



Morane-Saulnier MS733 "Alcyon".

French military training aircraft, three seated, retracting gear, reciprocating engine 6 cylinders Potez 6D30 / 240 HP. Full metal construction. Night/Day VFR/IFR instrumentation.

Version 2 on 14/09/2014

3D-Model by Bernard JUNIOT (Berju83).

Flight Model by Jean-Pierre BOURGEOIS (Bee Gee).

Sounds by Jean-Michel RENAUX.

1/ **General Informations:**

This model represents an aircraft of 1950ies, which has been in use in French Armies for military pilots training, as well as SFA (Service de Formation aéronautique) and ENAC (Ecole Nationale de l'Aviation Civile) for future liners pilots and instructors.

After its first flight in 1951, 200 units were produced by Morane-Saulnier until 1958, then allotted among Air and Marine Armies. Few of them were fitted with machine-guns and used during Algeria conflict.

MS-733 was a strong aircraft, able to land on its skids in case of gear (pilot?) failure.

Due to modular construction, it was easy to replace broken parts and repair the plane quickly as new.

Fortunately, because its poor engine power ratio (240 Hp / 1800 Kg) had cause it to be called in french "peril jaune"!

However this aircraft was able to practice sufficient aerobatics figures for pilots training.

Several MS733 in good flying state are owned by aeroclubs, air museums, and collectors.

More informations available on following internet sites:

<http://www.avionslegendaires.net/avion-militaire/morane-saulnier-ms-733-alcyon/>

<http://richard.ferriere.free.fr/archives/essai/ms733.pdf>

http://www.aviationsmilitaires.net/display/aircraft/516/ms_733

<http://www.lecharpeblanche.fr/2011/12/09/walkaround-morane-saulnier-ms-733/>

User's Manual

2/ Installation:

- Unzip the compressed file in a temporary directory.
- Cut/paste "Alcyon_MS733" directory in your FSX Simobjects\Airplanes.

3/ Active functions/animations:

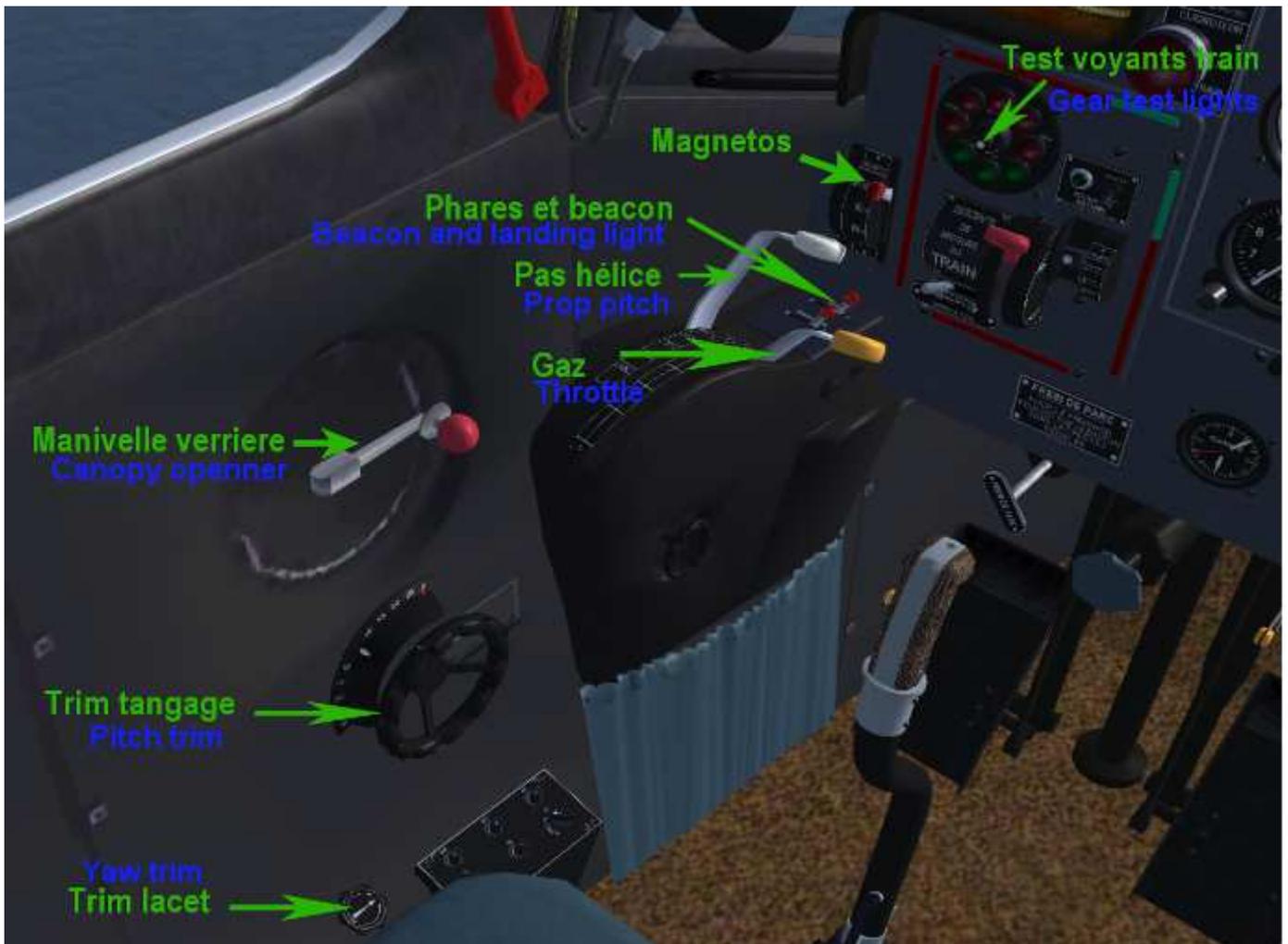
This model is fitted with all usual FSX animations, i.e:

- control surfaces, stick and pedals,
- switches and buttons,
- retractable gear , and so on...

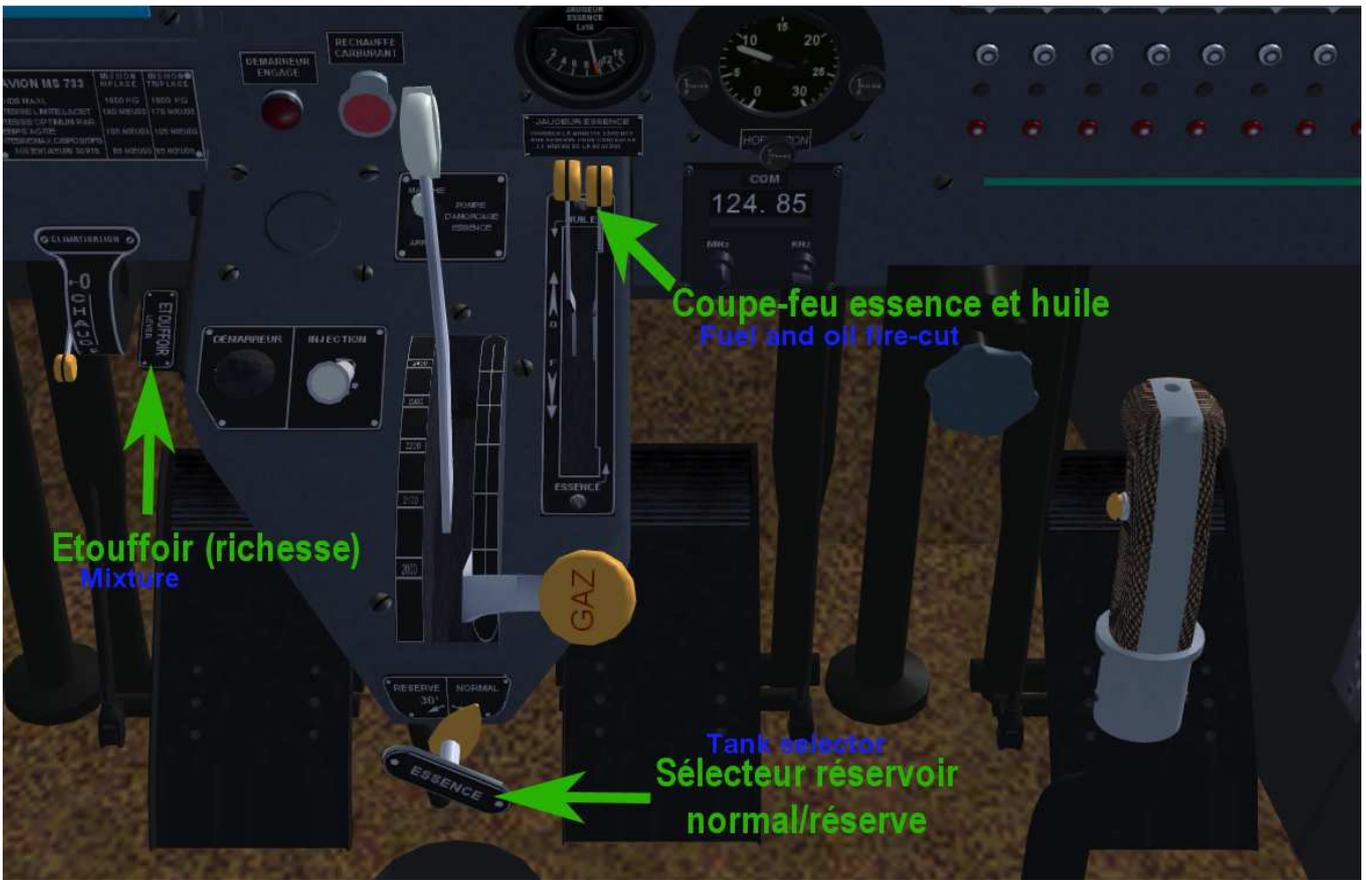
Most control levers and buttons are labelled with very clear instructions (since it was a school plane) in accordance with real cockpit

One may use also FSX standard tooltips for some controls.

Aircraft specific controls are summarized in following pictures:







Suction instruments: artificial horizon, heading indicator, inclinometer.

-set main voltage (battery or generator ON),

-left click on relative taps (green arrows) in order to remove flags and activate each instrument.



ADF functions:

Only ADF commands "arrowed" in green on the following picture are available in the sim. Other ones are fake. In order to simplify ADF use, a digital display is included..

The 2D radio panel (SHIFT+2) allows an easier reading if necessary.

Orange flag on ADF indicator appears if button M/A on radio-compass is on the "ARRET" position.

To activate the ADF indicator, left-click on button M/A (position ANT).



NotaBene relative to flight instruments:

On this kind of airplane the speed indicator is labelled in Knots, the altimeter in Feet, but the VSI is in hectometer per minute. This is quite an unusual feature for FSX, but it conforms to real airplane.

For pilots who prefer a Feet/mn scale, they may use the minipanel (shift+7).

Reminder: 500 ft/min = 1,5 hm/mn.

Cowl and canopy maneuver:

Left-click on each lateral crank or use standard FSX controls:

- SHIFT+E+1 left canopy,
- SHIFT+E+2 right canopy,
- SHIFT+E+3 engine cowls

Popup Menus:

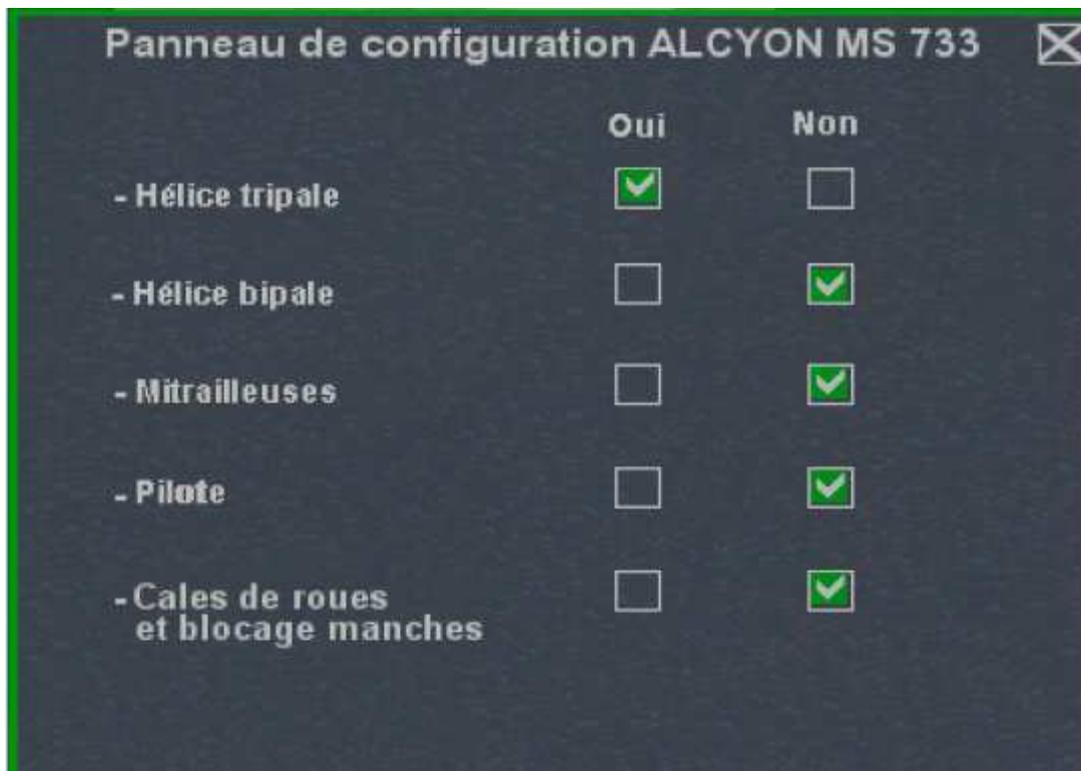
- SHIFT+1 = Aircraft configuration panel
- SHIFT+2 = Radios stack
- SHIFT+3 = GPS
- SHIFT+4 = Compass
- SHIFT+5 = Chronometer
- SHIFT+6 = switches
- SHIFT+7 = Minipanel

Aircraft configuration:

Actual MS-733s were fitted with some different equipment that are partly implemented in the virtual model:

- Three or Two blades propeller,
- Machine-guns in both wings,

Configuration panel available through SHIFT+1 allows selection of chosen equipment.



Parking features:

When at parking (cold and dark) the MS733 may receive wheel-chocks, pitot protections, and stick-latch-bar.

You may check the corresponding checkbox in order to popup those accesories and block both sticks

Obviously, you'll have to unchek the checkbox for flying!

5/ Technical Références:

Poids total de l'appareil avec le plein de carburant	1800 Kg
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V _{NE} - Vitesse à ne jamais dépasser	180 nœuds (vitesse indiquée)
VNO - Vitesse maximale de croisière autorisée par la structure	170 nœuds (vitesse indiquée)
Vitesse d'évolution à charge max.	123 nœuds à 2500 RPM
VB - Vitesse optimum par temps agité	105 nœuds
VFE - Vitesse max pour abaisser les volets	90 nœuds
VS - Vitesse de décrochage (poids maximum, volets rentrés)	55 nœuds (vitesse indiquée)
VSO - Vitesse de décrochage en configuration d'atterrissage	50 nœuds (vitesse indiquée)
VX - Vitesse d'angle de montée optimale (au niveau de la mer)	60 nœuds (vitesse indiquée)
VX - Vitesse ascensionnelle optimale (au niveau de la mer)	70 nœuds (vitesse indiquée)
Vent traversier max	15 nœuds
VLO -vitesse max pour sortie du train	90 nœuds
Configuration atterrissage	70 Kt, volets 32°, 3 points, Freinage modéré
Consommation moyenne	57 litres par heure
Distance max franchissable sans vent	385 Nm

Vitesses maximales selon le degré de sortie des volets

Degrés de volets	Nœuds (vitesse indiquée)
16	85
32	80

5/ Limitations:

This model has been created for FSX Acceleration with DX9 and DX10. It has not been tested in other conditions.

Optimal operation of Nav lights is not guaranteed with DX10.

6/ Credits:

Big thanks to:

- Bee Gee (Jean-Pierre BOURGEOIS) for the realistic flight model.
- Jean-Michel RENAUX for engine sounds.
- Royale French Navy for hosting the model in their website.
- Freeb!rd (Clement PRIMAT) who allowed me to continue his MS733 original project.
- All "Pilote-Virtuel" and RFN fans for their kind help.

7/ Legal Informations:

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Good flights!