F70 & F100

PROFESSIONAL

ELECTRONIC FLIGHT BAG (EFB)

Just Flight

F70 & F100 PROFESSIONAL

Electronic Flight Bag (EFB)

Please note that this manual is specifically for the Electronic Flight Bag (EFB) installed in the Just Flight F70 Professional and F100 Professional add-ons for Microsoft Flight Simulator.

CONTENTS

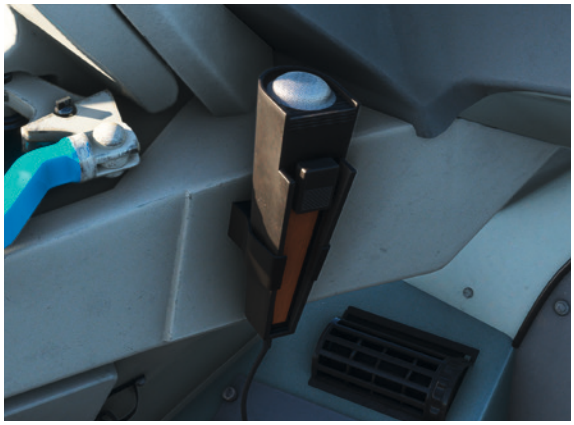
EFB OVERVIEW

The aircraft is equipped with an Electronic Flight Bag (EFB) tablet which is divided into two main areas:

1. An Electronic Flight Bag (EFB) which provides a selection of apps for importing/viewing a SimBrief Operational Flight Plan (OFP), monitoring the aircraft's present position on a moving map, viewing Navigraph charts (active Navigraph subscription required), taking notes, and aircraft performance calculators.

2. An Aircraft app that provides a large selection of aircraft customisation options, custom fuel and payload controls, boarding and refuelling simulation, and more.

The tablet can be powered on/off with the physical 'Power' button on the side of the tablet. The 'Home' button can be used to return to the EFB menu from any open app. The EFB can be hidden by using a clickspot on the handheld microphone on each side of the cockpit.



The Home page of the EFB shows the icons of all available applications (apps). Selecting one of these icons will open the respective app.

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 (ESS DC) is switched off and will recharge once it is powered on again.

The tablet will automatically move between the Captain and Co-pilot sills depending on the Pilot camera view selected in the MSFS Camera menu. Both tablets can be fitted independently by clicking the handheld microphone on either side of the cockpit.

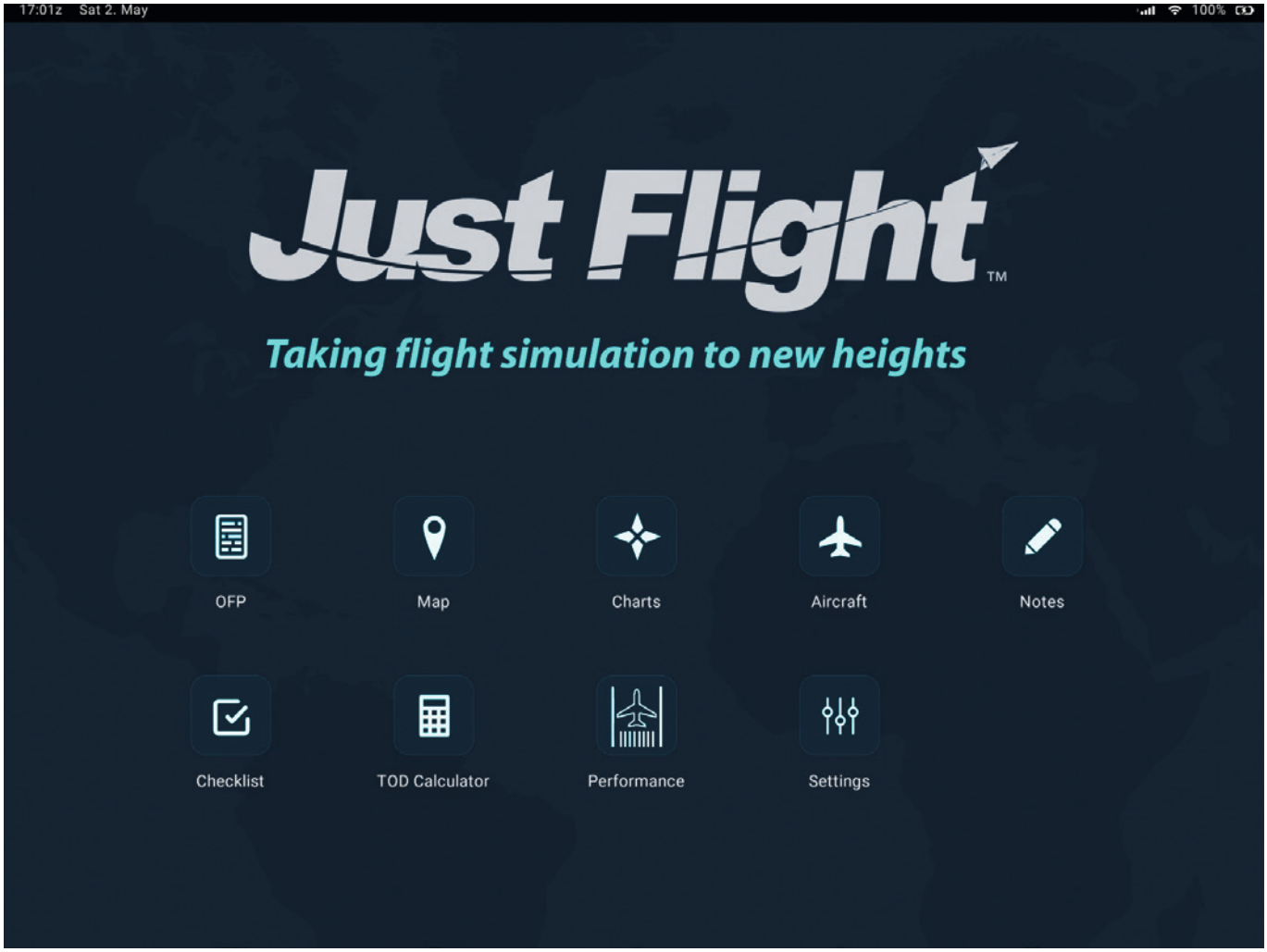
The tablet can be moved between two positions on each side of the cockpit by using the clickspots on the outer edge (bezel) of the EFB tablet.

The background on the EFB tablet can be changed to an image of your choice by replacing the app_background.png file in one of the following file directories:

F70 Professional:
…\Community\justflight-aircraft-f70\html_ui\Pages\VCockpit\Instruments\Airliners\JF_F70\EFB\img\app_background

F100 Professional:
…\Community\justflight-aircraft-f100\html_ui\Pages\VCockpit\Instruments\Airliners\JF_F100\EFB\img\app_background

The recommended resolution is 2048x1536 in a .PNG format.



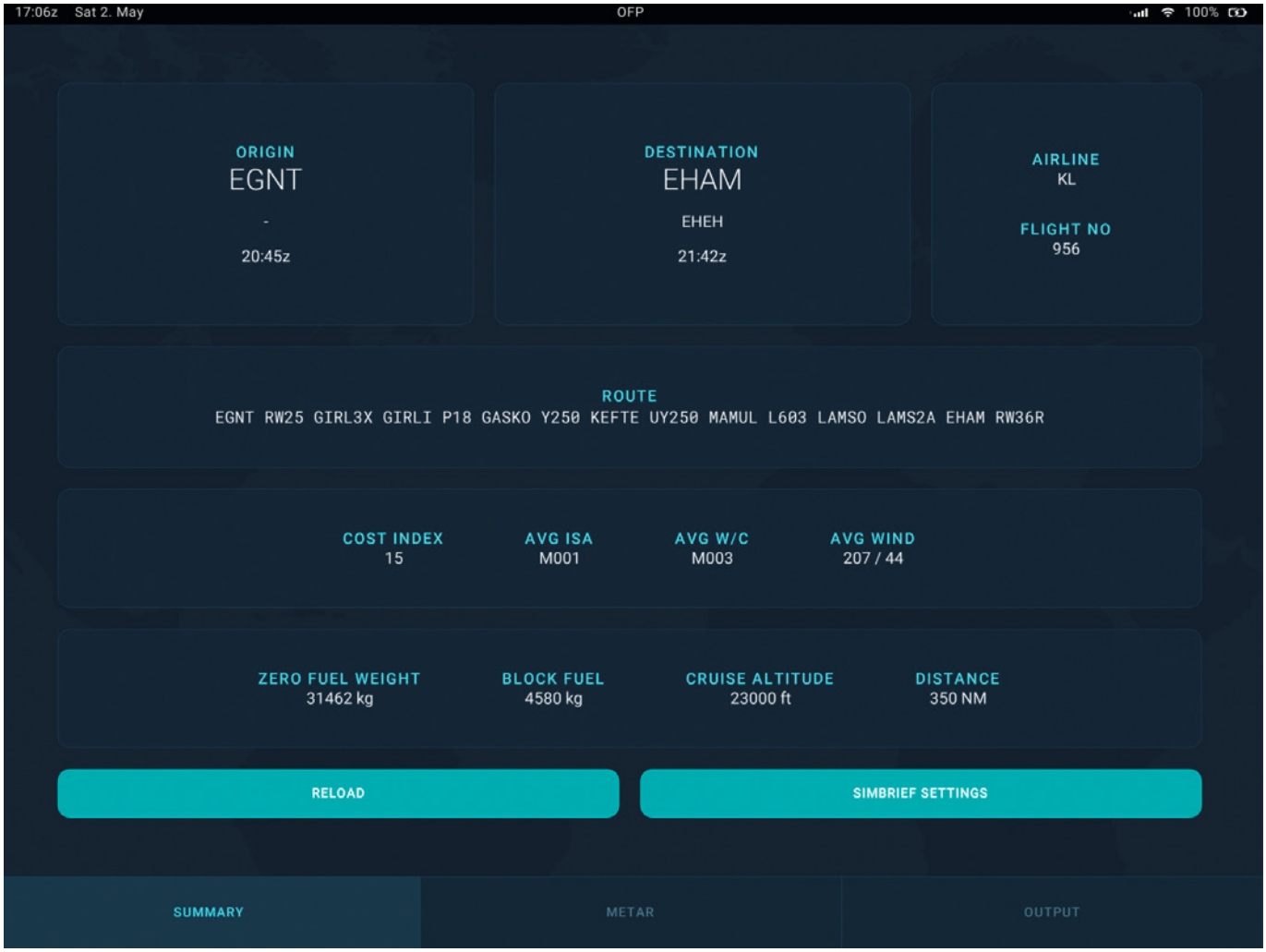
OPERATIONAL FLIGHT PLAN (OFP)

The OFP app allows you to view your latest SimBrief OFP and displays its information conveniently within the simulator.

On selecting the OFP app you will be prompted to enter your SimBrief Pilot ID to access your most recently exported flight plan.

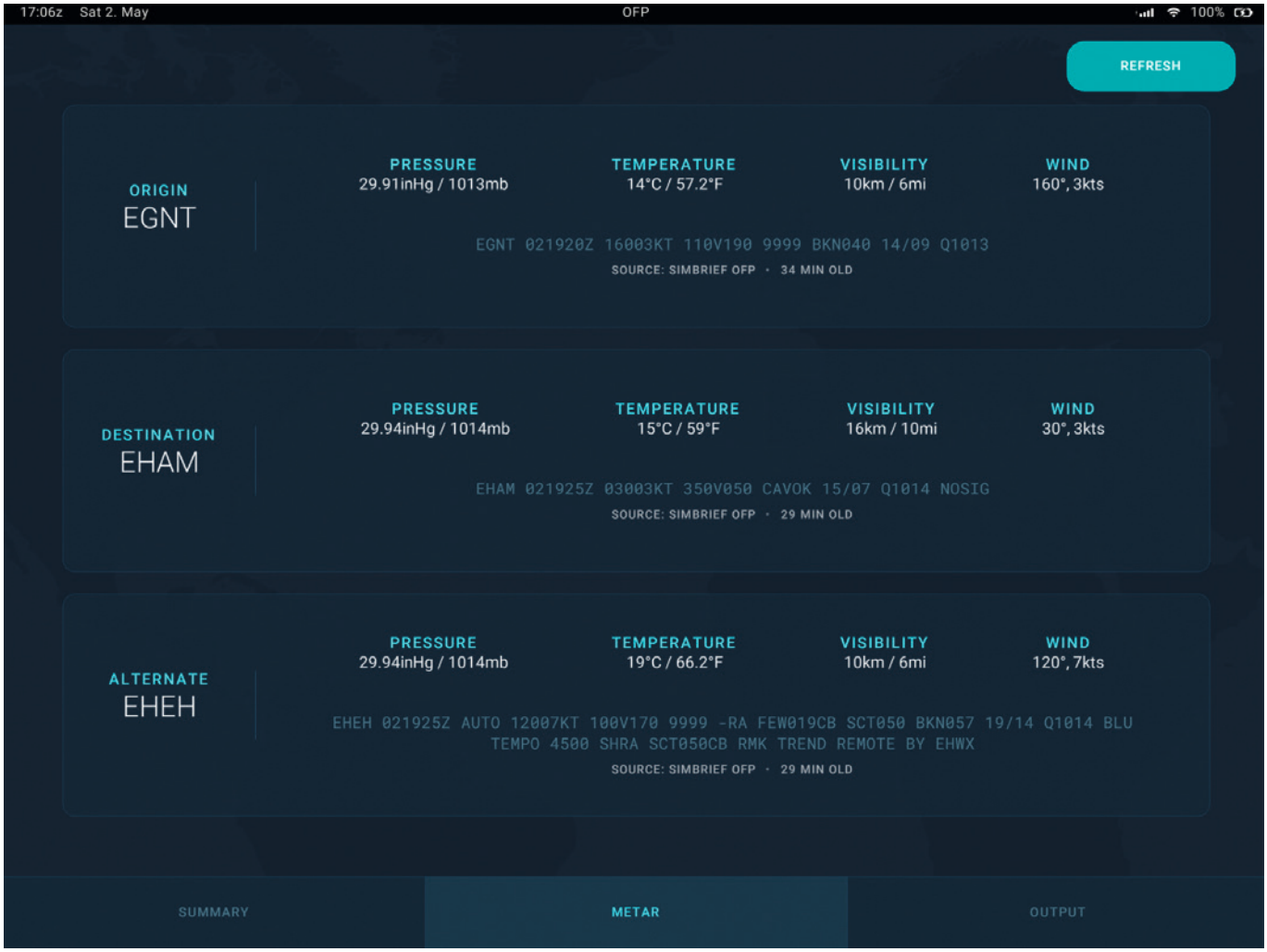
Note: *The EFB tablet will remember your SimBrief credentials between sessions, preventing the need to log in at the start of every session. The SimBrief credentials can be updated via the EFB Settings app.*

Once your SimBrief credentials have been entered, press the 'Continue' button and a summary of your active OFP will be displayed, including origin and destination airports, scheduled timings, flight number, route information, weather, and fuel and payload.



Pressing the METAR button at the bottom of the page opens the METAR page with wind data for the origin, destination and alternate airports listed in your OFP. The METAR data is provided in both raw and simplified formats.

The source and age of the METAR data is displayed immediately below the raw METAR data. After the initial import of the SimBrief OFP, the METAR data will be sourced from the OFP. A REFRESH button at the top right of the page will update the METAR data for the origin, destination and alternate airports based on the current weather in the simulator.



The OUTPUT page allows you to view the full OFP. The OFP is a lengthy document, and thus can be scrolled via the scrollbar on the right side of the page. A four-arrowed icon at the bottom right corner of the page enables ‘click and drag’ scrolling on the page itself. With this option enabled, hold left-click anywhere on the page and move your cursor up/down to scroll the page.

The OFP data can be refreshed at any time by pressing the RELOAD button at the bottom of the Summary page; this will update the OFP to the last exported SimBrief flight plan.

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

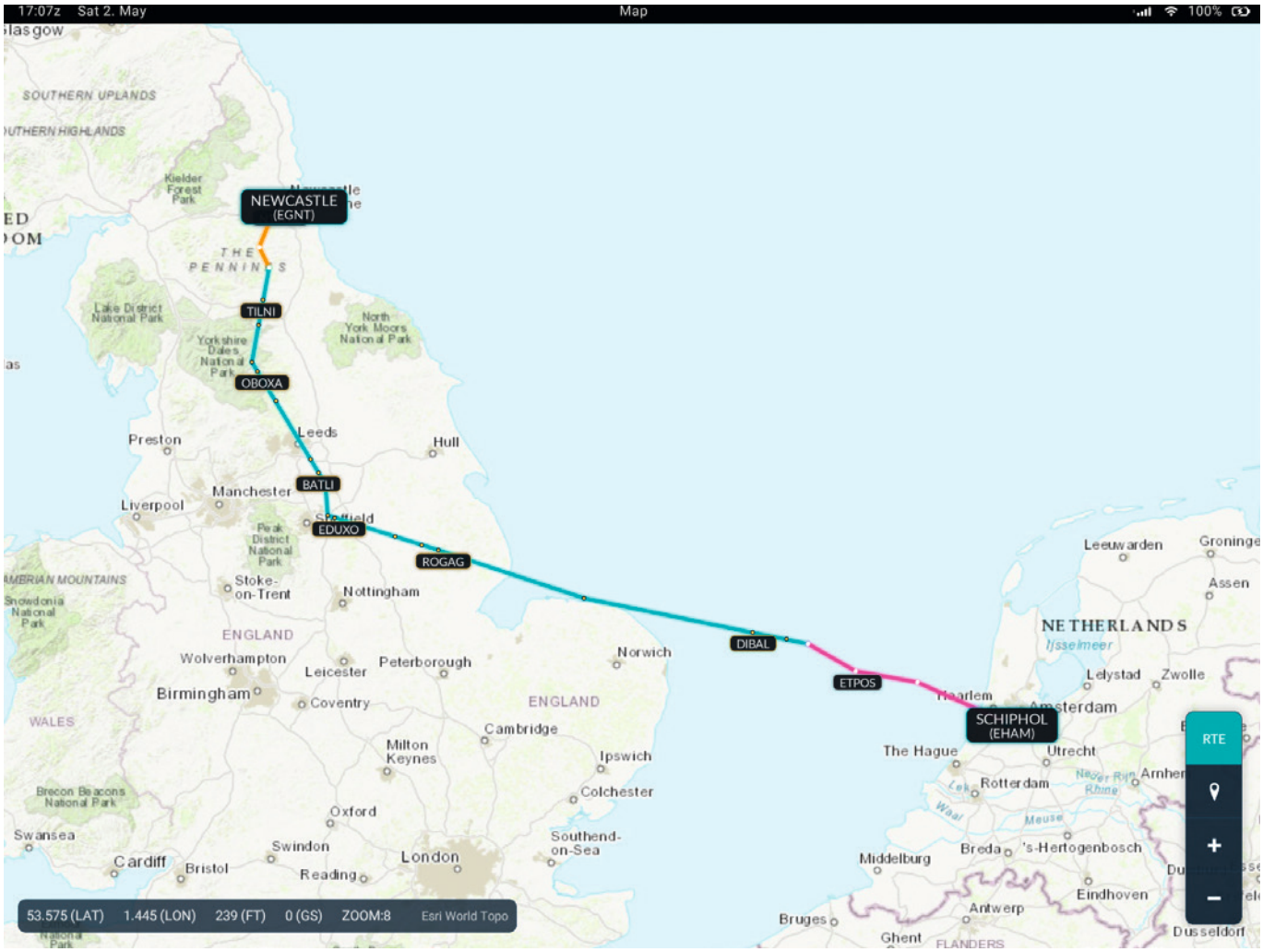
MAP

The Map app provides a moving map showing the aircraft's present position. A variety of map providers are available on the EFB Settings page.

The RTE button in the bottom right corner of the page toggles the visibility of your active flight plan on the map. The flight plan data is sourced from the SimBrief OFP, and requires an OFP to be imported on the OFP page.

In its default state, the map is set to track the aircraft's current position, with coordinates, altitude and speed also displayed in the bottom left corner of the page. It is also possible to move the map freely by deselecting the aircraft icon in the bottom right corner of the display and clicking and dragging anywhere on the map. Reselecting the aircraft 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

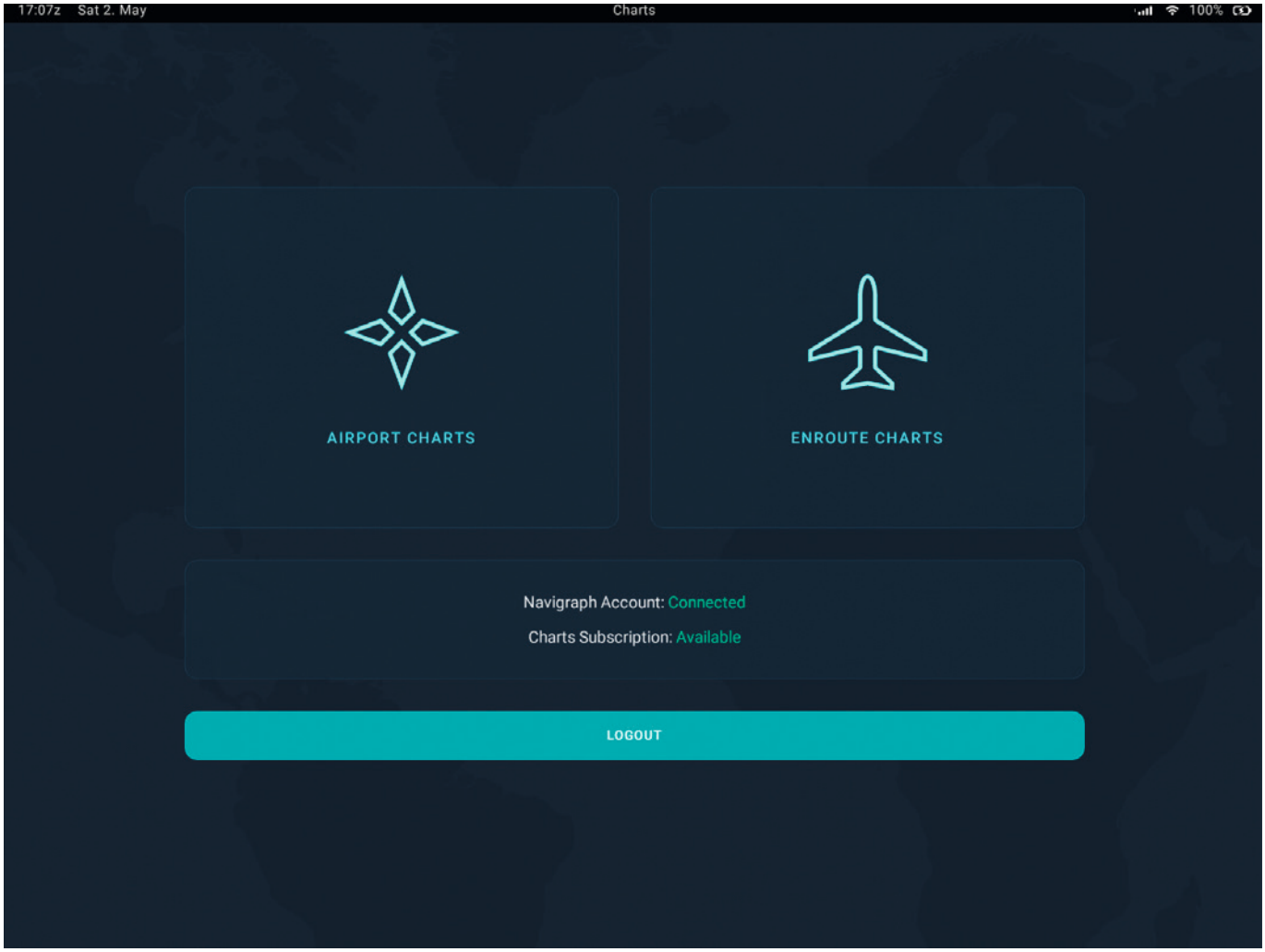
The Charts app allows you to browse aviation charts provided by Navigraph as part of an active Navigraph subscription. When opening the Charts app for the first time, a login is required to link the EFB to your Navigraph account (via external link or QR code). Follow the instructions on the EFB and your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

With a Navigraph account linked, two chart options are available for selection: AIRPORT CHARTS and ENROUTE CHARTS. Clicking on one of these options will open the respective chart.

A ‘Navigraph Account’ field shows the current login status and the ‘Charts Subscription’ field shows the status of the Navigraph subscription of the linked account.

A LOGOUT button at the bottom of the page will unlink the Navigraph account from the EFB.

Note: *A paid Navigraph subscription is required for the functionality described in this section.*



Airport charts

The AIRPORT CHARTS page allows you to search for and view charts for any airport in the world.

An airport's ICAO code can be entered in the ICAO code search field and the charts for that airport can be viewed by pressing the STAR/APP/TAXI/SID/REF buttons.

If a SimBrief OFP has been loaded on the OFP page, charts for the departure and arrival airports can be quickly accessed by pressing the DEPARTURE and ARRIVAL buttons.

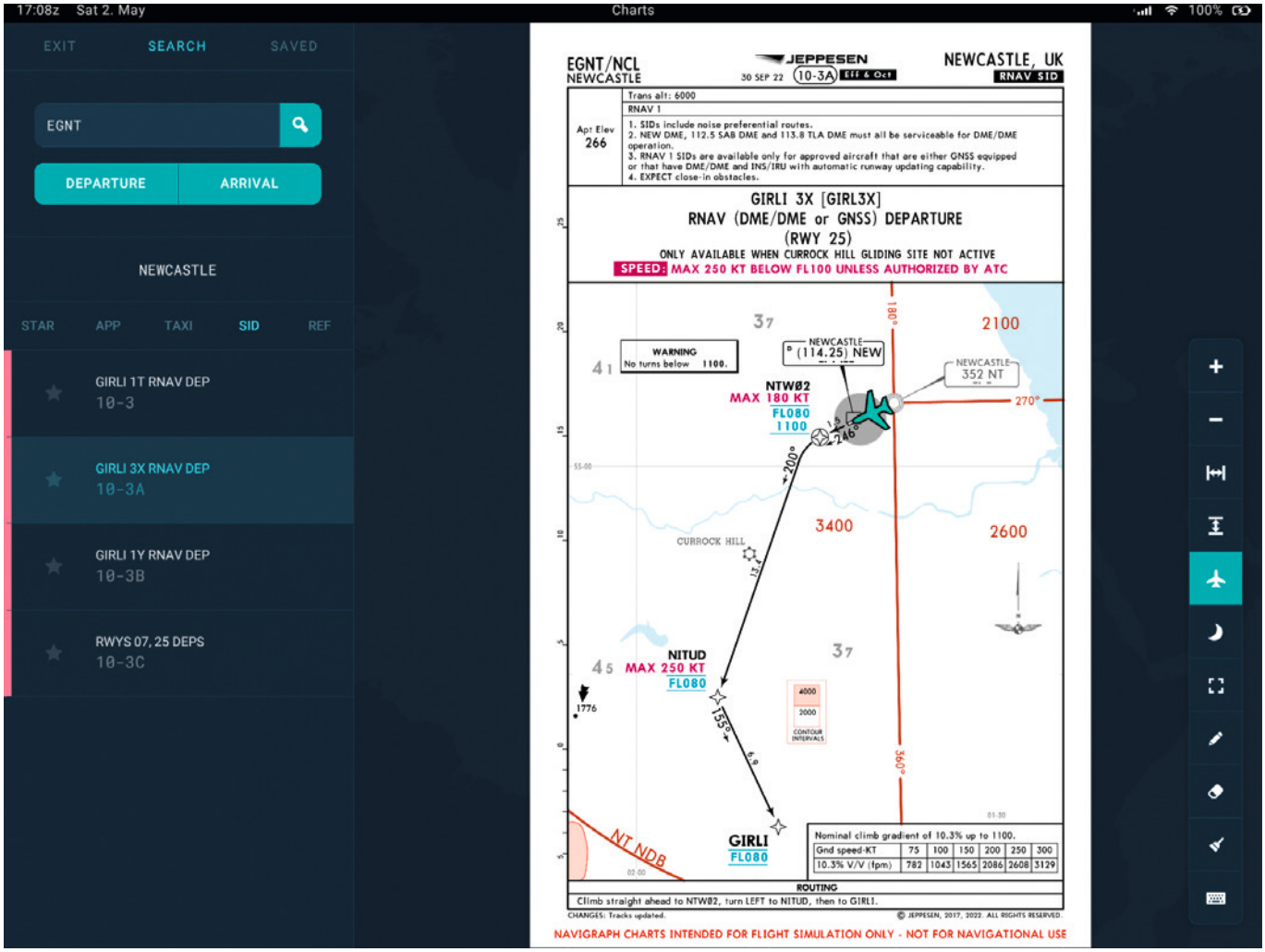
To view a chart, click on one of the charts listed on the left side of the page and the chart will open on the right side of the page. The active chart can be moved/resized/fitted as needed by using the controls at the bottom right of the page. Charts that provide georeferenced data will also display the aircraft's current position in the form of an aircraft icon.

Charts can be annotated by pressing the pen icon at the bottom right of the page and then moving your cursor across the page whilst holding left-click. Two eraser options allow you to either erase annotations via the same method or erase all annotations instantly.

To close a chart, click on the selected chart on the left side of the page or select another chart.

Charts can be saved for quick reference by pressing the star icon to the left of the chart's name. The star icon will change colour to indicate that the chart has been saved. All saved charts can be accessed by pressing the SAVED button at the top of the page. Saved charts can be removed from this list by pressing the star icon again.

Pressing the EXIT button at the top left of the page will return the EFB to the opening Charts page where the AIRPORT CHARTS or ENROUTE CHARTS pages can be selected.



Enroute charts

The ENROUTE CHARTS page allows you to view charts covering the various navaids and airways that are used for navigation between airports.

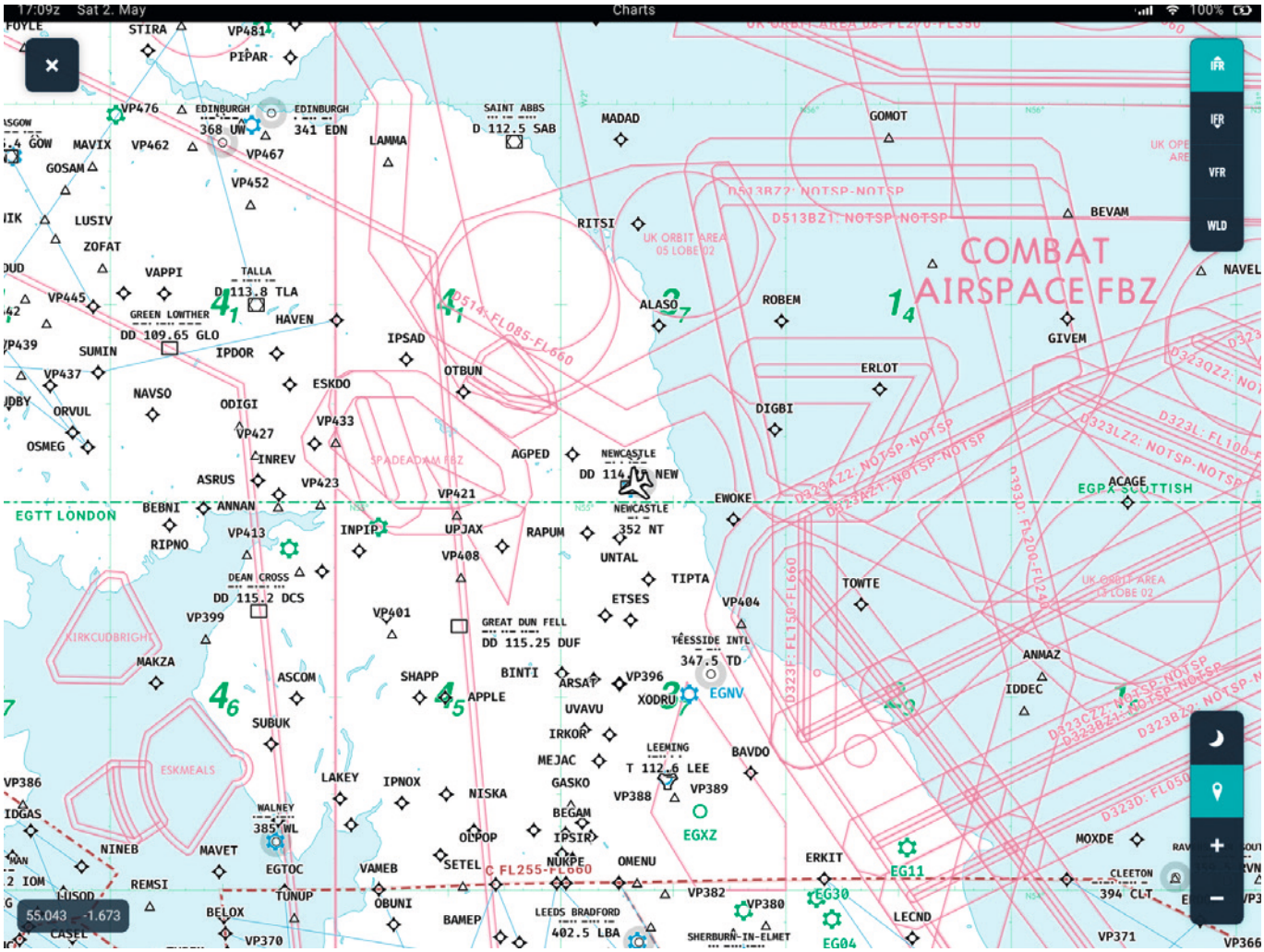
Four options in the top right corner of the page control which chart is shown:

- **IFR High Altitude** – High Altitude IFR charts designated for flights above 18,000ft
- **IFR Low Altitude** – Low Altitude IFR charts designated for flights below 18,000ft
- **VFR** – VFR charts
- **WLD** – world map

Various options at the bottom right corner of the page provide controls for zooming the charts in/out, following the aircraft's present position and toggling on/off dark mode.

The latitude and longitude at the centre of the chart are shown in the bottom left corner of the page.

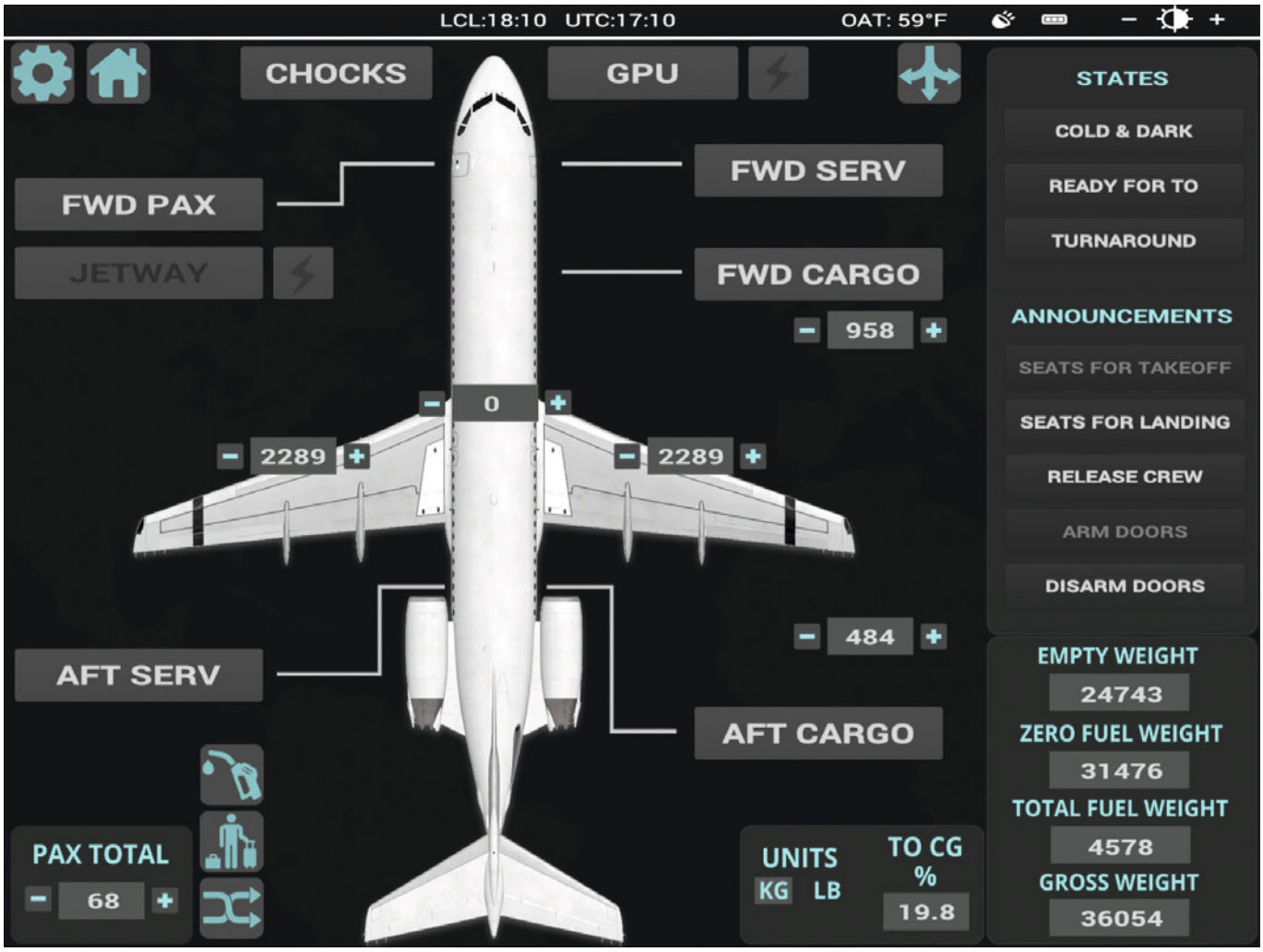
Pressing the 'X' button at the top left corner of the page will return the EFB to the initial Charts page where the AIRPORT CHARTS or ENROUTE CHARTS pages can be selected.



AIRCRAFT

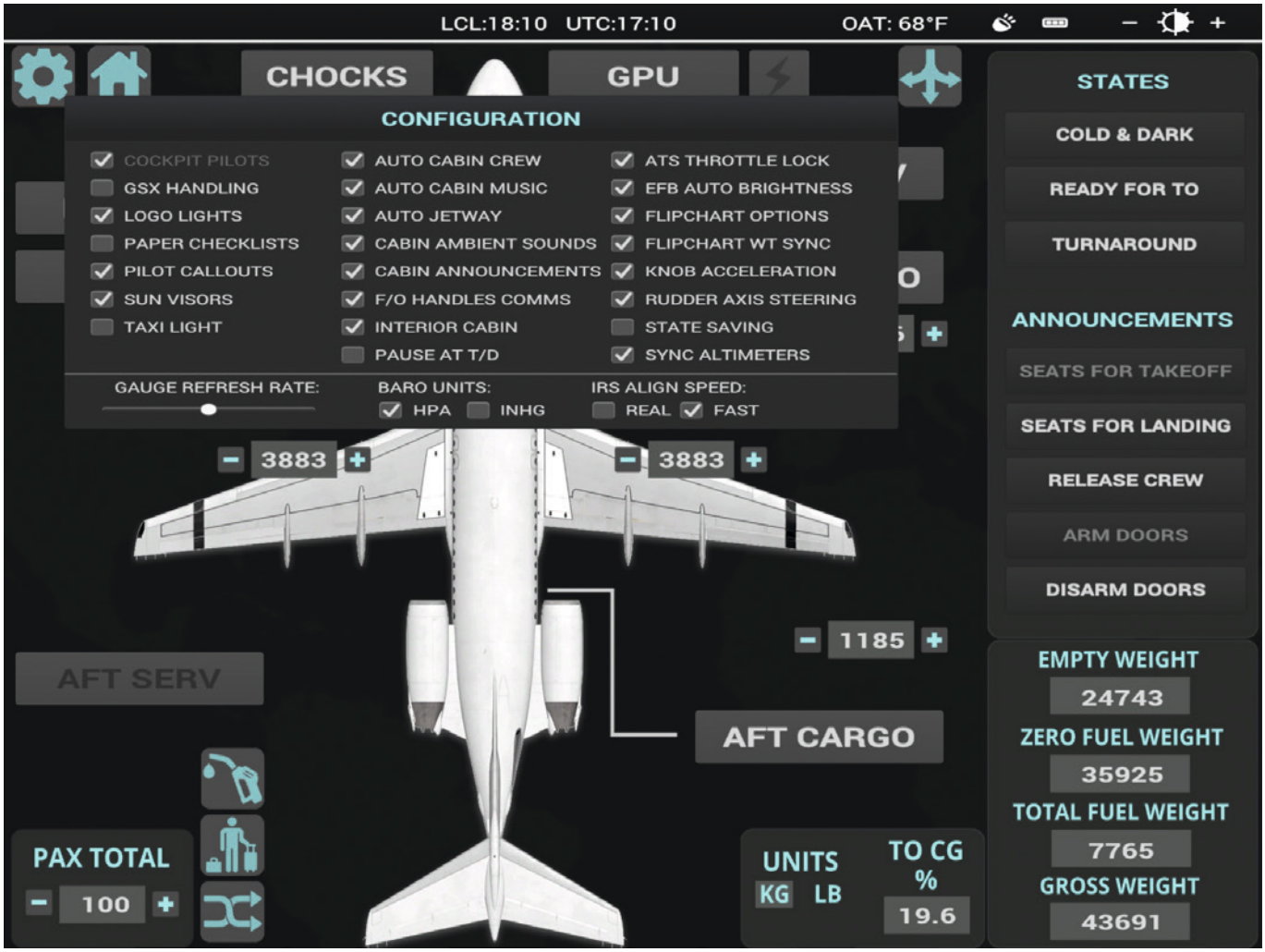
Selecting the Aircraft icon from the Home page will launch the Aircraft app, which provides a large selection of aircraft customisation options, custom fuel and payload controls, boarding and refuelling simulation, and more.

Please refer to the sections below for further information on the individual functions of the Aircraft app. You can return to the EFB from the Aircraft screen by clicking either the Home icon or the physical Home button on the tablet's bezel.



Configuration

With the Aircraft page displayed, pressing the Settings ‘cog’ icon opens and closes the Configuration menu.



This menu has the following options:

COCKPIT PILOTS – enables/disables the visible Captain and First Officer with interior camera selected.

GSX HANDLING – enables/disables the logic used to integrate the F70 Professional and F100 Professional’s boarding/deboarding logic with GSX. This option must be enabled prior to starting boarding and refuelling if you wish to use GSX’s boarding/refuelling logic with the F70 and F100.

LOGO LIGHTS – enables/disables the logo lights fitted to the out flaps track fairings. This option is set based on the chosen livery’s real-world configuration and is not affected by state saving.

PAPER CHECKLISTS – enables/disables the visibility of paper checklists on both the Captain’s and the First Officer’s yokes. The visibility of the individual paper checklists can be controlled via the clickspot on the light housing at the top of the chart holder.

PILOT CALLOUTS – enables/disables pilot callouts (“Rotate”, “Gear up” etc.).

SUN VISORS – enables/disables the visibility of the cockpit sun visors.

TAXI LIGHT – enables/disables the separate taxi light switch on the overhead panel, and the separate taxi light on the exterior. This option is set based on the chosen livery’s real-world configuration and is not affected by state saving.

GAUGE REFRESH RATE – a slider that controls the digital gauge refresh rate of the EFB, music player, speeds flipchart, paper checklists and CFDU/AFCAS maintenance panels. This may have a marginal impact on FPS with some hardware. Lower refresh rate = higher FPS.

AUTO CABIN CREW – enables/disables the Automatic Cabin Crew features. When enabled, the cabin crew will control the cabin lights and make cabin announcements at various stages during the flight. When enabled, the CABIN ANNOUNCEMENTS option will also be enabled automatically.

AUTO CABIN MUSIC – toggles the ability for the AUTO CABIN CREW to control the music on the digital music player. With this option enabled, the cabin crew will automatically configure the digital music player to play music during boarding and deboarding. With this option disabled, the cabin crew will not play any music through the digital music player. In both instances music remains manually playable via the player itself in the forward galley.

AUTO JETWAY – enables/disables the automatic jetway connection logic when converting the passenger door into a jetway configuration. This option will be automatically disabled when GSX HANDLING is enabled.

CABIN AMBIENT SOUNDS – enables/disables the cabin ambient sounds.

CABIN ANNOUNCEMENTS – enables/disables the cabin announcements spoken by the cabin crew using the cabin interphones (“The captain has switched off the fasten seatbelt signs” etc.) and the digital music player (“Welcome on board the aircraft” etc.). This option is automatically enabled when the AUTO CABIN CREW option is enabled.

F/O HANDLES COMMS – when enabled, the First Officer will automatically answer calls from the cabin and reset the calls panel once the call is complete. When this option is disabled, you are in full control of making and answering calls to/from the cabin. Calls to the cabin are made by triggering the PA switch on the audio panel. Calls from the cabin are answered by depressing the Cabin Interphone button on the audio panel.

INTERIOR CABIN – enables/disables the cabin with interior camera selected. The cockpit door will be locked closed when this option is disabled.

PAUSE AT T/D – when enabled, the simulation will pause as the aircraft approaches the Top Of Descent as computed by the FMS. A ‘T/D PAUSE’ pop-up message will be displayed on the EFB when the simulation is paused. The simulation can be un-paused by clicking the RESUME FLIGHT button on the pop-up message.

BARO UNITS – provides two options of pressure units displayed on the EFIS displays: hectopascals (hPa) or inches of mercury (inHg). This option is set based on the chosen livery’s real-world configuration and is not affected by state saving.

ATS THROTTLE LOCK – enables/disables a logic that controls whether the throttles can be moved via user inputs when the Autothrottle System (ATS) is engaged. When enabled, the throttles cannot be moved via user inputs when the ATS is engaged. When disabled, the throttles can be moved via user input when the ATS is engaged. This option is set to enabled by default. We highly recommend leaving this option enabled to prevent any user inputs or spiking in the throttle axis from interference with the ATS functionality.

EFB AUTO BRIGHTNESS – toggles on/off the auto brightness logic for the EFB tablet. With this option enabled, the brightness of the EFB tablet will vary depending on ambient lighting conditions within the simulator. With this option disabled, the brightness of the EFB tablet can be manually adjusted with the brightness buttons at the top right corner of the Aircraft page, or on the EFB Settings page. Manually adjusting the brightness on the Aircraft page will automatically disable the option (if enabled).

FLIPCHART OPTIONS – when enabled, clicking on the relevant column of the speeds flipchart (located on the Captain’s main instrument panel) will specify which speeds the speed bugs on the standby ASI will be set to. This allows you to preselect your take-off or approach flap setting. When disabled, clicking anywhere on the flipchart will set the speed bugs for take-off/landing, based on the current flap setting (e.g. if flap 25 is selected and the aircraft is airborne, the speed bugs will be set to flap 25 landing speeds).

FLIPCHART WT SYNC – when enabled, the speeds flipchart will be automatically synchronised to the aircraft’s current weight and will display the speeds for the aircraft’s current weight. When disabled, the speeds flipchart will not be synchronised with the aircraft’s current weight and you must manually find the correct speed chart for the aircraft’s current weight. With this option disabled, hovering your mouse over the speeds flipchart will display two arrows either side of the weight field at the top right of the flipchart. Clicking the left/right arrows will cycle through the various flipchart pages, which are in 1,000 kg (or 1,000 lb) intervals.

KNOB ACCELERATION – enables/disables scrolling acceleration when operating infinitely scrollable controls in the cockpit (e.g. the AFCAS controls on the FMP).

RUDDER AXIS STEERING – when enabled, the RUDDER AXIS control assignment will control both the rudder pedals and the nose-wheel steering tiller. When disabled, the RUDDER AXIS control assignment will only control the rudder pedals, allowing the nose-wheel steering tiller to be controlled independently. The nose-wheel steering tiller can be controlled via the STEERING INC/DEC and NOSE WHEEL STEERING AXIS control assignments, or it is also possible to click and drag the nose-wheel steering tiller.

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

Note: *State Saving's purpose is to save the position of cockpit controls between flights, allowing the aircraft to load into the next flight in a custom configuration. State Saving is not intended to be used as a 'Resume Flight' function, and will not save/recall FMS data or flight progress.*

SYNC ALTIMETERS – automatically synchronises all barometric pressure settings across the Captain's and Co-Pilot's panels.

IRS ALIGN SPEED – provides two options of IRS alignment speed: REAL will set a realistic IRS alignment time that will vary between 2 and 15 minutes based on the aircraft's latitude, or FAST will align the IRSs within 10 seconds of the IRS alignment procedure being completed.

Aircraft states

Three aircraft states can be selected:

COLD & DARK – aircraft is configured in a fully cold and dark state, with no electrical or hydraulic power. Chocks are fitted and all doors are closed.

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

TURNAROUND – aircraft is configured in a turnaround state with the engines shut down, cargo and forward passenger doors open, and chocks fitted. Upon selection of this mode, the electrical power source can be chosen via an 'AIRCRAFT STATE' pop-up message. The APU or GPU will be available instantly upon confirmation of this mode.

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 in the Configuration menu, will then occur.

Note: *For correct aircraft operation in all aircraft states, the FMS flight plan and performance data must be entered manually prior to flight.*

Announcements

Five cabin announcements can be triggered:

SEATS FOR TAKEOFF – flight deck to cabin PA for crew to take seats for take-off. After a short time the crew will confirm that the cabin is secure.

SEATS FOR LANDING – flight deck to cabin PA for crew to take seats for landing. After a short time the crew will confirm that the cabin is secure.

RELEASE CREW – flight deck to cabin PA to release crew to begin their service.

ARM DOORS – cabin PA to arm doors and cross-check.

DISARM DOORS – cabin PA to disarm doors.

The announcement buttons will be disabled (greyed out) if they have already been triggered.

The SEATS FOR TAKEOFF, RELEASE CREW and SEATS FOR LANDING cabin announcements can also be triggered by pressing the STEW CALL button on the overhead panel at the relevant stage of the flight (before take-off, during the climb and during the descent).

The announcements will also be triggered automatically if the AUTO CABIN CREW option is enabled on the EFB.

Doors and equipment

All passenger, service and cargo doors can be opened/closed by pressing the associated button:

FWD PAX – door 1L, main passenger door.

JETWAY – pressing this button on a variant of the F70 or F100 featuring integral airstairs will convert the L1 door into a jetway configuration by lowering the handrails and lowering a floor panel over the stairs. Pressing this button on any F70 or F100 variant will call and connect a jetway to the aircraft (if available).

FWD SERV – door 1R, forward service door.

AFT SERV – door 2L, aft service door (only available on one F100 variant).

FWD CARGO – forward/mid lower cargo doors.

AFT CARGO – aft lower cargo door.

The **CHOCKS** button enables/disables the wheel chocks.

The **GPU** button enables/disables the Ground Power Unit, which supplies external AC/DC power to the aircraft. A lightning bolt indicator to the right of the GPU button will be grey when external power is not connected to the aircraft, amber when external power is available but not connected to the aircraft's electrical system, and green when the external power is connected to the aircraft's electrical system. Clicking on this button with the GPU connected will perform the same function as the EXT PWR button on the overhead panel.

A lightning bolt indicator to the right of the STAIRS button indicates the status of external power if a jetway is connected to the aircraft. The lightning bolt will be grey when a jetway is not connected to the aircraft or in transit, amber when external power is available from the jetway but not connected to the aircraft's electrical system, and green when the external power from the jetway is connected to the aircraft's electrical system. Clicking on this button with a jetway connected to the aircraft will perform the same function as the EXT PWR button on the overhead panel.

Note: *The jetway external power cables are not modelled as external equipment..*

Fuel and payload

The F70 Professional and F100 Professional feature custom-coded fuel and payload systems. The fuel and payload fields on the Aircraft page can be used to set the following:

- Fuel load in each of the tanks – left wing, right wing and centre tank.
- Forward and aft cargo payload.
- Total passenger (PAX TOTAL) load.
- Zero Fuel Weight (ZFW) – the selected weight will be automatically split into a suitable passenger quantity and cargo load.
- Total Fuel Weight – the selected weight will be automatically split between the tanks.

Fuel and Cargo loads, Zero Fuel Weight and Total Fuel Weight values can be increased/decreased in 5% increments with the plus/minus buttons at either side of the field, or custom values can be entered manually. Manual entry can be achieved by clicking on the relevant field, inputting the value with the number keys on an external keyboard and then pressing the 'Enter' key, or by using the on-screen keyboard in the EFB. The 'Backspace' key can be used to delete an entry.

A 'Randomise' icon consisting of two arrows is located immediately to the right of the PAX TOTAL field. Clicking this icon will set a random passenger and cargo load.

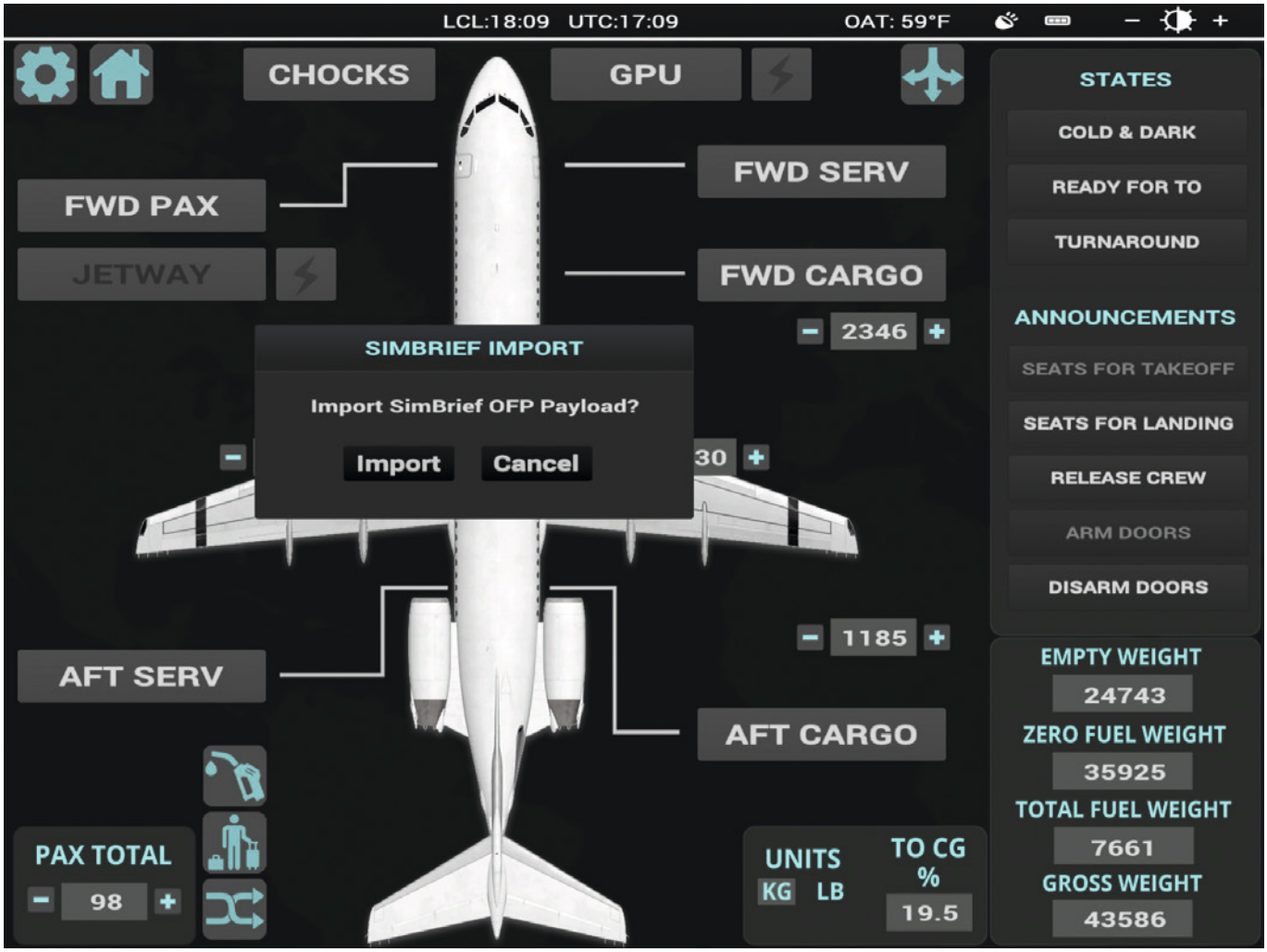
Units of measurement can be toggled between kilograms (KG) and pounds (LB) with the buttons at the bottom of the page.

Note: *We advise against using the default MSFS Weight and Balance menu when using the Boarding and Refuelling features of the F70 Professional and F100 Professional. Doing so can lead to conflicting values being shown between our custom fuel and payload logic and the default MSFS logic, and could lead to unforeseen issues with our custom-coded fuel system. To prevent any issues from occurring on your flight, we recommend restarting the flight if any changes are made inadvertently to the MSFS Weight and Balance menu.*

The TO CG% (Take-off Centre of Gravity) for the aircraft's current fuel and payload is shown at the bottom of the page. Clicking this button will automatically set the pitch trim to the correct position for take-off. The value will turn red if the Centre of Gravity is outside the aircraft's limits.

The Gross Weight value will turn red if the aircraft's maximum take-off weight (MTOW) has been exceeded.

If a SimBrief OFP has been imported on the OFP app, a window prompt will ask you to import the fuel and payload from the OFP data. This option will trigger the Zero Fuel Weight and Total Weight to be automatically set to the OFP values.



Boarding simulation

Boarding simulation is possible with all variants of the F70 and F100. The BOARDING menu can be opened by clicking the passenger icon at the bottom left corner of the Aircraft page and includes options to start the boarding/deboarding process and control its speed, as well as displaying useful tips for the next step which may be required to advance the process.

When loading into the aircraft at a gate in a cold and dark or 'turnaround' state, the aircraft will be loaded with 1000 KG of fuel in each wing tank and no passengers or cargo, simulating a 'ready for boarding' state. In order to begin the boarding process, the required aircraft weights must first be entered into the flashing data fields, either by using the 'plus' and 'minus' arrows, clicking on the field and inputting the weights with the on-screen keyboard, or by importing the weights from a SimBrief imported flight plan on the OFP page.

Once the desired weights have been entered, clicking the START BOARDING button will begin the boarding process. If the passenger and cargo doors are not already open, they will be opened automatically at the start of the boarding/deboarding process (with the exception of the INSTANT boarding speed option which is explained below).

The speed of the boarding/deboarding process can be altered by adjusting the BOARDING SPEED field. The boarding speed must be selected prior to starting the boarding/deboarding process:

REAL – boarding/deboarding will proceed at a realistic rate and will vary depending on the number of passengers and the amount of cargo to be loaded. With this option selected, boarding/deboarding can take up to 20 minutes for a fully laden F100.

INSTANT – boarding/deboarding will be completed instantly once the START BOARDING button has been clicked. The passenger and cargo doors will not be opened and the passenger and cargo weights will be instantly set.

5 MINS – boarding/deboarding will take five minutes to complete once the START BOARDING button has been pressed.

10 MINS – boarding/deboarding will take 10 minutes to complete once the START BOARDING button has been pressed.

20 MINS – boarding/deboarding will take 20 minutes to complete once the START BOARDING button has been pressed.

The GATE TYPE field allows for the selection of boarding method prior to boarding/deboarding:

JETWAY – once START BOARDING has been triggered with the AUTO CABIN CREW option enabled, the FWD PAX door will automatically open, convert into a jetway configuration (Integral Stair doors only) and boarding/deboarding will begin. A jetway will automatically be called to the aircraft. If no jetway is within range of the aircraft's current position, passenger boarding will not progress and a CANCEL BOARDING button will appear on the EFB. In that scenario, cancelling boarding and selecting the STAIRS option will allow boarding to progress.

STAIRS – Once START BOARDING has been triggered with the AUTO CABIN CREW option enabled, the FWD PAX door will automatically open and boarding/deboarding will commence (the F100 Sliding Door variant requires external stairs for deboarding).

During boarding/deboarding, a progress bar will replace the START BOARDING button, displaying the current progress as a percentage. The fields will turn amber when the weight is increasing/decreasing towards the previously set value and will turn green once the previously set value has been reached.

Once boarding is complete, the fields will return to their non-flashing state, indicating that the current weights shown are the actual weights loaded onto the aircraft. Editing the weights in this state will return the fields to their flashing state and a new boarding/deboarding process must be completed for the new weights to affect the aircraft.

If the aircraft is in a state where boarding/deboarding cannot be completed, all fields will be greyed out and the aircraft weights cannot be edited. This will occur if, after boarding has already been completed, the seatbelt signs are still on and the landing and strobe lights are on, or if the aircraft is moving with neither parking brake nor chocks set.

Deboarding the aircraft at the end of the flight can be completed by using the same process as for boarding; the button used to begin the deboarding will now be changed to START DEBOARDING to signify the different state.

Once the deboarding process is complete, the boarding menu will reset back to the pre-boarding state and the data fields on the Aircraft page will begin flashing, indicating that the aircraft's fuel and payload can now be adjusted ahead of the next flight.

In order to start the boarding/deboarding process, the aircraft must be stationary with the parking brake ON or chocks enabled; seatbelt signs must be switched OFF and landing and strobe lights must also be switched OFF.

When starting a flight on the runway, the aircraft will be loaded with full wing fuel tanks and a sub-station amount of passengers and cargo to increase the aircraft up to its Maximum Take-off Weight (MTOW). Unlike starting a flight at a gate, you will not be prompted to begin the boarding process. The payload values can still be changed by editing the respective fields to the desired values, but these new values will only take effect once a boarding process has been completed. When starting a flight on the runway, the most efficient way of achieving this is to set the boarding speed to INSTANT before clicking the START BOARDING button; this will allow the values to take effect instantly without requiring doors to be opened.

Users of GSX can enable the GSX HANDLING option in the Configuration menu to allow GSX to integrate with the F70 Professional and F100 Professional's boarding/deboarding processes.

Note: *We advise against using the default MSFS Weight and Balance menu when using the Boarding and Refuelling features of the F70 Professional and F100 Professional. Doing so can lead to conflicting values being shown between our custom fuel and payload logic and the default MSFS logic, and could lead to unforeseen issues with our custom-coded fuel system. To prevent any issues from occurring on your flight, we recommend restarting the flight if any changes are made inadvertently to the MSFS Weight and Balance menu.*

Refuelling simulation

Refuelling simulation is possible in all variants of the F70 and F100. The Refuelling menu can be opened by clicking the fuel nozzle icon in the bottom left corner of the Aircraft page and includes options to start the refuelling/defuelling process and control the speed, as well as displaying useful tips for the next step which may be required to advance the process.

When loading into the aircraft at a gate in a cold and dark or 'turnaround' state, the aircraft will be loaded with 1000 KG of fuel in each wing tank and no passengers or cargo, simulating a 'turnaround' state. In order to begin the refuelling process, the required aircraft weights must first be entered into the data fields, either by using the 'plus' and 'minus' arrows, clicking on the field and inputting the weights with the on-screen keyboard, or by importing the weights from a SimBrief imported flight plan on the OFP page.

Once the desired fuel weights have been entered, clicking the START REFUELLING button will begin the refuelling process.

The speed of the refuelling/defuelling process can be altered by adjusting the REFUEL SPEED field. The REFUEL SPEED must be selected prior to starting the refuelling/defuelling process.

REAL – refuelling/defuelling will proceed at a realistic rate of 1,200 l/min. With this option selected, refuelling/defuelling can take up to 10 minutes to fuel the F70 or F100 to maximum capacity, including wing and centre tanks.

INSTANT – refuelling/defuelling will be completed instantly once the START REFUELLING button has been clicked.

5 MINS – refuelling/defuelling will take five minutes to complete once the START REFUELLING button has been pressed.

10 MINS – refuelling/defuelling will take 10 minutes to complete once the START REFUELLING button has been pressed.

20 MINS – refuelling/defuelling will take 20 minutes to complete once the START REFUELLING button has been pressed.

During refuelling/defuelling, a progress bar will replace the START REFUELLING button and will display the current progress as a percentage, and a REFUEL SELECTED caption will illuminate on the FUEL section of the overhead panel. The EFB fuel fields will turn amber when the weight is increasing/decreasing towards the previously set value, and will turn green once the previously set value has been reached.

Once refuelling/defuelling is complete, the fields will return to their non-flashing state, indicating that the current fuel weights shown are the actual fuel weights loaded onto the aircraft. This can be verified by checking the fuel quantity indicators on the main instrument panel. Editing the weights in this state will return the fields to their flashing state and a new refuelling/defuelling process must be completed in order for the new fuel weights to affect the aircraft.

If the aircraft is in a state where refuelling/defuelling cannot be completed, all fields will be greyed out and the aircraft weights cannot be edited.

In order to start the refuelling/defuelling process, the aircraft must be stationary with the parking brake ON or chocks enabled, seatbelt signs switched OFF and landing and strobe lights also switched OFF.

When starting a flight on the runway, the aircraft will be loaded with full wing fuel tanks and a sub-station amount of passengers and cargo to increase the aircraft up to its Maximum Take-off Weight (MTOW). Unlike starting a flight at a gate, you will not be prompted to begin the refuelling process. The fuel values can still be changed by editing the respective fields to the desired values, but these new values will only take effect once a refuelling/defuelling process has been completed. When starting a flight on the runway, the most efficient way of achieving this is to set the refuelling speed to INSTANT before clicking the START REFUELLING button; this will allow the values to take effect instantly without any extended waiting time.

Users of GSX can enable the GSX HANDLING option in the Configuration menu to allow GSX to integrate with the F70 Professional and F100 Professional's refuelling/defuelling processes.

Note: *We advise against using the default MSFS Weight and Balance menu when using the Boarding and Refuelling features of the F70 Professional and F100 Professional. Doing so can lead to conflicting values being shown between our custom fuel and payload logic and the default MSFS logic, and could lead to unforeseen issues with our custom-coded fuel system. To prevent any issues from occurring on your flight, we recommend restarting the flight if any changes are made inadvertently to the MSFS Weight and Balance menu.*

Pushback controls

Pushback controls can be accessed by clicking on the three-arrow icon in the top right corner of the Aircraft page.

A pop-out PUSHBACK menu will open, providing controls for manoeuvring the aircraft on the ground with a pushback tug:

- **CONNECT** – connects the pushback tug to the aircraft. Pushback will begin once a direction is chosen via the arrow buttons. Text will change to CANCEL once a button is pressed.
- **CANCEL** – stops the pushback and disconnects the pushback tug. Text will revert to CONNECT once the button is pressed.
- **ARROW BUTTONS** – provide control of the aircraft in four directions. An arrow will change to green once that direction is selected. Multiple directions can be selected at the same time (e.g. reverse and left). The pushback direction can also be controlled with MSFS rudder axis control assignments.
- **SPEED** – provides control over the pushback tug speed. The greater the value, the higher the speed.
- **STEER ANGLE** – displays the current steering angle of the pushback tug.
- **STATUS** – displays the current status of pushback.

NOTES

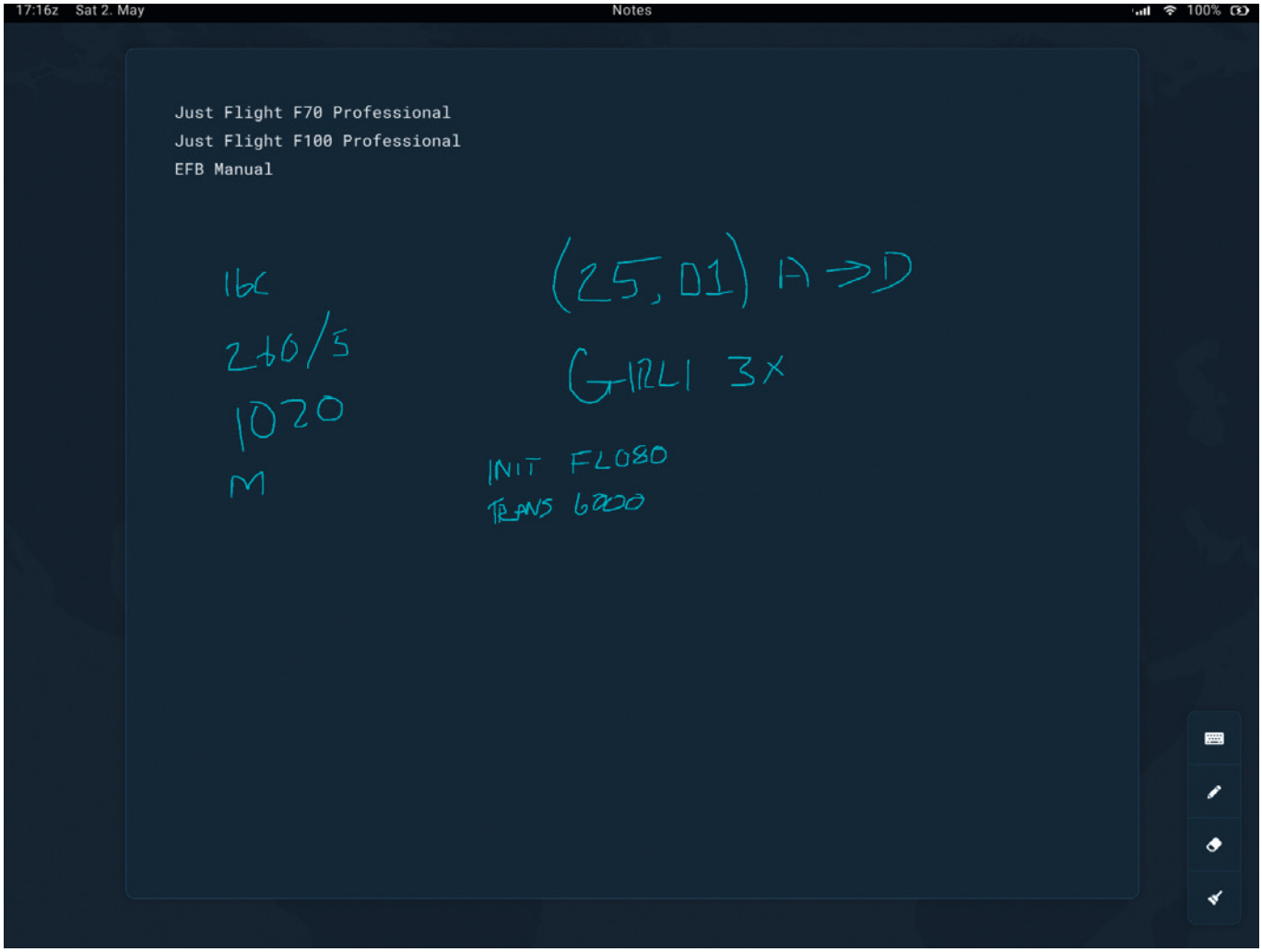
The Notes app acts as a virtual notepad for the pilot, allowing you to take text-based and handwritten notes on the fly (particularly useful for noting clearances and taxi instructions).

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 write 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.



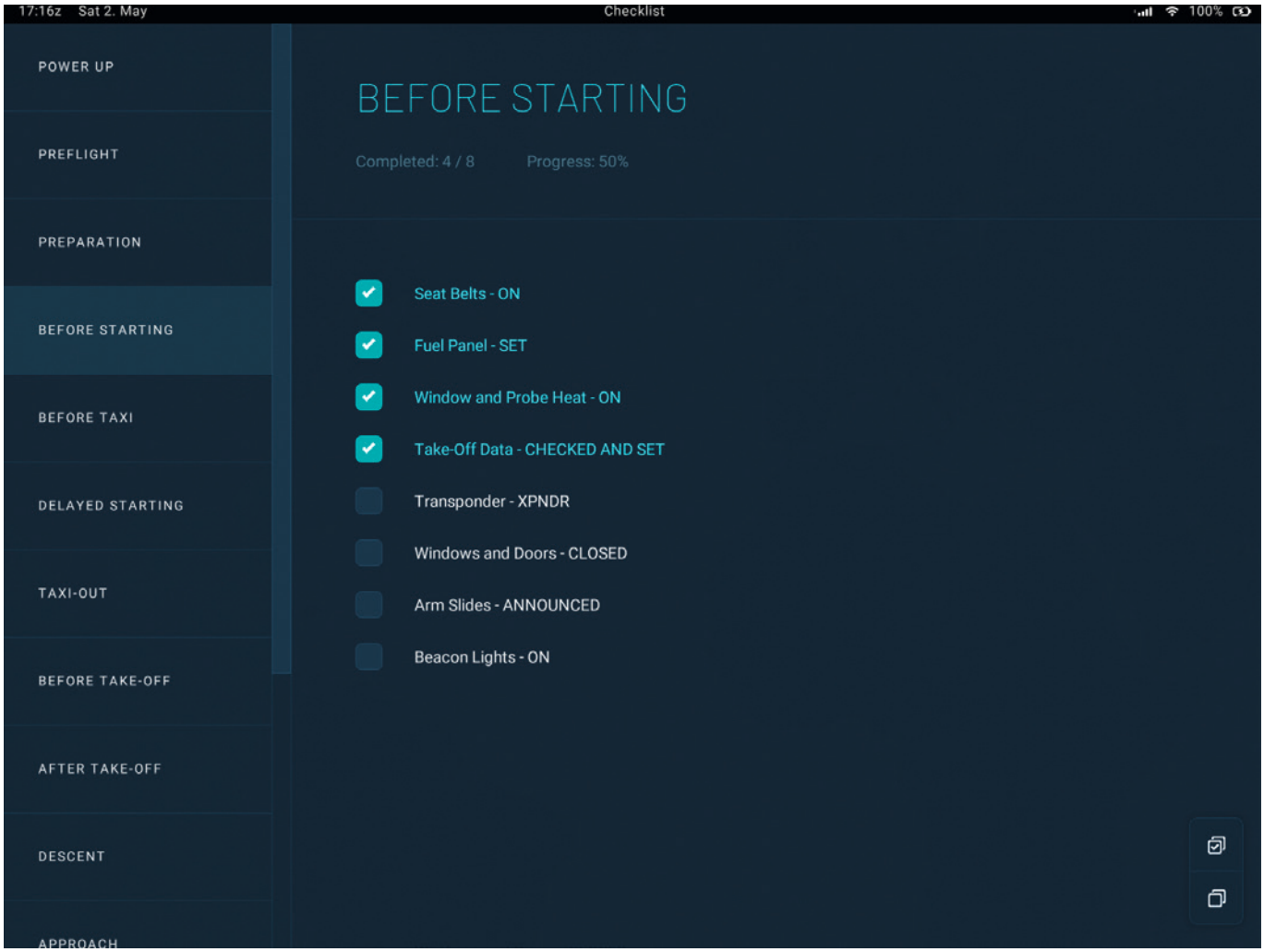
CHECKLIST

The Checklist app allows you to view the aircraft's checklists on one easy-to-navigate page. The title of each checklist is shown on the left side of the page. Clicking 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: *For expanded checklists with interactable elements, please use the interactive checklist menu within MSFS.*



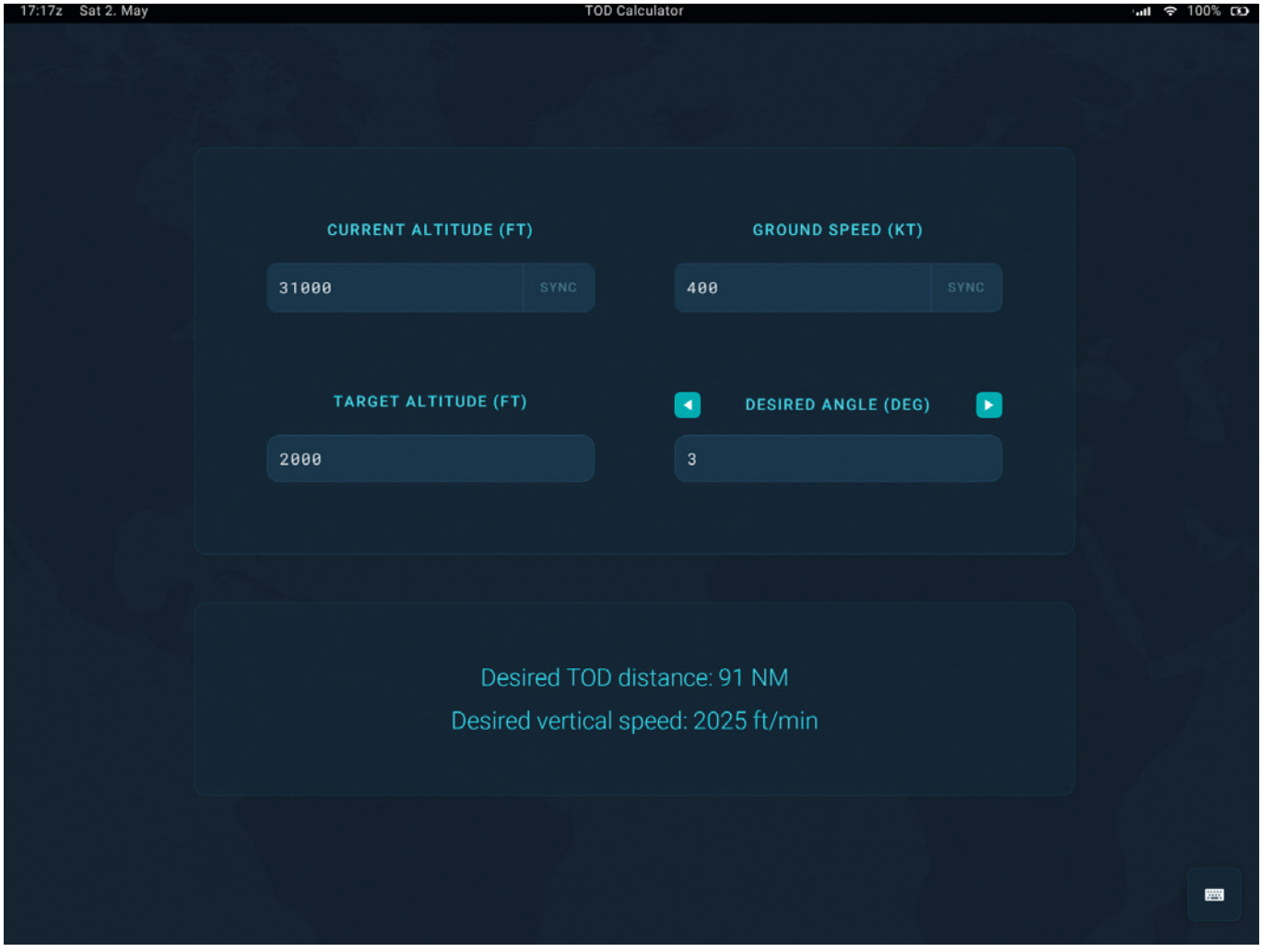
TOD CALCULATOR

The TOD (Top Of Descent) 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 arrows 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.

PERFORMANCE CALCULATOR

The Performance Calculator provides take-off and landing data for any airport in the navigation database and for a variety of different aircraft configurations and weather conditions. The app supports manual data entry as well as options to import data from a SimBrief OFP, or live weather from within the simulator. Performance data is sourced from real aircraft documentation, and airport data is sourced from the navigation database used by the F70 Professional and F100 Professional.

Take-off performance calculator

The take-off performance calculator can be accessed by clicking the TAKEOFF button at the top left of the page. A take-off calculation output is only as accurate as the inputs it receives, and a variety of mandatory input fields are displayed on the left side of the page. Once the calculator has sufficient input data, it will be able to output precise take-off performance data that includes: V-speeds, flap setting, flex, trim and estimated take-off distance.

The mandatory input fields are:

DEPARTURE ICAO – the four-letter ICAO code of the departure airport.

RUNWAY – the two- or three-character runway number of the planned departure runway.

RUNWAY LENGTH – the length of the selected runway in feet or metres (units can be toggled by clicking the box adjacent to the field).

T.O SHIFT (REDUCE AVAIL.) – if an intersection take-off is to be performed, the available runway length will be shorter than the full length of the runway. Use this field to enter the reduction which is to be applied to the total runway length. For example, a T.O SHIFT value of 500ft will subtract 500ft from the distance listed in the RUNWAY LENGTH field (units can be toggled by clicking the box adjacent to the field).

RUNWAY SLOPE (%) – the slope of the inputted runway as a percentage.

RUNWAY SURFACE – the current condition of the runway (DRY/WET).

FLAP – the expected take-off flap settings; can be forced to a certain flap setting, or left for the calculator to compute the required setting (AUTO/0/8/15).

ANTI-ICE – the expected take-off anti-ice setting (OFF/ENG/ENG+WING).

ANTI-SKID – anti-skid status (operative/inoperative).

TAKEOFF WEIGHT – the estimated take-off weight (units can be toggled by clicking the box adjacent to the field).

WIND – the current wind conditions in degrees and knots (direction/magnitude).

OAT – the current Outside Air Temperature (units can be toggled by clicking the box adjacent to the field).

QNH – the current barometric pressure (units can be toggled by clicking the box adjacent to the field).

FORCE TOGA – option to force TOGA thrust in calculations.

Data can be manually inputted into each field, or can be automatically inputted from external sources by using the buttons at the top right of the screen:

IMPORT AIRCRAFT – imports the aircraft's current Gross Weight into the TAKEOFF WEIGHT field.

IMPORT SIMBRIEF – imports departure airport, runway and estimated take-off weight from a SimBrief OFP (a SimBrief OFP must be generated and imported on the OFP page for this option to function).

IMPORT LIVE WX – imports departure airport weather information based on current simulator conditions at the airport inputted into the DEPARTURE ICAO field.

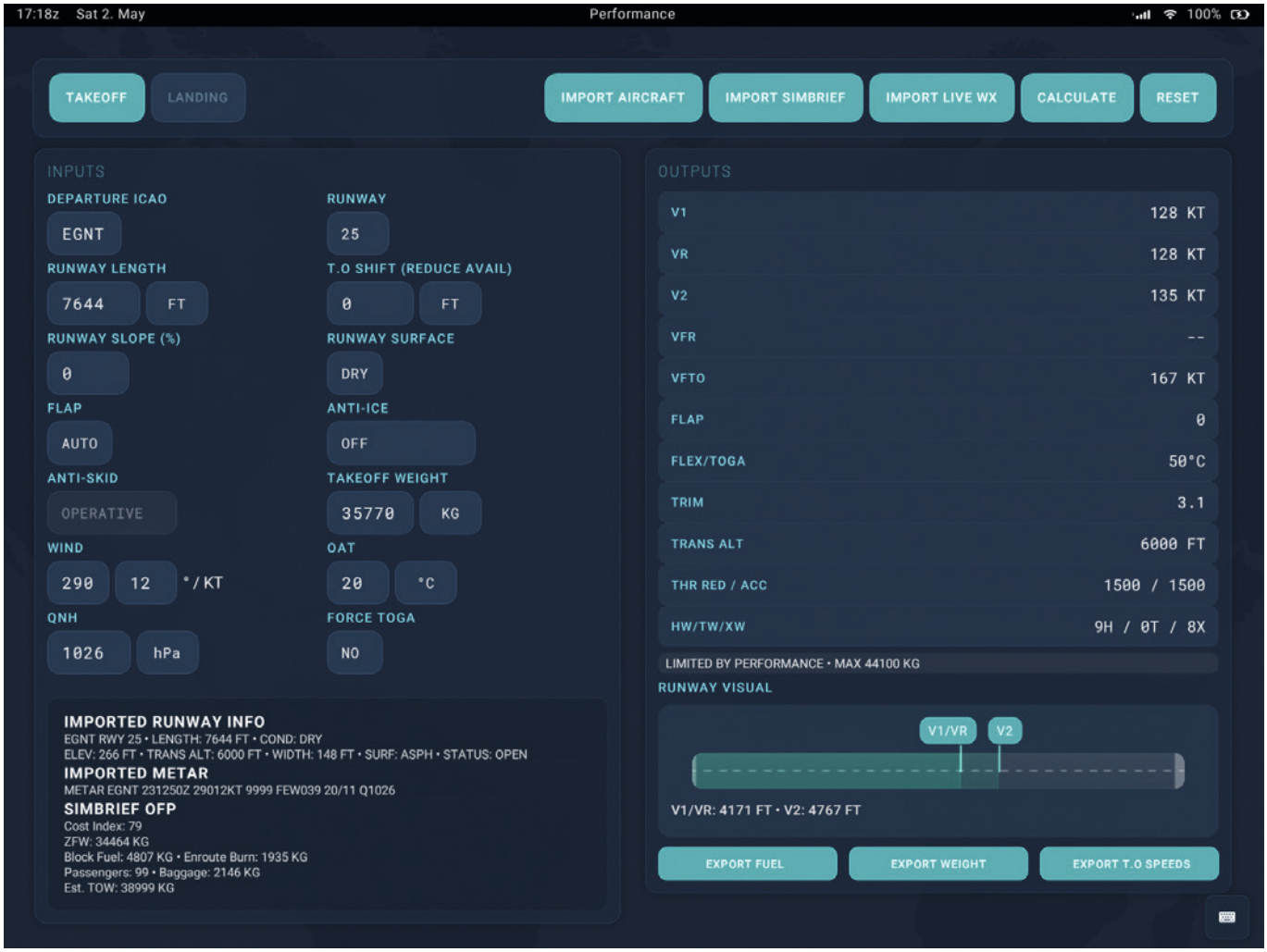
Once data has been entered in all fields, pressing the **CALCULATE** button will generate the required take-off performance data. Press the **RESET** button at any time to reset the page back to its default state.

The calculated take-off performance data will be displayed on the right side of the page. This data can be recalculated by manually changing any value on the left side of the page and pressing the CALCULATE button.

A visual indication of runway length is visible at the bottom of the page, as well as additional information on the chosen runway, the METAR for the selected airport and an overview of the imported SimBrief OFP.

Options to export data from the Performance Calculator app to other aircraft systems are available as buttons at the bottom of the page.

A selection of warning messages will appear at the top right corner of the page if any aircraft limitations have been exceeded, or if the calculated performance is not sufficient for the inputted conditions.



Landing performance calculator

The landing performance calculator can be accessed by clicking the LANDING button at the top left of the screen. A landing calculation output is only as accurate as the inputs it receives, and a variety of mandatory input fields are displayed on the left side of the page. Once the calculator has sufficient input data, it will be able to output precise landing performance data that includes: V-speeds, Landing Distance Available (LDA), Landing Distance Required (LDR) and wind.

The mandatory input fields are:

ARRIVAL ICAO – the four-letter ICAO code of the arrival airport.

RUNWAY – the two- or three-character runway number of the planned arrival runway.

RUNWAY LENGTH – the length of the selected runway in feet or metres (units can be toggled by clicking the box adjacent to the field).

RUNWAY SLOPE (%) – the slope of the inputted runway as a percentage.

BRAKING ACTION – the current reported braking action of the arrival runway.

LANDING FLAP – the planned landing flap setting (25/42).

AUTOBRAKE – the planned autobrake setting (LO/MED/HI/MAX MANUAL).

RUNWAY SURFACE – the current condition of the runway (DRY/WET/CONTAMINATED).

ANTI-SKID – anti-skid status (operative/inoperative).

LANDING WEIGHT – the estimated landing weight (units can be toggled by clicking the box adjacent to the field).

WIND – the current wind conditions in degrees and knots (direction/magnitude).

OAT – the current Outside Air Temperature (units can be toggled by clicking the box adjacent to the field).

QNH – the current barometric pressure (units can be toggled by clicking the box adjacent to the field).

Data can be manually inputted into each field, or can be automatically inputted from external sources by using the buttons at the top right of the screen:

IMPORT AIRCRAFT – imports the aircraft's current Gross Weight into the LANDING WEIGHT field.

IMPORT SIMBRIEF – imports arrival airport, runway and estimated landing weight from a SimBrief OFP (a SimBrief OFP must be generated and imported on the OFP page for this option to function).

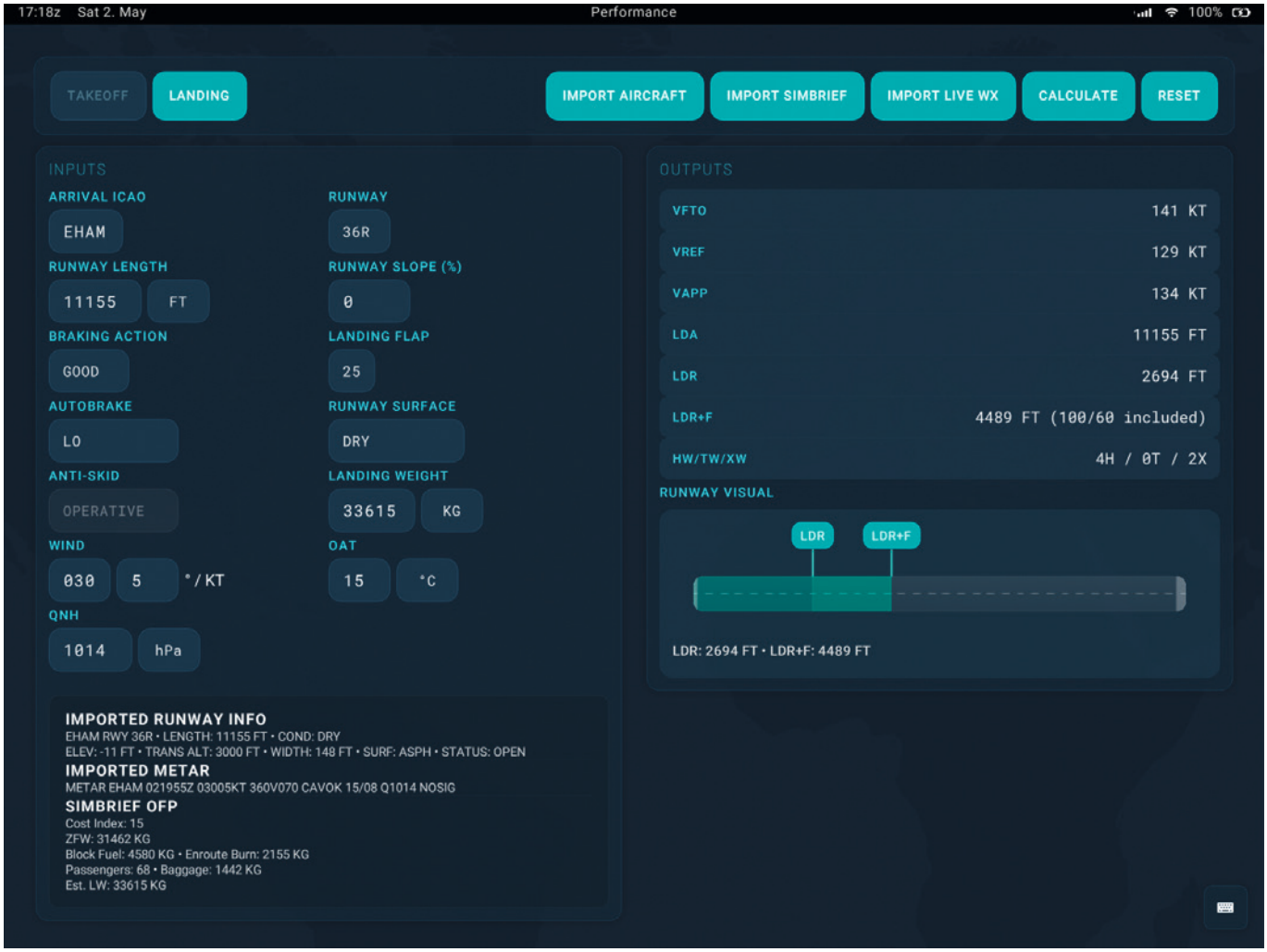
IMPORT LIVE WX – imports arrival airport weather information based on current simulator conditions at the airport inputted into the ARRIVAL ICAO field.

Once data has been entered in all fields, pressing the **CALCULATE** button will generate the required landing performance data. Press the **RESET** button at any time to reset the page back to its default state.

The calculated landing performance data will be displayed on the right side of the page. This data can be recalculated by manually changing any value on the left side of the page and pressing the CALCULATE button.

A visual indication of runway length is visible at the bottom of the page, as well as additional information on the chosen runway, the METAR for the selected airport and an overview of the imported SimBrief OFP.

A selection of warning messages will appear at the top right corner of the page if any aircraft limitations have been exceeded, or if the calculated performance is not sufficient for the inputted conditions.


17:18z Sat 2. May
Performance
100%
TAKEOFF
LANDING
IMPORT AIRCRAFT
IMPORT SIMBRIEF
IMPORT LIVE WX
CALCULATE
RESET
INPUTS
ARRIVAL ICAO
EHAM
RUNWAY
36R
RUNWAY LENGTH
11155
FT
RUNWAY SLOPE (%)
0
BRAKING ACTION
GOOD
LANDING FLAP
25
AUTOBRAKE
LO
RUNWAY SURFACE
DRY
ANTI-SKID
OPERATIVE
LANDING WEIGHT
33615
KG
WIND
030
5
°/KT
OAT
15
°C
QNH
1014
hPa
IMPORTED RUNWAY INFO
EHAM RWY 36R • LENGTH: 11155 FT • COND: DRY
ELEV: -11 FT • TRANS ALT: 3000 FT • WIDTH: 148 FT • SURF: ASPH • STATUS: OPEN
IMPORTED METAR
METAR EHAM 021955Z 03005KT 360V070 CAVOK 15/08 Q1014 NOSIG
SIMBRIEF OFP
Cost Index: 15
ZFW: 31462 KG
Block Fuel: 4580 KG • Enroute Burn: 2155 KG
Passengers: 68 • Baggage: 1442 KG
Est. LW: 33615 KG
OUTPUTS
VFTO 141 KT
VREF 129 KT
VAPP 134 KT
LDA 11155 FT
LDR 2694 FT
LDR+F 4489 FT (100/60 included)
HW/TW/XW 4H / 0T / 2X
RUNWAY VISUAL
LDR
LDR+F
LDR: 2694 FT • LDR+F: 4489 FT

SETTINGS

The Settings screen offers several options to adjust the design and functionality of the EFB:

Clock: 12h format – toggles the 12/24-hour format on the EFB tablet clock.

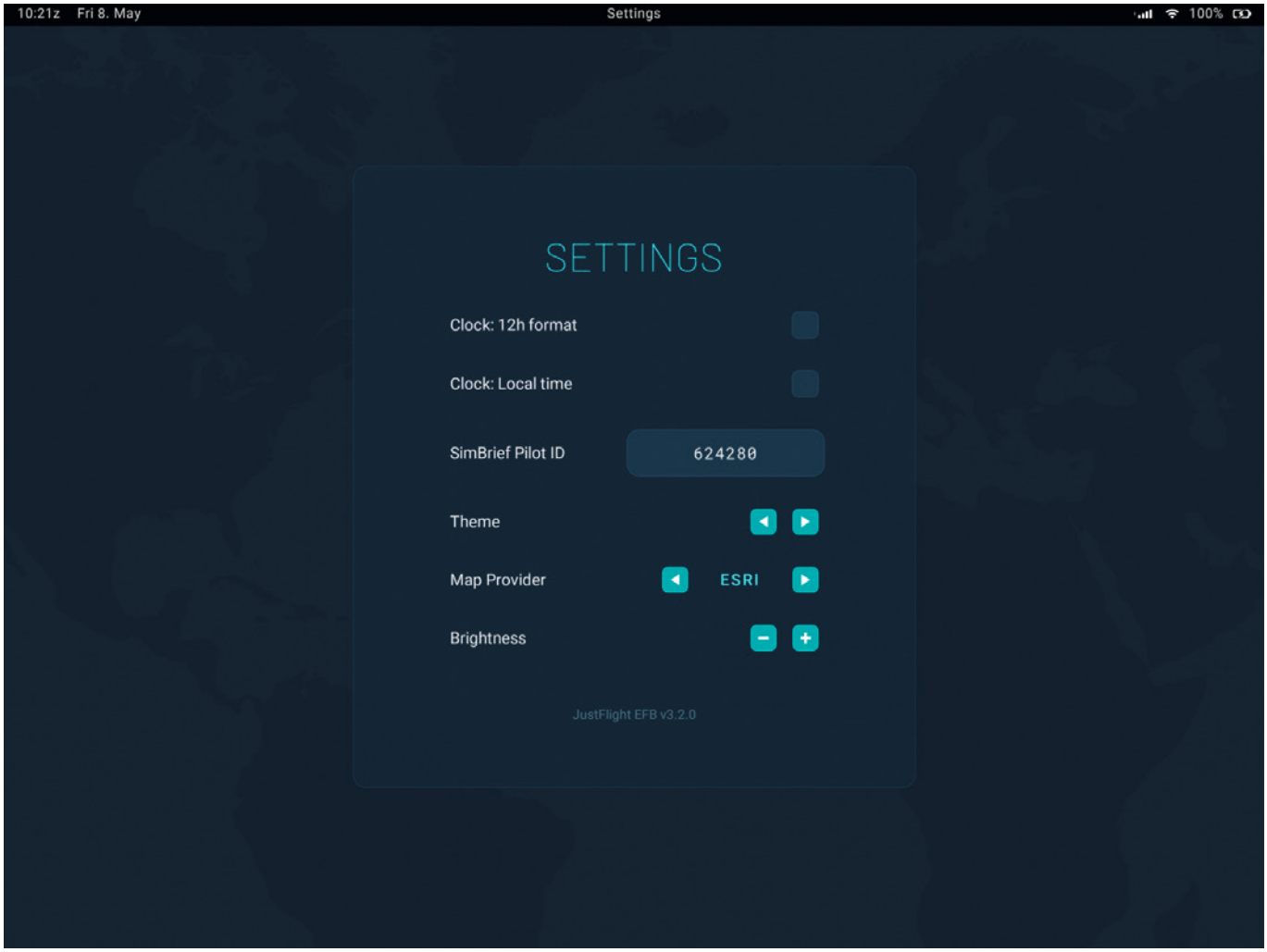
Clock: Local time – toggles between UTC and local time on the EFB tablet clock.

SimBrief Pilot ID – displays the SimBrief Pilot ID currently sync'd with the EFB tablet. The SimBrief Pilot ID can be updated here, and removing it entirely will unlink the EFB tablet and SimBrief.

Theme – toggles between the EFB tablet's various colour schemes.

Map Provider – toggles between several map provider options for the Map app.

Brightness – increases/decreases the EFB tablet's brightness.



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Manual	Mark Allison, Mark Embleton
Design	Fink Creative

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