

aerofly FS 2: Rodeo's Tutorial

My first ILS approach

v1: 2017-02-06

You are a beginner with aerofly FS 2. You made some VFR flights and tried some landings (*vfr = visual flight rules, pilot operates aircraft under visual conditions*).

Now let's do the next step and try an ILS approach (*ils = instrument landing system*).

This tutorial will be more complex:

We gather some preflight information, use both location and navigation map, adjust aircraft instruments and finally do a manual approach assisted by ILS. Don't let the autopilot fly, it's much more challenging to do this manually.

Preflight Preparations: We are going to San Francisco Intl and want to approach Runway 19L.

Open the site <http://airnav.com/airports/> and search for San Francisco or SFO or KSFO.

KSFO is the ICAO code of the airport (*ICAO = International Civil Aviation Organization*), also listed in aerofly.

The KSFO page tells you everything about the airport.

Please scroll down to **IAPs - Instrument Approach Procedures** and open the PDF file **ILS OR LOC RWY 19L**.

The layout of this file is standardized and explained in various locations of the web.

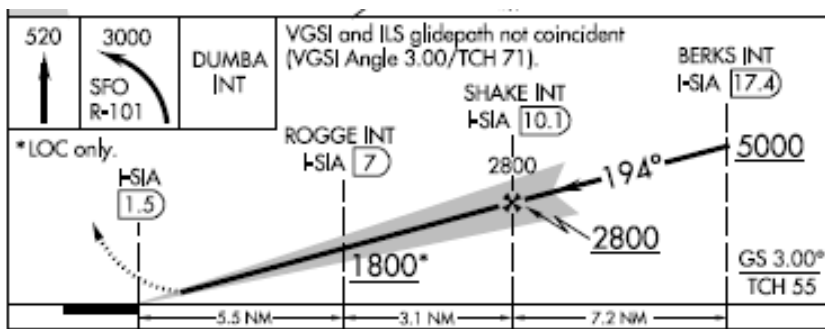
In the beginning we will concentrate on the most important information for us.

SAN FRANCISCO, CALIFORNIA

LOC/DME I-SIA	APP CRS	Rwy Idg	19L	19R
108.9	194°		8650	7650
Chan 26		TDZE	11	11
		Appt Elev	13	13

The frequency of the localizer *LOC/DME* is 108.9 MHz, the approach course *APP CRS* is 194 degrees.

The available runway length *Rwy Idg* is 8650 ft, the touch down zone elevation *TDZE* is 11 ft.



This is the glide path to the runway. To intercept the glide path, our flight level in a distance of 17.4 nm is at or below 5000 ft.

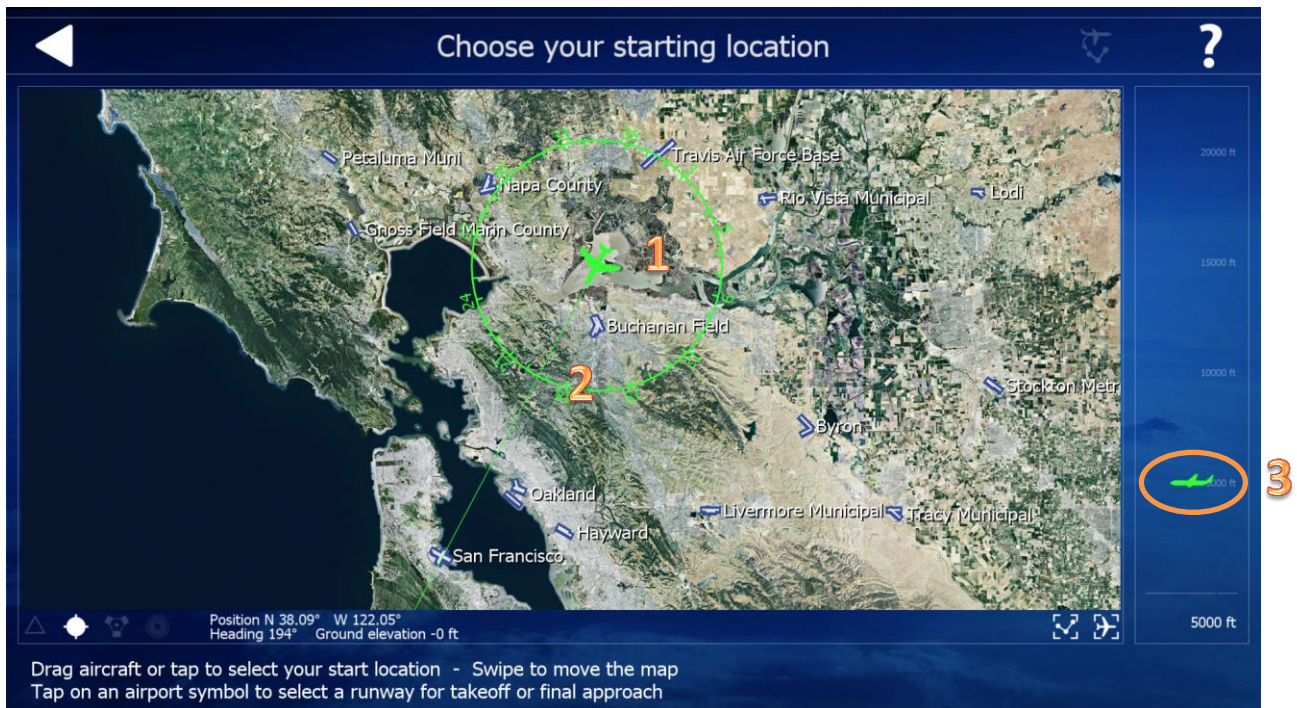
The final approach fix FAF is in a distance of 10.1 nm at 2800 ft. Our aircraft should be in line now and follow the glide path.

Next start aerofly FS 2, select Aircraft and scroll to the Baron 58.

This tutorial is based on the Baron 58, the instruments may differ in other aircrafts.

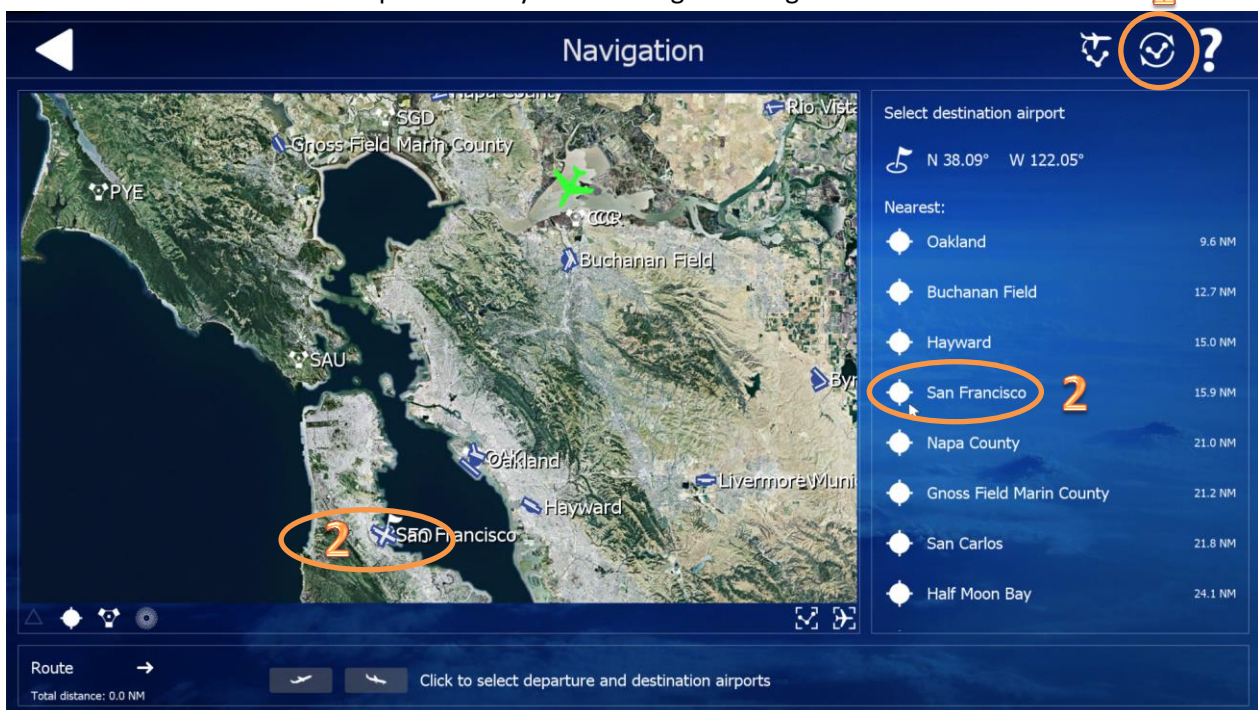
Exit aircraft selection and go to Location menu.

- 1 Place your aircraft above the Grizzly Bay NE of San Francisco.
- 2 Rotate the circle with the mouse to a heading of 194 degrees. The heading is shown below the map. Drag your aircraft symbol to be lined up with the San Francisco runways.
- 3 Select a flight level of 5000 ft.



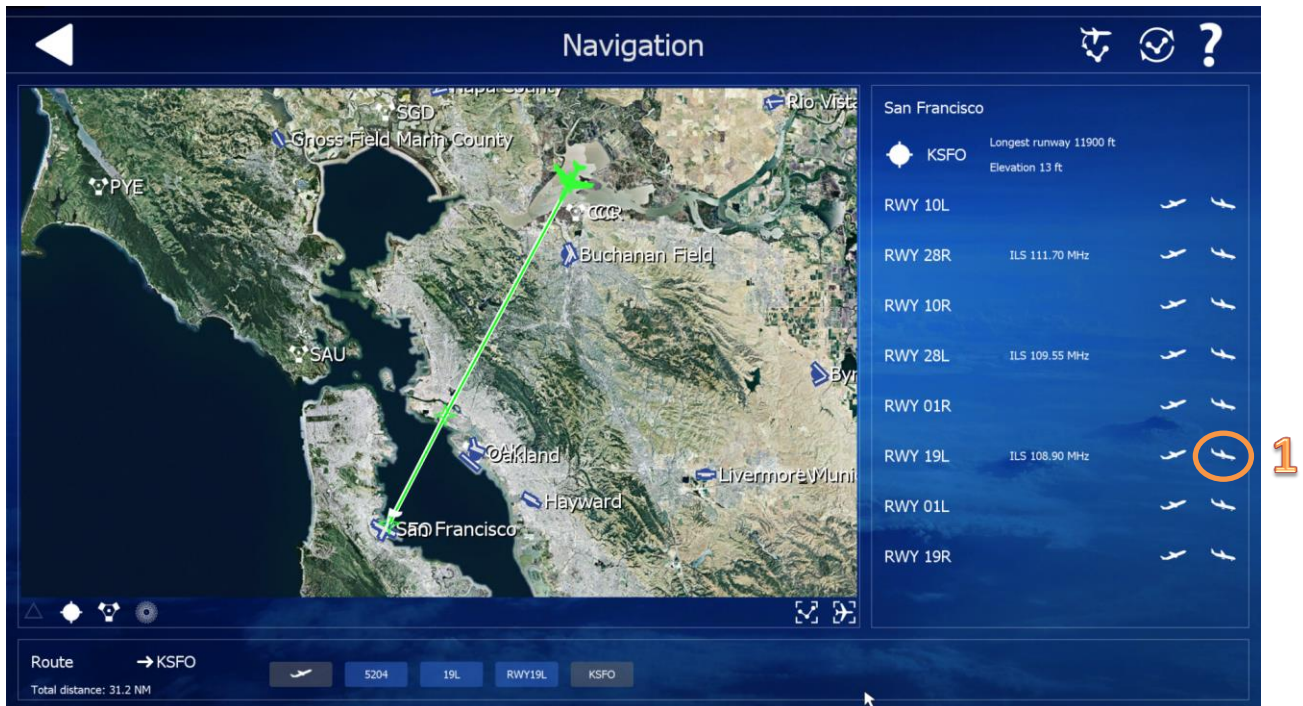
Leave the Location menu and enter the navigation menu.

- 1 Delete previous route settings
- 2 Click San Francisco on the map OR directly in the listing at the right side of the screen.



1 Select the arrival symbol of RWY 19L and see your flight route on the map.

Note additional information like the ICAO code, the ILS frequency and the total distance of 31.2 nm.



Leave the Navigation menu and **start the simulation**.

It's not bad to fly in the early morning. Adjust the time by pressing T or Shift-T.

The screenshots are done during daylight for better visibility.



Adjust average power, level your aircraft and press the key A to activate the Autopilot (alternatively press AP at the control panel).

Now we have the time to enter our flight data.

1 Turn the frequency knob of NAV 1 to 108.90.

Use the mouse wheel for this, point to outer ring for large change, inner knob for decimal changes.

2 Press the active/standby button. The active frequency 108.90 swaps to the left.

3 Turn the heading knob of the HSI instrument to 194 degrees.

4 Turn the knob to the same direction.



1 The ILS is now active. Note the distance, the average speed and minutes to our destination just below the HSI.

2 Turn the OBS knob to 194 (*OBS = omni bearing selector*).

3 Turn the knob of the CDI to 194 (*CDI = course deviation indicator*).

The knob is hidden behind the gear. Point with mouse to the marked position to get the mouse wheel symbol.



After having done these settings, switch the autopilot off (press A again or the AP button at the control panel).
Now it's your turn, to follow the flight path.

Let's have a closer look to the HSI (*Horizontal Situation Indicator*)



- 1 Our heading (white line) is 184 instead of the marked 194.
- 2 The yellow markers are above the center, so we are below the glide path.
- 3 The localizer (vertical yellow line) is 1 dot right, so we are slightly left off course.

The VOR instrument shows similar information.

(VOR = VHF Omni Directional Radio Range).

To correct the course, fly to the crossing of both lines: Go slightly right and higher.



1 Follow glide path with HSI and VOR .

2 When you intercept the glide path, try to keep -1 at the vertical speed indicator.

Here we are well in-line, just slightly too high and not enough vertical speed .



Optional: You can use the FD button to support your control inputs.

1 Press the FD button (*FD = flight director*).

2 The yellow ADI symbol is displayed (*ADI = attitude direction indicator*).

Try to fit the brown triangle to the yellow indicator.





Watch the Airspeed indicator and manage the speed during approach.



Set flaps during approach.
You can use the mouse wheel
(keys F and Shift-F are the standard setting for flaps).

Deploy the gear, hidden at the right side of the steering wheel
(key G is the standard setting for the gear).



**Attention: I'm not a pilot and this tutorial is not an official flight procedure.
It may contain errors and is only intended for demonstration of aerofly FS 2 functionality.**

Repeat this approach several times and you will see how fast you can improve your aircraft control.
Happy landings!