

Flightpanels 2.0 User Guide

Flightpanels 2.0 is a 3rd party software for DCS allowing for interaction with Saitek Pro Flight panels. Homepage : <http://sourceforge.net/projects/flightpanels> .

Support forum : <http://forums.eagle.ru/showthread.php?p=2293326#post2293326>

- 1/ Installation
- 2/ Configtion
- 3/ Creating a Profile
- 4/ Using the Panels
- 5/ Drivers Troubleshooting

WARNING:

The document isn't very long, we strongly recommend to go thru it before installing. Some files are affecting DCS savefiles. Installation is easy, however following the guide may help not messing your DCS.

Installation

Flightpanels 2.0 needs DCS-BIOS software to work. You can download it here :

<https://github.com/dcs-bios/dcs-bios>

DCS-BIOS installs in your DCS Saved Games folder. Complete documentation is available on their website

1. Download DCS-BIOS from the link above.
2. In Windows Start Menu, enter `%USERPROFILE%\Saved Games\DCS`. Your Saved Games folder will open.
3. Locate and open your DCS save folder. It may be either `DCS` or `DCS.openbeta` depending on your version
4. Warning- If you use any 3rd party software using export script (*SIOC, HELIOS.....*), **backup** your `/script/export.lua` file
5. Copy all DCS-BIOS files within that folder. That will complete the DCS-BIOS installation
6. If you previously had an `export.lua`, restore your backed version.
7. Open your export.lua and add the line
`"dofile(lfs.writedir()..[[Scripts\DCS-BIOS\BIOS.lua]])"` - this will allow DCS-BIOS to launch alongside your other export scripts.

Installation of Flightpanels 2.0 is pretty much straightforward. Just install and setup in the folder you want.

1. Download Flightpanels 2.0 from : <https://sourceforge.net/projects/flightpanels/files/>
2. Unzip the folder in a place you can choose.

Flightpanels does not need Saitek's drivers. It uses Windows' default HID (Human Interface Device) drivers. It should be working ok by default. If you have Saitek drivers already installed, or if you have issue with panels not appearing in the menu, please check the troubleshooting at the end of this document.

CONFIGURATION :

Everything is installed. Let's go for the first launch.

Firewall :

You may see a firewall warning at first launch. This is normal, as the software is communicating with DCS through network sockets (UDP). Blocking it will prevent Flightpanels from working.

Profiles :

The software stores the settings in ASCII text files (profiles). The profile is the configuration of your input/output related to an airplane. Hence, a profile will work with one airframe. At first launch, the software will ask you which module you want to use. Do not worry, you can create and save multiple profiles afterward !!

So far, support is limited since Flightpanels development is dependent on the modules supported by DCS-BIOS. Both programs are in development so don't hesitate to check for updates!

- A-10C
The A-10C supports the 4 main panels, including the RADIO one.
- UH-1H "Huey"

The Huey is present but still in development. Only PZ55 Switch Panel and Backlit Information Panel are working at the moment.

- None
This allows Flightpanel to work in limited mode as a **keyboard emulator** for every module and in other games. Configuration mentioned below are not available when in this mode.

"Options" -> "Check for Digital Combat Simulator" menu

This option prevents the software from creating (sending) keyboard presses unless DCS is launched. Deactivating it **may** eventually allows you to use Flightpanels in other games or even your text editor. This depends on games so we can't test it all.

API mode :

To simulate keypresses in Windows there are two different methods available (APIs).

[keybd_event\(\)](#)

[SendInput\(\)](#)

According to Microsoft the latter should be used for new software. If for some reason some software won't receive virtual keypresses you have the option to switch which API to use for creating the virtual keypresses. It may be that older software cannot hear SendInput and vice versa.

DCS-BIOS Settings

The software communicates with DCS thru the excellent DCS-BIOS set of export/import scripts. All modifications here requires a restart of the software.

- DCS-BIOS Json Folder Location:

This is the DCS-BIOS location. It should be ok by default. But **If you are using OpenBeta** version you need to change that.

`C:\Users\your name\Saved Games\DCS\Scripts\DCS-BIOS\doc\json`

should become :

`C:\Users\your name\Saved Games\DCS.openbeta\Scripts\DCS-BIOS\doc\json`

- IP/port settings.

Those should not be modified unless you want to run you Panels from a remote computer.

Open Error Log

Obviously, the software is perfect and you'll never have to use this. :)

If you encounter an issue, we may ask you for the error you had. In most case, all messages are logged here so you don't have to worry about reproducing the bug !

CREATING A PROFILE

Understanding the software.

The software works in two way :

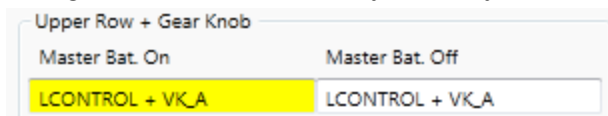
Keypresses and DCS-BIOS Control.

The first one is straight forward. Any control will work as a keyboard button. You can set simple letters, but you can also set ALT/CTRL/SHIFT modifiers, and even combos of several keys with timing set. One has to try to use it with a combat games ! The second mode is directly influencing DCS scripts thru the DCS-BIOS import/export program and allows for light outputs, among other things.

Editing Keypresses.

Let's take the master battery as an example :

Simply clicking in the entry will allow you to place keypresses. Once set, you can go into DCS configuration and set the key where you want.



Every time I will cycle the masterbat. button, **Left Ctrl + A** will get pressed.
In an empty entry, with right click, you can set complex sequences.

Seq #	Break (ms)	Key(s) to press	Time to press (ms)
0	FiftyMilliSec	UP	FiftyMilliSec
1	HalfSecond	UP	FiftyMilliSec
2	FiftyMilliSec	DOWN	FiftyMilliSec
3	FiftyMilliSec	DOWN	FiftyMilliSec
4	FiftyMilliSec	LEFT	FiftyMilliSec
5	FiftyMilliSec	RIGHT	FiftyMilliSec
6	FiftyMilliSec	LEFT	FiftyMilliSec
7	FiftyMilliSec	RIGHT	FiftyMilliSec
8	FiftyMilliSec	VK_B	FiftyMilliSec
9	FiftyMilliSec	VK_A	FiftyMilliSec

Sequence order

Up

Down

Sequence actions

Add Delete Edit

Information

OK Cancel

However, you will not be able to realistically synchronize a button state with some DCS functions.

Editing DCS-BIOS INPUT

The second mode is the DCS-BIOS integration. It works in a realistic way : the button and lights will be synchronized to whatever value you want. It takes a little bit more time but is still in the end easy to set. You will tell the profile to link a button with a function, or lights together, and the software, thanks to DCS-BIOS, will synchronise them.

Let's take again the master battery as an example.

While right clicking on an entry, select "Edit DCS-BIOS control". This will open the configuration page.

DCS-BIOS Control Search

Control Id	Type aircraft control search words:
EPP_BATTERY_PWR	bat
Control description	Choose input type
Battery Power	SET_STATE
Input description	Enter trigger value:
set position	1
Max value	
1	

Ok Cancel

Control Id is the DCS-BIOS name of the control you want to hook your button with.

Control Description is a text description of the control.

Input Description is the way you want to change the control value

Type aircraft control search words is an user friendly search box, to select the control.

Choose Input Type is the method of changing the control value. (*described in Input Description*)

To edit this :

1. Enter a keyword for the command and select the correct one.
2. Select the way your switch will be edited with input type.
3. Select the modification.
4. Save with OK.

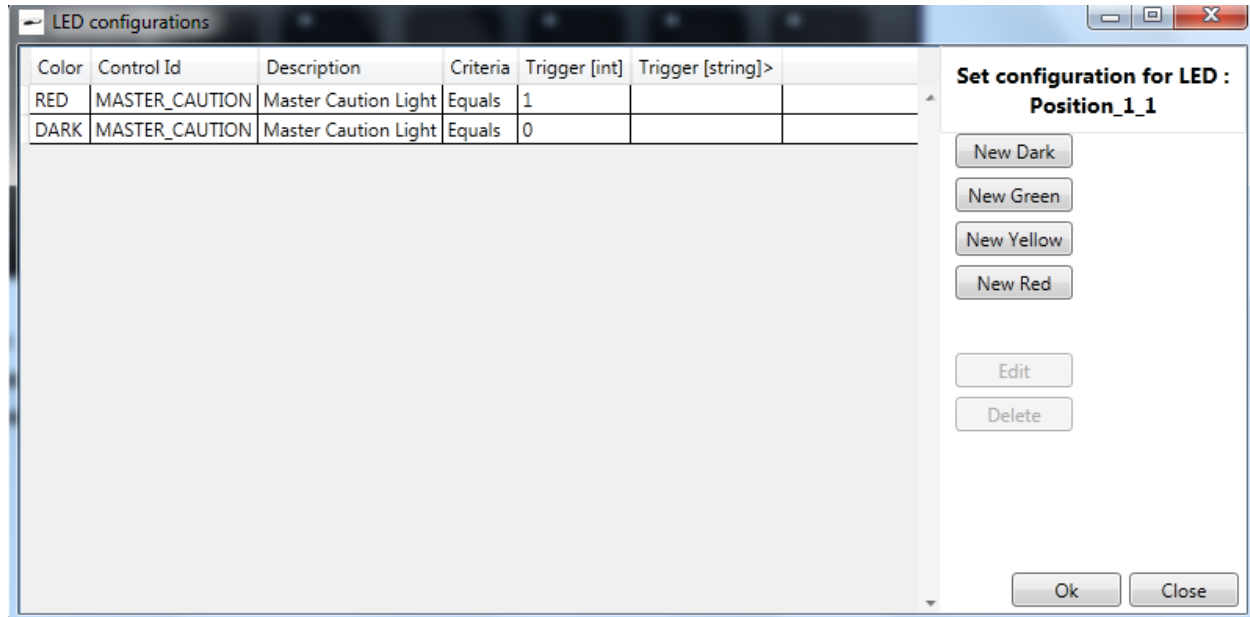
Example :

1. Enter "battery", and select the given choice "EPP_Battery_PWR"
2. Select the "Set State" way of modification
3. Enter 1, so whenever we will press this button up, it'll set the battery button in "ON"
4. Save.

Remember, you need to do the opposite for the lower switch position. (setting it to EPP_Battery_pwr = 0)

Editing DCS BIOS OUTPUT

Light controls work the same way :



In this example, whenever the "Master_Caution" Light is on in the game (trigger = 1), this light will go RED. When it is off, (trigger = 0) it will go DARK, which is off.

With the PZ70 Autopilot panel, you can display number values on the screen ! Whenever you are in ALT or VS mode, you can display two sets of number values. Please note this is still experimental and some numerical value aren't shown in a logical manner.

Additional tips

Saitek PZ55 Switch Panel also contains a page with additional tips for programming.

Save/Load/Edit


You can create a **New** profile



with




You can **Open** a profile with


When your profile is complete, don't forget to **Save** it. 

You can also manually **Edit** profiles with the  button.

USING THE PANELS


With a profile loaded, you can simply start DCS and play. You do not need to do anything in DCS to get Flightpanels working, the software will automatically get the information from DCS-BIOS when the mission launches.

The indicator wheel  will spin as soon as Flightpanels will receive data from DCS. Please note that data will be active at mission start. It is normal that the wheel stay idle when you are in DCS menus. Also, when running full screen and returning to desk, the wheel may stop since DCS will get paused.

You can edit your profile with DCS running. During profile creation, it may be handy to run DCS in windowed mode. If you edit DCS-BIOS input/output, you do not need to restart DCS. Just save the profile, then refresh with the  button

Saitek PZ55 Switch Panel

The panel can be either run as a keyboard emulator or as DCS-BIOS interface.



The image shows the Saitek PZ55 Switch Panel, a black device with various switches and a knob. The top row includes a knob with 'OFF', 'R', 'L', 'BOTH/ALL', and 'START' positions, followed by a 'CLOSE' switch, a 'MASTER' switch, and several 'ON' switches for 'BAT', 'ALT', 'AVIONICS MASTER', 'FUEL PUMP', 'DE-ICE', and 'PITOT HEAT'. The bottom row includes a 'LIGHTS' switch, 'COWL', 'PANEL', 'BEACON', 'NAV', 'STROBE', 'TAXI', and 'LANDING' switches. On the right, there is a 'LANDING GEAR' switch and a 'GEAR UP' knob with 'GEAR DOWN' and 'GEAR UP' positions. An 'ID' button is located at the top right.

Upper Row + Gear Knob	
Master Bat. On	Master Bat. Off
DCSBIOSInput[EPP_BATTERY_P	DCSBIOSInput[EPP_BATTERY_P
Master Alt. On	Master Alt. Off
DCSBIOSInput[EPP_AC_GEN_P1	DCSBIOSInput[EPP_AC_GEN_P1
Avionics Master On	Avionics Master Off
DCSBIOSInput[AHCP_HUD_MC	DCSBIOSInput[AHCP_HUD_MC
Fuel Pump On	Fuel Pump Off
DCSBIOSInput[FSCP_BOOST_M	DCSBIOSInput[FSCP_BOOST_M
De-Ice On	De-Ice Off
Pitot Heat On	Pitot Heat Off
Gear Down (on)	Gear Up (off)
DCSBIOSInput[GEAR_LEVERISE	DCSBIOSInput[GEAR_LEVERISE

Knob Position

OFF

R

L

BOTH / ALL

START

Lower Row

Cowl Close

Cowl Open

Panel On

Panel Off

Beacon On

Beacon Off

Nav. On

Nav. Off

Strobe On

Strobe Off

Taxi On

Taxi Off


Landing On

Landing Off

Double-click in the key command boxes to erase them. Right-click to set timings.

Clear all

Log

- The LED can be configured with DCS-BIOS, by right-clicking on it. You can test lights by left-clicking on it.
- The  contain further tips and information regarding settings.
- The Log keeps track of inputs.

Saitek PZ69 Radio Panel

The functionality of the PZ69 Radio Panel is a compromise all over. This is because there are 5 digits available for frequencies and DCS has many radios using 6 digit frequencies. In these cases the last digit are not used is always set to zero in DCS.

Other special functions like the A-10C TACAN tuning will take a few times to learn but once figured out will be quite natural.

The panel only works with **DCS A-10C**. Stay tuned, further development will follow !

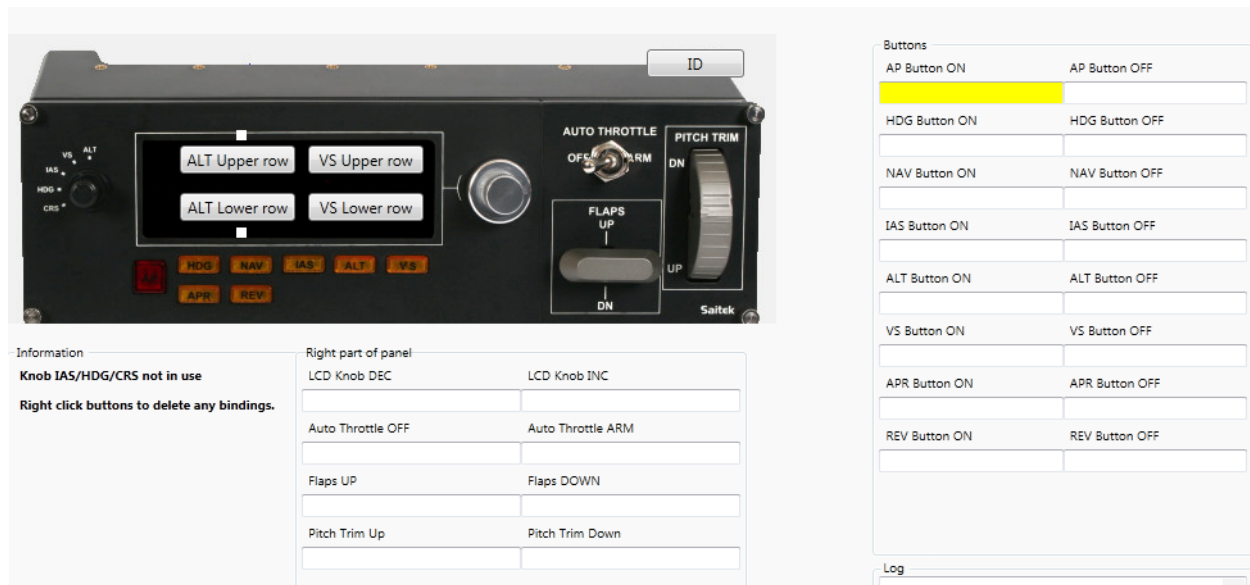


A10-C MODULE :

- The selector knob select the radio.
- Change the stand-by frequencies using the right knob. Once selected, press ACT/STBY to validate it. At this moment, the frequency will get dialed within DCS A-10C
- TACAN (ADF) is a little more tricky. Decimal .0 is the X channel. Decimal .1 is the Y channel. To change that, rotate full left to activate .X, rotate full right to activate Y.
- DME and XPDR aren't active.
- "Frequency Knobs sensitivity" will allow you to tune your knob speed.

Saitek PZ70 Multi Panel

The panel can be either run as a keyboard emulator or as DCS-BIOS interface.

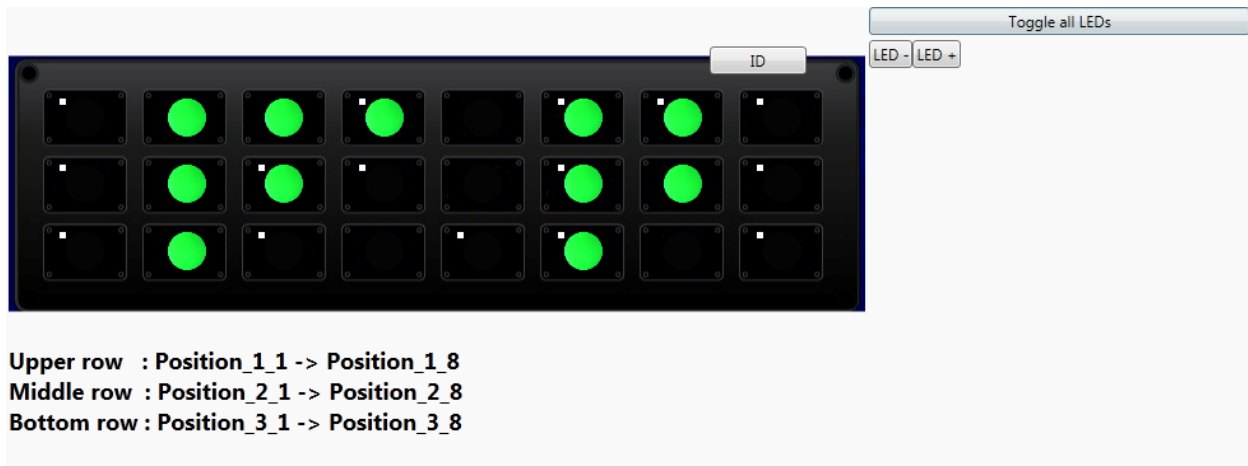


- IAS/HDG/CRS position inactive.
- Except the Right knob, all other commands are available as keyboard emulator or DCS-BIOS input.
- You can set 2 numerical outputs to ALT and VS position. Those will be pure DCS script outputs - and some results may not be what you expect*.

[*] It is currently showing raw DCS-BIOS output which is not meant for “human consumption” but rather for software/Arduino circuits. There will be changes made to this once a sustainable solution has been found.

Saitek Backlit Information Panel

The panel is only working in DCS-BIOS mode.



- You can configure light by right clicking on them. You can test the light with left click
- Toggle All LEDs will light all the panel.
- LED+ and LED- Allows you to manage the LED intensity
- Little squares show lights with scripts.

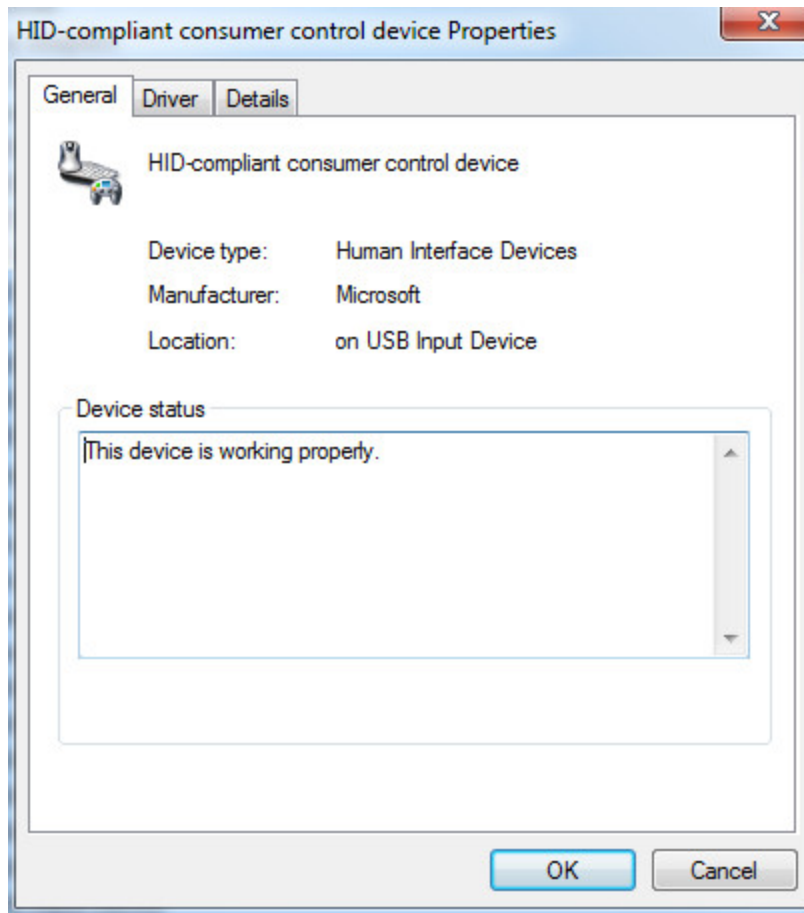
DRIVERS TROUBLESHOOTING

Unplug your Saitek panels from your computer.

Uninstall your Saitek drivers.

Plug again your Saitek Panels. They should use windows default drivers now.

Manual installation for windows manual drivers :



Enter the windows "*configuration panel*", then "*Devices and Printers*"

Search for your Saitek Panels. For each panels, do the following

-right click the panel, then "property" - a "property of :" windows will open.

-go into "hardware" tab

-IF it shows "*HID compliant devices*" and "*HID compliant consumer control device*" in the list of drivers, then your panels should work.

-IF NOT, go into "Properties", then a windows should open.

-Select "Modify" (admin rights are needed). the same windows should reopen again.

- In "Drivers" tab, hit "update drivers".
- The drivers selection page should open. Go ahead for a full list manual search
- Once all the drivers list shows up, uncheck the box "show compatible hardware"
- In the list, search for "*HID compliant devices*" and "*HID compliant consumer control device*" and install it/them. Discard the warning.

Profile does not recognize the proper panel.

If you change your panel's USB port around, Windows will most likely change the Instance ID and you will have to update your profile. If you are short of USB connectors, HUB hub (=multiplier) are inexpensive and can be found in most computer store (some large supermarket carry them too). Choose one with a power supply.

If you have any trouble with this software, you can contact the team on the following Eagle Dynamics page :

<http://forums.eagle.ru/showthread.php?t=137670>