

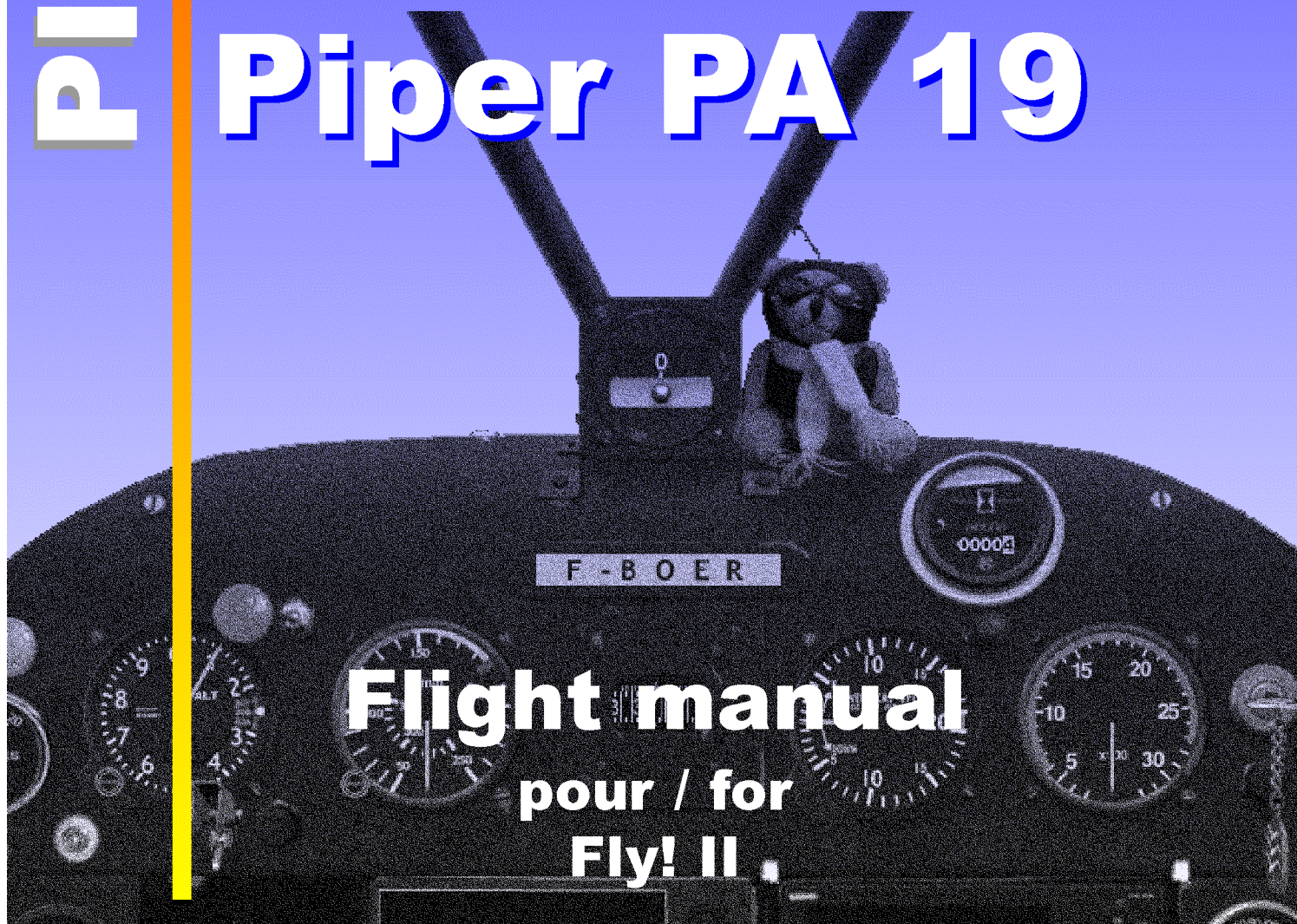
PIPER PA 19

ROTW
French Developers Team
et / and
Simvol Fly!



présentent / present

Manuel de vol pour **Piper PA 19**



Flight manual
pour / for
Fly! II

Piper PA19 for Fly !

Introduction

Introduction

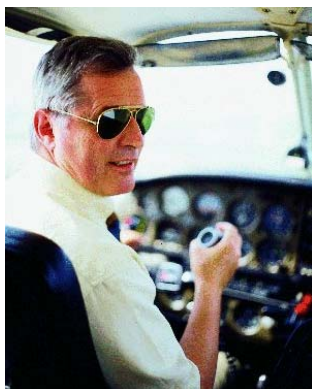
Fly ! is one of the first simulators to offer a complete panel, a realistic cockpit and the possibility to start a plane as in reality.

Of course, like in all major flight simulators, a key (in this case the “E” key) allows you to bypass this stage and start your flight with the engine(s) on and only the radios to tune.. That is a pity for the starting up of the engines is a very interesting stage of the pre-flight check-list. The strictness of the procedures will allow one to be sure of the airworthiness of the plane.

The more sophisticated the plane (multi-engined, turbo-props, jets) the longer and complex this step will be. Even for a single-engined piston driven aircraft, the check-list must be carefully followed. Skipping a part or trusting only one’s memory or habits are the cause of major accidents.

This manual, **only meant for flight simulators**, will allow the PA19 user to become familiar with the real-world procedures of starting the plane. The PA19’s , with its spartan avionics, is a pleasure to start up and to taxi and a challenge with crosswinds .

René Birot
Simvol/Fly Webmaster
ROTW coordinator
Private pilot



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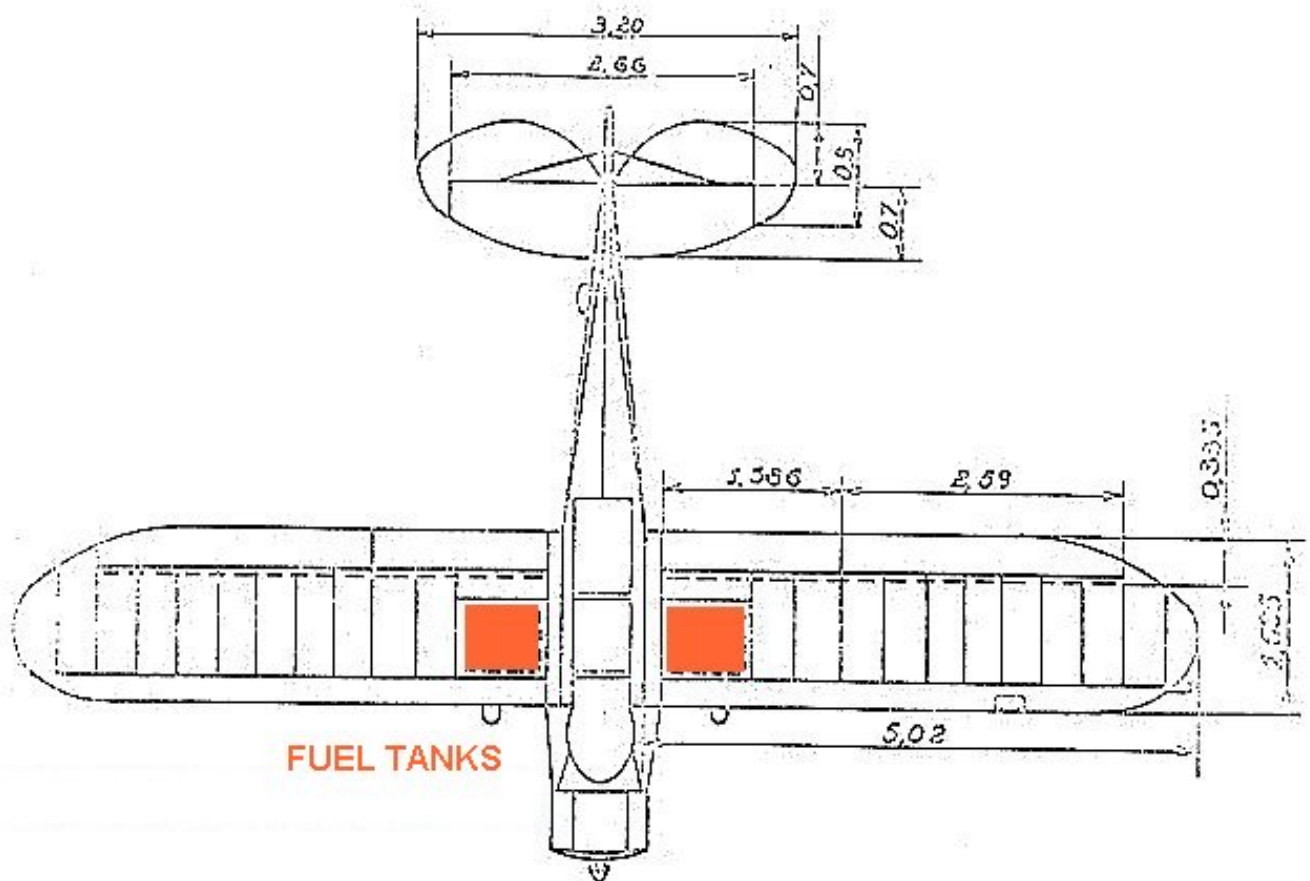
- 1- Guided tour of the Piper PA19 for Fly !
 - 1-1 External view
 - 1-2 The panel
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 - 1-4 Details of the panel
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- 2- Starting the engine
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- 4- Credits

Comments :

- a. All the screenshots were all taken in Fly!2 (except the picture on page 2)
- b. The procedures described in this manual are all from the real PA19 check-list
- c. The only unrealistic features are
 - the position of the parking-brakes levers
 - the "too modern" radios
 - the vertical speed indicator which is not fitted into the real plane
 - Teddy BOER

1- Guided tour of the Piper PA19 for Fly !

1-1 External view



1-2 The panel



The avionics, even though they are old fashioned, are sufficient to fly this plane.

We have added a vertical speed indicator which seemed useful as the plane is not fitted with an attitude indicator.

The pilots of this plane say that the main instrument of this plane is the ball of the turn coordinator.

The following pages will explain to you how to use all the carefully modelled features of the plane.

The following images are all screenshots from Fly! 2

Beware, this plane is not equipped for night-flying

1.3 Flight preparation screens

Selecting menu



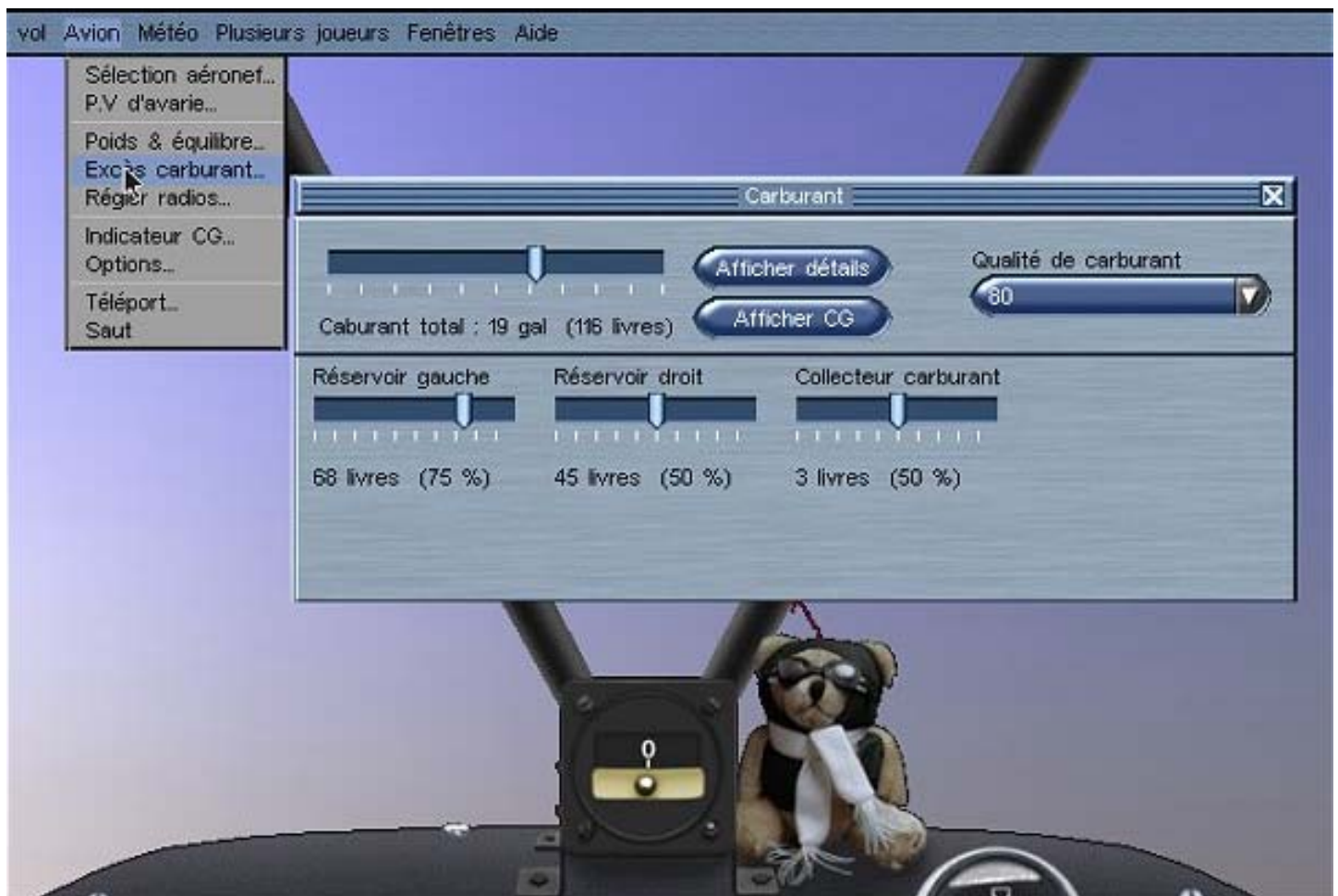
Choosing the plane in Fly! 2

Specifications :

	knts	Km/h

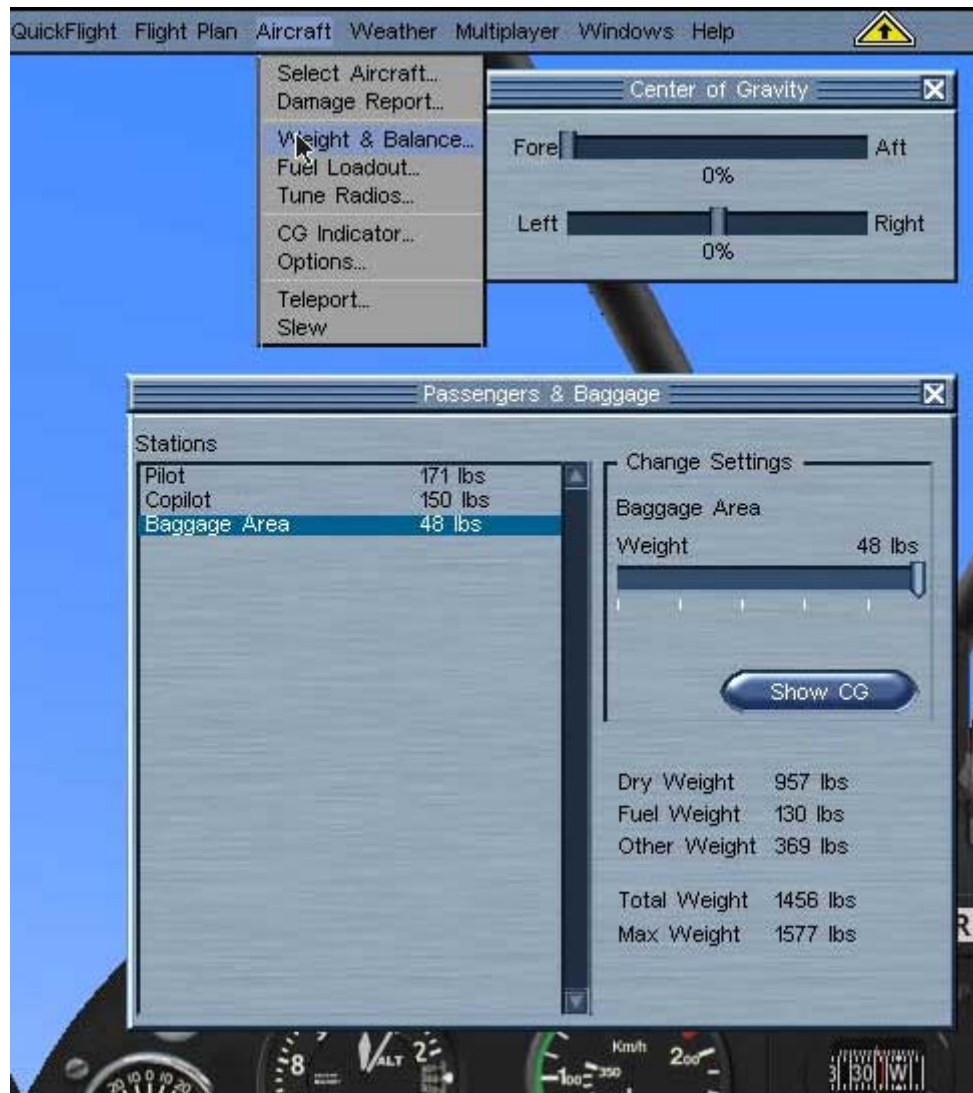
STALL	39	72
Vx	59	109
Vc cruise	75	140
Vno	79	146
Va	86	160
Vne	101	188

Fuel management



Before starting, set lever on “ouvert partout” (both tanks)

Load and center of gravity



Watch out for your forward centring !

1-4 Panel description



- the starter button is a key with two positions
- fuel cut-off lever : if pulled, the engine stops
- this plane is equipped with a generator and not an alternator
- the battery is set to on or off by a pull lever
- The speeds on the air speed indicator are in kilo-meters per hour
- There is no attitude indicator



Extra view with more perspective including active gauges (CTRL Up)

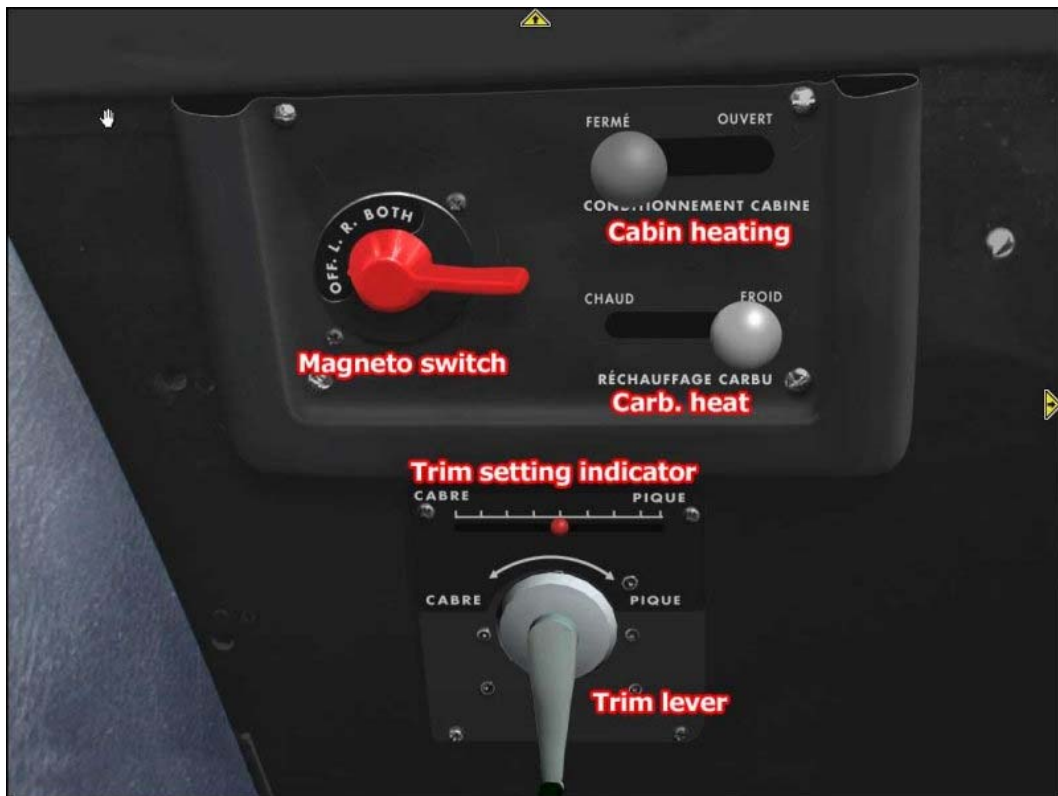
1.5 Levers on the left panel



Fuel tank selection lever



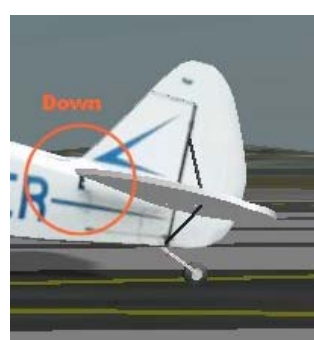
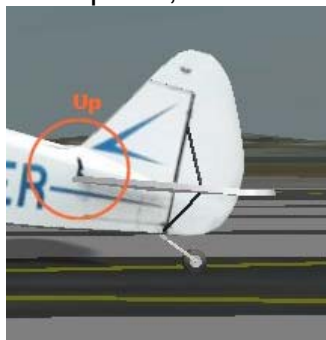
Throttle



All these elements are situated on the left side panel of the front seat (below the left window)
The trim is set with a handle which has to be turned several times to set it full up or full down. We have limited this to $\frac{1}{4}$ of a turn in both directions.

The cabin heating lever is not activated

And a "première" : like on the real plane, the trim moves the whole horizontal stabilizer



2- Starting the engine

2.1 External pre-flight check :

Ensure yourself that the plane, the tires and shrouds are in good condition

Check oil (level, grade)

The fuel levels can precisely be checked from inside the plane, thanks to two glass tubes situated at wing-level on both sides of the pilot's seat.



Left gauge



Right gauge

Both gauges can be seen by selecting the side views with the usual keys

The blue colour of the fuel is characteristic, in France, of 100 LL aviation fuel (heavy tax!).

The gauges have two scales, one for level flight, the other for on the ground (three points)

2.2 Manual start-up

On the left panel

- Set parking brakes
- et fuel flow selector to "**Ouvert partout**" (both tanks)



- Set magneto on "**both**" and carb heat on "**froid**" (cold).



Push the throttle slightly



On the main panel

Switch the battery on (the red light of the generator lights up, the ammeter indicates that power is used)



Push the fuel cut-off lever



Switch the generator on (switch up) and lower the red protection cover. The red light of the generator remains on as long as the engine is below 800 RPM.



Piper PA19 for Fly !

Start the engine with the key (on the right of the panel)

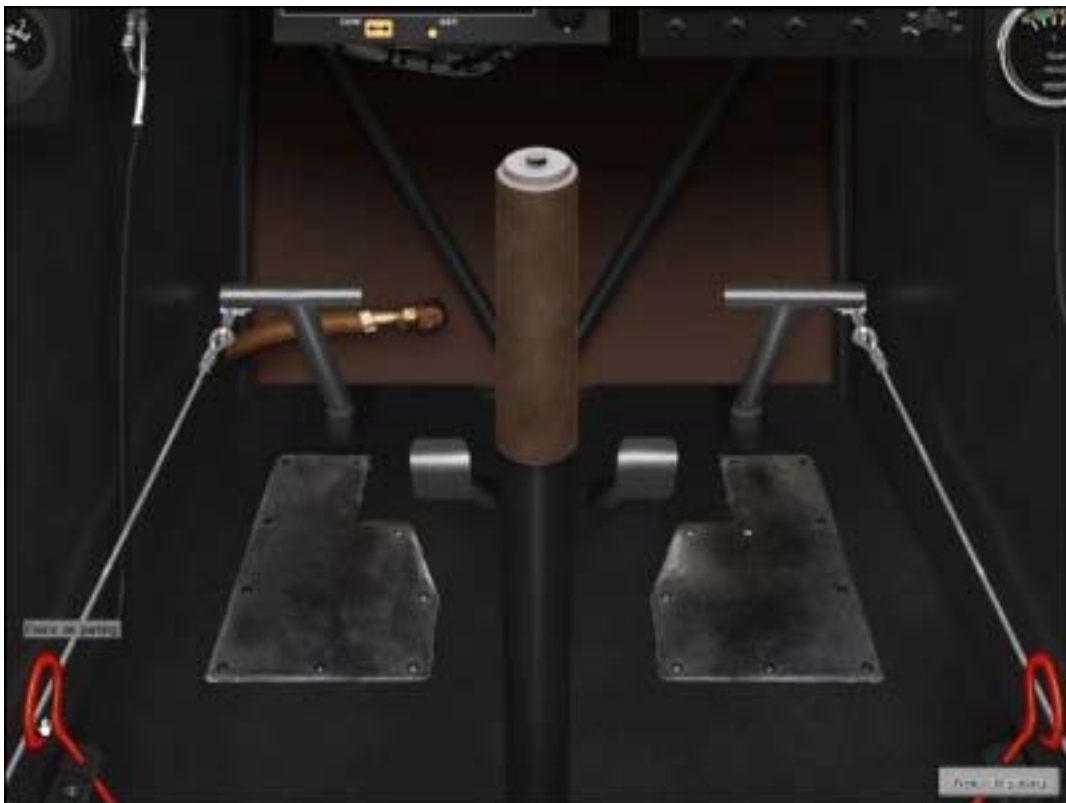
Set RPM to +/- 1000 to heat up the engine (the generator light should now be off).

Tune the radios

This is how the panel and gauges should look when the plane is ready for departure.



Release parking brakes.



Parking brakes set (click with mouse on one of the red levers to release)

Piper PA19 for Fly !



Parking brakes released

You are ready for taxiing, ask the tower for clearance

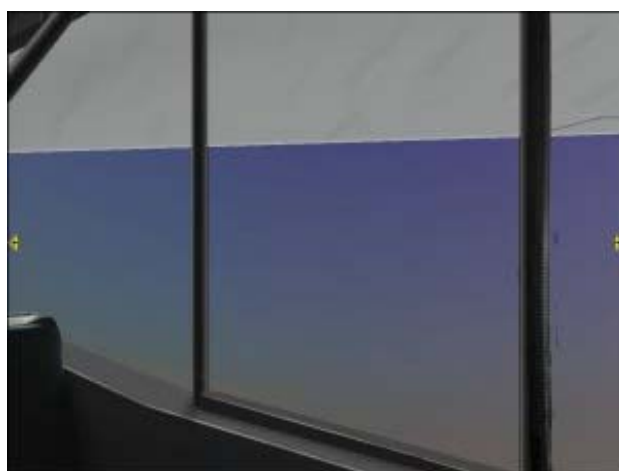
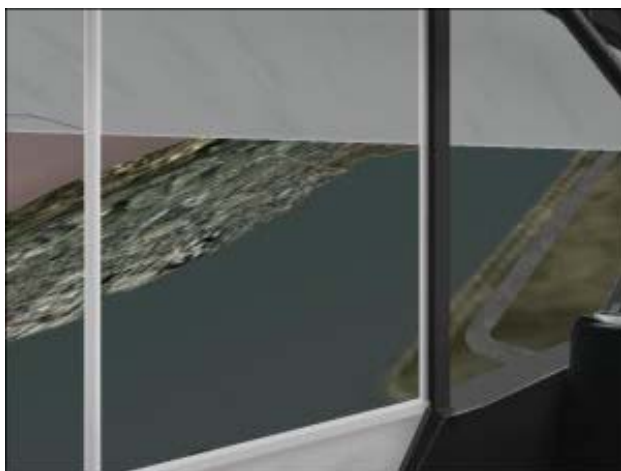
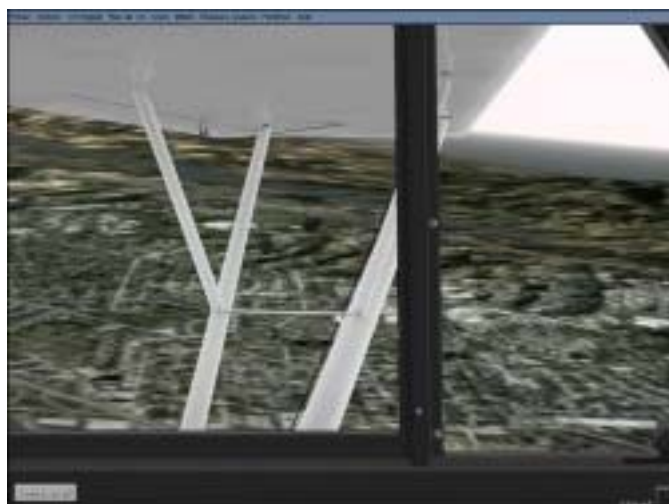


Bon Vol ! (have a great flight)

3- Inside views

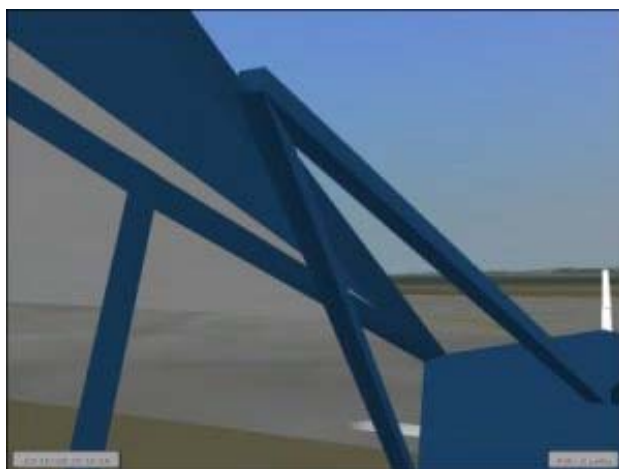


Another "premiere" : the main gauges are active on the $\frac{3}{4}$ front views





... And a "bonus" presented to you by the ROTW team : two new cameras simulating the pilot's or the passengers 360° view (read the "ReadMe" file included with the plane)



For this new camera we had to create new internal 3D views

4- Credits

1-The Piper PA19 is a plane which was built in the United States of America by :
« Piper Aircraft Corporation »

The real plane which was used for the model is the « F-BOER » of the ACRIV (AéroClub Rennes Ile et Vilaine) based on the airport of Rennes St Jacques (LFRN) in Brittany, France.

2-Development for Fly ! 2 : « Rest Of The World » (ROTW)

a. Digital pictures of the real plane	René Birot
b. Internal and External model (3D	Jean Sabatier
c. Internal views	TJ
d. Panel	TJ
e. Flight Model	Laurent Claudet
f. Gauges programming	Laurent Claudet
g. EPD (POD) creation	Laurent Claudet
h. Flight preparation screens	René Birot
i. Flight model testing (real and virtual)	René Birot et Claude Panetier
j. Conception of the flight manual	René Birot
k. Translation of the flight manual	Jean-Paul Mes
l. Cover page design	Jean-Paul Mes

We would like to thank Rob Young and Peter Sidoli for allowing us to use the improved flight model parameters they developed for TRI.

We also would like to thank Richard Harvey of Terminal Reality and the Beta team for the latest (230) patch. Keep 'em coming !



Don't modify this plane without ROTW agreement