LivToAir

EVIATION ALICE

A FULL ELECTRIC AIRCRAFT

INTRODUCTION

ALICE

INTRODUCTION

THE BASICS

The Eviation Alice is a fully electric Aircraft. Therefore there is no fuel.
The Alice has 3 batteries, powering 2 engines:
- Battery 1 gives power to the cockpit,
- Battery 2 And 3 are powering the 2 engines.

Electric engines have 2 significant changes comparing to piston engines:

- There is no Idle. The engine will deliver the Amount of thrust you will set it
  (Engine power is measured in KW)
- When electric engines spins by an outer Source they become a generator and will charge the batteries.
  Example for that is the descent phase. While descending if You set power to 0 you will see the power become negative

SPECIFICATIONS

GENERAL

Length	57 ft
Height	12 ft
Wingspan	63 ft
Empty Weight	16,000 lb
Max Takeoff Weight	18,400 lb
Battery Capacity	2x 640kwh
Engines	2x magniX 650
Power	700 kW (940 hp)

PERFORMANCE

Range	450 nm
Max Speed	300 kt
Never exceed speed	370 kt
Stall speed	80 kt
Climb Rate	2,000 ft/m
Takeoff Distance	2,750 ft
Landing Distance	1,800 ft
Hight Speed Cruise	Mach 0.63
Low Speed Cruise	Mach 0.55
service ceiling	32,000ft

COMMUTER

Crew	2
Pax	9
Baggage	530 lb

LUXURY

Crew	2
Pax	6
Baggage	1040 lb

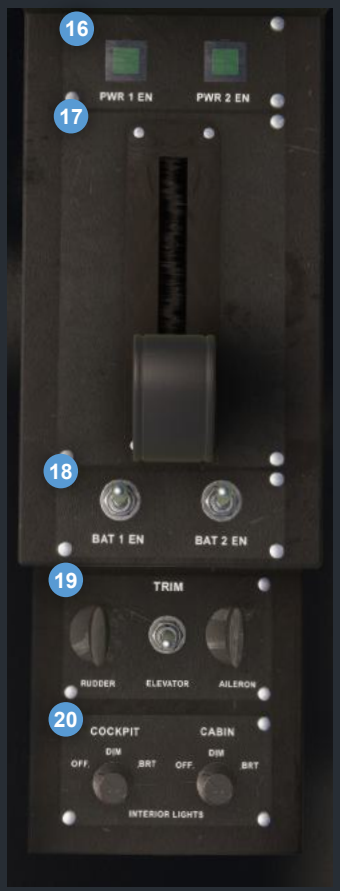
CARGO

Crew	2
Cargo	1800 lb
Baggage	260 lb

WALK THROUGH

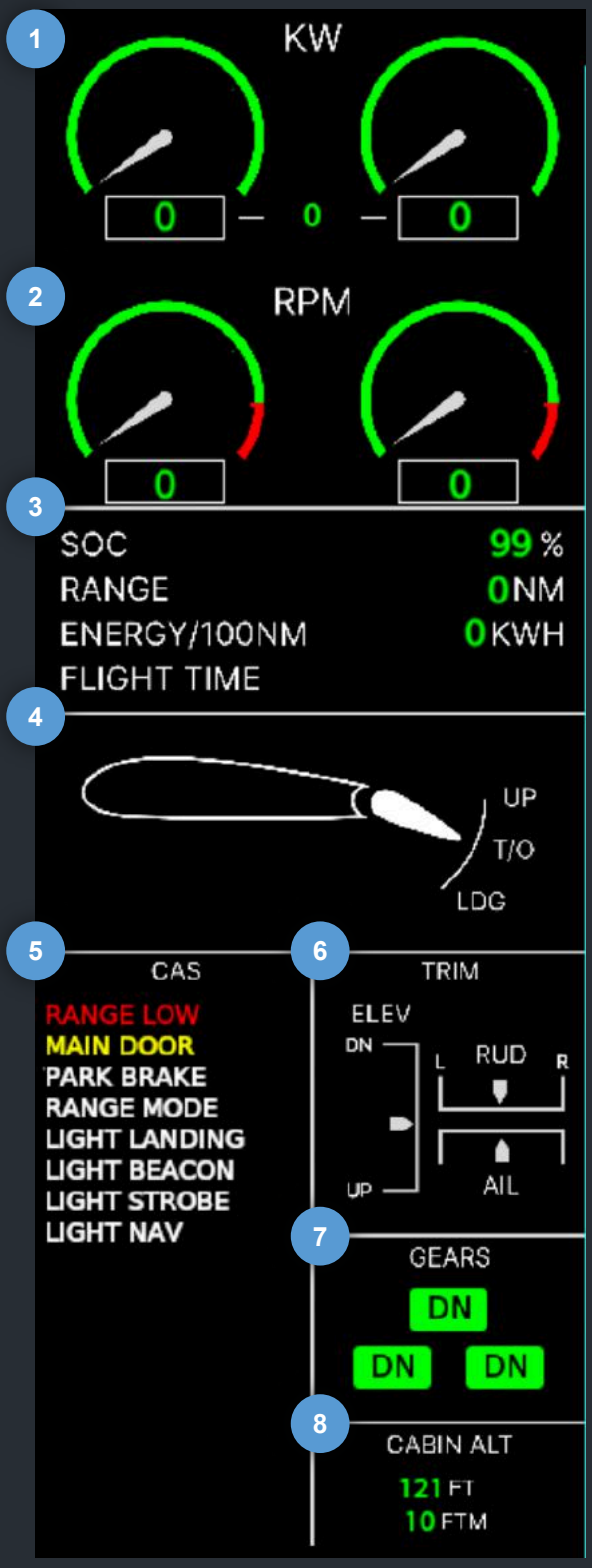
COCKPIT

1. Battery Master - Toggles Battery 1
2. Avionics Master
3. Backup Rate Of Climb Indicator
4. Backup Speed Indicator
5. Parking Brakes
6. Exterior Lighting Panel
7. Autopilot Panel
8. Thrust Mode Selector - Taxi (300kw) → Range (500kw) → Power (700kw)
9. G3000 Avionics
10. Landing Gear Lever
11. Flaps Lever
12. Air Conditioner Panel
13. Pressurization Panel
14. Cabin Rate Of Climb Indicator
15. Cabin Altitude Indicator
16. Engine 1 & 2 Toggle
17. Engine 1 & 2 Throttle Lever
18. Bat 2 & 3 Toggle
19. Trim Panel
20. Interior Lighting Panel



WALK THROUGH

G3000 MFD Instruments



1. Engine Power in kw
2. Propeller RPM
3. Electrical batteries data
4. Flaps position
5. CAS (Crew Awareness System)
6. Aircraft Trims
7. Gears State
8. Cabin Altitude and Cabin Climb Rate

THROTTLE ERROR	When you try to start the engines on the ground and the throttle lever is not set to idle
BAT 2-3 LOW	When battery 2 or 3 are less then 15 percent
RANGE LOW	When estimated range is less then 50nm
CABIN ALT	When cabin altatude is above 10,000ft
BAT 2 OFF	When battery 2 is off
BAT 3 OFF	When battery 3 is off
MAIN DOOR	When the main door is open
BAGGAGE DOOR	When the baggage door is open
CHARGING DOOR	When the charging door is open
PARK BRAKE	When parking brakes are on
POWER MODE	When thrust mode is set to Power
TAXI MODE	When thrust mode is set to Taxi
RANGE MODE	When thrust mode is set to Range
AC ON	When the air conditioner is on
LIGHT TAXI	When the taxi light is on
LIGHT LANDING	When the landing light is on
LIGHT BEACON	When the beacon light is on
LIGHT STROBE	When the strobe light is on
LIGHT NAV	When the nav light is on

WALK THROUGH

G3000 Synoptics Pages

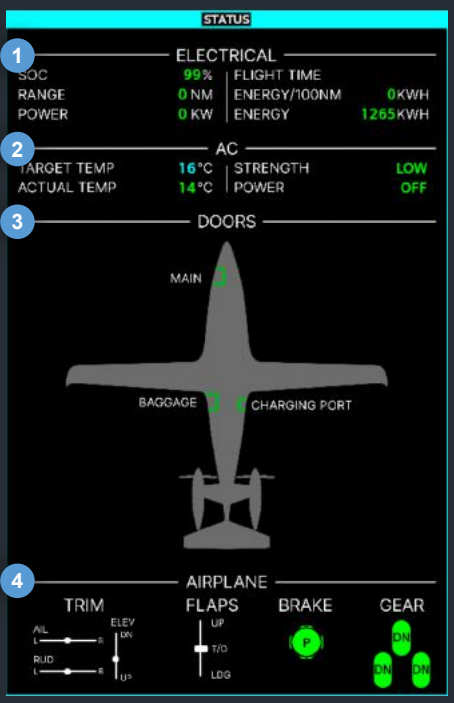
Open Synoptics Pages

All airplane systems can be monitored from the MFD synoptics pages.
There are a total of 5 custom pages that can be displayed in both the MFD and PFD.

To open any synoptics page follow those steps:

- Pane to the desired panel you want the page to be displayed at
- In the GTC screen select MFD → Aircraft Systems → Select desired panel

STATUS



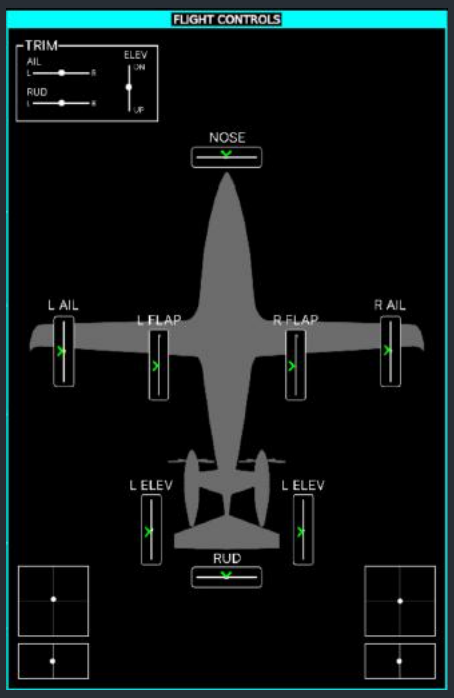
This page will give you general information about the aircraft.

1. Electrical - includes the most important information about the electrical system
2. AC - gives information about the temperture inside the airplane and air Conditionering system
3. Doors - an illustration of all the doors of the aircraft and their status
4. Airplane - displays information about main physical systems of the aircraft

WALK THROUGH

G3000 Synoptics Pages

FLIGHT CONTROLS

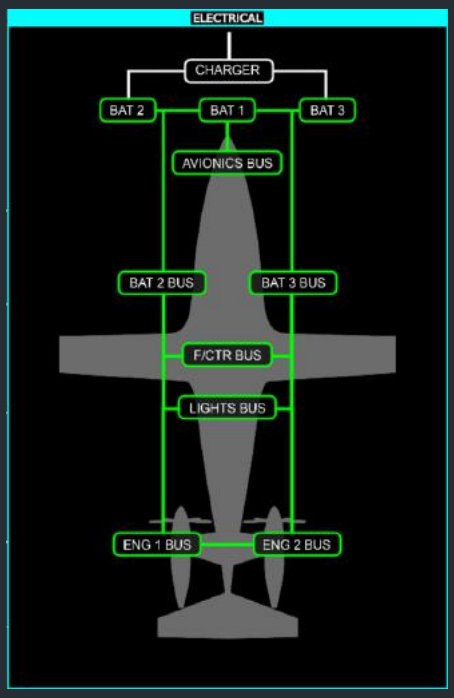


This page contains all the information about all moving surfaces that control the aircraft.

Including:

- Ailerons
- Elevators
- Rudder
- Flaps
- Nose Steering
- Trim
- Joystick inputs

ELECTRICAL

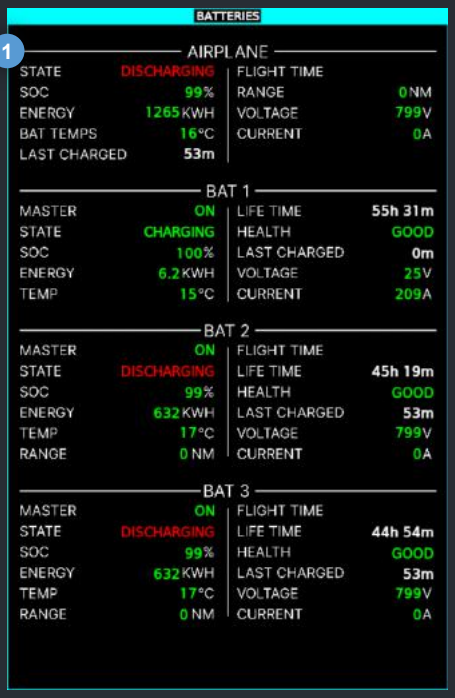


This page is a diagram of the electrical systems status and connectivity

WALK THROUGH

G3000 Synoptics Pages

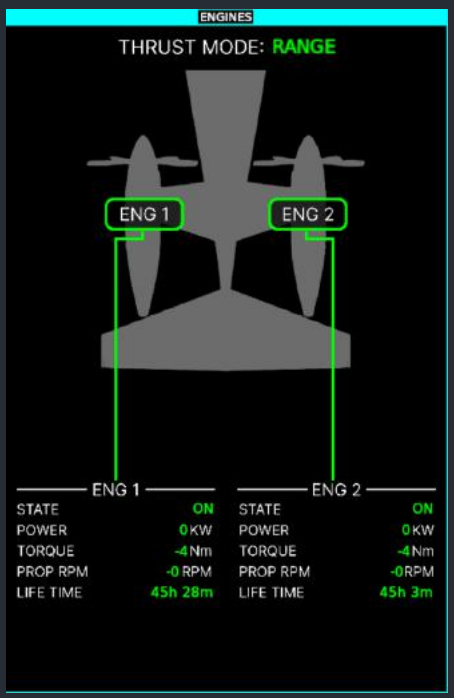
BATTERIES



This page contains all the information about the 3 batteries that are on the aircraft.

1. Airplane - General battery information combining battery 2 & 3
2. BAT 1/2/3 - Individual full battery information

ENGINES

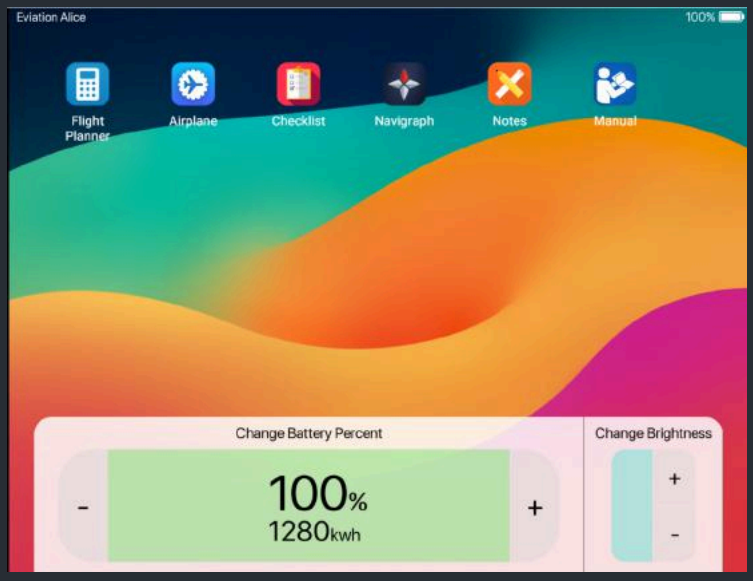


This page contains all the information about the 2 engines

WALK THROUGH

EFB

Home Page & Settings



The home page is the first screen you will see after unlocking the EFB.
It displays all the available apps and a settings popup.

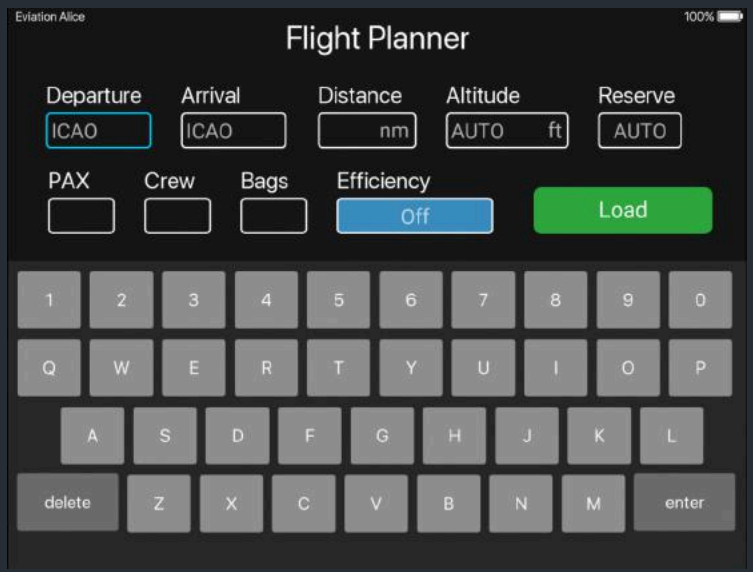
Apps:

- Flight Planner: Calculate the battery and power performance for your flight
- Airplane: All ground equipment including a working Charger
- Checklist
- Navigraph
- Notes

Settings:

Includes the EFB brightness control and the ability to control the aircraft battery

Flight Planner - Page 1



The first page of the flight planner app is the planning Page.

Input Fields:

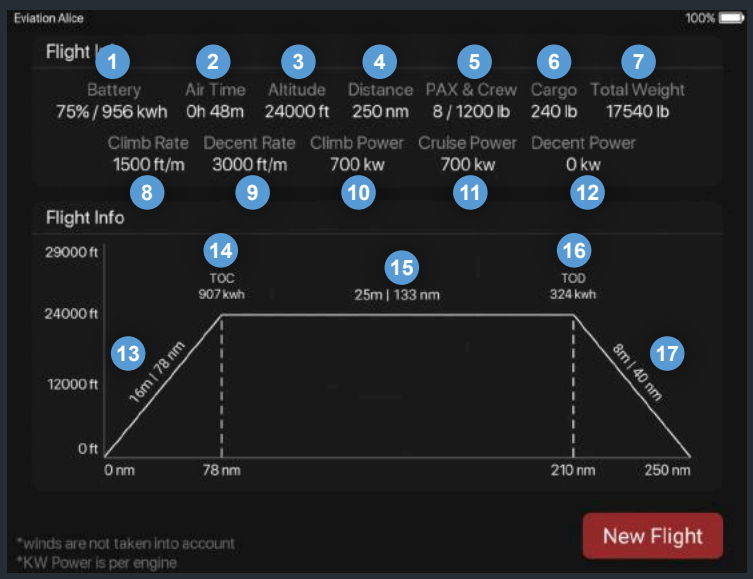
input fields marked with * must be filled to load the flight

- Departure - Airport ICAO
- Arrival - Airport ICAO
- Distance* - Flight Plan Length
- Altitude - Automatic if left empty
- Reserve - The minimum battery percent after flight allowed (default - 25%)
- Pax* - Passangers on board (not including crew)
- Crew* - Pilots on board
- Bags* - Total amount of bags in the baggage compartment
- Efficiency - when on, the app will prefer landing with higher battery precent then the time in flight
- Load - Calculates the battery usage and performance and opens page 2

WALK THROUGH

EFB

Flight Planner - Page 2



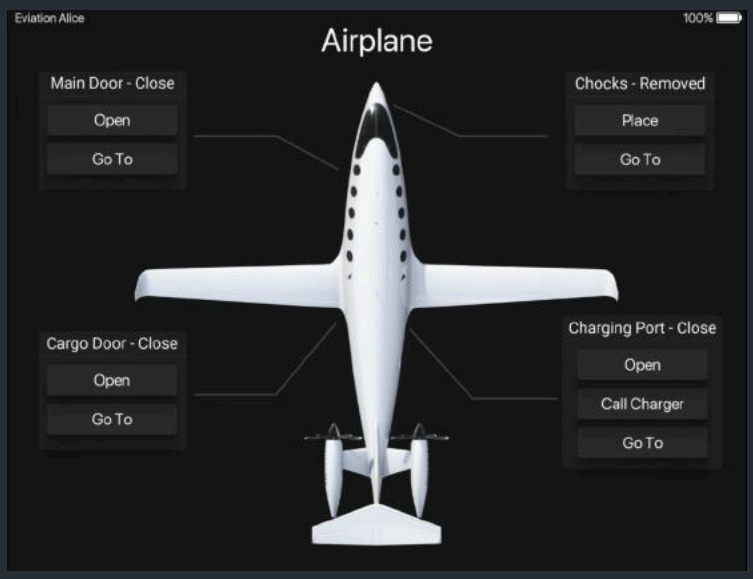
This page will show you everything you need yo know about your flight

1. Your battery usage for the flight
2. Total Flight Time
3. Cruise Altitude
4. Flight Length
5. Total souls on board
6. Total Cargo
7. Total Weight
8. Rate of climb to cruise alt
9. Rate of descent from cruise alt
10. Power setting for climb phase
11. Power Setting for cruise phase
12. Power setting for descent phase
13. Climb phase time and distance
14. Battery left at top of climb
15. Cruise time and distance
16. Battery Left at top of descent
17. Descent time and distance

WALK THROUGH

EFB

Airplane & Charging



This app lets you control and go to all doors and ground equipment

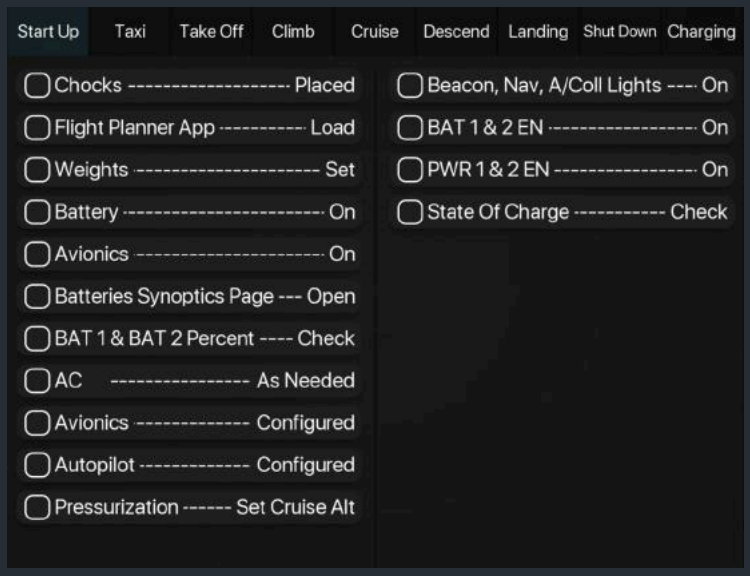
Charging:
After calling the charger and going to it

1. Charging Time - The amount of time the aircraft is beeing charged
2. Energy Charged - The amount of energy (kwh) the aircraft charged
3. State Of Charge - The current battery percent
4. Remaining Time - The time left until full battery
5. Charging Cost - Simulated charging cost
6. Voltage - Charging voltage
7. Ampere - Charging ampere
8. Charging Power - Lets you change the charger power
9. Speed Scaler - Lets you change the charger speed
10. Charger Plug - Connect to the aircraft to start charging

WALK THROUGH

EFB

Checklist



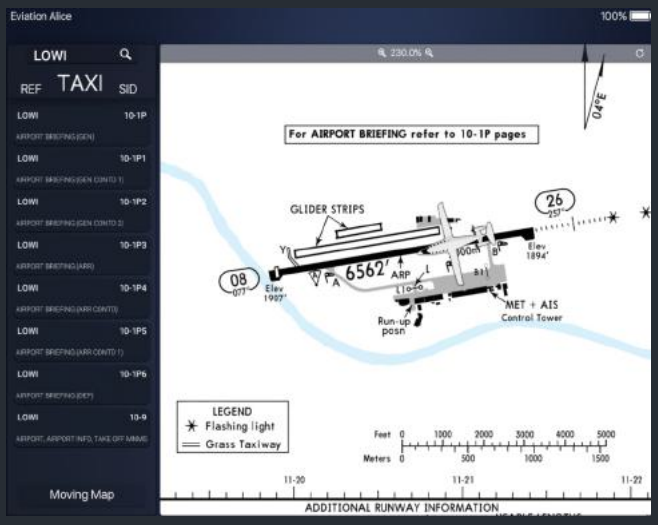
This app walk you through the checklist in each phase of the flight.

The full checklist can be found in page #

A more detailed checklist can be found in page #

Navigraph

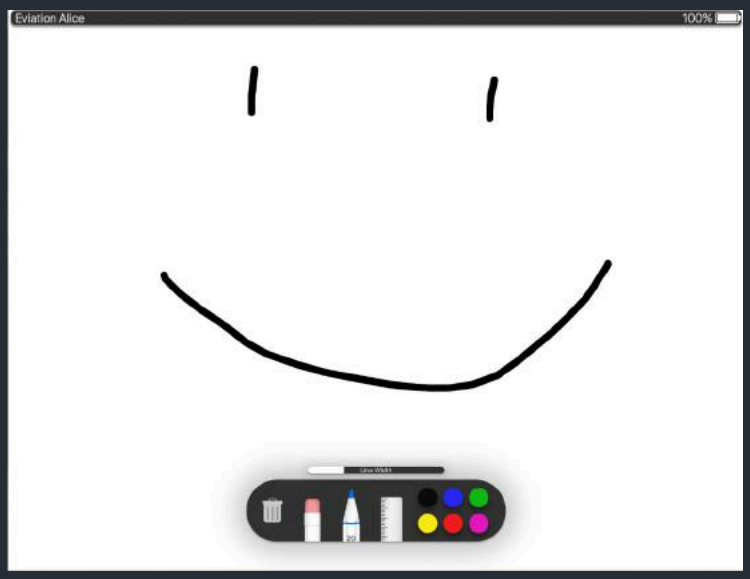
This app lets you use your navigraph subscription to see in flight charts and use the navigraph moving map.
To log in you will need to press the “Link Acount” button and scan the QR code with your mobile device, then youll be redirected to the navigraph website and it will ask you to log it.
After logging in the EFB will redirect you the the main app pages in a couple of seconds.
Please note that you will need to log in everytime you spawn with the Alice



WALK THROUGH

EFB

Notes



This app is a simple but useful notes app that lets you draw and write anything you want.
You could use it to note ATC comments or just as a fun drawing app

WALK THROUGH

EFB

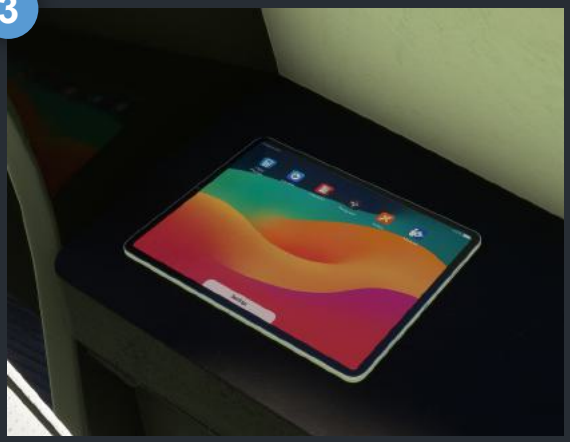
Positioning

1

1. Default position, Left side of windsheild
2. Middle of cockpit above the the panel
3. Stored on the left bottom side of the cockpit
4. On top of both tables in the luxury variantt
5. In front of both seats in the second line in the commuter variant

2

3



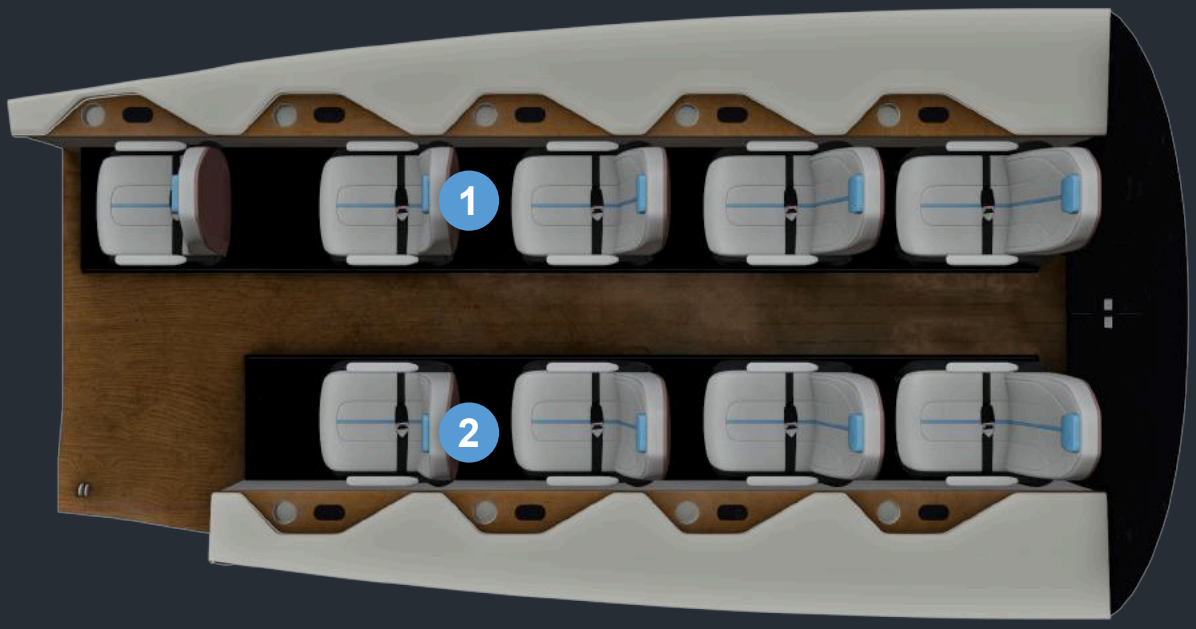
4

5

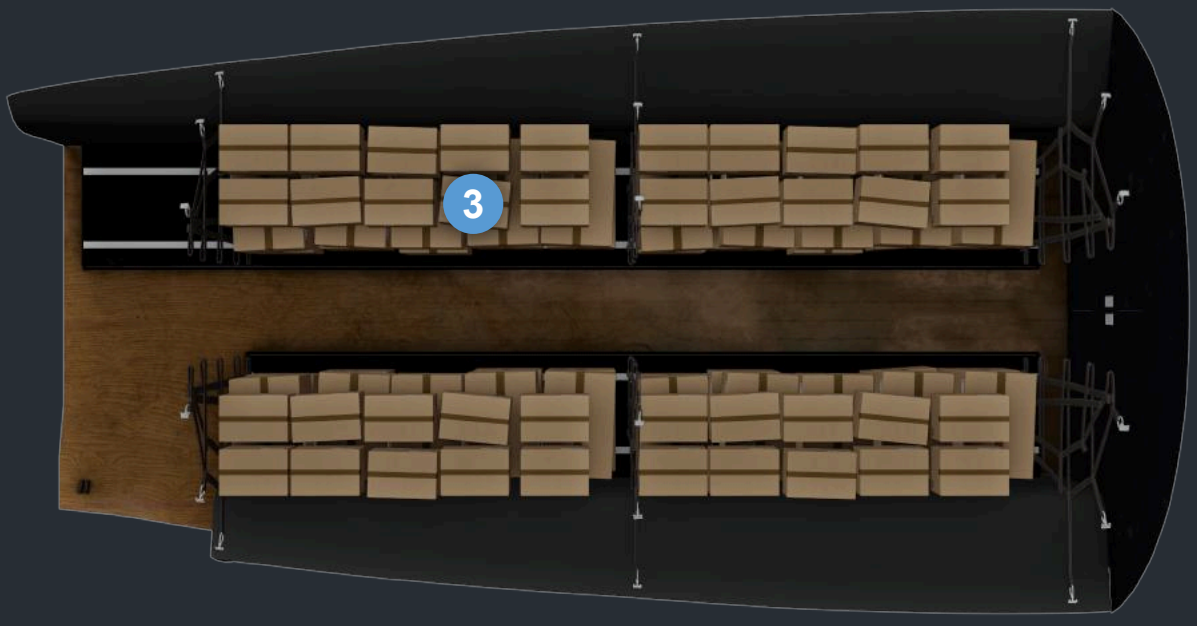
WALK THROUGH

INTERIORS

Commuter



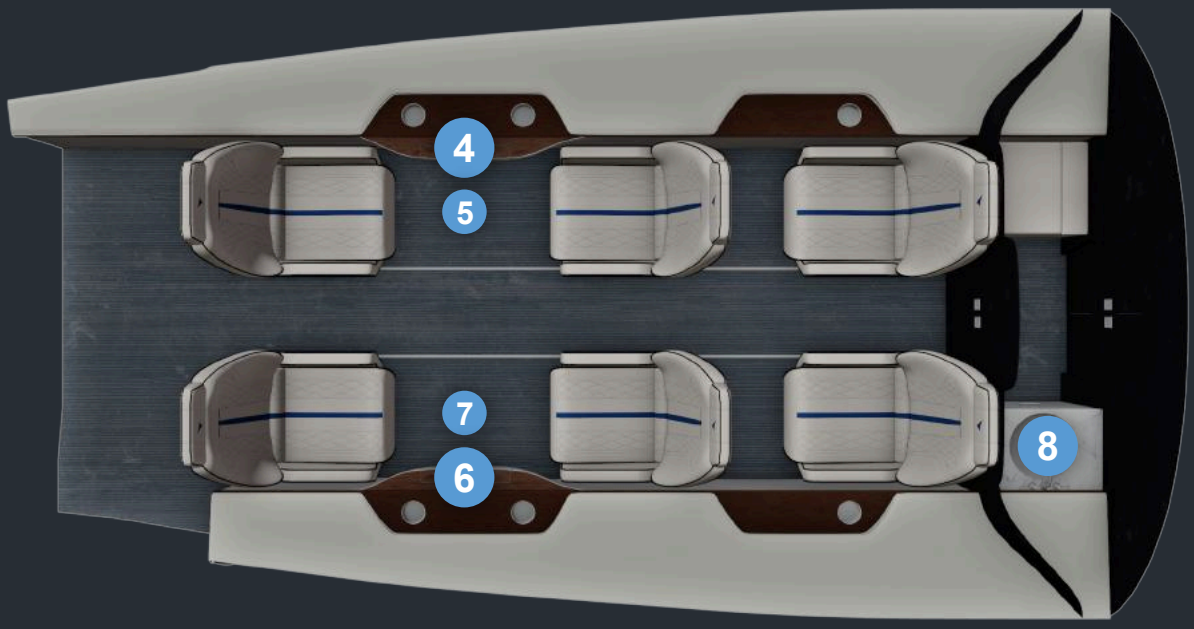
Cargo



WALK THROUGH

INTERIORS

Luxury



Commuter

1. Move EFB to right seat clickspot
2. Move EFB to left seat clickspot

Cargo

3. Just a random box?

Luxury

4. Open/Close right table
5. Move EFB to right table clickspot
6. Open/Close left table
7. Move EFB to left table clickspot
8. Fridge with interactable food and drinks

CHECKLIST

START UP

Chocks ..... Placed
Flight Planner App ..... Load
Weights ..... Set
Battery ..... On
Avionics ..... On
Batteries Synoptics Page ..... Open
BAT 2 & BAT 3 Percent ..... Check
AC ..... As Needed
Avionics ..... Configured
Pressurization ..... Set Cruise Alt
Beacon, Nav, A/Coll Lights ..... On
BAT 2 & 3 EN ..... On
PWR 1 & 2 EN ..... On
State Of Charge ..... Check

TAXI

Chocks ..... Remove
Thrust Mode ..... Taxi
Taxi Light ..... On
Flaps ..... T/O

TAKE OFF

Taxi Light ..... Off
Landing Lights ..... On
Thrust Mode ..... As Required
Power ..... T/O

CHECKLIST

CLIMB

Gears ..... Up
Flaps ..... Up
Power ..... As Required
State Of Charge ..... Monitor
After 10,000ft
Landing Lights ..... Off
Transition Level
Baro ..... Standard

CRUISE

Thrust Mode ..... As Required
Power ..... As Required
State Of Charge ..... Monitor

DESCEND

Thrust Mode ..... As Required
Power ..... As Required
State Of Charge ..... Monitor
Transition Level
Baro ..... Set QNH
After 10,000ft
Landing Lights ..... Off

CHECKLIST

LANDING

Gears ..... Down
Flaps ..... Down
After Landing
Thrust Mode ..... Taxi
Flaps ..... Up
Landing Lights ..... Off
A/Coll Lights ..... Off
Taxi Lights ..... On

SHUT DOWN

PWR 1 & 2 EN ..... Off
BAT 2 & 3 EN ..... Off
Chocks ..... Place
All Lights ..... Off
Avionics ..... Off
Battery ..... Off

CHARGING

Airplane App ..... Call & Go to Charger
Charging Power ..... Set
Speed Scaler ..... Set
Charging Plug ..... Connect

THANKS & SUPPORT

Special Thanks for:
Tapzi, Adi, Lucas Winter, CaptainGhost and yf
For help with development and testing!

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