Opencockpits' MCP

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We introduce this MCP module specially designed for those users who want to fly with FlightSimulator or X-plane in a more realistic way, controlling the autopilot and flight modes from an external module.

This module is completely plug&play (no need of USB driver). It only needs SIOC with your favourite configuration file that will link with the simulator via FSUIPC or IOCP.

The following flight modes can be managed with this MCP module: N1, SPEED, FD1 and 2, AT, LVLCHG, VNAV, HDGSEL, APP, VORLOC, LNAV, ALTHLD, V/S, CMDA and B, CWSA and B, Disengage, Course1 and 2, IAS/MACH, Heading, Altitude and Vertical Speed.

The module includes displays brightness controlled by software.

The module is fully compatible with the rest of IOCards and other Opencockpits modules.

The module admits any configuration defined by the user, and can link with any other software like ON-737, Project Magenta, LEVEL-D 767, ...

Technical specification:

- Simulation module that manages the following flight modes:
  - N1
  - SPEED
  - FD1 and 2
  - AT
  - LVL CHG
  - VNAV
  - HDG SEL
  - APP
  - VOR LOC
  - LNAV
  - ALT HLD
  - V/S
  - CMD A and B
  - CWS A and B
  - Disengage
  - Course 1 and 2
  - IAS / MACH
  - Heading
  - Altitude
  - Vertical Speed

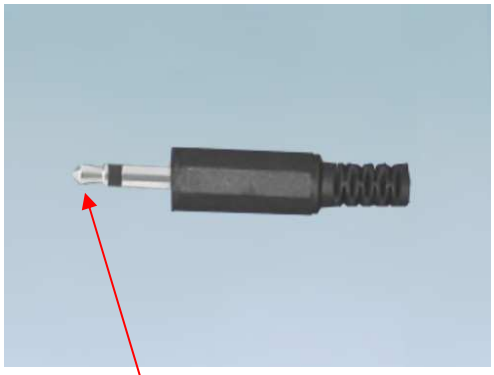
- Connection to USB port (no USB drivers needed).
- Flight sims admitted: X-Plane, FS98, FS2000, FS2002, FS2004 and FSX (the last one via FSUIPC).
- Displays brightness controlled by software.
- No additional cards needed.
- Manages decimal points and negative figures.
- Possibility of linking with other Opencockpits modules or modules from other manufacturers.
- Totally programmable.
- Module completely finished or assembly kit available.
- Dimensions W:470mm H:78mm D:150mm. (D:40mm without box).

Power source.

The module can be fed by any USB port, but, due its high comsumption (500 mA), this is not recommended. We recommend to use one of the following options:

a) External USB HUB with its own power source (D-link 4 or 7 ports or similar):

b) Independent power source with 5 volts DC and >500 mA. In this case a male minijack connector (3.5 mm) is needed:



Connecting the module.

The module is connected to any free USB port, and is recognised by Windows as a HID device. The module has been tested under Windows XP.

Once recognised, we can run the corresponding software.

Software.

The module uses Opencockpits' SIOC.

Can be totally programmed by the user using SIOC.

Anyway, a configuration file can be downloaded. With this file the module is ready to be used with FS2004 (Boeing 737). In a short time, configuration files for other addons will be published.

To install SIOC, just download it from download page at Opencockpits and unzip it in a folder.

The module is compatible with SIOC 3.41 or higher.

To use this MCP with SIOC, we have to incluye the following line in the SIOC.ini file:

MASTER=0,5,1,0

If another line starting with MASTER exists and is not marked with brackets [...], delete it.

Now change the following line to:

CONFIG_FILE=.\sioc.txt

This way when SIOC starts, it looks for a script named "sioc.txt"

Now rename the script to use to **sioc.txt** and start SIOC or click the "reload" button.

For example, if you want to use the FS2004 configuration, just rename **IOCardMCP_FS2004.txt** to **sioc.txt**

Or if you want to build your own configuration, a configuration file named **MCP_Definicion.txt** includes every variables definition. From this point you just have to configure orders to be played by the MCP.

Definition in SIOC for every MCP elements.

```
// ********************************************************************************
// * Opencockpits MCP  -    By Manolo Vélez   -   www.opencockpits.com
// ********************************************************************************
// * FileName : MCP_Definicion.txt
// * Date : 2007-06-12

// DIGITS
Var 100, name D_COURSE1, Link IOCARD_DISPLAY, Digit 0, Numbers 3
Var 102, name D_IAS, Link IOCARD_DISPLAY, Digit 3, Numbers 3
Var 104, name D_HDG, Link IOCARD_DISPLAY, Digit 6, Numbers 3
Var 106, name D_ALT, Link IOCARD_DISPLAY, Digit 9, Numbers 5
Var 108, name D_VS, Link IOCARD_DISPLAY, Digit 14, Numbers 5
Var 110, name D_COURSE2, Link IOCARD_DISPLAY, Digit 19, Numbers 3

// OUTPUTS
Var 200, name DECIMAL, Link IOCARD_OUT, Output 20
Var 202, name O_N1, Link IOCARD_OUT, Output 21
Var 204, name O_AT, Link IOCARD_OUT, Output 22
Var 206, name O_SPEED, Link IOCARD_OUT, Output 23
Var 208, name O_LVLCHG, Link IOCARD_OUT, Output 24
Var 210, name O_VNAV, Link IOCARD_OUT, Output 25
Var 212, name O_HDGSEL, Link IOCARD_OUT, Output 26
Var 214, name O_APP, Link IOCARD_OUT, Output 27
Var 216, name O_VORLOC, Link IOCARD_OUT, Output 28
Var 218, name O_LNAV, Link IOCARD_OUT, Output 29
Var 220, name O_ALTHLD, Link IOCARD_OUT, Output 30
Var 222, name O_VS, Link IOCARD_OUT, Output 31
Var 224, name O_CWSA, Link IOCARD_OUT, Output 32
Var 226, name O_CMDA, Link IOCARD_OUT, Output 33
Var 228, name O_CWSB, Link IOCARD_OUT, Output 34
Var 230, name O_CMDB, Link IOCARD_OUT, Output 35

// ROTARY ENCODERS
Var 300, name E_IAS, Link IOCARD_ENCODER, Input 0, Aceleration 1, Type 2
Var 302, name E_ALT, Link IOCARD_ENCODER, Input 2, Aceleration 1, Type 2
Var 304, name E_COURSE1, Link IOCARD_ENCODER, Input 4, Aceleration 1, Type 2
Var 306, name E_HDG, Link IOCARD_ENCODER, Input 6, Aceleration 1, Type 2
Var 308, name E_COURSE2, Link IOCARD_ENCODER, Input 9, Aceleration 1, Type 2
Var 310, name E_VS, Link IOCARD_ENCODER, Input 11, Aceleration 1, Type 2

// SWITCHES
Var 400, name I_CO, Link IOCARD_SW, Input 13
Var 402, name I_FD2, Link IOCARD_SW, Input 14
Var 404, name I_DISENGAGE, Link IOCARD_SW, Input 15
Var 406, name I_FD1, Link IOCARD_SW, Input 16
Var 408, name I_CWSB, Link IOCARD_SW, Input 18
Var 410, name I_CMDB, Link IOCARD_SW, Input 19
Var 412, name I_CWSA, Link IOCARD_SW, Input 20
Var 414, name I_CMDA, Link IOCARD_SW, Input 21
Var 416, name I_VS, Link IOCARD_SW, Input 22
Var 418, name I_ALTHLD, Link IOCARD_SW, Input 23
Var 420, name I_APP, Link IOCARD_SW, Input 24
Var 422, name I_VORLOC, Link IOCARD_SW, Input 25
Var 424, name I_LNAV, Link IOCARD_SW, Input 27
Var 426, name I_HDGSEL, Link IOCARD_SW, Input 28
Var 428, name I_LVLCHG, Link IOCARD_SW, Input 29
Var 430, name I_VNAV, Link IOCARD_SW, Input 30
Var 432, name I_SPEED, Link IOCARD_SW, Input 31
Var 434, name I_N1, Link IOCARD_SW, Input 32
Var 436, name I_AT, Link IOCARD_SW, Input 33
```