# X-FMC Manual

## Complete guide for X-FMC Plugin
## Version 3.25

**X-FMC Dev Team**

**28/08/2025**

The X-FMC manual is provided as is. Basic knowledge of flight planning and IFR (Instrument Flight Rules) is required before using this software. This plugin is developed for X-Plane 9 and X-Plane 12.

# 1 Summary

| Revision | Reviewer | Comments |
|---|---|---|
| **V1.0 (Nov 2011)** | Tony (MaxWaldorf) | Initial release |
| **V1.1 (Apr 2012)** | Tony (MaxWaldorf) | Content review + additional info for X-FMC v1.5 |
| **V2 (Nov 2012)** | Tony (MaxWaldorf) | Content update for X-FMC V2 |
| **V2.1.4 (April 2014)** | Tony (MaxWaldorf) | Update to match website and new features |
| **V2.5 (June 2014)** | Tony (MaxWaldorf) | New Nav dataset included |
| **V2.6 (March 2015)** | Tony (MaxWaldorf) | New features in this version |
| **V3.25 (August 2026)** | | Release Xplane12 |

## Disclaimer:


This software has been tested and reported with no known virus infection. Therefore, X-FMC Team will not be responsible for any harm done to your device or computer due to wrong manipulation.
For more information, please refer to XFMC manual and tutorial to learn more on how to operate XFMC.
Fmod library (provided in package) is needed and installed with this installer (be careful when uninstall because library could be needed by other programs)

# 2 Introduction

## 2.1 The project

X-FMC is a Flight Management Computer integrated to X-Plane as a plugin. Relying on internal and external data, it will help you manage your flight from and to everywhere!

X-FMC is based on a Boeing style FMC with many custom functions.

The product relies mainly on technologies like OpenGL and fmod (for sounds) and is developed in C#. You can adapt it to almost any aircrafts as long as they have an Autopilot based on X-Plane via a simple configuration file .

## 2.2 How it works

To keep it simple, X-FMC plays with the HDG, ALT and V/S data from X-Plane to pilot the plane.

But this is not the only thing; we have reproduced almost all functions from real FMC as for LNAV, VNAV, fuel prediction, ETA, SID/STAR, Step climb, auto-tune, copilot assistance, and much more...

The latest functions added and the most difficult to accomplish were:

- New UI design with interactive graphic parts
- New LNAV Wind compensation model
- Top of Climb and Top of Descent prediction
- SID/STAR and Terminal procedures with restrictions (speed / Altitude)
- Complementary FIX and Airways implementation

As for SID/STAR, FIX and Airways, we cannot rely on X-Plane database so we have decided to rely on NAVIGRAPH or Aerosoft NavDataPro (VasFMC and KLN90B) files.

## 2.3 The team

We are two persons behind the X-FMC project:

- **Bert (Klmva/FPR36):** Project founder and developer.
- **Tony (MaxWaldorf):** Project lead designer, website management and external communication...

Our long experience in flight simulation and our active involvement in simulation networks and real flight experience have given us the will to carry on such a major freeware project.

Please note that we have no link with Laminar Research (X-Plane developers)…

# 3 Installation

## 3.1 Installer

Windows an auto-installer.
Just simply follow the installation process and enjoy the use of your X-FMC plugin.

*Note:* Please remove all previous versions of X-FMC before installing V2.5+!!!

## 3.2 How to install the Navigation data

X-FMC is now included with its own customized navdata set.

This nav data is not up-to-date but you can easily upgrade it by going to navigraph and aerosoft.

You will find this new navdata in /Resources/plugins/XFMC/X-FMC navdata/

***Note:*** In X-FMC general config file in [X-Plane]\Resources\plugins\XFMC\xfmc.ini, there is a parameter that can help you putting priority to external navigation data instead of X-Plane Navdata…

#EXTNAVPRIORITY=1 or 0

**Reminder:**

Please note that using a FMC require knowledge about IFR (Instrument Flight Rules) and flight planning and this manual will not provide you those basics…

Lack of knowledge in those fields might get you errors or wrong behavior of X-FMC.

We can only provide support for our product. (Please review Routefinder or download Wayfinder)

# 4 X-Plane startup and flight preparation

## 4.1 X-Plane start

Once you have setup everything, you can launch X-Plane 12.

If the plugin initialization goes correctly, you will hear a “FMC check: OK” sound…

After X-Plane load page, you’ll end up with your cockpit view and the X-FMC panel open (note that you may prevent X-FMC from popping-up at startup thanks to #DEFAULTHIDING=0 in general config).

If you don’t need it, just press F9 to put it away!

Before selecting the plane, be sure to have the configuration file placed in the plane folder. Please note that the name of the cfg file must be matching plane acf file (eg: B737.acf → B737.ini)…

*Note:* If you don’t have one or if your plane is not listed in the download section, please report to the end of manual to learn how to create one.

## 4.2 X-FMC Quick review

At start, X-FMC should look like the picture below.


1. Here you will find the Flight status (Boarding, Climb, Cruise, Descent, …)
2. The screen: 6 buttons on each side that will help you select values or functions…
3. The function buttons (please note that “FIX” function is not available), the autopilot engage/disengage button “AP” and the keyboard to FMC activation key “KEYB” (note that you need to focus on X-FMC for the keyboard to type in). The MAP Key will bring up the ND Display of X-FMC.
4. X-FMC keyboard keys if you don’t want to use your key board or if you need to access special functions such as delete “DEL” or clear “CLR”.
5. X-FMC VNAV and LNAV activation
6. Auto-Throttle activation

Each of the panel state or function keys will be explained along this manual and will try to regroup them in categories. Please note that we try to be as close as common FMC functions but we can’t reproduce all behaviors…

*Note:* Backlit is activated at night by engaging batteries in cockpit.

## 4.3 Flight plans and Company routes

We have added a special feature in the FMC to make flight planning much easier!

Many among you use RouteFinder to prepare their flight plan and the format used is:

“DEP ICAO” SID “ROUTE” STAR “ARR ICAO” (e.g. LFLL SID MOKIP UN854 DJL STAR LFPG)
>>>>>>XFMC 3.25 also accepts simbrief!

If you want to store it, just create a file named DEPARR.FPL (e.g. LFLLLFPO.FPL) with your notepad insert the route and save it in the “flightplan” directory in the “XFMC” plugin folder…

We should warn you that RouteFinder can be helpful but not accurate. If you need to have accurate flight plans, you’ll need much more time to prepare your flight!

# 5 Before Engine Start

## 5.1 The MENU page

The Menu page is the first page you will see on first X-FMC launch.

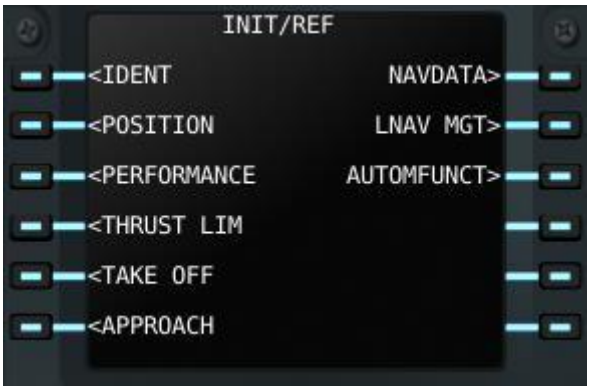
It gives a few functionalities to the user:

- FMC: Go back to FMC mode
- Reset FMC: Reset FMC and flight plan
- ACARS: Not Implemented

To continue, simply click on the first Left Screen Key (LSK1) to activate FMC mode. (See previous picture)

## 5.2 INIT / REF Pages

INIT button will give you the opportunity to bring back those pages when preflight check is over. The following page will show up:



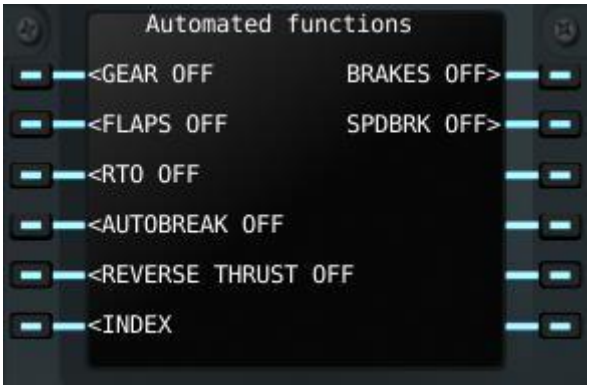

Some hidden features are accessible through this menu such as:

***LNAV Management***


You can select the lateral offset tolerance that X-FMC can have compared to initial plotted route.

If you wish to Activate or deactivate LNAV (or VNAV) just press the button on the side of the FMC.

***Automated Functions (AUTOMFUNCT)***




Those functions are defined inside the cfg file of each aircraft but you can choose to activate or deactivate automated functions. (See Appendix for more information on cfg file settings)

## 5.3 IDENT/ Position / Flight initialization

The IDENT page will be the first page to show up. It will give you vital information about current FMC data and configuration.


First row is about the plane and the configuration file found. Second row will tell you the AIRAC date you have installed… The rest is dedicated to X-FMC.

*Note:* In case you are using the X737 , you will find extra data in front of RSK5.

On startup, you might also see this line appear:


X-FMC now automatically updates your config file if not up to date. You won't have to manually check if new parameters are included.

X-FMC will then ask you to initialize satellite position by clicking on "POS INIT".


Simply enter the ICAO of the airport you're at and validate it with LSK2. Next step is the ROUTE!

## 5.4 RTE / Flight Route

On the first RTE page you will need to set your destination.


You have two ways of doing that:

1. Set destination directly to “DESTINATION” the ICAO of arrival airport via RSK1 and click RSK6 and activate.
2. Enter the corresponding company route in format ICAO1ICAO2 (e.g. LFLLLFPG) and activate.

*Note:* When activation is needed, you will hear a sound and the EXEC button will light up! Simply click on the EXEC button to execute action…

For those using company routes, Flight plan will be automatically entered in “RTE1” page.

If you wish to do it manually, here is how it should look like:


Enter the airway or DIRECT first and then the waypoint.

To continue on other pages, click “NEXT” or “PREVIOUS”

*Note 1:* First waypoint does not need “VIA” information. It’s always a DIRECT!

*Note 2:* If you wish to remove a waypoint, click on “DEL” and the waypoint…

Once you have done your flight plan, you can save it by returning to the first page by clicking on the “RTE” button, entering ICAO1ICAO2 in “co-route” and clicking LSK5 “ROUTE COPY”. Your flight plan will now be saved for future flights.

## 5.5 Performance Pages

Your flight plan is set and you can finally concentrate on your plane and the most important part: fuel planning!

*Note:* For accurate flight planning and fuel planning, you will need to either download “official” cfg file or simply create one with XFMC procedure.

You will have to go through 3 pages to finish your flight plan setup.

1. **Performance Reference**



All fields are mandatory in order to validate your X-FMC pre-flight check.

1. *Cruise altitude:* enter flight level in FL or feet (e.g. 240 or 24000)
2. *PLAN/FUEL:* Calculated planned fuel and missing fuel (in lbs.)
3. *Reserves:* reserve fuel for the flight (in 1000 lbs.)
4. *Cost Index:* Desired cost Index (1-9999: high value = no savings)
5. *Ground weight:* simply click on LSK1 to auto-calculate weight
6. *STEP Size:* For long flights, optimize your fuel consumption with step climbs


**Sel**: the selection for FLEX temp (you can enter a value for N1 max to change)

**TO**: full take-off power, -5% and -15%. If you think you are at max capacity and high altitude airport, consider using it…

**CLB:** 3 climb profiles are available to use full thrust or less during initial climb…

### 3. TAKE-OFF Preferences


**FLAPS:** Flaps degrees (or position) for take-off (must match blue values)

**THR REDUCTION:**.

**E/O ACCEL MT:**.

**WIND/SPEED:** Current wind average Heading and speed (kts).

**RWY COND:** Current runway condition.

**REF V1, VR, V2:** Reference Take-off speeds.

*Note:* For Airbus, there are usually no flaps degrees indicated but positions (1,2,3)

Once flaps value entered, validate each Reference speed by clicking on RSK1,2 and 3…
Once every input is checked, X-FMC will validate pre-flight checklist and let you know by writing "preflight complete" and playing the corresponding sound!


You can now concentrate on vertical navigation management: VNAV.

## 5.6 VNAV: Climb, Cruise and Descent

To finalize your flight planning, it's important to change info in the VNAV pages.

The first page is the CLIMB page. Here is an example:


**Cruise altitude:** In feet. (Initially set by perf page)

**Econ Speed:** In kts. (Initially set by cfg file)

**Speed Transition:** 250/10000 by default

**Speed Restriction:** to limit speed until a given altitude. (e.g. 260/18000)

**Top of Climb, climb V/S:** Information cannot be modified

**Transition altitude:** In feet, transition between local and standard barometric pressure.

**Max Angle:** Maximum pitch angle XFMC can take. (Initially set in cfg file)

**VNAV Disable:** You can disable/enable vertical navigation management

The second page is the Cruise page:


**Cruise altitude:** In feet. (Initially set by perf page)

**Econ Speed:** In kts. (Initially set by cfg file)

**N1 %:** Target N1 power.

**Eta/Fuel:** Estimated Time of Arrival and fuel calculation for flight.

**VNAV Disable:** You can disable/enable vertical navigation management

The third page is the descent page:


**Cruise altitude:** In feet. (Initially set by perf page)

**Econ Speed:** In kts. (Initially set by cfg file)

**Speed Transition:** 250/10000 by default

**Speed Restriction:** to limit speed until a given altitude. (e.g. 260/18000)

**Top of Descent:** Distance until Top of Descent (Nautical Miles)

**Decision Height:** Decision Height for Go Around decision.

**Transition altitude:** In feet, transition between local and standard barometric pressure.

**VNAV Disable:** You can disable/enable vertical navigation management

**NO PAUSE/PAUSE:** PAUSE simulation on Top of Descent

**NOT ACT/DESCENT NOW:** Not active (no action) / Start descent now

*Note 1:* Cruise and Descent pages mostly used during flight…

*Note 2:* You can navigate between pages with “PREV” “NEXT” buttons.

## 5.7 SID/STAR


This page functions are quite obvious. If you have the latest AIRAC from NAVIGRAPH, you will be able to add Standard Departure and Arrival to your flight plan.

Each time you select an option, you have to execute to validate and it will show the next option list (you will see that <SEL> will then become <ACT>).

Just navigate through Runways and procedures with the PREV and NEXT buttons. Press LSK6 to switch between RWY pages and procedures pages.

*Note:* X-FMC reads the restrictions in procedures and applies them to flight plan. Once procedure activated, last waypoint of procedure will be printed to acknowledge.


For SID and STAR, you can now select the transition procedure after Runway and STAR procedure has been selected.

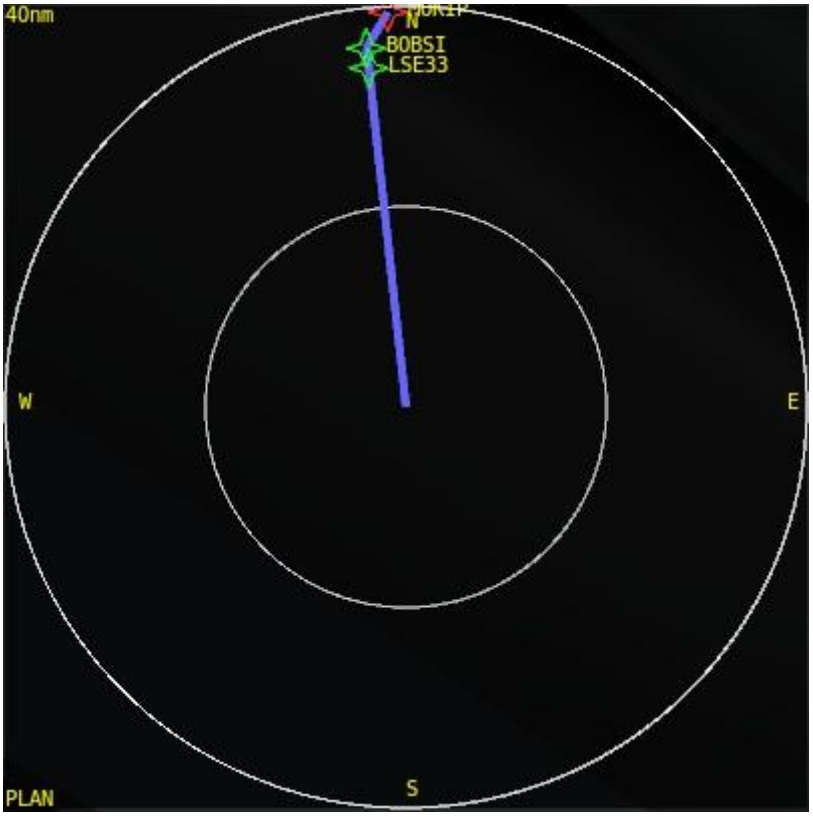
## 5.8 MAP: X-FMC ND display

*<u>NOTE:</u> This feature is still a beta version and is still under development by our team but we thought we could share it with you in the current release.*

X-FMC has introduced new ways to review your flight plan and totally independent from X-Plane ND instrument.

Simply click on the MAP button (over the EXEC key) to toggle the MAP ND display. To hide it again, press anywhere on the map display or on the MAP button on X-FMC main unit.

You will see the following screen.




On this map you can see two icons:

- The map range
- The plan leg

The map range will change it from 10NM to 320NM. *Steps: 10, 20, 40, 80, 160, 320*

The plan key will roll out the route from current position in global steps depending on your current NM selection (eg. Here you see current position to MOKIP then next step will be from MOKIP to the next waypoint within 40NM and so on until the arrival airport…)

Green stars show waypoints but red stars show waypoints that are outside the current range…

# 6 In flight

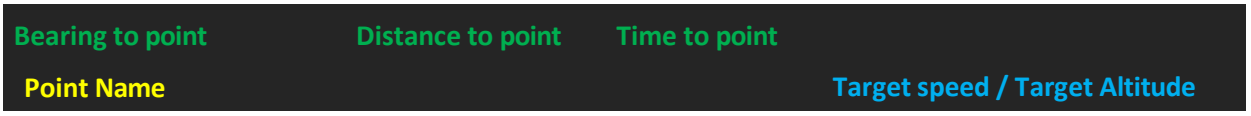
## 6.1 LEG /Leg list

Your leg list should look like that:


As you can see, TC (Top of Climb) and TOD (Top of Descent) will be calculated depending on your cruise altitude and total distance. Their position might move when entering SID and STAR procedures.

*Note:* TC and TD should not be deleted (It can stop FMC from continuing flight plan correctly)

Let's see now the info available for each navigation point:


You can modify target speed and / or altitude by entering values in the following formats:

**Speed only:** SPD/ (e.g. 250/ )

**Altitude only:** /ALT (e.g. /280 or /28000)

**Speed + altitude:** SPD/ALT (e.g. 250/280 or 250/28000)

*Note 1:* If you see /5000A /5000B or 5000 in big size letters that means a restriction is active.

*Note 2:* SPD will turn from Knots to Mach over Flight Level FL300…

## 6.2 Modify Leg List in flight

Note: All those operations will need you to press execute button to apply change.

**Removing waypoint**

Remove a waypoint by clicking on DELETE and then on the LSK button of the waypoint you need to remove.

**Making a direct to waypoint**

Sometime if you are using simulation networks, you are being controlled and the navigation needs to be modified by making a DIRECT to a NAV point; In this case just click on the LSK in front of the NAV point you need to go to and then click on LSK1 of page 1 to insert it as your current destination…

X-FMC will change its heading to match new destination and respect ATC orders.

*Note:* Be careful with point delete… Operation cannot be undone.

**Add point**

If you wish to add a point to the Leg list, just type the point name and click the LSK of the point coming after this new point.

**Inserting a Waypoint along Track**

This option will simply add a point on the existing route; you simply need to indicate the distance (in NM) before or after the reference point.

The syntax used for that is the following XXXX/NM (e.g. MOKIP/15 or MOKIP/-15)

Just click on the reference point in the leg list and X-FMC will add the new line with name XXXX-ATWP.

**Inserting a Waypoint Latitude / Longitude**

X-FMC gives you the ability to enter a special GPS coordinate into your flight plan. The data must be inserted in decimal degrees (LAT/LONG):

XX.XXXXNXX.XXXXE or XX.XXXXSXX.XXXXW

Short notice is also allowed XXNXXE.

Just click on the point you want to insert the value before…

**Inserting a Bearing and Distance from a reference Waypoint.**

The format is: XXXXBBB/DD, where XXXX is the fix (VOR, ADF, waypoint ...). X-FMC will then place a point bearing BBB° for DD miles from waypoint XXXX.

For example an input of SPY090/10 will give a point on radial 90° from SPY and 10 nm from it.

*Note:* Max range is 200 nm from a point.

Just click on the point you want to insert the value before… A new point will be created with name XXXX-BDWP.

## 6.3 Flight Progress


The progress page will give flight status information.

The first page will tell you the active waypoint, next waypoint and destination airport with each time the distance, ETA (estimated time of arrival) and remaining fuel at waypoint.

The second page will give you information about the environment:

- **Wind:** Current wind with head and cross wind components
- **Heading correction (XTK error):** modifying factor for heading to compensate X wind
- **Vertical offset (VTK DEF):** offset between current altitude and target
- **TAS:** True air speed…
- **SAT:** Static Air Temperature
- **FUEL USED (lbs.)**
- **Weight (lbs.)**

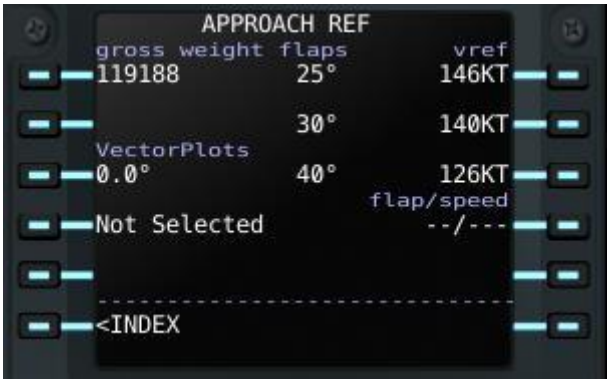
## 6.4 NAV / RADIO Page


On this page, you can set NAV1, NAV2, ADF1 and ADF2 information.

There is a special feature helping you to quickly select ILS data for your arrival:

ILS Mls will directly set NAV1 and NAV2 to current ILS frequency and course…

## 6.5 Approach Page




You can access this page via: “INIT / Approach” menu

This page will give you:

- **Current gross weight**
- **Vref:** Reference speed calculated for current weight and flaps setting
- **Vector plots:** special X-FMC feature; X-FMC will add points to your NAV to align with ILS
- **Flaps speed:** I you have activated vector plots, set speed for X-FMC to reduce speed in final

## 6.6 Holding Page

The holding pattern can be activated after pressing the “HOLD” button. Then select the point where you need to enter the pattern and then activate.


A second page will then show up allowing you to enter more details about your holding configuration.

*Note:* To understand the principals of flying a hold I would refer to this link http://www.pilotlist.org/zahar/howto.htm

On this RTE1 HOLD page you will find the following data:

1. **LSK1:** Here is the FIX or GPS coordinates on which you starting the hold pattern.
2. **LSK2:** Not active at the moment.
3. **LSK3:** Here are the holding parameters you will need to enter first; the heading and position of hold (Left or Right). The data input will be: XXX/L or XXX/R.
4. **LSK4:** Lap time, usually 1 minute, but you can set it from 1 to 20 minutes.
5. **LSK5:** If your lap is in distance (NM) and not time, you can set it there. The value must be between 4 and 50 NM.
6. **RSK1:** Current set speed and altitude for the HOLD.
7. **RSK2:** Zulu time at which you should enter first holding point.
8. **RSK3:** Estimated Further Clearance Time. The time at which you may leave the hold. This value is here for reference. No warning will show up at the end of time.
9. **RSK4:** Estimated time left for the holding based on the fuel. This value is expressed in XX+YY format. Thus, 00+48 will say you have 48 minutes left to stay in the hold. 00-02 will say: you are currently using your reserve fuel and should ask for priority landing.
10. **RSK5:** Current Holding speed. Can be adjusted to desired value.
11. **RSK6:** EXIT HOLD. After the completion of the hold turn the plane will leave the hold and will resume on navigation.

# 7 Appendix

## 7.1 General configuration file

Located in XFMC plugin directory: "XFMC.ini"

***General Configfile for XFMC***
#Date=Sun Mar 01 19:44:59 2025

#RELEASE_CONFIG=3.25

***Set this for local transition altitudes***
#TRANSITIONLVL=18000 ← Transition altitude in VNAV pages
***Sound level, set this between 0 to 100***
#SOUNDLVL=30 ← X-FMC audio output is not linked to X-Plane so set it here!
***To hide XFMC when xplane starts up, set this to 0***
#DEFAULTHIDING=1

***FontColor for Data lines***
#FONT_DATA_COLOR=0 ← Main lines
***FontColor for Label lines***
#FONT_LABEL_COLOR=2 ← Header (label) lines

**Note on available colors:** 0= white, 1= gray, 2= light blue, 3= yellow, 4= dark blue, 5= red

***XFMC uses xplane navbase+external navbase (0) or external navbase only (1)***
#EXTNAVPRIORITY=1 ← Use external Navigation data instead of X-plane default data
***XFMC set the QNH automatic (0) or Disable automatic setting (1)***
#QNH_DISABLE=1 ← Enable or disable the QNH auto set feature of X-FMC

***min range in nm when will be switched to next waypoint in flightplan ***
#WP_DIST_SWITCH=2 ← When #SYSTEM_FMC=0 is used in plane config file use this parameter to set waypoint switching distance

***auto update of NDB2/VOR2 (1) or disable (0)
#AUTO_UPDATE_VOR_NDB=1 ← Will disable the automatic setting to nearest VOR or NDB station

#ENDCONFIG#

- Red: Modifying those values is not recommended. Expert users ONLY!!!
- Green: Recommended to modify.
- Orange: Specific features needed by advanced users.

## 7.2 Data needed for airplane configuration file creation

A configuration file is like a flight model, you can only have correct behavior if you input the correct data. For X-FMC, it is the same!

Of course, you will be able to create with default values from X-FMC, but your experience of our software might be reduced.

So I strongly advise you to get the following data:

1) Flaps positions used for take-off (e.g. 737 uses only positions 1°, 5°, 10°, 15° for Take-off…)
2) Take-off speed charts. For each flaps position, you will need the highest and lowest values for V1, Vr and V2. (X-FMC will then calculate the values needed for the current weight)
3) Approach speeds. For each flaps settings, there is also a highest and lowest values for a given weight. If you have them, please input them in the configuration file.
4) Typical speeds and Max service altitude. Used for Climb, Descent and Cruise phases…

The following page will show you exactly how a configuration file is created:

- Blue: Lines generated and calculated by X-FMC. Tweaking is not recommended (except expert users)
- Green: Lines that are mandatory to be modified before starting the configuration process
- Orange: Lines that need to be modified with real data but not mandatory (advanced users)

**Example File:**

```
Configfile for XFMC
#Date=Sun Mar 01 22:37:22 2015

#RELEASE_CONFIG=2.60
#PLANENAME=A320-200
   ***Specify engine model)***
#ENGINE=V2527-A5
  ***Specify here which alitude the flaps should be retracted (if enabled)***
#FLP_RTCT_ALT=500
   ***nightlit color 0=BLUE, 1=GREEN, 2=RED ***
#NIGHT_LIT_COLOR=0
  ***XFMC should switch flightdirector on (1) or manual control FLD (0)
#FLIGHTDIRECTOR=1
   ***max allowed pitch (normally 20)***
#MAX_PITCH_CLIMB=18.0
  ***a/p default 1=No headingsteering, 2=No Vnav, 4=No ATH or any combination of these***
#AP_RESTR=7
  ***automated settings gear/flaps etc, see manual for explaination***
#A_CONFIG=3
  ***specify here fmc should present the flaps as airbusstyle***
#AIRBUSSTYLE=1
  ***specify here the speed what should be used during climb***
#TYPICALCLIMBSPEED=300
  ***specify here the what cruisespeed below fl300***
#CRUISESPEEDBELOW30000=300
  ***climbrate after takeoff, between 1000-4000(too high may cause stall!)***
#INITCLIMBRATE=4300
  ***standardclimbrate ***
#TYPICALCLIMBRATE=3500
  ***standard descend speed***
#TYPICALDESCENTSPEED=300
  ***standard descend rate***
#TYPICALDESCENTRATE=2200
  ***specify here the max cruisealtitude for the model***
#TYPICALCRUISEALTITUDE=35000
  ***specify here the optimalcruise speed (in mach) ***
#OPTIMALCRUISESPEED=0.80
```

***climbtable in steps of 2000 feet, used for the altitude calculation waypoints***
#NOMINALCLIMBRATE=4300,4100,4300,4800,4600,2700,3800,3900,3700,3400,3100,2800,2600,2400,2200,2900,2700,2500,1900,1700,
***Descenttable in steps of 2000 feet, used for the altitude calculation waypoints***
#NOMINALDESCENTRATE=1200,1500,1600,1600,2200,2300,2300,2400,2400,2400,2500,2500,2500,2300,3800,3500,3400,3100,3100,3400,
***Fuel used during climb in steps of 2000 feet***
#NOMINALFUELCLIMB=455,401,353,321,289,271,249,224,212,199,187,175,164,155,147,140,133,127,164,164,
***Fuel used during descent in steps of 2000 feet***
#NOMINALFUELDESCENT=99,99,18,17,16,15,14,13,12,11,11,10,9,9,8,7,7,6,10,10,
***Fuel used during cruise in steps of 2000 feet***
#NOMINALFUELCRUISE=76,70,108,70,69,77,75,73,73,72,71,71,69,70,67,64,62,65,65,65,
***N1% during cruise in steps of 2000 feet***
#N1_TOTAL=55,55,66,58,59,63,64,65,66,67,68,69,70,72,73,73,74,90,100,100,
***N1% during climb in steps of 2000 feet***
#N1_CLIMB=93,86,87,87,87,87,87,88,88,88,89,89,89,89,89,89,90,90,100,100,
***Grossweight altitude table***
***Specify altitude1,grossweight1,altitude2,grossweight2 etc ;Altitude in incremental level!!***
#GROSSWEIGHT=31000,120000,33000,115000,35000,110000,37000,103000,0,0,0,0,0,0,0,0,0,0,0,0,
***Specify here the approach MINIMUM speed/flapposition***
#APPROACHMIN=153,143,136,136,136,136,0,0,0,0,
***Specify here the approach MAXMIMUM speed/flapposition***
#APPROACHMAX=187,177,167,157,147,147,0,0,0,0,
***Specify here the takeoff MAXIMUM speed***
#TAKEOFFMAX=235,225,215,212,210,205,0,0,0,0,
***Specify here which flapposition(s) should be used for takeoff***
#TAKEOFFFLAPS=1,1,1,0,0,
***Specify here the V1 MAXIMUM speed /flapposition***
#V1_MAX=156,155,155,0,0,
***Specify here the VR MAXIMUM speed /flapposition***
#VR_MAX=158,158,158,0,0,
***Specify here the V2 MAXIMUM speed /flapposition***
#V2_MAX=160,160,160,0,0,
***Specify here the V1 MINIMUM speed /flapposition***
#V1_MIN=112,111,111,0,0,
***Specify here the VR MINIMUM speed /flapposition***
#VR_MIN=117,117,117,0,0,
***Specify here the V2 MINIMUM speed /flapposition***
#V2_MIN=122,121,121,0,0,
***Trustlimit temp table***

#TRUSTLIMITTAKEOFF=6,79,-1,83,32,88,50,86,60,86,
#ENDCONFIG#

## 7.3 Basic Values

**#TYPICALCLIMBSPEED**
**#TYPICALDESCENTSPEED**
Set to the normal speed you use during climb to and descent from cruise altitude

**#CRUSESPEEDBELOW30000**
Set to typical cruise speed with this exception: some aircraft must reduce their normal climb speed as they climb to avoid overstressing the airframe -- in this case, set this to the cruise speed used at 30000

**#INITCLIMBRATE**
If set to high, can cause a stall and autopilot disconnect after lifting off -- you must test fly to the takeoff to find the setting that gives you the proper attitude (usually 5-10 degrees nose up) on rotation

**#TYPICALCLIMBRATE**
**#TYPICALDESCENTRATE**
The climb rate you usually use when climbing to and descending from cruise altitude

**#TYPICALCRUISEALTITUDE**
Set to the maximum cruise altitude

**#OPTIMALCRUISESPEED**
Set to the Mach number for cruise

## 7.4 Advanced Values

**#GROSSWEIGHT**
For step climbs, you need to set an altitude (ft) corresponding to a weight in (lbs).

**#APPROACHMIN**
Minimum approach speeds. Each value corresponds to a flaps position starting with 0° as first value.

**#APPROACHMAX**
Maximum approach speeds. Each value corresponds to a flaps position starting with 0° as first value.

**#TAKEOFFMAX**
Maximum after take-off speeds. Each value corresponds to a flaps position starting with 0° as first value.

**#V1_MAX / #V1_MIN (VR and V2)**
Maximum / minimum take-off speeds. Each value corresponds to a flaps position starting with 0° as first value.

**#TAKEOFFFLAPS**

For each flaps position (except 0°), you must enter a value of 0 or 1:

- 0: Not used for take-off
- 1: used for take-off

This parameter will be reflected in the performance page.

## 7.5 Advanced functions

### 7.5.1 #MAX_PITCH_CLIMB

You can set maximum pitch angle that X-FMC will allow while active.

If maximum value is reached, a warning message will appear and X-FMC will automatically limit its climb rate.

### 7.5.2 #NIGHT_LIT_COLOR

X-FMC let you choose between 3 different sets of background lit colors: blue / green / red. You can customize it for each aircraft.

### 7.5.3

### 7.5.4 #FLIGHTDIRECTOR

In some plugin customized planes, activating X-Plane flight director dataref causes troubles. In this case, you can use this parameter to prevent X-FMC from activating the dataref upon pressing ON on it.

### 7.5.5 #AIRBUSSTYLE

Used to change Perf flaps from degrees to position numbers, like in Airbus MCDU…

### 7.5.6 #AP_RESTR

This function let you disable / enable automated navigation and speed for the current plane.

For example:

- If set to 1 LNAV is off
- If set to 2 VNAV is off
- If set to 4 ATH is off
- Any combination is possible, so 1+4=5 will switch ATH and LNAV off

### 7.5.7 #FLP_RTCT_ALT

(Works if #A_CONFIG includes flaps control)

*Values in feet: min= 50, max= 5000, otherwise an error will be given if outside this range.*

For the climb the first retract will be calculated this way:
*Altitude given in takeoff PERF screen LSK2 (normally 1500) + FLP_RTCT_ALT*

- so first step is 1500+500 in this example=2000
- second 2000+500=2500
- 3th 2500+500=3000
- Etc…

So the levels of retracting can be adapted according the specific plane

### 7.5.8 #A_CONFIG

Consider having a co-pilot at your side making your life much easier and let you concentrate on flight parameters.

Here is a list of what X-FMC can do for you with this parameter:

- Gear Up and Gear Down (takeoff at 200 feet AGL and 800 f AGL before landing)
- Flaps retract and deploy (in steps) (starts by takeoff after the first set transition level, normally 1500 AGL; at descent it started in steps the moment the Approach is activated AND the plane is closer than 12 nm from the destination airport)
- RTO switch setting before takeoff Auto-brake switch setting (position 3)
- Reverse Thrust the moment the plane touches down Brakes after the Reverse thrust. (when the speed is lower than 120 kts)

You can enable and disable these functions by setting the appropriate bit in the Config file:

**#A_CONFIG=**

CONFIG=0 all functions OFF
CONFIG=255 all functions ON
CONFIG=1 gear
CONFIG=2 flaps
CONFIG=4 RTO
CONFIG =8 Auto brake
CONFIG=16 Reverse thrust
CONFIG=32 Brakes
CONFIG=64 Air Brakes (During Descent)
CONFIG=128 Transponder

Any combination can be made, thus Gear + flaps + RTO = 1 + 2+ 4 ➔ #A_CONFIG=7

XFMC will not change the V1, V2, Vref and Approach Speeds. If not correct, please give new inputs (each value corresponds to a flaps position).

ANDROID COMPANION APP (2025)

In 2025, X-FMC has expanded its ecosystem with a dedicated Android Companion App, allowing users to interact with the CDU (Control Display Unit) remotely via a local network connection. This app mirrors the functionality of the onboard CDU and enhances usability during flight simulations.

Key Features:

- Full CDU mirroring: All X-FMC pages (RTE, INIT, PERF, LEGS, etc.) are accessible via the app.
- Touchscreen input: Use your device as a touchscreen CDU for fast data entry.
- Network syncing: Real-time sync with X-Plane 12 over local Wi-Fi.
- ND Display Support: View MAP/ND directly on the app with range control.
- Multi-instance: Use multiple Android devices to mirror both CDU and ND panel simultaneously.

A separate manual is included in the ANDROID Folder.

•>>>>**No iOS version is currently available**