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Old VFR-COCKPIT series
14th August 2016 version

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CONCEPT

Build your own cockpit is every time synonym of unique plane. After you will have finish to build your cockpit of B747, difficult to pilot your favourite "small Cessna". We found a solution for this inconvenient and we offer for you a concept of "swappable panels".

You can take out the panels and use your computer for another things (Read Emails, Use Excel or Word...) Panels are "swappable", like that it's very easy to change plane. They are making in aluminium AG3 of 1.5mm.



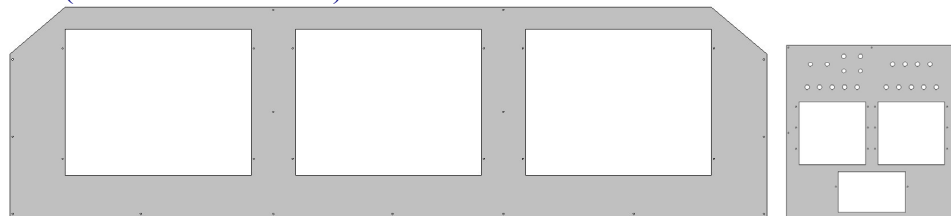
Same plane (Beechcraft King 350) here in IFR & XFR Versions

All products are delivered with documentation and files for FS2004 & FS X. One half day to finish your own cockpit.

We use basic FS2004 or FS X without any modification (except panels & situation files).

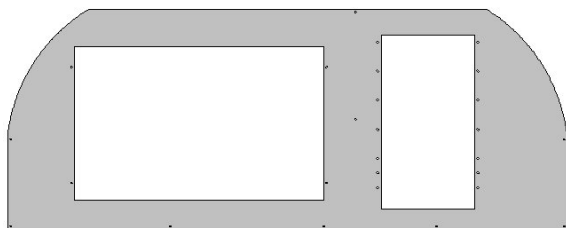
*2 versions are available IFR & XFR,
their differences is done only in the number of screens dedicated to the instruments.*

IFR (For FS2004 & FS X)



- Panel size : 136 cm (~53 inch)
- Need 3 flat screen (17in) for instruments (Captain, Engine, F/O) and one 4rd for external view (TFT, Catode Ray or Beamer).
- One computer only, but with 2 video cards => 2 PCI Express SLI or 2 CrossFire
- Possibility to put Go-Flight moduls over our special console. Panel

XFR (For FS2004 & FS X, except Garmin 1000 panels for FSX Only)



- Panel size : 96 cm (~37 inch), idem VFR but with 20in Wide screen instead of 17in
- Need 1 flat screen (20in Wide 16/10 or 22p 16/9) for instruments and second for external view (TFT, Catode Ray or Beamer).
- One Computer only with double ouptut video card 128 mo RAM or +
- Possibility to install until 5/6 Go-Flight moduls (not includes).

HOW DOING IT

All the explanations are based on **Flight Simulator 2004**

Why a simulator ?

In the beginning the trainers of flights (version without visual) were dedicated to the pilot training, the technique having evolved one speaks from now on about the simulators, most sophisticated being simulators call "Full Flight", these systems on jack allow to carry out a drive without never not putting the feet on the aircraft. This type of machine costs almost the price of a plane (several million euros for a Jet Simulator). For the private individual or the school flight this type of machine is out of matter (Cost, Place, Entretien, Technical Niveau to start it). In this case it will be necessary for us to make some compromise (Place, Cost, Time spent to build it...), many solutions exist according to the type of planes, we will evoke some here of them:

Light or Middle Aircraft :

1. **Analog Instruments** : (*Simkits, SeaGull, Flight Illusion*) "Real" instruments are connected to an interface owner to the manufacturer and the whole with the PC via a USB cable. In this case the simulator is dedicated to only one plane, the solution is very realistic, but also more expensive (12000 € without computer).
2. **Digital Display** : A TFT screen is use to display the instruments. In this case you will be able to change plane into keeping the same cockpit, it is the least expensive solution.



*Here VFR Cockpit solution → 1 Cockpit for many planes (Here C172, King 350, Learjet)
Obviously the simulator « look » must be basic possible, here with DR400 cap and GoFlight radios modules.
Cockpit dimensions 96.5*30*45 cm*

Jet Planes : Here according to the plane one will be able to mix LCD screens and real instruments or to use only LCD Screen (Flight Deck, Engravity, CP Flight, VFR COCKPIT...)



Claude Kieffer's Boeing B777 Cockpit.



VFR Cockpit panel in B737 configuration, one will be able as easily to change the masks progressively as plane is changed. A central console could easily be installed. It acts of a starting solution for a more complete cockpit, such as for example that of Claude Kieffer. This type of cockpit costing less than 500 euros (except computer and screens)

Size : According to the selected cockpit the place will not the same one , from **1.70*2m** for the B777 cockpit, to **96.5*30cm** for DR400 cockpit.

Important : To always start small and not to have the eyes bigger than the belly, you would be likely to be disappointed and never not to finish your cockpit, for my part I am has my 4th cockpit and this by recovering each time the elements of the precedent. Thus the user acquires the technique and the project is likely to succeed.

Visual : We evoked the panel part, there is also the visual part. Several possibility, vision "Mono Screen" or "Multi Screen", in this last case we will use "Wideview" of Luciano Napolitano. It is necessary well to distinguish the panel and its screens and the visual one. Here some examples..

1. **Config XFR - Mono view** : One computer with one dual-output video card will be enough. The visual one will be configured on the exit (n°1), and the instruments on (n°2) of the video card. Once the configured PC (see the document on the **configuration simu**) one will have a functional simulator with a screen dedicated to the visual one.



2. **Config XFR - Multi Views** : 2 PC in network will be used. The PC n°1 configured as in example Ci above (Seen n°1 & 2), the 2nd PC will have the load of sight 3 & 4 (Front Left and Front Right). The 2nd PC will use Wideview and will be connected in network. It is possible to use only one PC only if it is equipped with 2 PCI Express SLI Video cards (config which costs more than 2 standard PC).



3. **Config IFR - Mono View** : The instruments representing a less workload for the processor, have will be able to be satisfied with only one PC equipped with 2 video cards with double exits each (either 4 sights). **The main** card (AGP or PCI Express) will be in charge of sight 1 & 2, **the 2nd** standard PCI Card, (one still finds models 128Mo equipped with 2 exits, by ex ATI Radeon 9250), less powerful, will be satisfied with sights 3 & 4.



4. **Config IFR - Multi Views** : To configure like Ci above for sights 1 to 4 - One 2nd PC in network and using Wideview will take care of sights 5 & 6 (Front Left & Right)

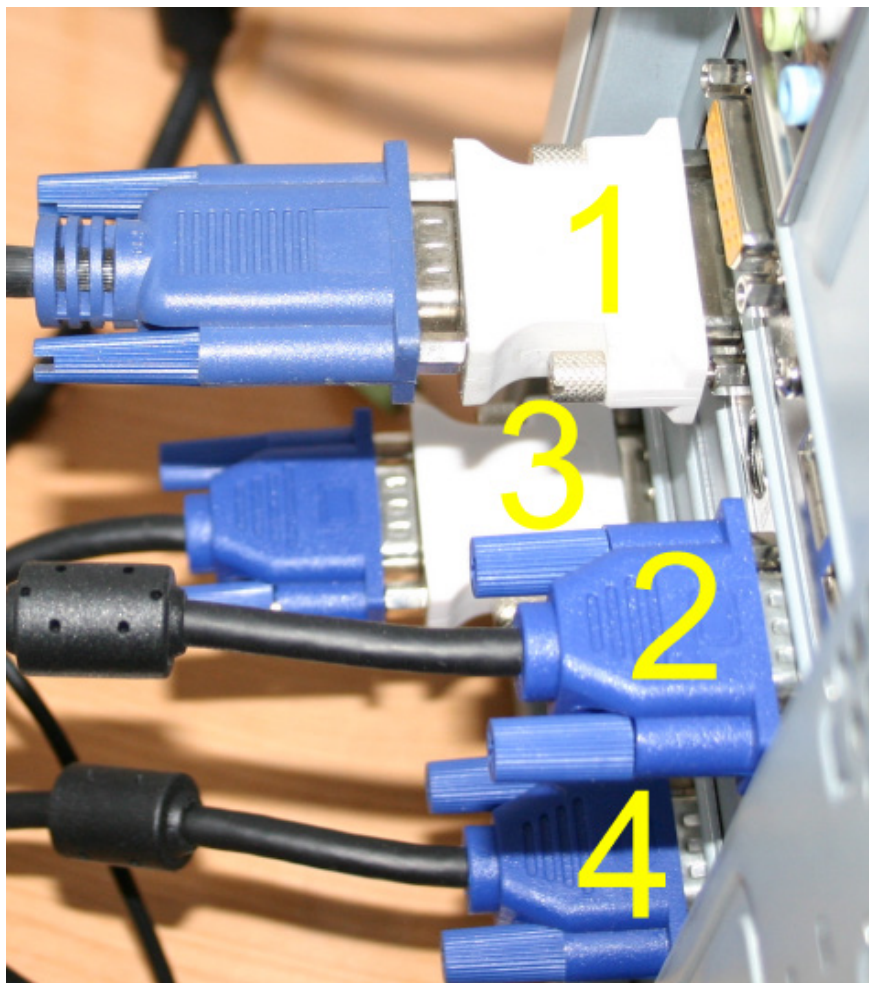


COMPUTER & FS2004 / FSX SETTINGS

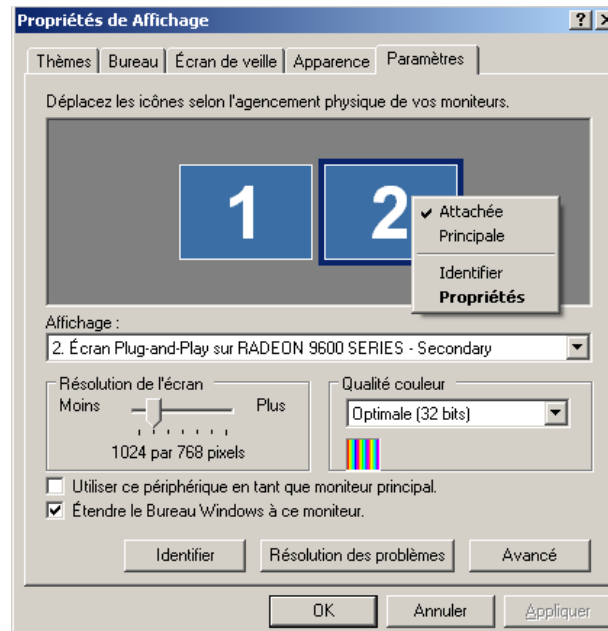
XFR Series

Preamble : The councils given in this documents are it for VFR-COCKPIT products, they are also valid for other type of configuration, has you to adapt them consequently. (Screens resolutions in particular). Attention screen copy are from French Version, they will be different from your, (depend about you language version).

Setting Windows Desktop : You must have a video card with dual output, generally → 1 Exit DVI + 1Exit VGA, if your monitors have only VGA plug (15 pins) you will need to use adapters allowing to convert signal DVI into a Signal VGA. (On photo Ci below, one will polarize only on exits 1 & 2).



1. Normally your PC is already installed with at least 1 screen. We will thus consider that it acts of left n°1 on photo Ci above. This exit will be assigned to the external sight, it can be a Video Projector, a TV, a Plasma or a monitor. If you can, choose it material with entry DVI and it to preserve quality.
2. Shutdown your PC and plug 2nd monitor (N° 2 on picture). Under Windows, click on desk with right button of mouse, then on **Properties**, then on **Settings**, you should see appearing the following window. If one of the screens "is grayed", click on the drawing of the screen, then above with the button of right and validates the option "**attached**".



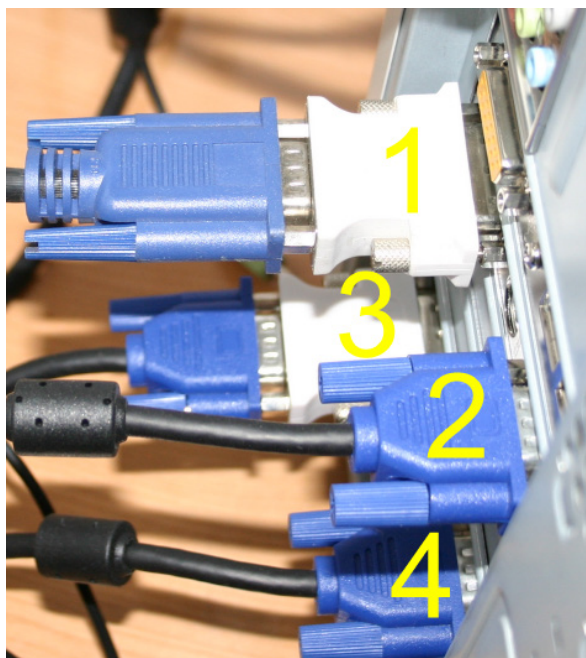
3. As Verify that resolution display is 1280*800 for both monitors. (essential, all at least at the beginning, to launch the situations).
4. If all is well you have from now on Windows Desk in 2 parts with on the screen n°1, the office and the bar of the spots and on the screen n°2 the office, but without any icon. It is wanted, to post the instruments, it is essential not to parasitize this screen with the bar of the spots or unspecified icons.
5. Launch Flight Simulator. Choose saved flight, Meigs for example.
6. Ensure to be in 2d mode (it acts of the mode in which the bar of the spots in top and bottom appears, to rock of a mode the other has (vice versa 2d & 3 D &) it is enough to press **ALT + ENTER**
7. **Load *VFR-COCKPIT's situations delivered with the XFR series panels*** and that's it
8. You can also configure to you even your screens, for that it is enough to click on the window or the selected dashboard. Example, post the GPS, then to click on the button of right-hand side of the mouse and select "Undock window", one can then move the window or good seems to us.



IFR Series

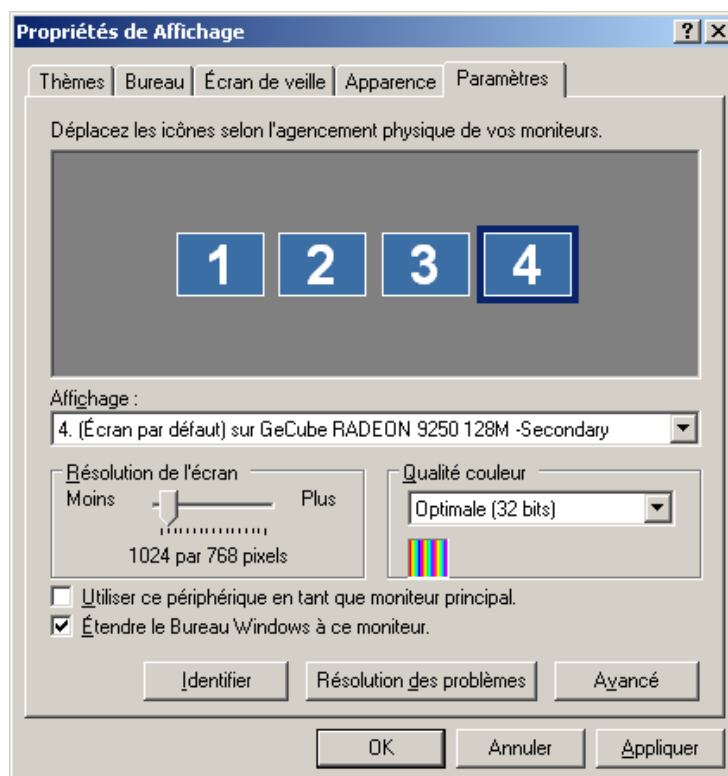
For that you will need one video card more (PCI ou PCI Express SLI, attention for this least option your mother board need do be compatible SLI). In each case, the 2nd video card must have same "chipset" as the main card, RADEON or GEFORCE for the principal card of the market.

1. We suppose that the stages of the version "Mono pilot were carried out". Once the PC configured and working correctly, shutdown it. Unplug electricity and install your 2nd card. You will have 2 additional outputs (n° 3 & 4 in picture above).



2. As in the version "Mono Pilot", it will be enough for you to declare the screens additional, while clicking on the desk (Button Right-hand side/Settings) should see you appearing the following image.

For WFR Series, you will have only 3 screens



3. It does not remain you any more which has to configure the windows in flight simulator as at the beginning of this document **or to use the situations delivered with the panels of WFR or IFR series.**

IFR Series

KITS

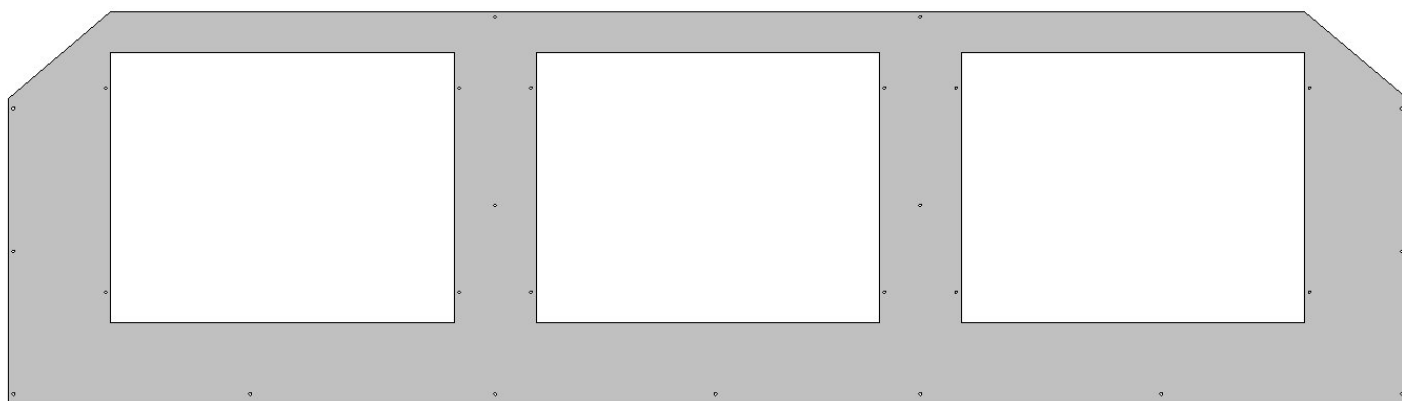
For this series, 3 panels are necessary : Captain, Engine, F/O (for it you will use the same panel as Captain, but in opposite position)

Carefully : We sold only one package including all files to do you panels : DXF files for laser cutting and configuration files for FS9 & FSX
We doesn't sold anymore panels ready yet...

IFR Series → 85 € TTC

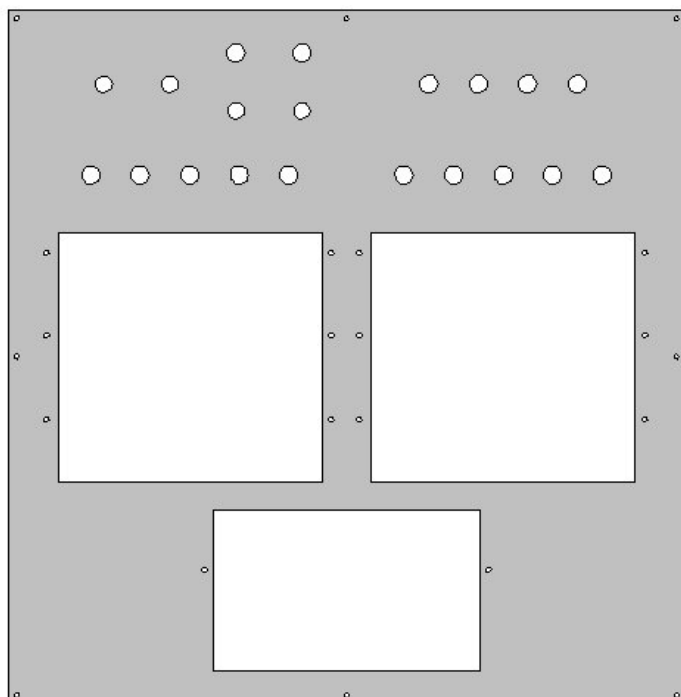
Include : all files from IFR series needed to do the same panels as shown below

IFR-BSE



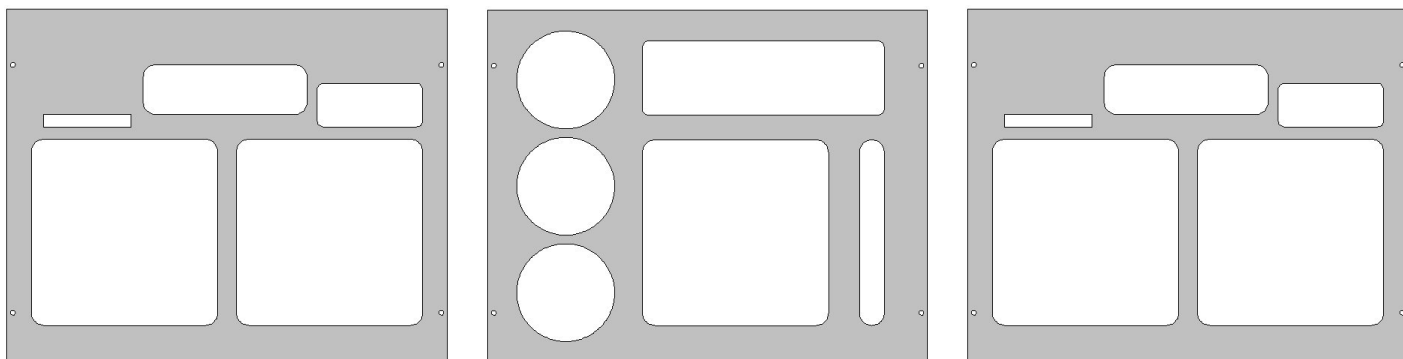
Base for 3 panels => Captain, Engine & First Officer - Size : 136.5 * 38.5 cm

IFR-PED



Console for Go-Flight, Switchs

IFR-GLC

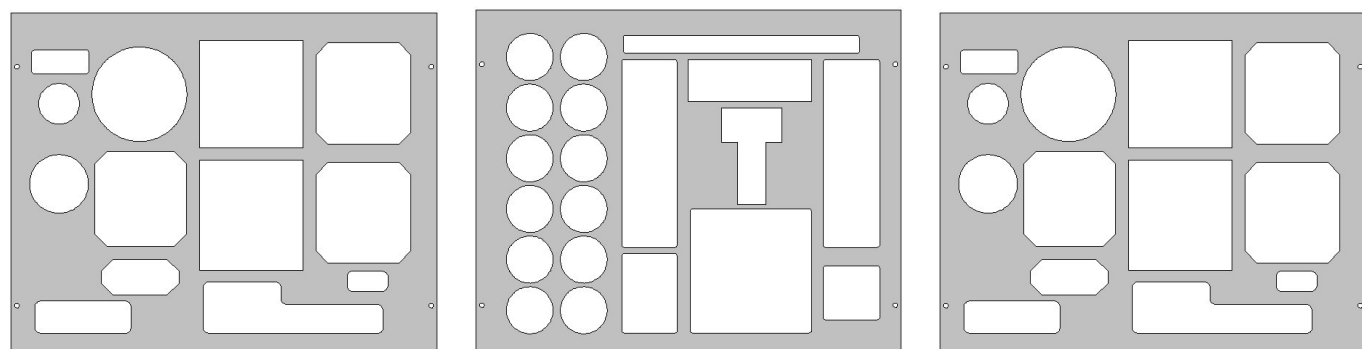


Captain, Engine & F/O panels for B737/800 & A321 (FSX Only)



Glass Cockpit – B737/600 PMDG (FS9) or B737/800 (FSX)

IFR-KING

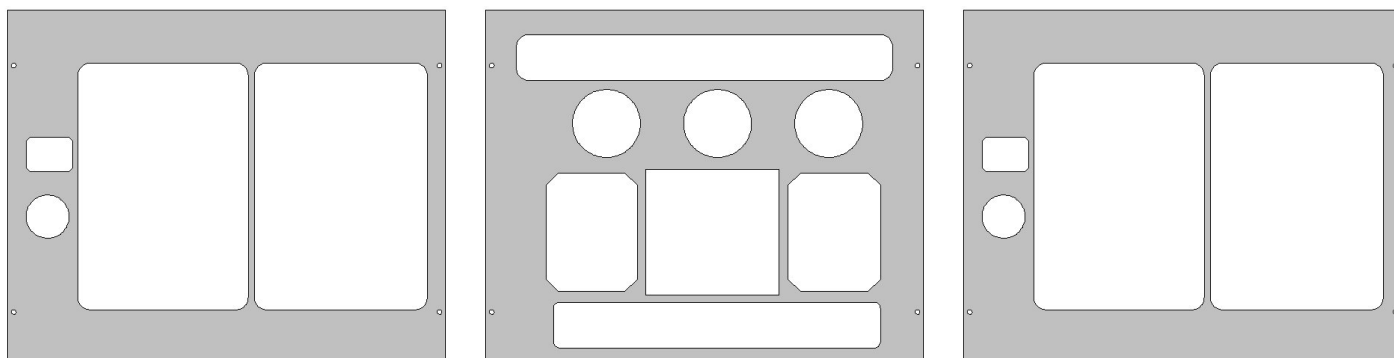


Captain, Engine & F/O panels for Beechcraft King 350



Beech KingAir 350 (FS9 / FSX)

IFR-LEAR

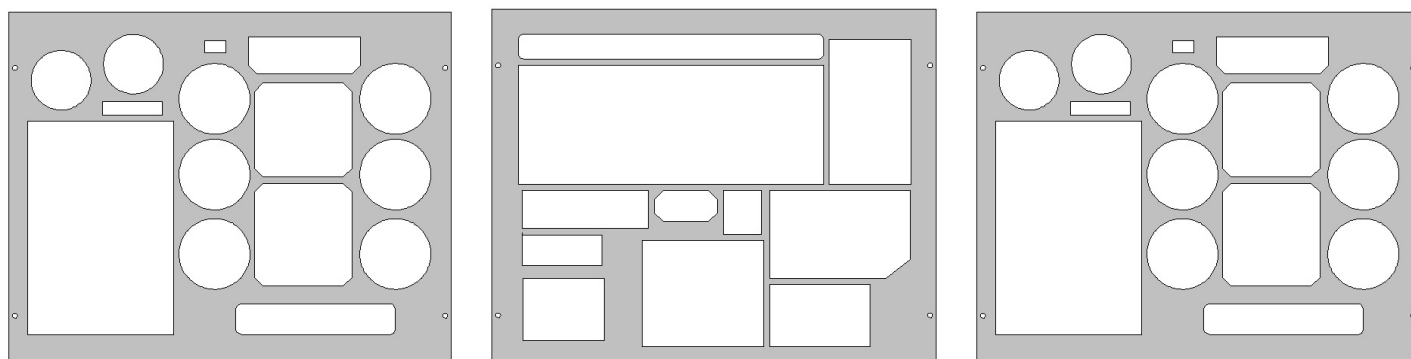


Captain, Engine & F/O panels for LearJet 45



Learjet 45 (FS9 / FSX)

IFR-CIT



Captain, Engine & F/O panels for Cessna Citation



Cessna Citation EagleSoft (FS9)

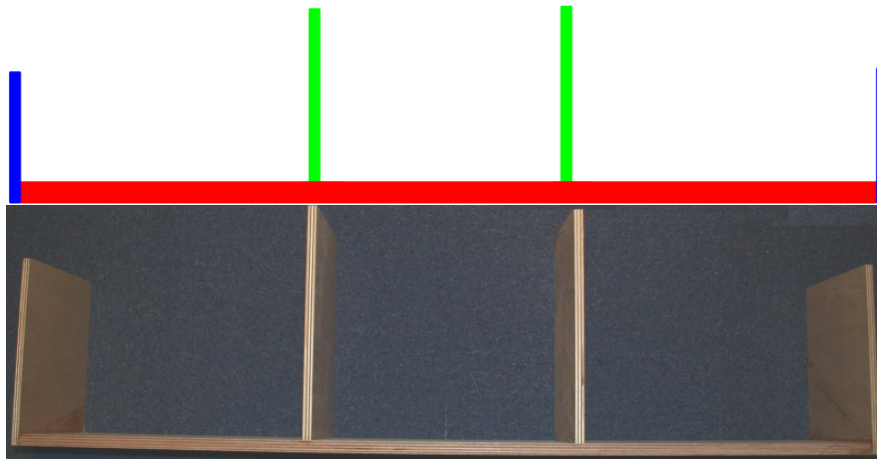
IFR SERIES KIT INSTALLATION

- You will need to use 3 * 17inch flat screen (LCD), **Not Wide**, with area display of minimum : 333 * 258 mm (17in flat have in general : 337 * 270 mm).
- When you order panels you will get panels and situations files.
- Clean Aluminium with Trichlorethylene or equivalent product
- Apply painting (take special painting for metal or aluminium)
- After drying put varnish protection.
- Cut wood, it's better to use « Plywood or Triplex » *(the name is different in many countries, in France we said "Contre-Plaqué")*, look after for the right dimension

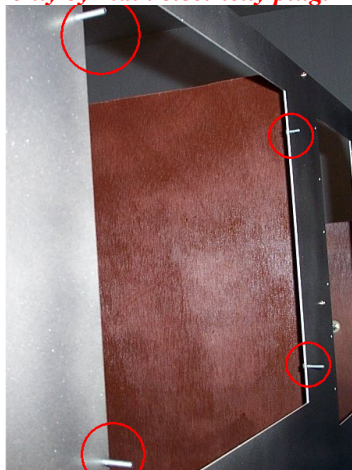
All values are in mm. TP 18, mean Triplex or Plywood with 18mm of tickness.

TP 18 = 1341 * 250
TP 15 = 347 * 250 → 2 parts
TP 12 = 300 * 250 → 2 parts

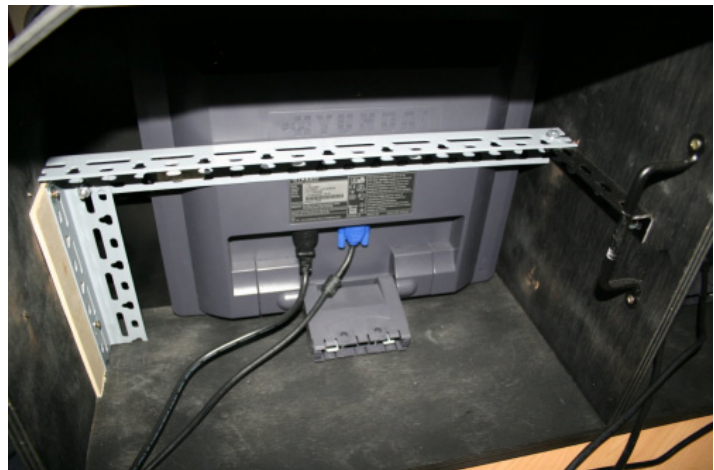
*Adjust 2 elements (TP 12, blue color on example ci-above) on both extremity of TP18.
Put at 475 & 890mm front left extremity the 2 TP 15 elements (green color).*



- Put panel to the wood structure with screw, you need 3*25 mm screw **Attention!** *doing a whole before to put screw, if not you will risk to "destroy" the wood.*
- Install 12 bolts that you will stick to the glue in order to receive the "removable" panels there
- To stick 3 Plexiglass (either on the part fixes or on the moving parts). Dimensions : 34*30 cm, thickness 2.5mm
- To install your monitors. **Think to put them on before installation, after it will be impossible to access front button and they will be close only by main electricity plug.**



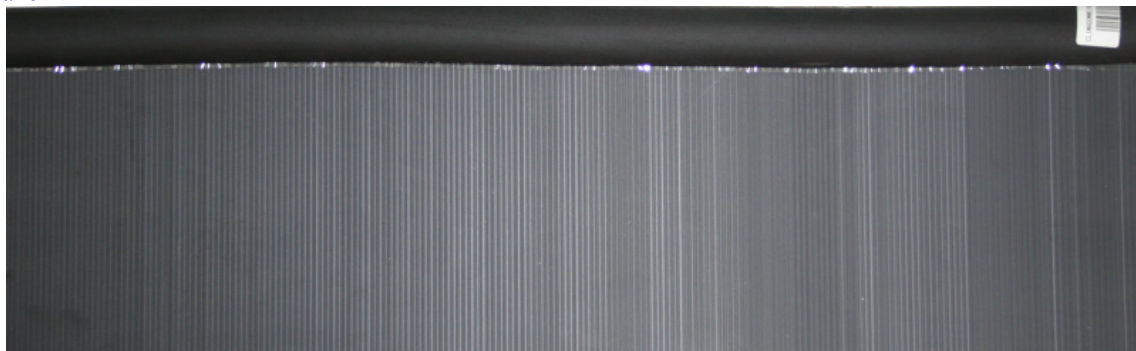
Putting Bolts and Plexiglass support



Monitors Fixation

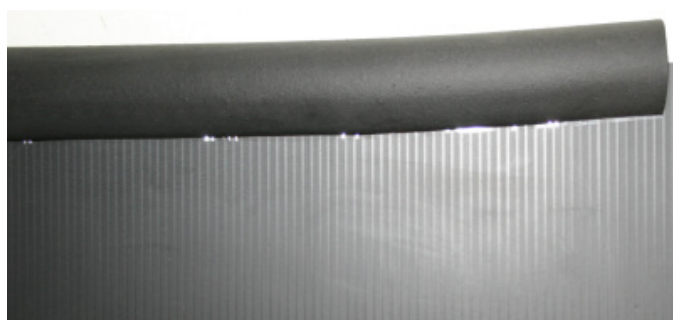
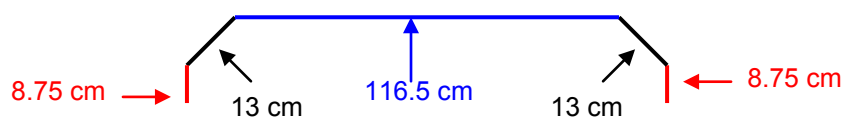
- **Manufacture of the cap :** Once the assembled panel and the screens installed, you will have to make a cap.

To be done it is necessary to buy a grooved plastic, you will cut out the plastic in order to keep the grooves in the direction depth, to see below, thus you will be able easily to fix the plastic on the structure, the foldings easily marrying the shape of the structure and the panel



will once the cap installed it be easy for you to place there an edge, I use of the foam of protection for drain (4€ in the stores of do-it-yourself).

To use a 160 cm length plastic and to fold it this way



Here the final result



XFR SERIES

KITS

For this series, 1 panel is necessary

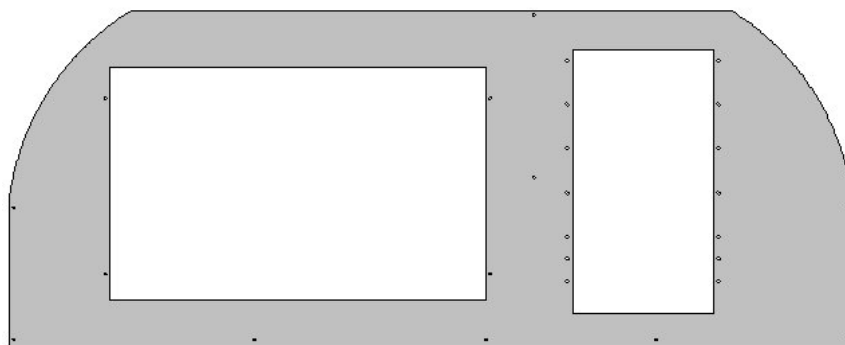
For each panels you will found : Reference, price and pictures of finished product

All panels are delivered not painted , files for FS2004/FSX are includes (panels & situations).

IFR Series → 85 € TTC

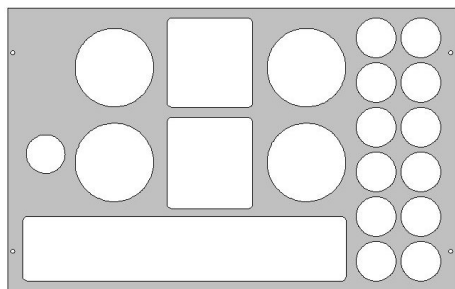
Include : all files from IFR series needed to do the same panels as shown below

XFR-BSE



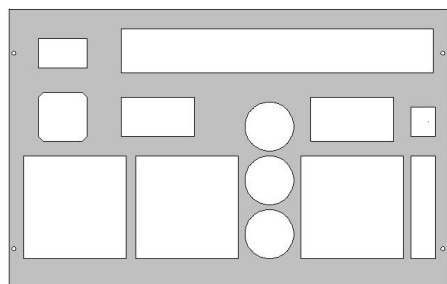
This element is used as support with the removable masks and the Go-Flight modules. Dimensions : 96.5 * 38.5 cm

XFR-B58

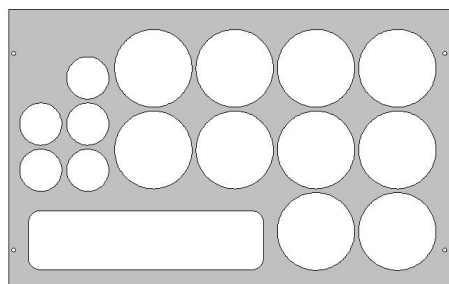


Beech Baron 58 (FS9 / FSX)

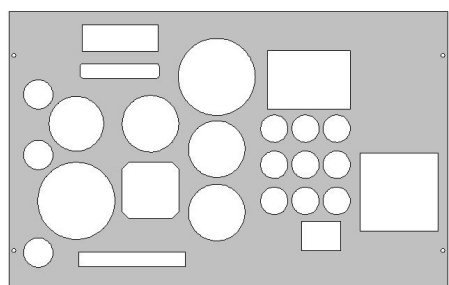
XFR-B737



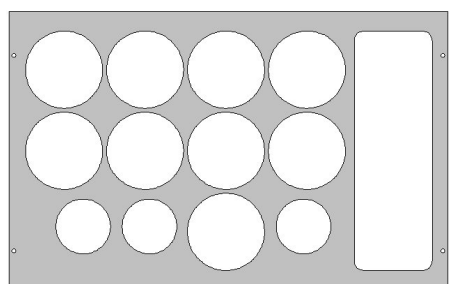
Boeing 737/800 (FSX)

XFR-C172

Cessna 172 – Standard version (FS9/FSX) & Garmin 1000 (FSX)

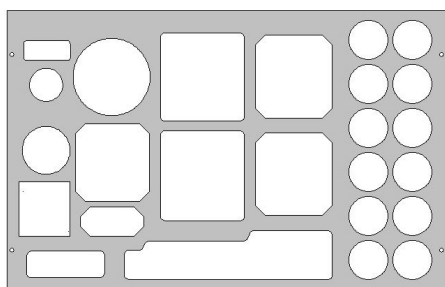
XFR-DC3

Douglas DC3 (FS9 / FSX)

XFR-DR400

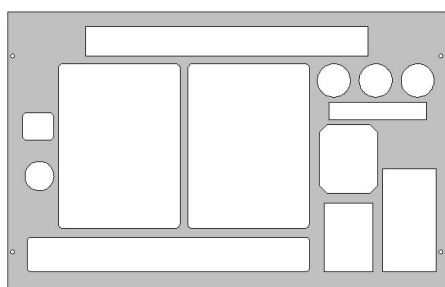
Robin DR400 (FS9 / FSX)

XFR-K350



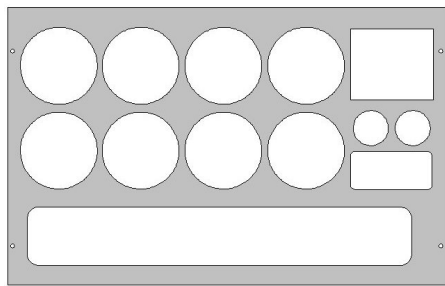
Beech Kingair 350 (FS9 / FSX)

XFR-LEAR



Learjet 45 (FS9 / FSX)

XFR-MOONEY



Mooney Bravo – Standard version (FS9 / FSX) & Garmin 1000 (FSX)

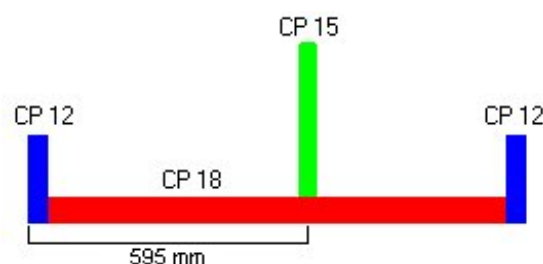
XFR SERIES KIT - INSTALLATION

- You will need to use 20 or 20.1 inch Wide Flat screen. 16/10 format with 1680/1050 native resolution or 22 inch 16/9 . *The minimum screen size needed is : 430*267 mm*
- Wholes are making for 6 GoFlight moduls 2" or 4 GoFlight moduls 2" + 1 modul 4". If you don't use all you can hide the end with aluminium or plastic
- When you order panels you will get panels and situations files.
- Clean Aluminium with Trichlorethylene or equivalent product
- Apply painting (take special painting for metal or aluminium)
- After drying put varnish protection.
- Cut wood, it's better to use « Plywood or Triplex » (*the name is different in many countries, in France we said "Contre-Plaqué"*), look after for the right dimension

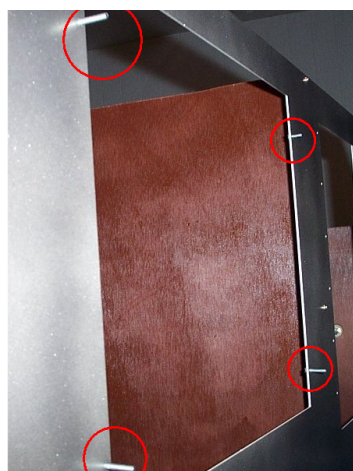
All values are in mm. CP18, signify Triplex or Plywood with 18mm of tickness.

CP 18 = 941 * 250 CP 12 = 140 * 250 → * 2 CP 15 = 345 * 250
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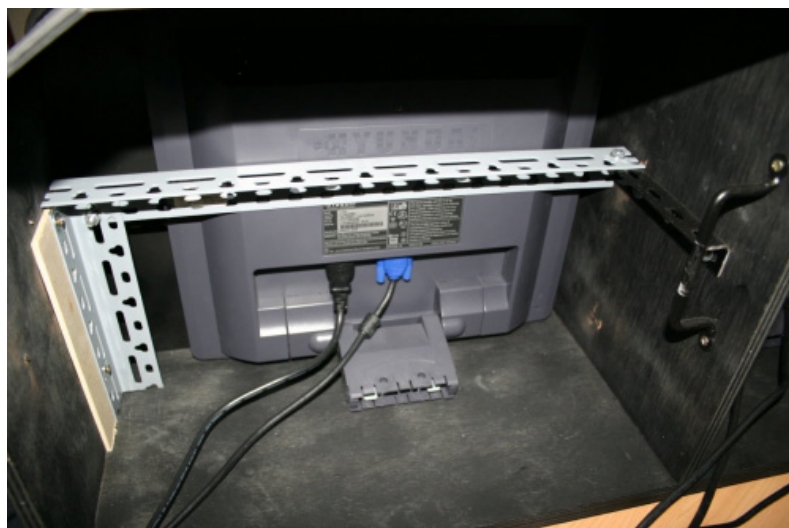
*Ajust BOTH elements (CP 12) on extremity of CP 18 element.
Put at, 595mm from left extremity the CP 15 element.*



- Put panel to the wood structure with screw, you need 3*25 mm screw. **Attention! doing a whole before to put screw, if not you will risk to "destroy" the wood.**
- Install 4 bolts that you will stick to the glue in order to receive the "removable" panels there



- To stick a plexi-glass on back of main panel. Dimensions : 43.5*31 cm, thickness 2.5mm
- For your GoFlight moduls, use also screws and bolts of 3*25mm
- Install your monitor. **Think to put it ON before installation, after it will be impossible to access front button and they will be close only by main electricity plug.**



- **Glareshield** : Once the assembled panel and the screens installed, you will have to put the glareshield. You can buy it on our website (ref : VIS-DR400)



Here the final result with Go-Flight moduls

