



Flight Ops – Quick user guide

Flight Ops is an app designed for pilots, flight dispatchers and anyone involved or interested in Flight Operations.

Here are the main functions:

Distance, flight time and estimated fuel used computation

It will be based on the following parameters:

- Mach number or TAS
- Wind component
- ISA deviation
- Distance factor to compensate great circle distance

Aircraft Profiles

You can easily create and manage your aircraft profiles, setting the following:

- Fuel used depending on distance flown. It can be set for as many distance values as you wish. The more you indicate, the more accurate will be your result! Of course, it can be done for any Mach or TAS
- Structural weight limitations
- ACN/PCN values

In a single tap, you can even share these profiles via Airdrop, email, WhatsApp, Wechat, Dropbox... An example of aircraft profile with full instructions is provided in the app

Alternate airports finder

It's based on the following parameters:

- Distance from destination
- Minimum runway length
- Paved runways or not
- Airports of entry or not
- Including military airports or not

They will be automatically sorted by ascending distance from destination airport

Plotting map

On this map you can plot:

- Great circle routes between airports
- ETP circles based on a specific radius
- By a long push on the map you can display all airports around, making easy and fast the selection of ETP airports. As for alternates search, this selection is based on same parameters (distance, runway length, paved runways or not, airports of entry or not, including military airports or not)



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Airports database

You can search in the database and retrieve any airport(s) based on the following parameters:
ICAO code, IATA code, airport name or city name

Fuel uplift module

You can use your aircraft limitations or use the "free mode".

If you fly different birds, your aircrafts limitations can be stored in the database.

Therefore, no need to remember the max fuel weight or volume nor your maximum ramp weight!

Based on your aircraft limitations, you can easily compute the fuel quantity required.

Just enter desired uplift fuel volume, fuel weight or your desired aircraft ramp weight and Flight Ops will compute other numbers at once!

It considers all common units:

- Weight: Lbs and Kg
- Volume: Liters, US Gal, Imp Gal
- Density: Kg/L, Kg/US Gal, Kg/Imp Gal, Lbs/L, Lbs/US Gal, Lbs/Imp Gal

You cannot get the fuel density from the fueller?

No worries, now you can retrieve it from the fuel temperature and can even select the type of fuel (Jet or Gasoline).

ACN / PCN

Based on a PCN number, Flight Ops will decode and display a full description.

If you have at least 1 aircraft in your database, it will provide your limitation(s) if any:

- Aircraft weight
- Main Landing Gear tire pressure
- Nose Landing gear tire pressure

If you indicate your aircraft weight, Flight Ops will provide your ACN.

Of course, all these ACN values can be set through your aircraft profiles.

SNOWTAM decoding (METAR format)

Just make a copy paste of any SNOWTAM or simply use the wheel. You will then get:

- Full decoding
- Crosswind and headwind/tailwind components based on the related runway

Weather and airports information

- You can build your own favorite airports list to check weather status at a glance
- For any airport, you can get the latest METAR and/or TAF (if available)
- Based on current wind speed and direction, Flight Ops will display all runways with corresponding crosswind and headwind/tailwind components



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Distance calculator

Use this module to calculate the distance and True bearing between 2 latitudes/longitudes waypoints.

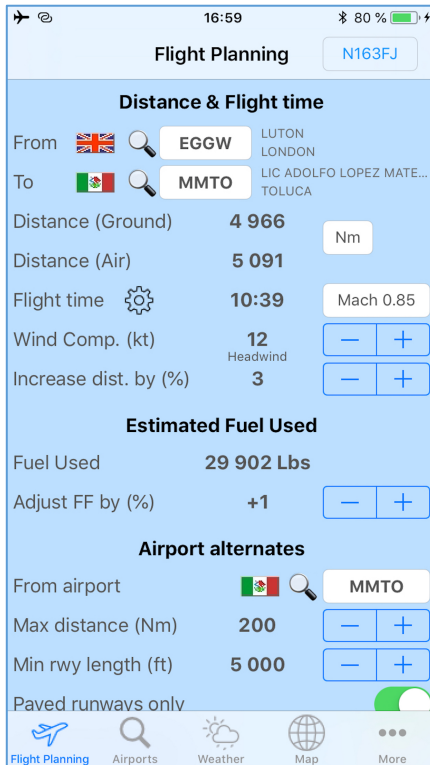
Last Minute Change

Based on the Weight & Balance Load Sheet provided for your flight, grab your iPhone/iPad and easily compute your Last Minute Change data.

First you need to update your aircraft profile with OEM data. Instructions are provided in this user guide.



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Distance & Flight time computation

You can compute a distance and a flight time between 2 airports. If you don't know the ICAO code, tap on the search icon and you will be able to retrieve your airport by airport name, city name or IATA code.

**In case of crash while entering airports, go to :
More > Airports database and tap on "Update database"**

As the distance is a great circle, you can apply a factor (%) to get a more realistic distance.

Modifying the wind component will adjust the flight time too.

Tapping on the toothed wheel icon  next to Flight Time, you will be able to modify ISA conditions.

There is another parameter, allowing you to consider an additional time to compensate climb and descent phases of flight.

If an aircraft profile has been found (see page 5), Flight Ops will calculate the Estimated Fuel Used based on the Air Distance flown.

Tapping on aircraft registration on the top right is a good way to swap quickly to another aircraft of your list. It will then be considered as the active one through the different modules during the session.



Airport alternates

Once you get a valid computed routing, Flight Ops will automatically fill in the airport field in this section.

Then, based on selected parameters, you just have to tap on "Search alternates for XXXX"

It will trigger a window with all alternate airports matching your request.

The color coding is the same as on Flight Planning page:

In blue: Airports of Entry

In red: Military airports

In dark grey: All other airports

These airports will be automatically sorted by ascending distance from selected destination airport.

If you tap on any of them, you will get some airport information and the latest weather (METAR, TAF and calculated headwind & crosswind components for all runways)



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Airport details

This page will be displayed each time you tap and select an airport.

4 sections :

- General information
- METAR
- TAF
- Runways

The Runways section will provide you all runways with :

- Runway identification
- Length & width
- Magnetic orientation
- Crosswind and Headwind components

The METAR section will also provide you the flight category based on current weather conditions.

Depending on ceiling and visibility, it could be **VFR**, **MVFR**, **IFR** or **LIFR**

Category	Color	Ceiling		Visibility
LIFR Low Instrument Flight Rules	Red	below 500 feet AGL	and-or	less than 1 mile
IFR Instrument Flight Rules	Orange	500 to below 1,000 feet AGL	and/or	1 mile to less than 3 miles
MVFR Marginal Visual Flight Rules	Green	1,000 to 3,000 feet AGL	and/or	3 to 5 miles
VFR Visual Flight Rules	Blue	greater than 3,000 feet AGL	and	greater than 5 miles
NOTES: By definition, IFR is ceiling less than 1,000 feet AGL and/or visibility less than 3 miles while LIFR is a sub-category of IFR. By definition, VFR is ceiling greater than or equal to 3,000 feet AGL and visibility greater than or equal to 5 miles while MVFR is a sub-category of VFR.				



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Weather stations

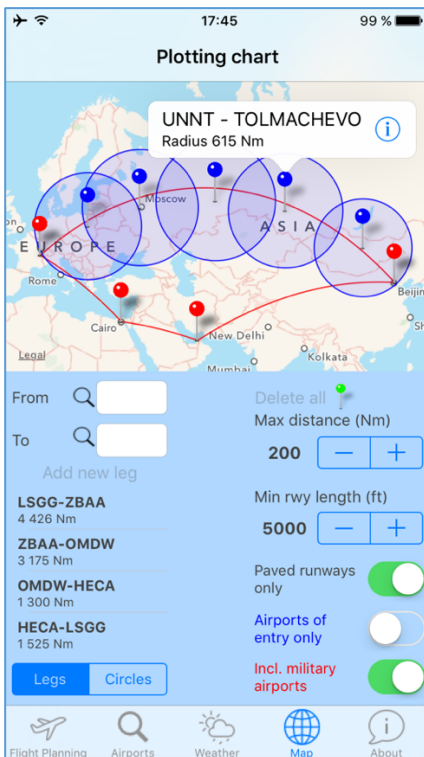
In this section, you can build your own favorite airports list to check weather status at a glance.

For all airports you will get :

- Wind direction and speed
- Temperature
- QNH
- Flight category (VFR, MVFR, IFR or LIFR)

For detailed information, just tap on an airport and it will display the “Airport details” page (page 2).

Tapping on **Edit**, you can of course delete or rearrange your airports list



Plotting chart

This page will allow you to plot a couple of things. At the bottom, you can swap between :

- Legs
- ETP circles

You can display as many routes and ETP circles as you want.

Once your routes will have been displayed, and based on your aircraft characteristics, you can display some ETP circles.

If you know which ones you want to display, just fill in the fields and add them.

If you are looking for an airport, then make a long push on the map (at least 0,5 second).

Based on the parameters located on the right side of this window, it will automatically display all airports matching your request with green pins.

Selecting one of them will trigger a popup with short information.

Selecting the “i” icon, you will get the corresponding “Airport details” page (page 2).

When you do not need the green pins anymore, just tap on “Delete all”



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Aircrafts list

In this section, you can create and manage your aircraft(s).

- To add an aircraft, tap on **+**
- To delete an aircraft, you can either swipe on your aircraft to the left or tap on **Edit** and select the appropriate icon

To see and/or modify your aircraft details, just tap on it and it will bring you to the page below.



Aircraft details

Here you can set all your aircraft details.

If you have already created or imported some aircraft profiles, then you can assign one of them to your aircraft.

Doing so, when you compute some distance and flight time on Flight Planning module, Flight Ops will then use the Fuel Used values set in your aircraft profile.

As all aircrafts Fuel Flow (FF) may differ by +/- 3%, you can adjust your FF accordingly using the appropriate option in OPS data section.

It could also be useful to compensate a forward CG for example.

Regarding ACN values, you need to indicate for which minimum, intermediate and maximum weights the ACN values are referring to.

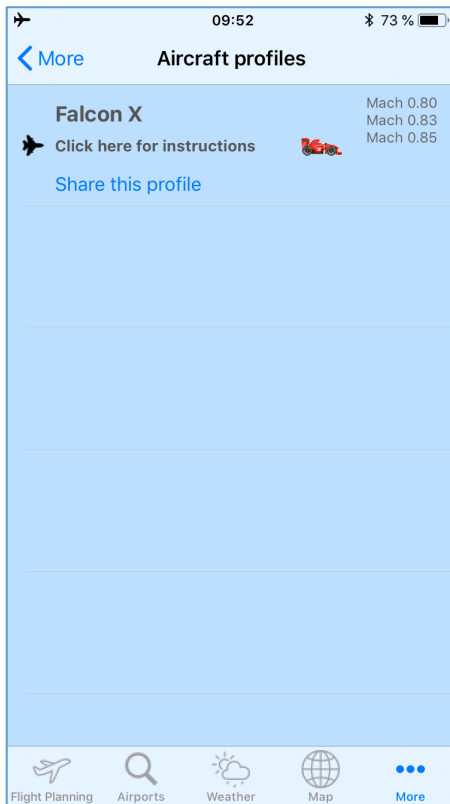
Depending on aircrafts, the minimum weight is not always the lowest aircraft weight, and the maximum weight provided is not always the maximum ramp weight either.

Intermediate is not always the average weight, but it depends on your ACN curve.

Determine the intermediate weight to follow this curve more accurately.



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Aircrafts profiles

With aircraft profiles, you will indicate to Flight Ops the estimated Fuel Used for flown Air Distances.

It can be set for any speed (Mach or TAS).

Based on these values, Flight Ops will interpolate to provide you the estimated Fuel Used.

By default, when you load this page you will see a “Falcon X” aircraft. Just below, it’s written “Tap here for instructions”.

This profile will be there as long as you do not have any other profile. Even if you decide to delete it, it will come back at once.

Why? ☺

Because all instructions to build your own aircraft profiles are indicated in this sample file:

- Full procedure to follow
- Example of full profile
- Format to use

However, in case you have at least 1 other profile, Flight Ops will allow you to delete it...

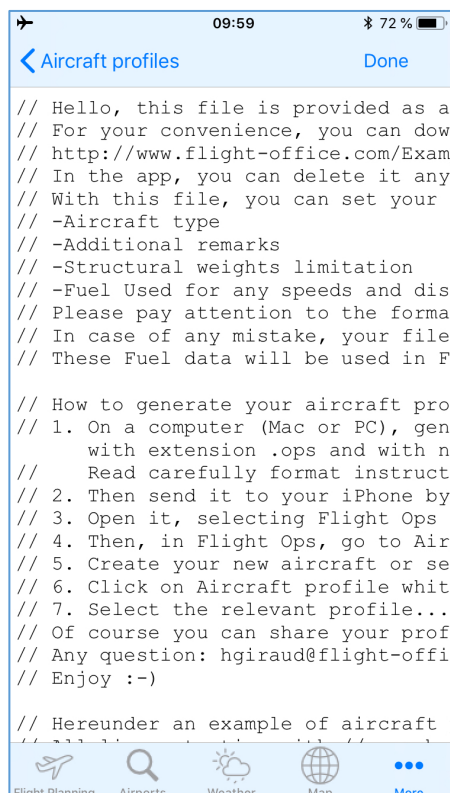
If you tap on this sample profile, you will see the following:

Aircraft profiles

In this default profile, you will find all instructions to create your own aircraft profile.

This is followed by an example of aircraft profile, and at the end there is a detailed reminder about the format you need to comply with.

On the next pages, the full procedure is described step by step.





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How to create an aircraft profile

1. On a computer (Mac or PC), generate a simple text file **with extension .ops** and no space in the file name (ex: FA7X.ops)
2. Read carefully format instructions at the bottom of this file
3. Then send it to your iPhone by email, Airdrop, WhatsApp, Wechat, Dropbox etc...
4. Open it, selecting Flight Ops as suitable app.
5. Then go to Aircrafts module
6. Create your new aircraft or select an existing one
7. Tap on Aircraft profile white text area (in OPS data section)
8. Select the relevant profile...and that's it 😊

Hereunder all explanation to understand how to build your own aircraft profile:

IMPORTANT: Always use “;” to separate 2 fields or 2 values

A:[AircraftType]

R:[Remarks]

W:[MRW];[MTOW];[MLW];[MZFW];[MaxFuelWeight];[MaxFuelVolume]

U:[WeightUnit];[TASUnit];[DistanceUnit];[FuelUnit];[PressureUnit]

P;T;180.0;200.0;160.0;180.0

P;R;[MinimumWeight];[InterWeight];[MaximumWeight];[ACNmin/RA];[ACNmin/RB];[ACNmin/RC];[ACNmin/RD];[ACNinter/RA];[ACNinter/RB];[ACNinter/RC];[ACNinter/RD];[ACNmax/RA];[ACNmax/RB];[ACNmax/RC];[ACNmax/RD]

P;F;[MinimumWeight];[InterWeight];[MaximumWeight];[ACNmin/FA];[ACNmin/FB];[ACNmin/FC];[ACNmin/FD];[ACNinter/FA];[ACNinter/FB];[ACNinter/FC];[ACNinter/FD];[ACNmax/FA];[ACNmax/FB];[ACNmax/FC];[ACNmax/FD]

L;M;[MAC]

L;F;[FuelQuantity1];[FuelQuantity2];[FuelQuantity3]...

L;M;[FuelMoment1];[FuelMoment2];[FuelMoment3]...

S;[Mach or TAS]

D;[Distance1];[Distance2];[Distance3]...

F;[FuelUsed1];[FuelUsed2];[FuelUsed3]...

A:[AircraftType]

You can indicate whatever you want.

ex: Falcon 7X, or FA7X, or My Falcon 7X etc...

R:[Remarks]

Free space to add any additional info, such as version of your aircraft

ex: With M1389

W:[MRW];[MTOW];[MLW];[MZFW];[MaxFuelWeight];[MaxFuelVolume]

To indicate your aircraft structural limits.

Do not indicate any unit, only values

MRW = Maximum Ramp Weight

MTOW = Maximum Take-Off Weight

MLW = Maximum Landing Weight

MZFW = Maximum Zero Fuel Weight

MaxFuelWeight = Maximum Fuel Weight

MaxFuelVolume = Maximum Fuel Volume



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U;[WeightUnit];[TASUnit];[DistanceUnit];[FuelUnit];[PressureUnit]

Order of these units is important !

This section is to indicate to user(s) which units have been used in these provided data.

However, they are not fully considered for Flight Ops computation. Flight Ops will also use the units provided in aircraft details module.

In case these values are not in the units you are looking for, then you have to convert them.

P;T;[MainLandingGearMinPress];[MainLandingGearMaxPress];[NoseLandingGearMinPress];[NoseLandingGearMaxPress]

T = Tire pressure

[MainLandingGearMinPressure] = Minimum pressure of the Main Landing Gear

[MainLandingGearMaxPressure] = Maximum pressure of the Main Landing Gear

[NoseLandingGearMinPressure] = Minimum pressure of the Nose Landing Gear

[NoseLandingGearMaxPressure] = Maximum pressure of the Nose Landing Gear

P;R;[MinimumWeight];[InterWeight];[MaximumWeight];[ACNmin/RA];[ACNmin/RB];[ACNmin/RC];[ACNmin/RD];[ACNinter/RA];[ACNinter/RB];[ACNinter/RC];[ACNinter/RD];[ACNmax/RA];[ACNmax/RB];[ACNmax/RC];[ACNmax/RD]

ACN values for minimum, intermediate and maximum weights

Intermediate is not always the average weight, but it depends on the ACN curve

Determine the intermediate weight to follow this curve more accurately

R = Rigid pavement

[MinimumWeight] = Minimum weight for which ACN values are provided

[InterWeight] = Intermediate weight for which ACN values are provided

[MaximumWeight] = Maximum weight for which ACN values are provided

[ACNmin/RA] = ACN value for minimum weight on Rigid pavement with Subgrade A

[ACNmin/RB] = ACN value for minimum weight on Rigid pavement with Subgrade B

[ACNmin/RC] = ACN value for minimum weight on Rigid pavement with Subgrade C

[ACNmin/RD] = ACN value for minimum weight on Rigid pavement with Subgrade D

[ACNinter/RA] = ACN value for intermediate weight on Rigid pavement with Subgrade A

[ACNinter/RB] = ACN value for intermediate weight on Rigid pavement with Subgrade B

[ACNinter/RC] = ACN value for intermediate weight on Rigid pavement with Subgrade C

[ACNinter/RD] = ACN value for intermediate weight on Rigid pavement with Subgrade D

[ACNmax/RA] = ACN value for maximum weight on Rigid pavement with Subgrade A

[ACNmax/RB] = ACN value for maximum weight on Rigid pavement with Subgrade B

[ACNmax/RC] = ACN value for maximum weight on Rigid pavement with Subgrade C

[ACNmax/RD] = ACN value for maximum weight on Rigid pavement with Subgrade D

P;F;[MinimumWeight];[InterWeight];[MaximumWeight];[ACNmin/FA];[ACNmin/FB];[ACNmin/FC];[ACNmin/FD];[ACNinter/FA];[ACNinter/FB];[ACNinter/FC];[ACNinter/FD];[ACNmax/FA];[ACNmax/FB];[ACNmax/FC];[ACNmax/FD]

ACN values for minimum, intermediate and maximum weights

Intermediate is not always the average weight, but it depends on the ACN curve

Determine the intermediate weight to follow this curve more accurately

F = Flexible pavement

[MinimumWeight] = Minimum weight for which ACN values are provided

[InterWeight] = Intermediate weight for which ACN values are provided

[MaximumWeight] = Maximum weight for which ACN values are provided

[ACNmin/FA] = ACN value for minimum weight on Flexible pavement with Subgrade A

[ACNmin/FB] = ACN value for minimum weight on Flexible pavement with Subgrade B

[ACNmin/FC] = ACN value for minimum weight on Flexible pavement with Subgrade C

[ACNmin/FD] = ACN value for minimum weight on Flexible pavement with Subgrade D

[ACNinter/FA] = ACN value for intermediate weight on Flexible pavement with Subgrade A

[ACNinter/FB] = ACN value for intermediate weight on Flexible pavement with Subgrade B

[ACNinter/FC] = ACN value for intermediate weight on Flexible pavement with Subgrade C

[ACNinter/FD] = ACN value for intermediate weight on Flexible pavement with Subgrade D



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[ACNmax/FA] = ACN value for maximum weight on Flexible pavement with Subgrade A
[ACNmax/FB] = ACN value for maximum weight on Flexible pavement with Subgrade B
[ACNmax/FC] = ACN value for maximum weight on Flexible pavement with Subgrade C
[ACNmax/FD] = ACN value for maximum weight on Flexible pavement with Subgrade D

L;M;[MAC]

MAC value indicated in your Loading Manual.

L;F;[FuelQuantity1];[FuelQuantity2];[FuelQuantity3]...

Indicate all fuel values quantities from your Loading Manual. You can indicate as many values as you want.

L;M;[FuelMoment1];[FuelMoment2];[FuelMoment3]...

Indicate all fuel moment values. Obviously, number of values must correspond to fuel quantities values above.

S;[Mach or TAS]

It could be a Mach number. ex: Mach 0.80 or a TAS. ex: 250

In case of Mach, keep a space between Mach and the value.

In case of TAS, do not indicate any speed unit but only the speed value.

D;[Distance1];[Distance2];[Distance3]...

All distances must be in ascending order.

Do not indicate any unit, only values

F;[FuelUsed1];[FuelUsed2];[FuelUsed3]...

Corresponding Fuel Used.

Do not indicate any unit, only values.

Once done, your aircraft profile will look as something like this :

Nothing else is required in your file.ops

```
A;Falcon X
R;With M1389
W;70200;70000;62400;41000;31940;18042
U;lbs;kt;Nm;lbs;psi

P;T;180.0;200.0;160.0;180.0
P;R;36000;52500;70000;09.0;09.5;10.0;10.5;14.5;15.0;15.5;16.0;21.0;21.5;22.5;23.0
P;F;36000;52500;70000;07.0;07.5;08.0;08.5;12.0;12.5;13.0;13.5;20.0;20.5;21.0;21.5

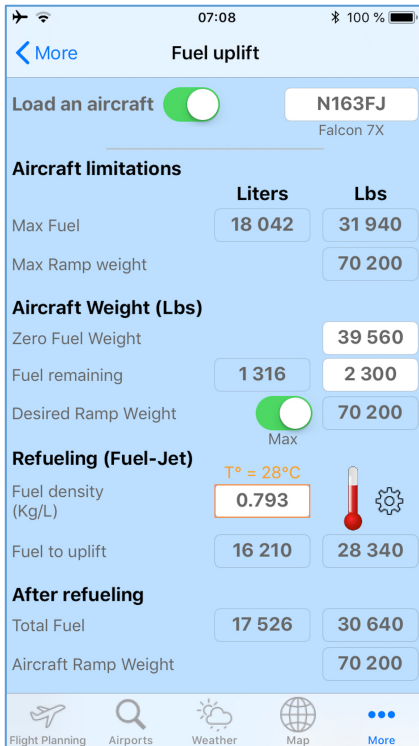
L;M;113.69
L;F;500;1000;2000;3000;4000;5000;6000;7000;8000
L;M;-11900;-18200;-20100;-19900;-18500;-18200;-18400;-18600;-18600

S;Mach 0.80
D;01000;02000;03000;04000;05000;06000
F;03000;05000;08000;11000;14000;17000

S;Mach 0.85
D;01000;02000;03000;04000;05000
F;04000;06000;09000;12000;15000
```



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Fuel uplift

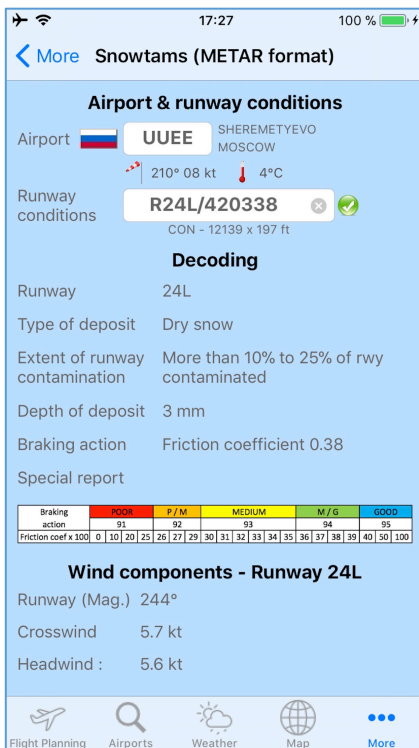
In this module, you can compute the fuel uplift figures. You can use one of your existing aircrafts or enter in Free mode.

If you select one of your aircrafts, your aircraft specs will be automatically loaded (weights and fuel volume).

Indicate your ZFW and your fuel remaining. Then you have 3 different calculation modes:

1. Indicate your desired ramp weight:
It will calculate the required fuel uplift (volume & weight)
2. Indicate the fuel uplift volume:
It will calculate the fuel uplift weight and your aircraft weight
3. Indicate the fuel uplift weight:
It will calculate the fuel uplift volume and your aircraft weight

Tapping on the toothed wheel icon will bring you to another page where you can indicate the T°. It will then provide you the corresponding fuel density and adjust your fuel figures.



Snowtams

This module will help you decoding Snowtams (METAR format).

You can either copy paste the code in the white text area, or just tap on it and a wheel will comes up.

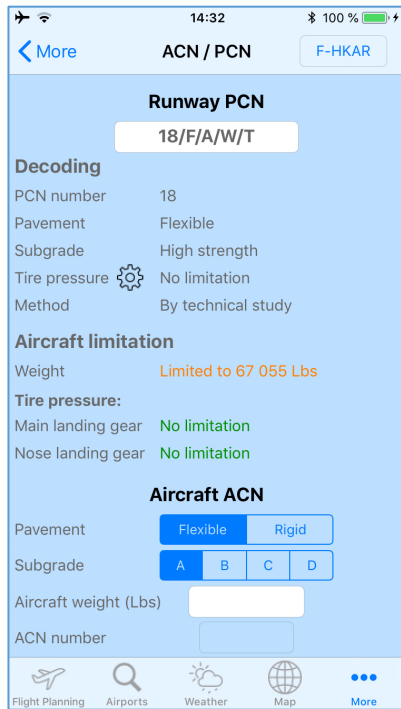
Use it if required and Flight Ops will automatically decode this Snowtam.

If you indicate the airport ICAO code, Flight Ops will download the latest METAR and display current wind and temperature.

At the bottom, if an airport was indicated, Flight Ops displays all runways with their headwind/tailwind and crosswind components.



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ACN / PCN

In this module you have 2 ways of computation.

Runway PCN

Tap on the white text area and a wheel will come up. Use the wheel to display the PCN number you are looking for.

It will be automatically decoded.

Based on your aircraft ACN specifications (see Aircraft Details module), Flight Ops will provide your limitation(s) if any:

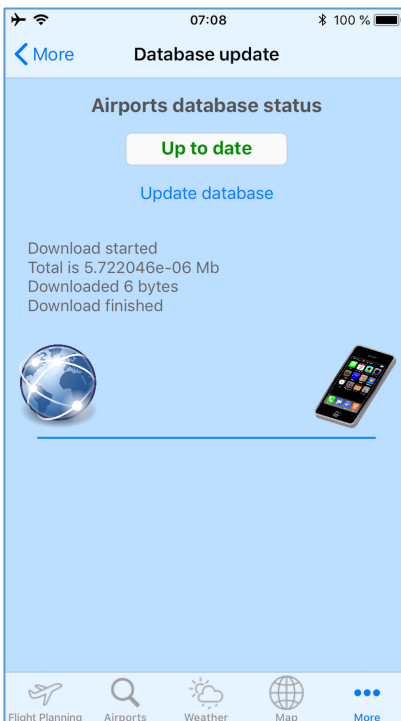
- Aircraft weight
- Main landing gear tire pressure
- Nose landing gear tire pressure

Aircraft ACN

Select the type of pavement and its subgrade strength.

Now, enter your aircraft weight, and your ACN number will be provided.

Tap on the aircraft registration on the top to swap to another one.



Database update

When you access this page, Flight Ops will automatically check if your airports database is up to date.

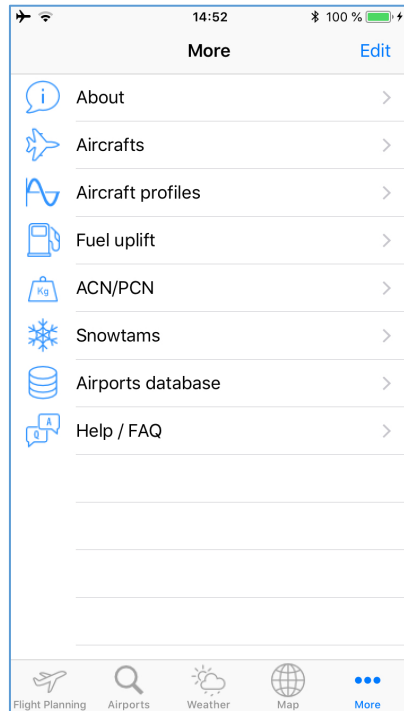
Then, status will be indicated as **EXPIRED** or **UP TO DATE**

In case your database is expired, tap on Update database and Flight Ops will download the latest one.

In case of crash while entering airports code through the app, go to : More > Airports database and tap on "Update database"



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Flight Ops quick access modules

You can organize all modules as you wish, with a quick access to 4 of them.

By default, at the bottom, the main modules are:

- Flight Planning
- Airports database
- Weather
- Map

If you prefer to display something else, you can swap any of them by any of the other ones you can access through “More”.

Tap on **Edit**, and drag the icon you want to the desired location. It will then replace it.