



Home Cockpit projects Boeing 737-800 NG

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Onderwerpen

- Aanpak – het beginnen met een Home Cockpit
- Software:
 - Default 737
 - PMDG / FSUIPC
 - SIOC / Programmeren
 - Prosim
- Hardware:
 - Interface kaarten
 - Schakelaars / rotary encoders
 - Flight Illusion / Gauges
 - “Plug & Play” oplossingen
- Home cockpits – een nadere kennismaking

Aanpak

- Research, research & nog eens research.
- Keuzes.
- Budget.
- Termijn (hoe snel wil je het af hebben?).
- Geduld.
- Forums / internet / youtube.



Cockpitbouw begint vaak klein...

- Leo Bodnar – Schakelaars
- PMDG & FSUIPC
- SIOC / programmeren – aansturen van een Flap Gauge & APU LED
- CDU/FMC – opties middels Software

Cockpitbouw begint vaak klein...

- flight yoke, throttle quadrant en pedalen
- radio panelen, mcp etc
- Schakelaars, rotary switch, rotary encoder

PMDG voorbeeld, gebruikt is:

- leo bodnar kaartje
- fsuipc
- offsets

Techniek: PMDG & FSUIPC

- Gekozen voor offsets vanwege de snelle reactie.

Linda (<http://fs-linda.com>) kan ook maar ervaring is tragere werking.

- Offsets zijn te vinden in:

%FSX HOME%\PMDG\PMDG 737 NGX\SDK\PMDG_NGX_SDK.sh

- Te herkennen aan:

THIRD_PARTY_EVENT_ID_MIN + <GETAL> in te vullen in offset fsuipc

THIRD_PARTY_EVENT_ID_MIN = 65536 + 4096=69632 (=CONSTANTE!)

Techniek: PMDG & FSUIPC

- APU voorbeeld:

PARAMETERS

unsigned char APU_Selector; // 0: OFF 1: ON 2: START

GETAL

```
#define EVT_OH_LIGHTS_APU_START (THIRD_PARTY_EVENT_ID_MIN + 118)
```

- Autobrake voorbeeld:

PARAMETER

unsigned char MAIN_AutobrakeSelector; // 0: RTO 1: OFF ... 5: MAX

GETAL

```
#define EVT_MPM_AUTOBRAKE_SELECTOR (THIRD_PARTY_EVENT_ID_MIN + 460)
```

Techniek: PMDG & FSUIPC

- Flight & Landing altitude voorbeeld:

PARAMETER

Parameters dan : 8192 of 16384

GETAL

```
#define EVT_OH_PRESS_FLT_ALT_SET    (THIRD_PARTY_EVENT_ID_MIN + 14507)
```

```
#define EVT_OH_PRESS_LAND_ALT_SET (THIRD_PARTY_EVENT_ID_MIN + 14508)
```

Techniek: PMDG & FSUIPC

FSUIPC Options and Settings

About | Logging | Miscellaneous | Winds | Clouds Etc. | Hot Keys

Buttons + Switches | Key Presses | Axis Assignment | Joystick Calibration | AutoSave/GPSout

Choose the action for this button: either keypress or FS control?

☐ Select for key press Joy# Btn# ☐ Select for FS control ☒

☐ Profile specific? ☐ ☐ Include Project Magenta

Press the key(s) to be sent when you press this button

☐ Key press not to be held

☐ Key press to repeat while held

Press the key(s) to be sent when you release this button

Control sent when button pressed

<custom Control>

Abort

Add Fuel Quantity

Adf

Adf 1 Dec

Adf 1 Inc

Adf 10 Dec

Adf 10 Inc

Adf 100 Dec

Adf 100 Inc

Adf Card Dec

Adf Card Inc

Adf Card Set

Adf Complete Set

Adf Extended Set

FSUIPC Options and Settings

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Press the key(s) to be sent when you press this button

☐ Key press not to be held

☐ Key press to repeat while held

Press the key(s) to be sent when you release this button

Control sent when button pressed

<69750>

Parameter

☐ Control to repeat while held

Control sent when button released

<69750>

Parameter

SIOC / programmeren – aansturen van een Flap Gauge & APU LED

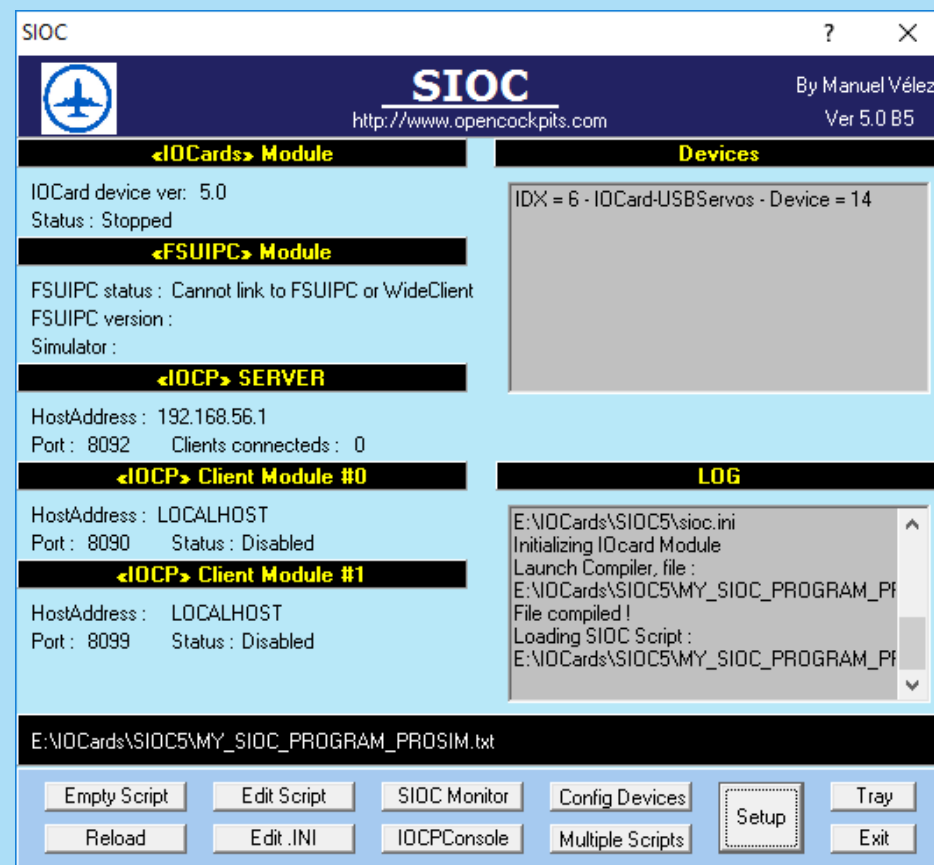
Sioc.ini

CONFIG_FILE=.\\MY_SIOC_PROGRAM_PROSIM.txt

[MASTER=(Device index),(Type),(Number of cards),(Device number)]

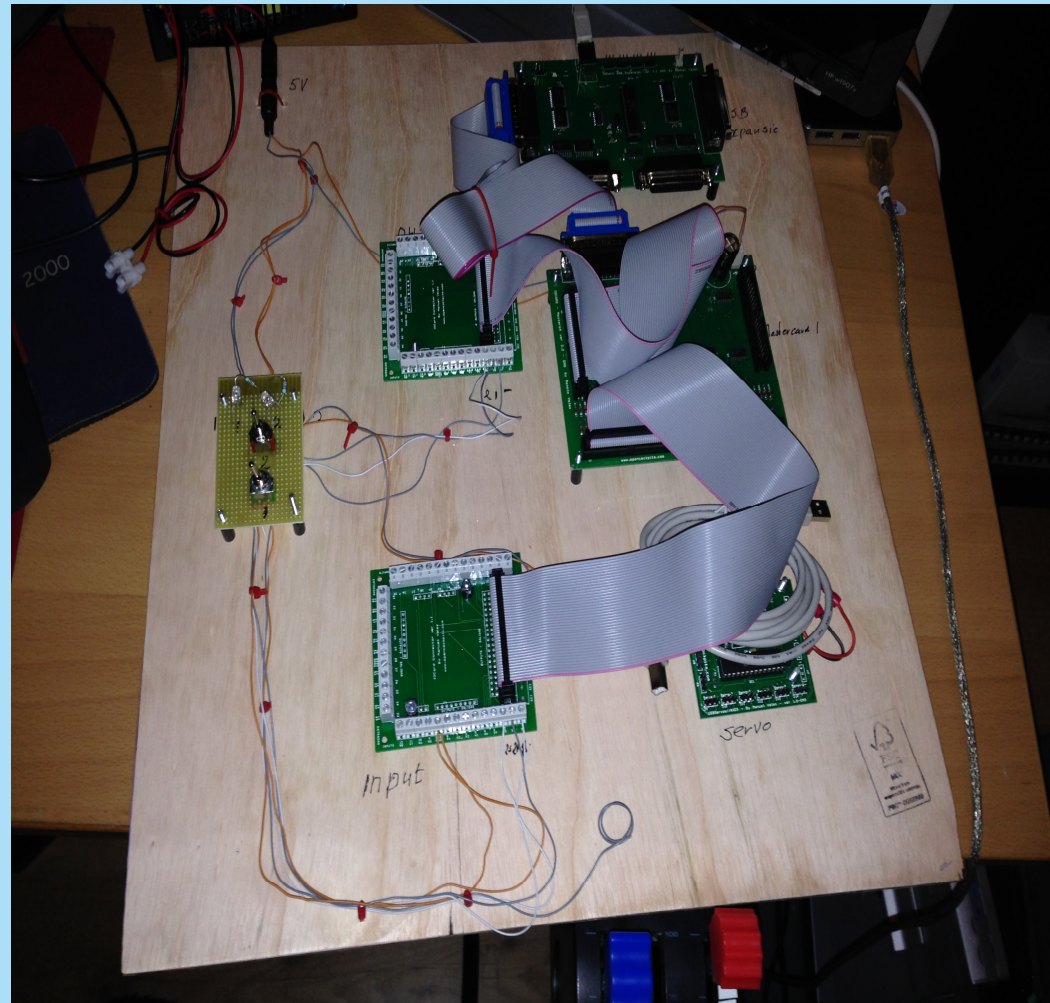
[MASTER=0,6,1,6]

USBServos=6,14



APU Led & Flaps gauge

- Mastercard
- Expansion
- Input
- Output
- Servo



SIOC / programmeren – aansturen van een Flap Gauge & APU LED

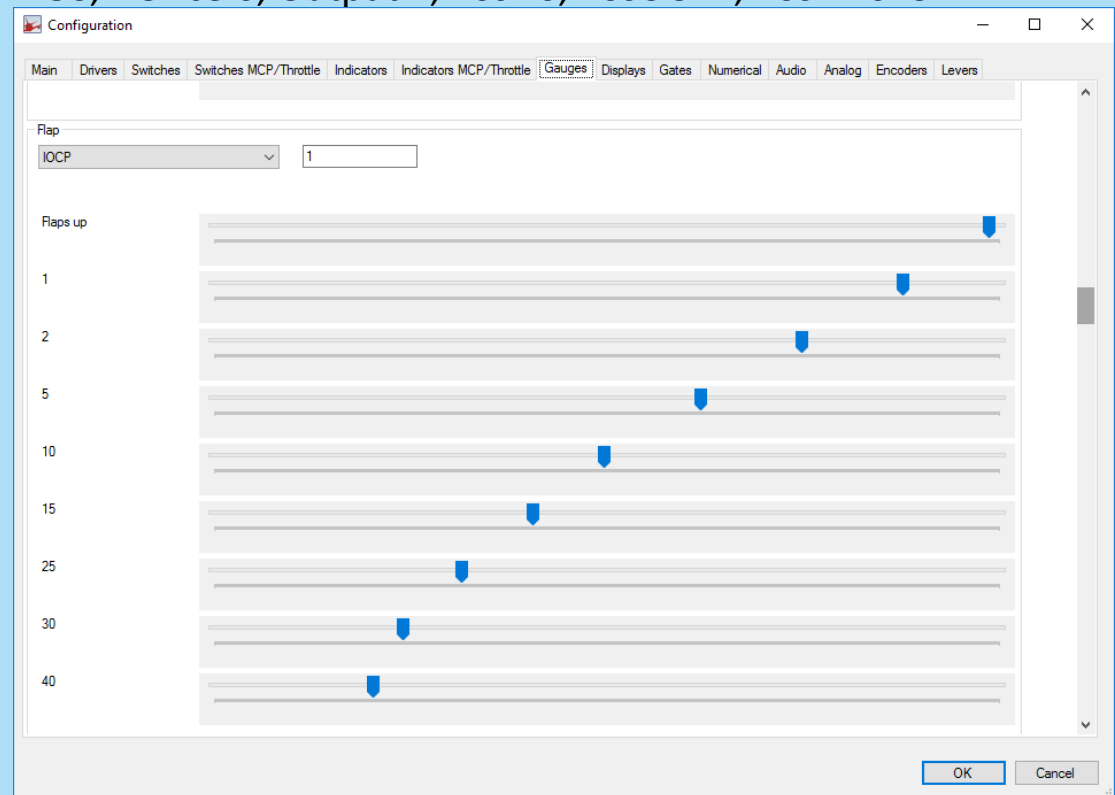
Zonder Prosim:

http://www.opencockpits.com/uploads/manual_gauge_flaps_eng.pdf

Met Prosim:

MY_SIOC_PROGRAM_PROSIM.txt

Var 0001, name servo_flaps, Link USB_SERVOS, Device 6, Output 2, PosL 0, PosC 511, PosR 1023



Overhead opties

Kant & klare opties maar kost ook wat!

- fwd ovh cpflight € 7.795
- aft ovh cpflight € 2.290
- vrinsight € 1.078

Dus..... zelfbouw!

Een stapje verder...de bouw van een Cockpit



Een stapje verder...de bouw van een Cockpit

- De mogelijkheden en de verschillen tussen de Default 737, PMDG en Prosim
 - Hardware – enkele mogelijkheden
 - Interfacen – de communicatie tussen hardware en software

Plug & Play CP Flight.....



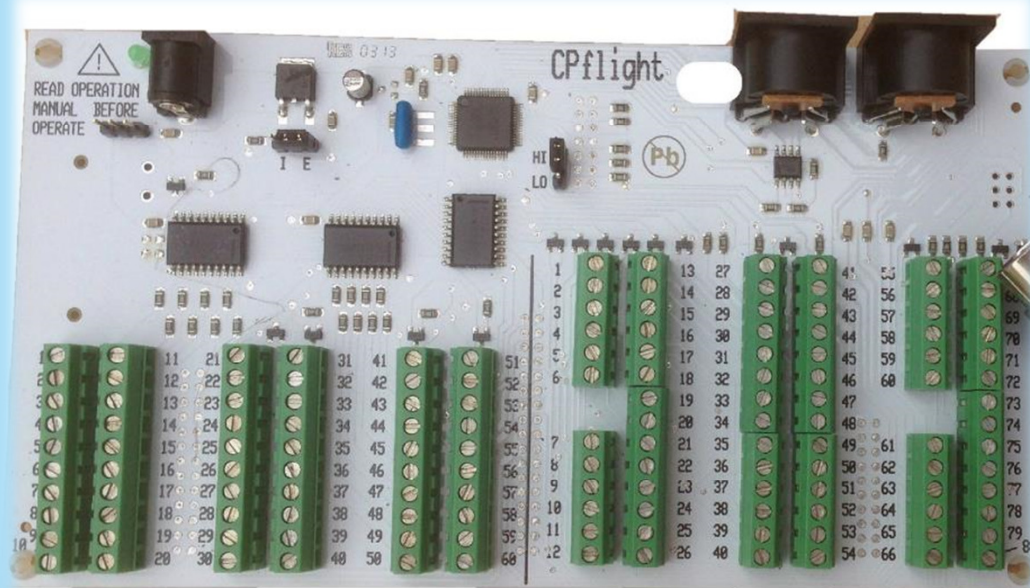
CP Flight ICS2 P&P panels.....



€ 3600 euro

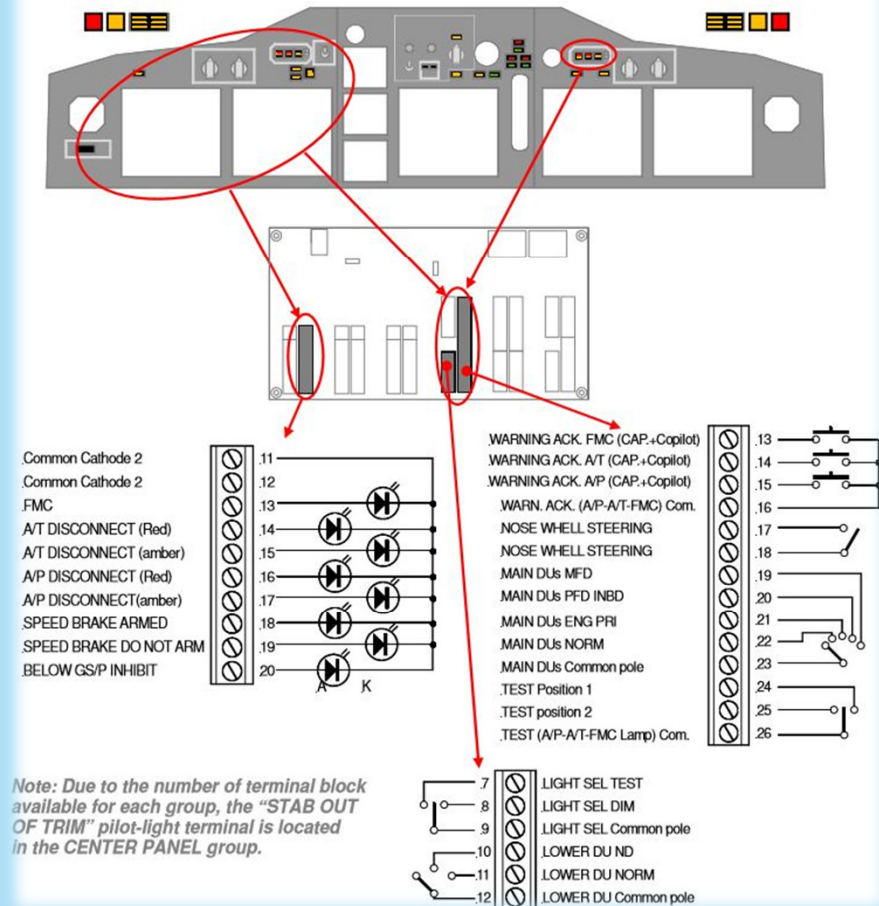
CPflight
HARDWARE FOR FLIGHT SIMULATION

...Of zelf doen!

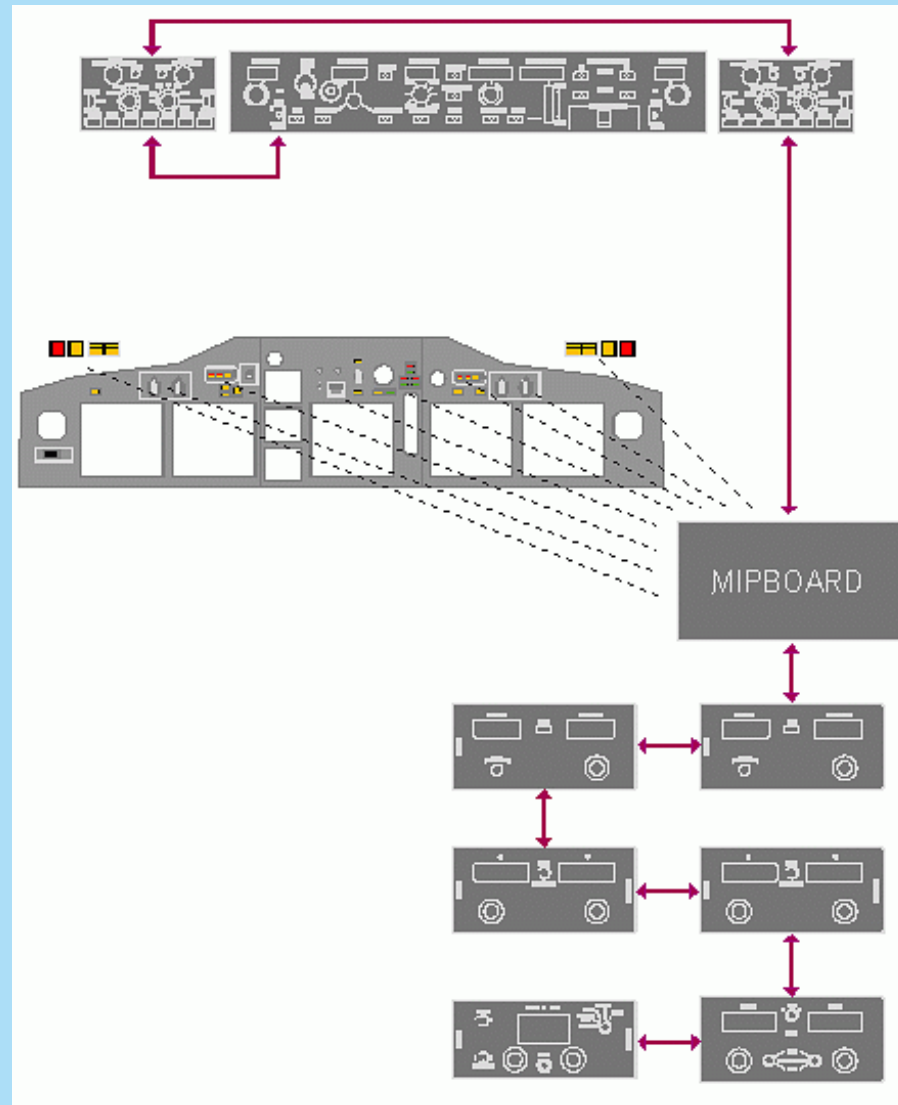


€ 800 euro

CAPTAIN PANEL



CP Flight Hardware – software setup

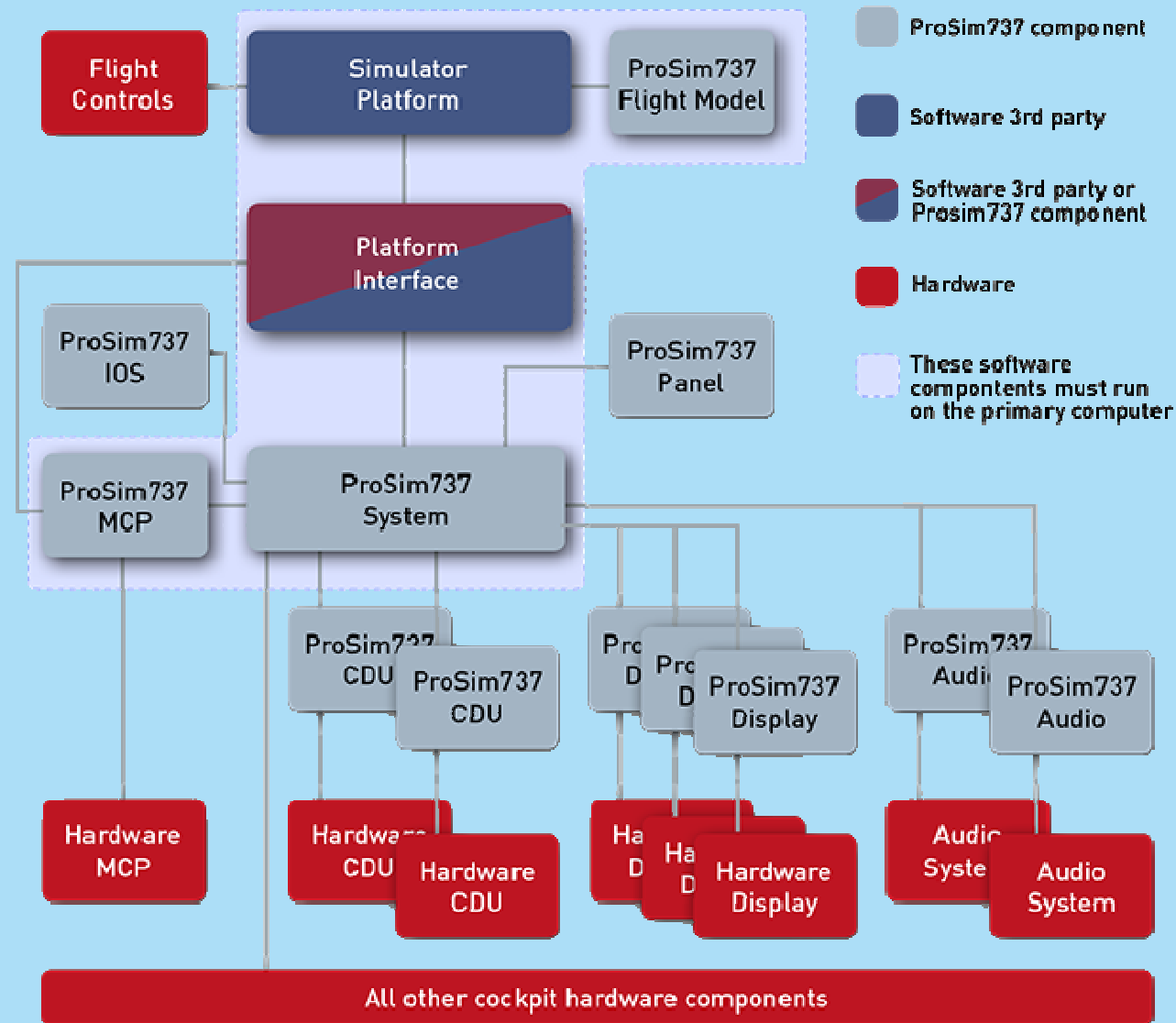


CP Flight Hardware – software setup

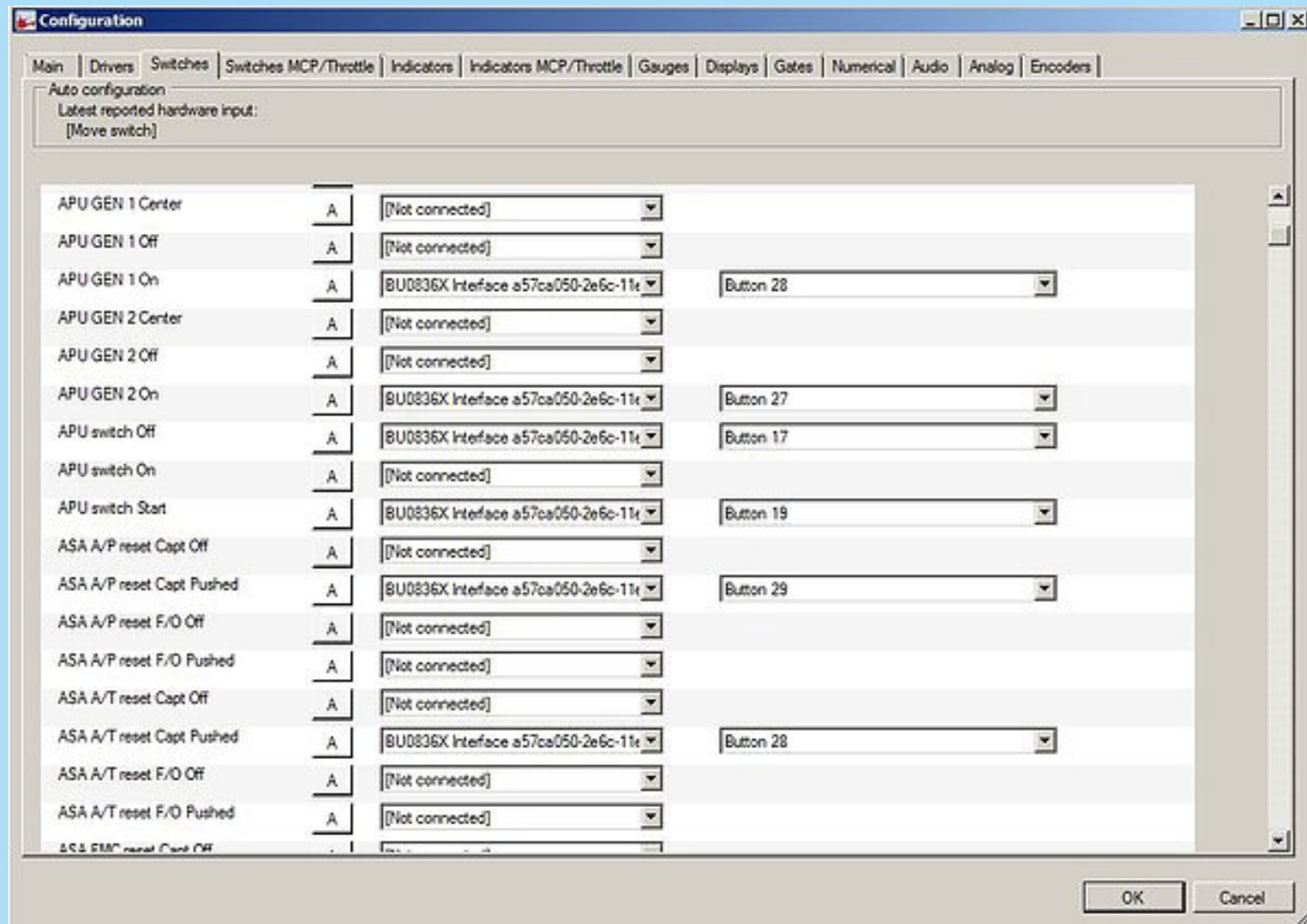


Werkt met Default 737 & PMDG

The Next Level...Prosim Hardware – software setup



Prosim Hardware – software setup



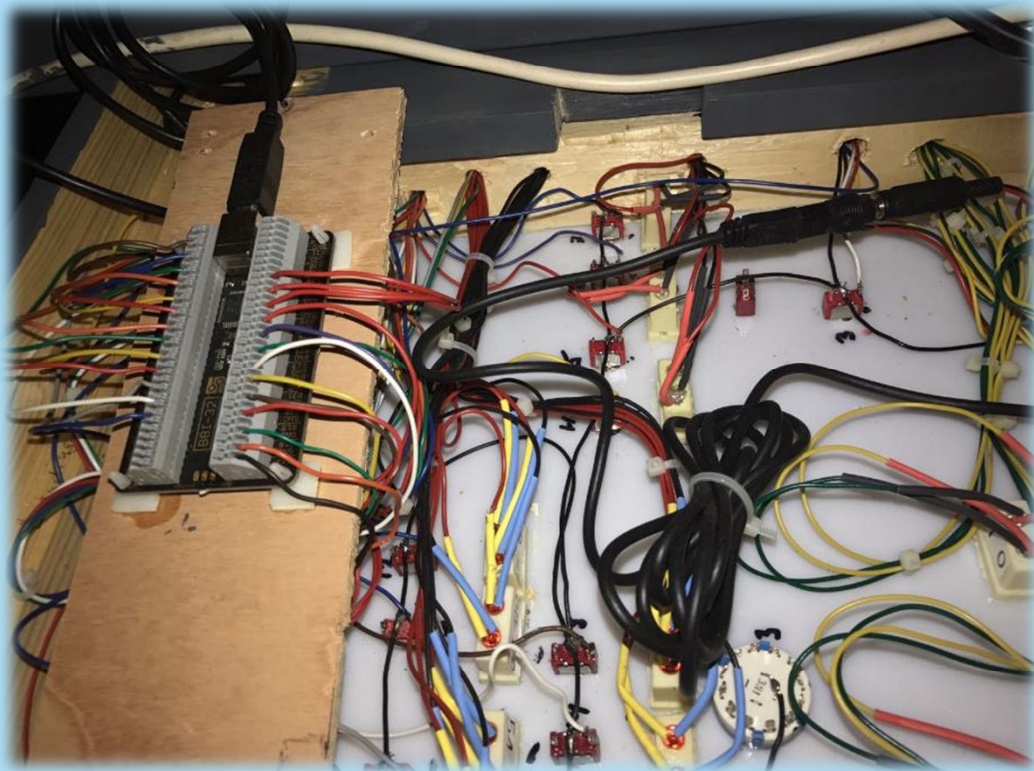
Home cockpit Time van der Meer

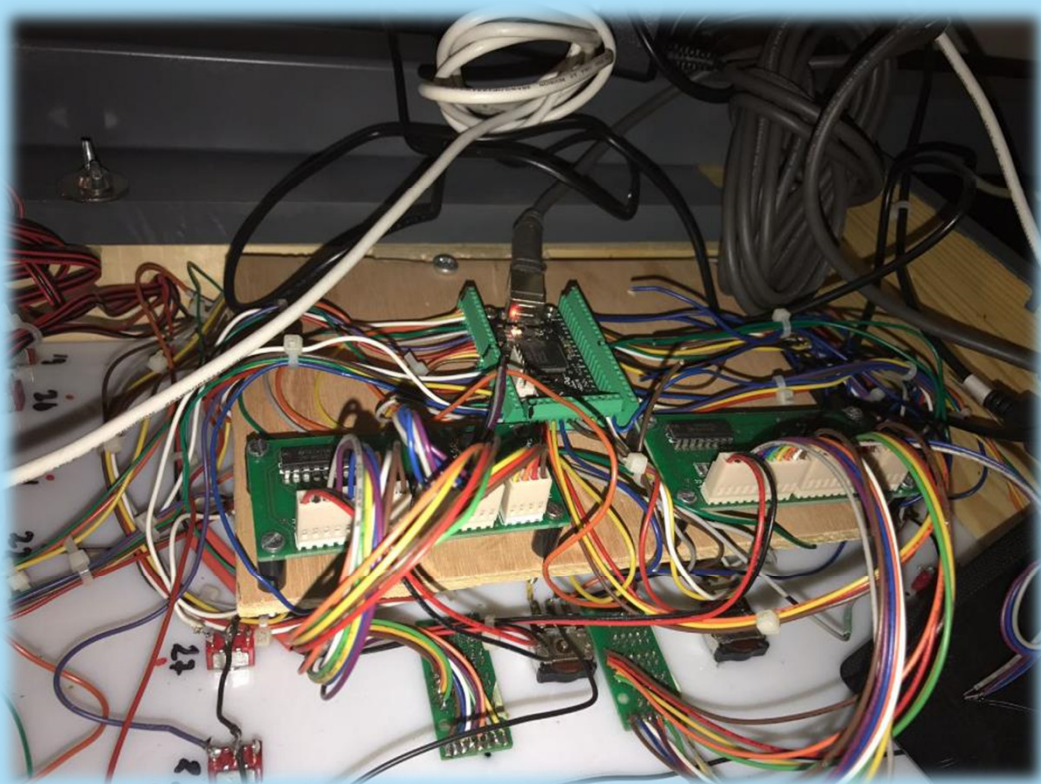












Home Cockpit Joop Mak



Totaal overzicht



onderste 2 schermen op vlieg PC : Voorruit en FStramp
bovenste 3 schermen op de 2e PC : Teamspeak, charts en PlanG



Cockpit in afgesloten ruimte met deur



Machine kamer met alle aansluitingen

Home Cockpit William Voskuil



PROSIM:737



FLIGHT
ILLUSION

more than simulation

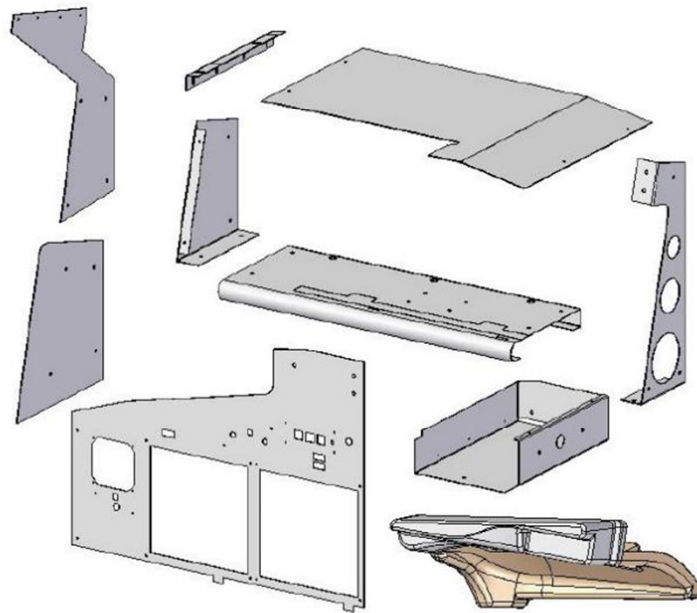
2014 Keuze gemaakt...



Flight simulator weekend November 2014

Start van de bouw begin 2015

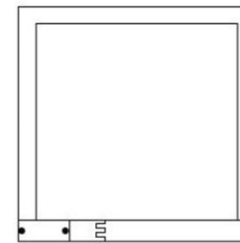
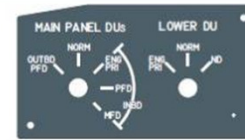
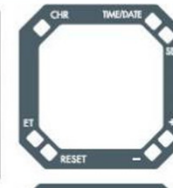
CONTENTS



Aluminium parts & Glare wing



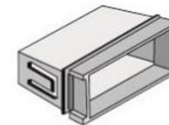
panel set



window frame
2x



Smoke grey window
2 x



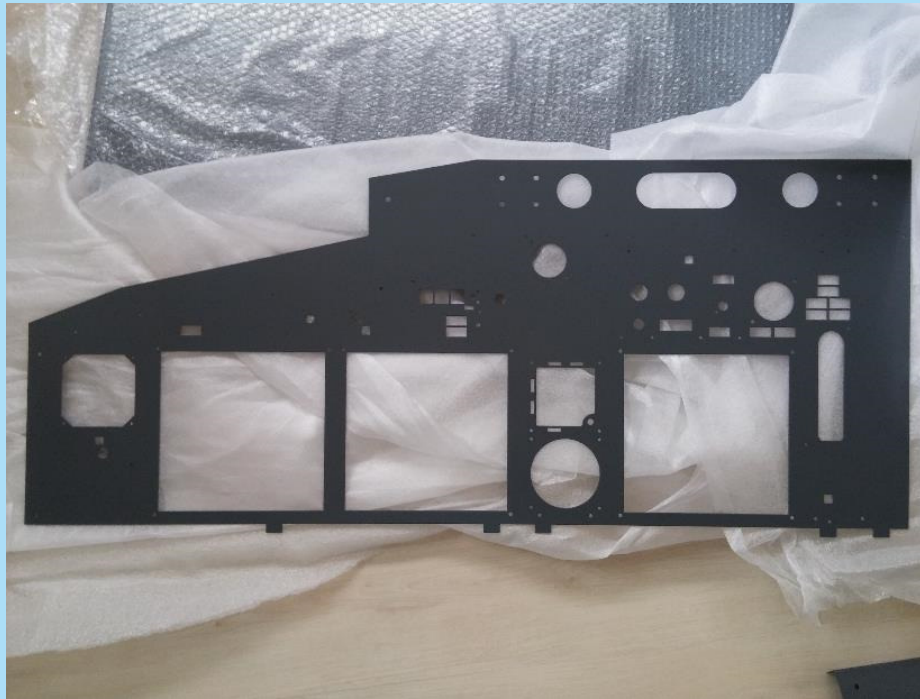
Annunciator holders
3 x



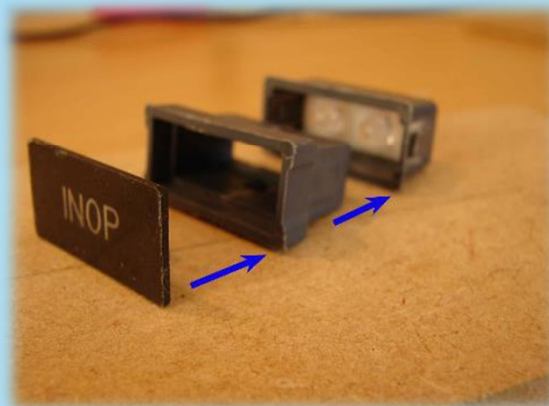
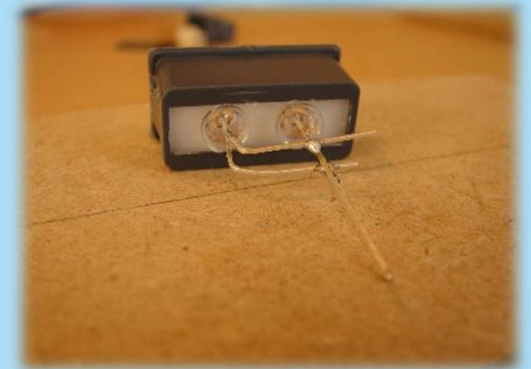
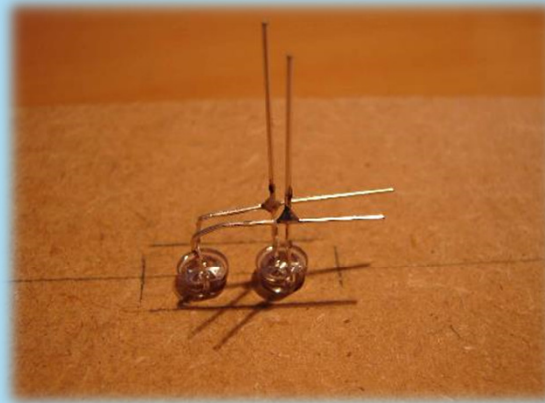
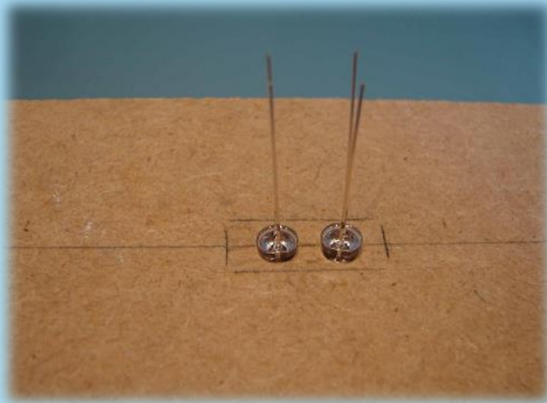
Annunciator legends

A		M6	11 x
B		M4	8 x
C		M3	11 x
D		M6 x 12	7 x
E		M6 x 12	4 x
F		M4 x 8 tapped	10 x
G		M4 x 8	16 x
H		M3 x 8	11 x

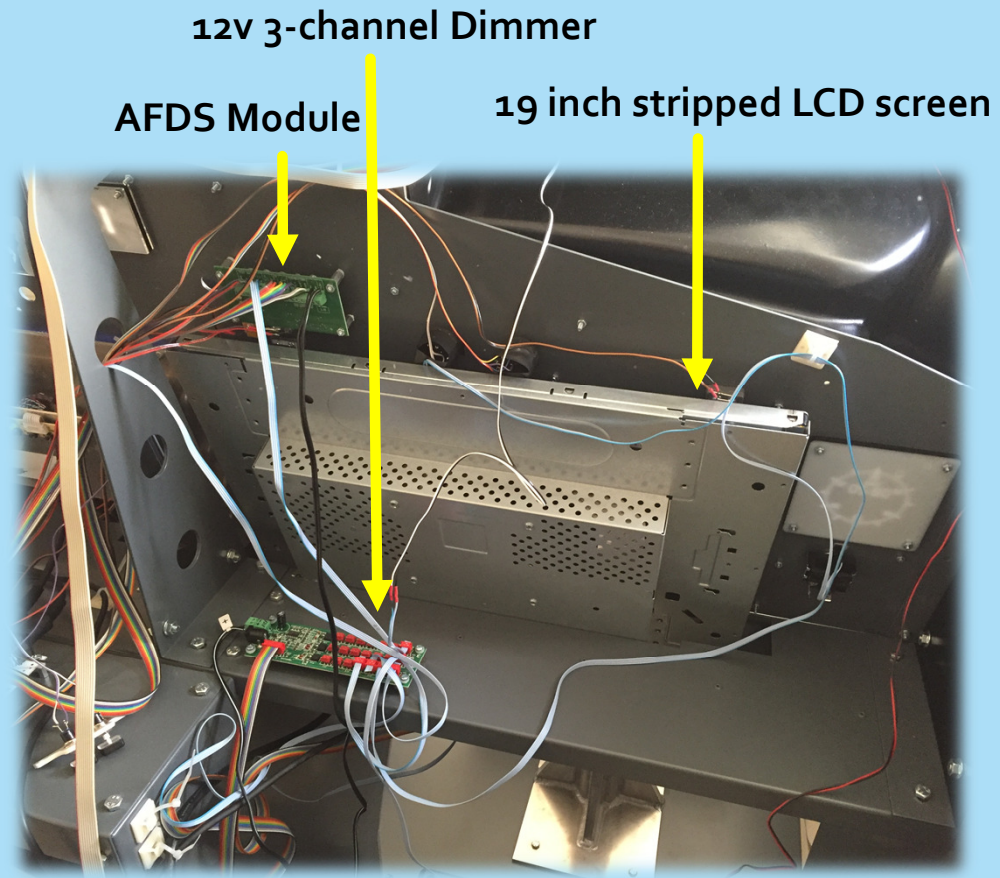
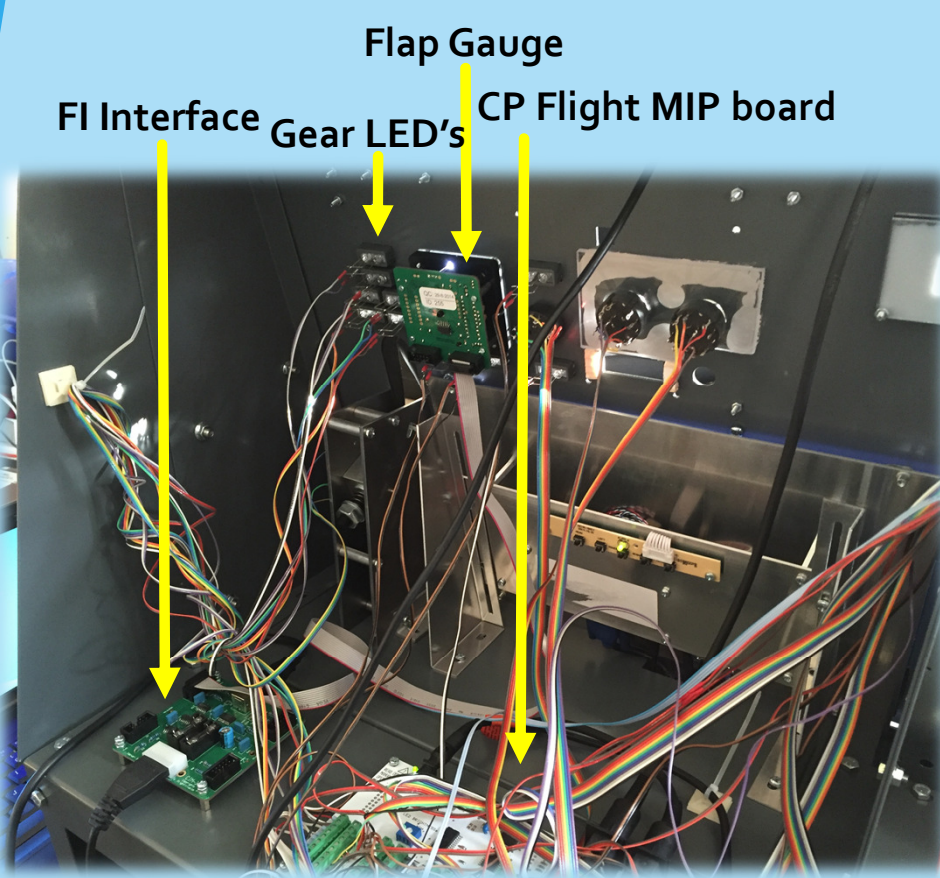
Start van de bouw begin 2015



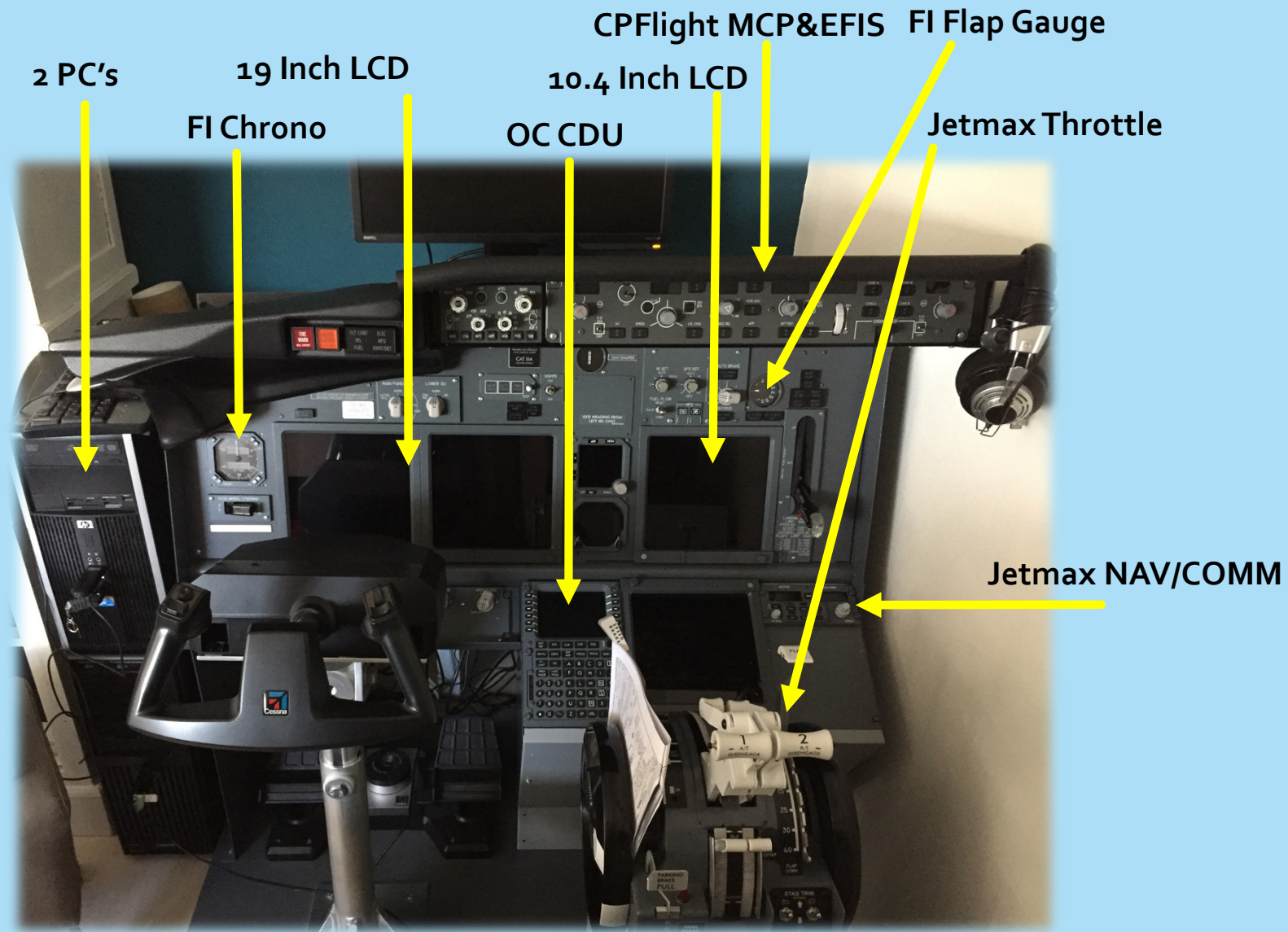
Zelf doen!....



Hardware



Hardware



Huidige status...



Hardware & Software

HARDWARE:

- Jetmax Throttle quadrant (P&P)
- Jetmax NAV / COMM unit (P&P)
- Echte Honeywell switches MIP
- Flight Illusion Chrono & Flap gauge
- Open Cockpits CDU V3 (SIOC)
- CP Flight MCP-EL & EFIS-Pro
- Fly Engravity Single Seat Trainer (Alu MIP)
- Communicatie verloopt via CP Flight MIP board & Flight Illusion Central Interface.

SOFTWARE:

- Prosim Suite
- Prosim 737
- FSX
- FTX Global
- FTX Vector
- AEROSOFT LFMN, LIME, LOWI, EDDF & LEIB
- NL2000

Toekomst...

- Bezig zijn met de hobby is net zo leuk als vliegen!
- ISFD + RMI gauges van Flight Illusion
- Overhead (zelfbouw)
- Overstap naar Prepar3D V3.x



Home Cockpit Joop Bakker





