How to

Lighten up the annunciators in your cockpit with iFly 737NG and iFlyToFsuipc

Being a very satisfied user of the iFly 737NG, my last issue was to get all the annunciators to work.

Since iFly don't support offsets it's quite difficult to read the status of a given annunciator. But Jouni Törmänen has developed a tool that solved this.

I have used the following solutions:

- iFlyToFsuipc
- iFly variables
- SIOC
- OpenCockpit USB Output board
- FSUIPC

iFlyToFsuipc

iFlyToFsuipc connects each status in iFly with a free offset. This is made for version 2.03.

Install SIOC eg. into \Documents\SIOC

Place the iFlyToFsuipc in the same folder as your SIOC installation

In the documentation you can see a list over all the offsets and which bit that covers each status.

Using this list we can made a script in SIOC so we can control each light.

Open Notepad

Create a .txt file eg. SIOC.TXT

Herby a example, we start with the Fuel Panel:

```
// ***************************************************************************
// * Config_SIOC ver 4.00  -   By Manuel Velez  -   www.opencockpits.com
// ***************************************************************************
// * FileName : SIOC.TXT
// * Date : 12.1.2012
// FUEL PANEL

 Var 0701, name fuel_3, Link FSUIPC_INOUT, Offset $941C, Length 1

 {
   &Out261 = TESTBIT &fuel_3 ,0
   &Out262 = TESTBIT &fuel_3 ,1
   &Out263 = TESTBIT &fuel_3 ,2
   &Out264 = TESTBIT &fuel_3 ,3
   &Out265 = TESTBIT &fuel_3 ,4
   &Out266 = TESTBIT &fuel_3 ,5
 }
 Var 0702, name Out261, Link IOCARD_OUT, Output 4, Device 3    // LOW_PRESSURE_Light_CENTER_L_Status
 Var 0703, name Out262, Link IOCARD_OUT, Output 5, Device 3    // LOW_PRESSURE_Light_CENTER_R_Status
 Var 0704, name Out263, Link IOCARD_OUT, Output 0, Device 3    // LOW_PRESSURE_Light_L_AFT_Status
 Var 0705, name Out264, Link IOCARD_OUT, Output 1, Device 3    // LOW_PRESSURE_Light_L_FWD_Status
 Var 0706, name Out265, Link IOCARD_OUT, Output 2, Device 3    // LOW_PRESSURE_Light_R_FWD_Status
 Var 0707, name Out266, Link IOCARD_OUT, Output 3, Device 3    // LOW_PRESSURE_Light_R_AFT_Status
```

So what are we doing here.

We define a new Var 0701. We call it fuel_3 and we link it to FSUIPC_INOUT and to offset 941C.

This offset is taken from the PDF documentation

941C	0	LOW_PRESSURE_Light_CENTER_L_Status
941C	1	LOW_PRESSURE_Light_CENTER_R_Status
941C	2	LOW_PRESSURE_Light_L_AFT_Status
941C	3	LOW_PRESSURE_Light_L_FWD_Status
941C	4	LOW_PRESSURE_Light_R_FWD_Status
941C	5	LOW_PRESSURE_Light_R_AFT_Status

Here we can see the offset and which bit covers the light.

So each time the offset changes status, the variables will be updated.

We have defined a section for each light:

```
 &Out261 = TESTBIT &fuel_3 ,0
 &Out262 = TESTBIT &fuel_3 ,1
 &Out263 = TESTBIT &fuel_3 ,2
 &Out264 = TESTBIT &fuel_3 ,3
 &Out265 = TESTBIT &fuel_3 ,4
 &Out266 = TESTBIT &fuel_3 ,5
```

Now the status of LOW_PRESSURE_Light_CENTER_L_Status will be put into Out261.

Now we need open/close the output on the Output card.

This is done by this line:

Var 0702, name Out261, Link IOCARD_OUT, Output 4, Device 3   // LOW_PRESSURE_Light_CENTER_L_Status

We define a new Var0702, assign this to Out261, link it to IOCARD_OUT on Output 4, and with the device no 3, which mine are at my system.

By doing this the USB Output card will open/close the Output 4 on the card, where mine LOW_PRESSURE_Light_Center_L LED are connected to.

Continue this way with all the sections you need. Mine setup are not covering all the lights. You can see mine SIOC.TXT file here.

When you are done, save the txt file.

Start config_sioc.exe
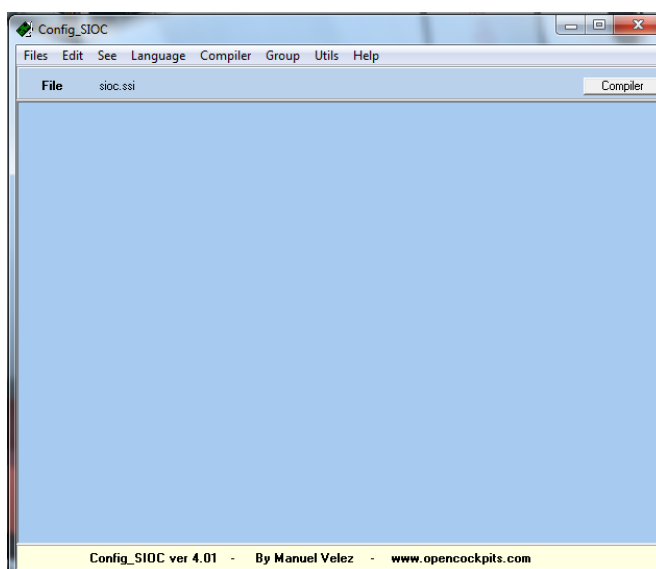
Choose Files—Import TXT and select your txt file.

If everything are written correct the code will appear in the box. If there are any errors a message box will appear.

Choose Files—Save as. Save the file with a given name (SIOC) and the extension .SSI.

A detailed description can be seen at Nico's site.

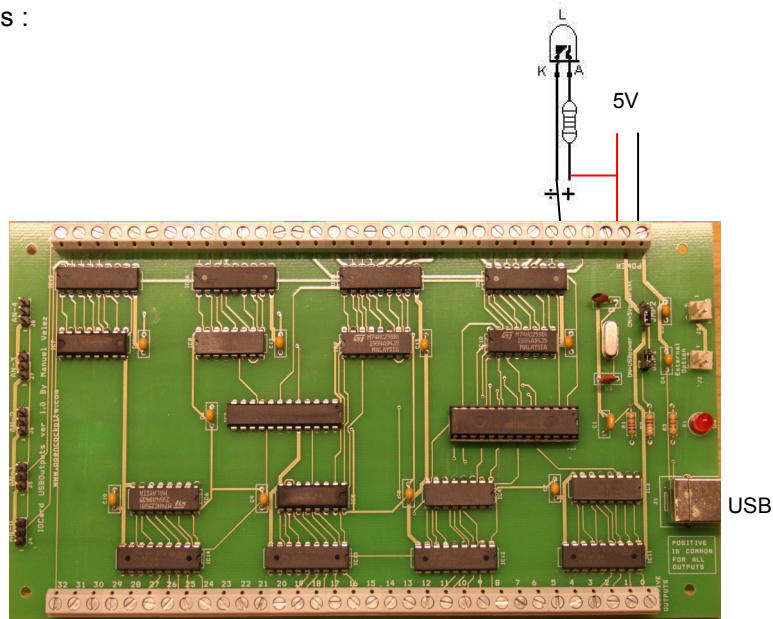Remember that the sioc.ini file should look for this file in the section:

[SIOC]
CONFIG_FILE=.\SIOC.ssi

The script can be used together with eg. The script for MCP and EFIS. Just make sure that you don't uses and variables that are already used.

Opencockpits USB Output Card

Now we need to connect the USB Output card to power and all our annunciators.

Connect it like this :

Remember that the diodes share a common + plus. The card open/closes the negative. When you use external power JP1 shall be open and JP2 closed, not as in this picture.

I have used a 5V / 1A power supply from OC, and high density LED's. On each LED I have a 330 Ohm resistor. This can be lower, but works great in my setup.

So now the software and hardware are in place. The testing shall be done.

- First start FS.
- Select a saved flight with iFly.
- Start iFlyToFsuipc.
- Start SIOC (sioc.exe) and the lights should lighten up !!!

If you have undocked the different instruments into different monitors, remember to use W to display / un-display the main panel.

This works in my setup : Windows 7 64 DK, FS2004, IFly737NG, ActiveSky, REX2004, OC MCP and lots of scenery…....

This tutorial are made with my simple knowledge about offsets and SIOC, so please bear with me if there are some mistakes.

It's your own responsibility to connect things properly and use of this software.

I hope that others can use this, and get the same positive experience of the great IFly 737 NG simulator.

You can download the necessary files here :

Link

Happy flying

Claus Hansen
www.737sim.dk