



In this short user guide I will speak about the following topics:

1. How this program was born.
2. What this program is going to do.
3. What this program is **NOT** going to do.
4. How to use this program.
5. Some issues when using this program.
6. Acknowledgments.



How this program was born...

Sometimes my students asked me for flights to practice in the simulator with certain requirements (for example: airports with arc on departure or arrival, with ILS approach, or airports with certain difficulty), and I ended up suggesting the same flights over and over again...so I decided to write a program where my students could select the options and based on them my program would suggest flights.

That's how **Flight Gen!©** was born. Several other options were added, for example suggestions based on the time you have available for the flight, this way, if you have only 30 minutes in the KingAir 350, **Flight Gen!©** will select one flight for you... as simple as that!

This program is for all my students. I hope you find it useful...and practice until you can navigate with no errors.



Flight Gen!



What this program is going to do.

The objective of **Flight Gen!@** is simple:

This program will suggest a flight for you based on your selected options.

Once the flight is suggested, it will give you very basic airport information like ICAO codes, runways available, runway length, course and distance and EET to your destination, and some other info.

All suggested flights will be in Colombia.



What this program is NOT going to do.

This program will not:

1. Read your mind... select the options carefully.
2. Give you a flight plan for your flight.
3. Give you *METAR* or *TAF* information for your flight.
4. Suggest flights outside of Colombia.
5. Interact in any way with your flight simulator.
6. Teach you how to navigate. ..but it will give you good reasons to practice!



Flight Gen!



How to use this program.

I tried to make the interface as simple and intuitive as I could, but remember that the program has many options, so read this manual and follow the instructions.

These are the parts of the program. In the next pages I will describe each option in detail.

Menu.

TAS and time available for your flight.

Results.
Suggested flight will be here!

Selection options. For Departure and Arrival.

Desition options.

The screenshot shows the Flight Gen! application window. The title bar says 'Flight Gen!'. The menu bar has 'File' and 'Help'. The main area has a header with a paper airplane icon and the text 'Flight Gen!'. Below the header, there are two steps: 1. Indicate the TAS for your flight today: 240 ... and the time available for your flight today: 90 minutes. 2. Select the way you want to create your flight: Selection based on details Selection based on difficulty. The 'Selection based on details' section has two parts: 'Select one option for your departure airport:' with radio buttons for 'Select random airport.', 'Depart from this airport:' (SKAR), and 'Departure airport must have:' (checkboxes for VFR, IFR, SID, and SID with arc); and 'Now select one option for your arrival airport:' with radio buttons for 'Select random airport (Considering your time available).', 'Select this airport for arrival:' (SKAR), and 'Arrival airport must have:' (checkboxes for VFR, IFR, STAR, STAR with arc, ILS, NDB, VOR, and VOR-A, plus a 'Difficulty level' dropdown set to '1. Easy'). A 'Start Search' button is at the bottom of this section. The 'Selection based on difficulty' section is currently selected. The '3. These are the details for your flight. HAVE FUN!' section shows 'Departure airport:' and 'Arrival airport:' details (ICAO, IATA, AD Elev, Airport name, City, RWY available, RWY length) and 'Remarks:' (Course, Distance, EET). The 'Use these options to make desitions:' section has four buttons: 'Proceed to the holding?', 'Make missed approach?', 'Proceed to the alternate?', and 'Yes or No'.



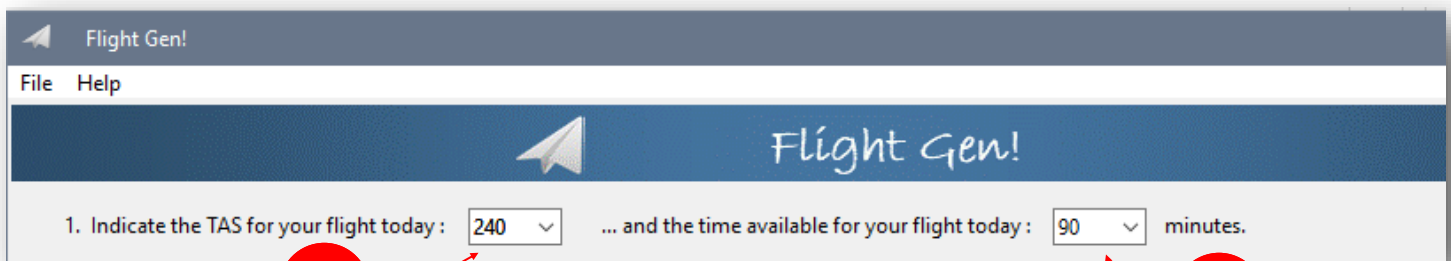
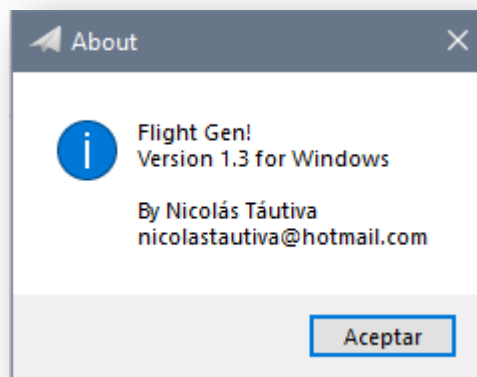
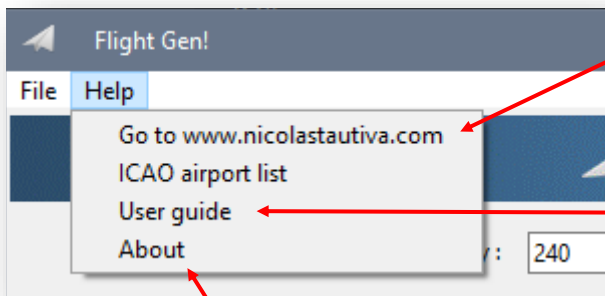
Flight Gen!

It will go to my website.

Check to see if there are updates or new flights in the database.

It will open a PDF file with a list of ICAO codes and airport names that are on the database.

Version of this program.



Select the TAS for your flight.

For example, the King 350 keeps 240 TAS on cruise

Select the time in minutes that you have for your flight.



Flight Gen!

3 Two options here.

1. Selection based on details
2. Selection based on flight difficulty (refer to page 9)

4 Let's say you want to specify the details for your departure and arrival airports:

Flight Gen!© will randomly select a departure airport from the database.

Select the departure airport from the list to the right.

Flight Gen!© will select a departure airport based on the options you select.

The screenshot shows the 'Flight Gen!' web application interface. At the top, there are two tabs: 'Selection based on details' (active) and 'Selection based on difficulty'. Below the tabs, the form is divided into two main sections: 'Select one option for your departure airport:' and 'Now select one option for your arrival airport:'. The 'departure airport' section has three radio button options: 'Select random airport.' (selected), 'Depart from this airport:' (with a dropdown menu showing 'SKAR'), and 'Departure airport must have:' (with several checkboxes). The 'arrival airport' section has three radio button options: 'Select random airport (Considering your time available).', 'Select this airport for arrival:' (with a dropdown menu showing 'SKAR'), and 'Arrival airport must have:' (with several checkboxes). At the bottom, there are two buttons: 'Start Search' (highlighted in red) and 'Clean Data'. Red arrows point from the text annotations to specific elements in the form: from the '4' annotation to the 'Select random airport.' option; from the 'Select the departure airport...' annotation to the 'Depart from this airport:' dropdown; from the 'Flight Gen!© will select a departure airport...' annotation to the 'Arrival airport must have:' checkboxes; and from the '3' annotation to the two tabs at the top.

Selection based on details | Selection based on difficulty

Select one option for your departure airport :

☒ Select random airport.

☐ Depart from this airport: SKAR

☐ Departure airport must have:

- ☒ Only VFR operations.
- ☐ VFR and IFR operations.
- ☐ SID.
- ☐ SID with an arc on the departure.

Now select one option for your arrival airport :

☒ Select random airport (Considering your time available).

☐ Select this airport for arrival: SKAR

☐ Arrival airport must have:

- ☒ Only VFR operations.
- ☐ VFR and IFR operations.
- ☐ STAR.
- ☐ STAR with an arc on the arrival.
- ☐ ILS approach.
- ☐ NDB approach.
- ☐ VOR approach.
- ☐ VOR-A approach.

Difficulty level 1. Easy

Start Search | Clean Data



Flight Gen!

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Now specify one option for your arrival airport:

Flight Gen!© will randomly select an arrival airport. It will consider the time you have available for the flight.

Select the arrival airport from the list.

Flight Gen!© will select an arrival airport based on the options you select.

Selection based on details Selection based on difficulty

Select one option for your departure airport :

☒ Select random airport.

☐ Depart from this airport: SKAR

☐ Departure airport must have:

- ☒ Only VFR operations.
- ☐ VFR and IFR operations.
- ☐ SID.
- ☐ SID with an arc on the departure.

Now select one option for your arrival airport :

☒ Select random airport (Considering your time available).

☐ Select this airport for arrival: SKAR

☐ Arrival airport must have:

- ☒ Only VFR operations.
- ☐ VFR and IFR operations.
- ☐ STAR.
- ☐ STAR with an arc on the arrival.
- ☐ ILS approach.
- ☐ NDB approach.
- ☐ VOR approach.
- ☐ VOR-A approach.

Difficulty level 1. Easy

Start Search Clean Data

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Once you select all your options, press the START SEARCH button.

In case you want to clean all the options selected and start over.



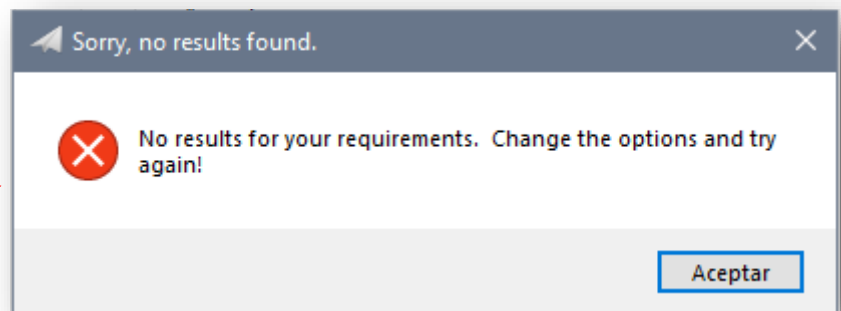
Flight Gen!



When you click on
START SEARCH, **Flight Gen!@**
can give you 2 alert warnings.

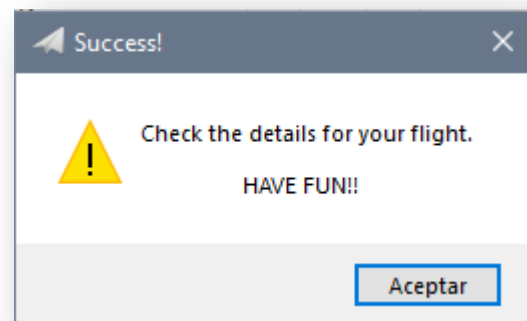
Option 1:

In case that **Flight Gen!@**
doesn't find any flights with your
requirements, change the
options a try again.



Option 2:

In case that **Flight Gen!@**
successfully finds a flight for you.
(Results on the next page)





Flight Gen!

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Analyze the results!

Check the data for your
departure airport.

Check the data for your
arrival airport.

Check the remarks data.

Depending on the airport, some
information may be displayed here.

3. These are the details for your flight. HAVE FUN!

Departure airport :

ICAO: SKCZ	IATA: CZU	AD Elev: 568'
Airport name: LAS BRUJAS		
City: COROZAL		
RWY available: 2/20		RWY length: 1520 mts

Arrival airport :

ICAO: SKMZ	IATA: MZL	AD Elev: 6973'
Airport name: LA NUBIA		
City: MANIZALES		
RWY available: 10/28		RWY length: 1391 mts

Remarks :

Course (aprox): 182.0 degrees		
Distance (aprox): 259.0 nm	EET: 1:04	

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Make your flight...
and HAVE FUN!



Flight Gen!

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Remember the two options here??

1. Selection based on details
2. Selection based on flight difficulty ([on this next page](#))

Flight Gen!@ can select a flight based only on difficulty.

Selection based on details

Selection based on difficulty

You are about to select a flight based on the difficulty.

These flights don't take into account your time available, so select one when you have enough time to complete the flight.

These flights range between 35 minutes to 1.5 hours at a speed of 240 knots, which is the (regular speed for the King 350.)

The main objective of these flights is to test your ability to find the route and navigate using the charts.

When you are ready select the difficulty level and click the red button to search for a flight. Pay special attention to the remarks for the selected flight.

I would like a flight ...

- | | | |
|------------|--|---|
| 1. Easy: | This may be too easy for me! | ▼ |
| 1. Easy: | This may be too easy for me! | |
| 2. Medium: | yeah... I can do that! | |
| 3. Hard: | WTF!... How am I supposed to do this!? | |

Select the difficulty for your flight.

Select a flight for me

Difficulty may be due to :

The SID, the route, the STAR, the approach or the missed approach.

The difficulty level is subjective ... so, try them all!

Click to select a flight based on difficulty... to find the results go back to page 8.



Flight Gen!

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Use the desition options to know what to do next in your flight.

Flight Gen!@ will help you to make desitions and make your flights less predictable.
Just click on the question, and a pop-up message will give you the answer.


If you click here...

Use these options to make desitions :

Proceed to the holding?	Make missed approach?
Proceed to the alternate?	Yes or No


You will receive your answer:
a yes... or a no.

Proceed to the holding?

 Yes... Proceed to the holding!

Aceptar

Proceed to the holding?

 No... you can continue your approach.

Aceptar



Flight Gen!



Some issues when using this program

There are some things to consider when you use **Flight Gen!@**.

1. All the flights suggested are in Colombia. The reasons? On one hand, I created a database with the necessary information for the program to find all posible airport characteristics, something not easy to do for every contry in the world. On the other hand, because the objective is to create flights (IFR hopefully) and that you practice... that means using charts (and finding IFR charts for other countries is not easy).
2. **Flight Gen!@** is a computer program, so it will make whatever you make it to. So, make good choices and the program will return good answers. For example: asking for a 60 minutes flight departing from San Andres in a C172 will not give you many possibilities.
3. Colombia has more tan 120 airports, but **Flight Gen!@** uses a database with only 70, so don't expect to fly to every airport in the country. If this program is used by many people, I will consider adding more aiports to the database.
4. If you find any errors in the **Flight Gen!@** (you know...I'm not a profesional program-mer), please contact me with the details of the error. I'll try to fix it as soon as possible.
5. All the information given by **Flight Gen!@** is for training purposes. **DO NOT USE IN REAL NAVIGATION!**



Acknowledgment

Special thanks to:

1. Santiago Falla. Los Halcones pilot student, who gave me fantastic ideas and encouraged me to improve **Flight Gen!@**.
2. Andrés Palacios. For his support in the website.
3. Last but no least, Diana Valencia. For her loving patience and support.