



**Aviator for X-Plane**

**Custom Switch Panels**

Version 1.0.0.20 – Revised Jan-2020



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Table of Contents

Contents

Disclaimer .....2

About Custom Switch Panel.....3

Getting ready for Custom Switch Panel.....3

Editing and Creating Custom Switch Panel.....4

Mastering Custom Switch Panels .....5

List of available switch panel custom examples .....5

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Disclaimer

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Aviator PRO version provides some examples of switch panel customization and allows users to create new custom panels for their planes, but we are not providing custom panel for every plane neither free customization services.

Aviator’s plane switches customization, not only in Aviator but in most of the X-Plane products and plugins is not an easy task. User has to be familiar with the full X-Plane environment and concepts like Datarefs, commands, configuration files, settings and more. We will do our best to help users to integrate compatible plane elements with Aviator, but we will be not responsible of any customization or integration results.

Aviator development team will keep publishing new examples and documentation as well as panel contributions submitted by uses in X-Plane community.

We reserve the right to add, change, modify and remove Aviator’s functionality and features as well as this manual at our sole discretion and without any notice.



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## About Custom Switch Panel

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Aviator PRO version allow users to customize or create custom switch panel, either to change the way it looks or to create plane-specific features.

In the default switch panel, Aviator uses standard DataRefs and Commands to interact with X-Plane. It means that it will work well only with planes using X-Plane standard datarefs.

Switches and actuators are what changes most from one plane to another and lot of plane creators are bypassing standard DataRefs and using their own custom ones, very different from one plane to another.

Then, IMPORTANT: To create custom switch panel user needs to have basic knowledge of how DataRefs and Commands works for X-Plane. Unfortunately, there is no way to have an automated tool to create this easy or visually, there is no WYSIWYG tool to do this plus find out the plane-specific DataRefs to use is not an easy task. In other words, switch panel customization in Aviator is not for newbies or occasional users, but I think most of X-Plane users already know this.

Switch definition files are in JSON data format and can be edited in regular text editors. There are a lot of resources and JSON editors on the Internet, we use Notepad++ with JSON plugin.

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## Getting ready for Custom Switch Panel

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Aviator loads custom switch panel data from file switches.data located in a subfolder of \Data\acf\ inside Aviator's folder. This subfolder will have the same name of the .acf file for selected plane, in example: C:\X-Plane 11\Aviator\Data\acf\Eclipse\_NG\switches.data

If no custom file is found for selected plane, then Aviator uses \Data\acf\default\switches.data

Aviator will automatically create a folder for each loaded plane in X-Plane inside X-Plane 11\Aviator\Data\acf\. This folder will be empty by default. If you want to create a new custom switch panel for a specific plane, just copy \Data\acf\default\switches.data file to your new created plane subfolder in \Data\acf\ and start changing and customizing this file. You can just keep the default format and change DataRefs only or create a totally new and different one, following provided examples.

Never change default switch file located at \Data\acf\default\switches.data before copying to the new location first, this will affect to all other planes using default definitions.



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## Editing and Creating Custom Switch Panel

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The switch panel objects defined in .data file its just a list of objects in json format.

Users can find lot of resources explaining JSON file format on the Internet.

All the files content must start with [ and end with ], in between list of objects enclosed by { and }.

Let's see an example of minimum expression of a switch panel definition:

```
[{
  type: "switch",
  title: "EXAMPLE"
}]
```

Above code show one switch with title EXAMPLE and does nothing, so next step, let's do something useful:

```
[{
  type: "switch",
  title: "NAV",
  dataref: "sim/cockpit/electrical/nav_lights_on",
  on: 1,
  off: 0
},
{
  type: "switch",
  title: "STROBE",
  dataref: "sim/cockpit/electrical/strobe_lights_on",
  on: 1,
  off: 0,
}]
```

Above code shows now two operative switches for NAV and STROBE lights, using standard X-Plane DataRefs, of course you must enter your plane custom DataRefs instead if you want this to work for custom planes.

It's is very important to follow next syntax rule; all switches are between { } and comma separated:

```
[{switch code},{switch code}]
```

Particular DataRefs for each plane are sometimes difficult to find. There are also tools to view DataRefs: DataRefEditor, DataRefTool and some more, I personally use this last DataRefTool since it has special filtering capabilities.

The only way to go with this, read posts in the .org, google it a lot, patience and enjoy.

This is an example of what I'm talking about:

<https://forums.x-plane.org/index.php?/forums/topic/62991-how-do-i-find-the-custom-data-refs/>



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## Mastering Custom Switch Panels

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We will keep posting information about editing and creating custom switch panels for Aviator as well as expanding this manual, posting videos and supporting Aviator PRO users in the forum.

Some examples are provided in \X-Plane 11\Aviator\Data\acf\ and we will provide much more.

We also expect user community to contribute posting their own creations.

Use the examples provided in \X-Plane 11\Aviator\Data\acf\ as a starting point, you will be able to change format and look and replace existing DataRefs for your plane-specific ones.

Check related posts at <https://forums.x-plane.org/index.php?/forums/forum/499-aviator-pro/>

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### List of available custom switch panel examples

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#### **Included in Aviator Pro - January 2020**

<b><u>Aircraft</u></b>	<b><u>Developer</u></b>
<b>390 PREMIER IA XP11</b>	Carenado
<b>E50P PHENOM 100 HD SERIES</b>	Carenado
<b>PA31T CHEYENNE II XP 11</b>	Carenado
<b>PC12 HD Series XP11</b>	Carenado
<b>PC12 HD Series XP11 + REP</b>	Carenado
<b>Saab 340 XP11</b>	Carenado
<b>Eclipse 550 NG</b>	Aerobask
<b>Diamond DA62</b>	Aerobask
<b>Bombardier Challenger 300 v2 XP11</b>	Ddenn
<b>King Air 350</b>	Airfoillabs
<b>TBM900</b>	Hot Start
<b>Mitsubishi MU-2 Marquise</b>	X-Scenery
<b>Kodiak Quest G1000 v1.6</b>	Thranda
<b>Kodiak Quest G1000 v2.0</b>	Thranda
<b>Boeing B737-800X ZIBO</b>	Zibo
<b>Default Boeing B737-800</b>	Laminar Research
<b>Airbus A319</b>	ToLiss



**Custom panel templates published by fort1:**

[https://forums.x-plane.org/index.php?/profile/800354-fort1/content/&type=downloads\\_file](https://forums.x-plane.org/index.php?/profile/800354-fort1/content/&type=downloads_file)

Aircraft	Developer	Link
A320neo v1.5	JarDesing	<a href="https://forums.x-plane.org/index.php?/files/file/57314-jarDesing-a320neo-v15-multipanel-custom-switch-panel-template-for-aviator-pro/">https://forums.x-plane.org/index.php?/files/file/57314-jarDesing-a320neo-v15-multipanel-custom-switch-panel-template-for-aviator-pro/</a>
PC 12-47G	STMA	<a href="https://forums.x-plane.org/index.php?/files/file/56534-stma-pc-12-47g-custom-switch-panel-template-for-aviator-pro/">https://forums.x-plane.org/index.php?/files/file/56534-stma-pc-12-47g-custom-switch-panel-template-for-aviator-pro/</a>
LET L 410 turbolet	<a href="#">ksgv</a>	<a href="https://forums.x-plane.org/index.php?/files/file/56590-let-l-410-turbolet-custom-switch-panel-template-for-aviator-pro/">https://forums.x-plane.org/index.php?/files/file/56590-let-l-410-turbolet-custom-switch-panel-template-for-aviator-pro/</a>
Dash8 Q400_Legacy	FlyJSim	<a href="https://forums.x-plane.org/index.php?/files/file/57088-fjs_dash8q400_legacy-custom-switch-panel-template-for-aviator-pro/">https://forums.x-plane.org/index.php?/files/file/57088-fjs_dash8q400_legacy-custom-switch-panel-template-for-aviator-pro/</a>
Saab 340A v 2.5	LES	<a href="https://forums.x-plane.org/index.php?/files/file/56759-les-saab-340a-v-25-custom-switch-panel-template-foraviator-pro/">https://forums.x-plane.org/index.php?/files/file/56759-les-saab-340a-v-25-custom-switch-panel-template-foraviator-pro/</a>
Bombardier Challenger 300 v2	Ddenn	<a href="https://forums.x-plane.org/index.php?/files/file/57264-bombardier-challenger-300-v2-captain-edition-xp11-custom-panel-template-for-aviator-pro/">https://forums.x-plane.org/index.php?/files/file/57264-bombardier-challenger-300-v2-captain-edition-xp11-custom-panel-template-for-aviator-pro/</a>

**Custom panel templates published by Hosidax:**

[https://forums.x-plane.org/index.php?/profile/99698-hosidax/content/&type=downloads\\_file](https://forums.x-plane.org/index.php?/profile/99698-hosidax/content/&type=downloads_file)

Aircraft	Developer	Link
C404 Titan	Alabeo	<a href="https://forums.x-plane.org/index.php?/forums/topic/193691-custom-aircraft-template-request/&amp;do=findComment&amp;comment=1794973">https://forums.x-plane.org/index.php?/forums/topic/193691-custom-aircraft-template-request/&amp;do=findComment&amp;comment=1794973</a>
Beech18	STMA	<a href="https://forums.x-plane.org/index.php?/files/file/56699-aviator-pro-stma-beech18-switchesdata/">https://forums.x-plane.org/index.php?/files/file/56699-aviator-pro-stma-beech18-switchesdata/</a>
DO228	Carenado	<a href="https://forums.x-plane.org/index.php?/files/file/57162-aviator-pro-switches-for-carenado-do228/">https://forums.x-plane.org/index.php?/files/file/57162-aviator-pro-switches-for-carenado-do228/</a>
C47/DC-3	VSKYLABS	<a href="https://forums.x-plane.org/index.php?/files/file/57231-aviator-pro-switches-for-vskylabs-c47dc-3/">https://forums.x-plane.org/index.php?/files/file/57231-aviator-pro-switches-for-vskylabs-c47dc-3/</a>

**Custom panel templates published by Josh M:**

[https://forums.x-plane.org/index.php?/profile/822165-josh-m/content/&type=downloads\\_file](https://forums.x-plane.org/index.php?/profile/822165-josh-m/content/&type=downloads_file)

Aircraft	Developer	Link
AFM Mooney M20R Ovation II	AFM	<a href="https://forums.x-plane.org/index.php?/files/file/56773-afm-mooney-m20r-ovation-ii-custom-switch-panel-template-for-aviator-pro/">https://forums.x-plane.org/index.php?/files/file/56773-afm-mooney-m20r-ovation-ii-custom-switch-panel-template-for-aviator-pro/</a>