Martyn Northall
Manual	Mark Allison
Design	Fink Creative

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