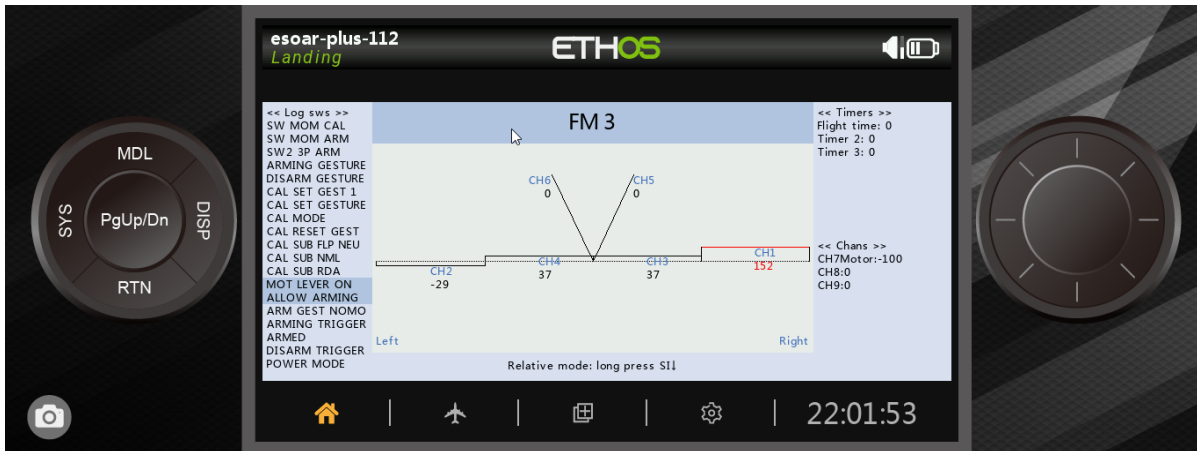


DevMon 1.6 - setup guide

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9 January 2023

<http://rc-soar.com/ethos/scripts/devmon>



Description

DevMon is a tool for debugging Ethos setups. Using DevMon, you can design your mixers and logical switches without the model being present - a great timesaver when designing complex models.

Main points:

- Displays channels 1 thru 9 as virtual control surfaces, where possible
- Displays logical switches, timers, and active flight mode
- Saturated channels are highlighted.
- Choice of relative or absolute display mode

Installation

DevMon can be run on any Ethos transmitter (X20 recommended), or an Ethos simulator.

If using a transmitter, copy devmon.lua to the \scripts folder of the transmitter. If using the sim, the scripts folder will be something like C:\Program Files (x86)\FrSky\Ethos\X20\scripts.

Then select the model to be debugged and assign the widget to a full screen view.

Control surfaces

On first use, DevMon reads the names of channels 1 thru 9. Based on the names, it makes a guess as to the control surfaces to assign. There is no formal syntax for channel names - DevMon will make a good guess if the names include clues like 'ail', 'flap', 'left' (or 'lt'), 'vee' etc. It copes well with the names assigned by the Ethos wizard, as well as the author's templates. Any incorrect assignments can be fixed in the Configure widget menu.

Supported control surfaces are:

- Flaps (L/R)
- Ailerons (L/R)
- Tips (L/R)
- V-tail (L/R)
- Rudder
- Elevator

Channels which are not associated with any surface are displayed as raw mixer values.

Direction of control surfaces

The default rules are as follows:

- *Channel values > 0*: surface deflects up and right
- *Channel values < 0*: surface deflect down or left

This is the convention used in the author's templates. With other setups, it's possible that some channels may be drawn reversed; this can be corrected via the Configure widget menu.

Widget configuration menu

Below is a (composite) screenshot of the Configure widget menu:



Configuration options:

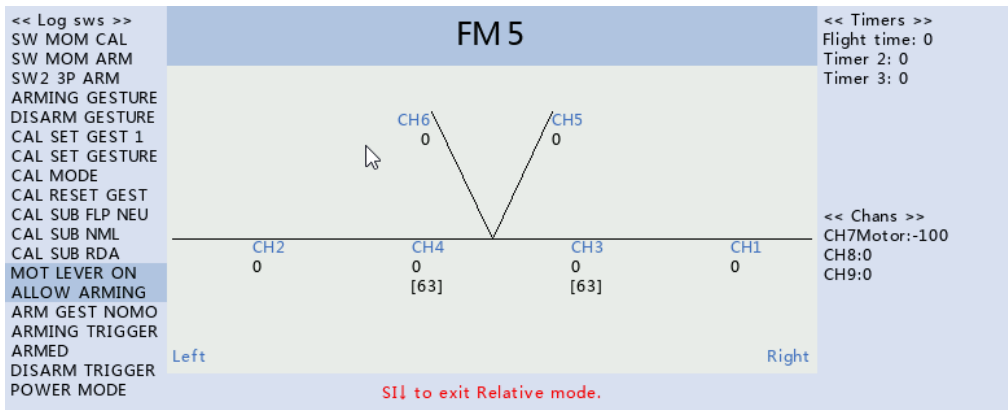
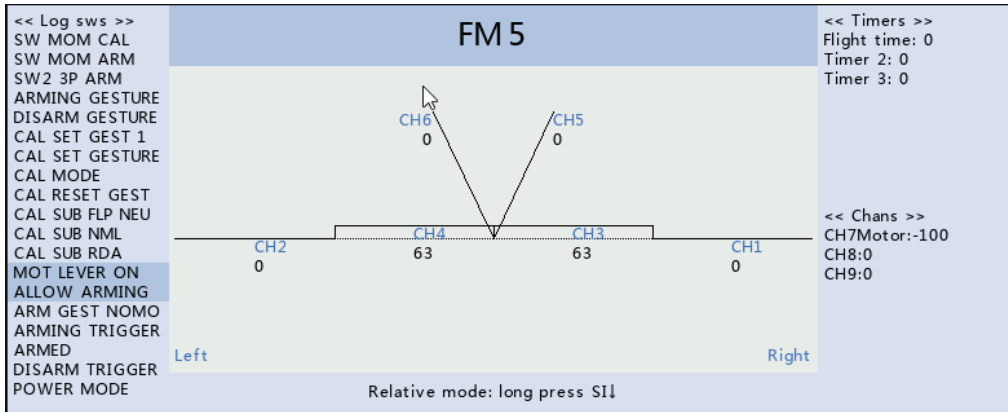
Configuration option	Description
Logical switches view	Number of columns to display logical switches
Button to select relative mode	Select from SI, SJ or SH
Channel list 1-9	Left column is channel name. Right columns are settings for virtual control surface. To remove a surface, set it to '---'. To set the render direction, choose 'normal' or 'inv'.
Reinitialise assignments	Click to reassign control surfaces automatically.

Display mode

There are two display modes: Absolute (the default) and Relative. NOTE: *Relative mode is only available from the transmitter. It is not available when running in the simulator!*

Before activating Relative mode for the first time, you must first define the momentary switch to use: enter the Configure widget menu. Advance to the 'Button to select relative mode', then select the switch from the dropdown.

When Relative mode is activated, the current channel values are stored as the new baseline. Subsequent deflections are relative to the baseline. Relative mode is useful when the flap neutrals are offset, as in the example below.



Operating tips and tricks

If a surface moves in the wrong direction in response *some* inputs *but not others*, then the mixing scheme is inconsistent. To fix this, reverse the relevant mixers in the Ethos setup.

If a surface moves in the wrong direction for *all* inputs, then the mixers are... consistent! Simply change the drawing direction (see Configuration menu). This is analogous to reversing the servo.

Once the control surfaces respond consistently to all inputs, the mixer scheme is validated and no further changes should be needed. Final adjustments to servo direction, centre and limits can then be made with the actual model, via the Outputs menu.

If using one of the author's templates with V-tail option enabled, the model may be initially shown incorrectly with rudder and elevator. You can correct this either manually, or by choosing 'Reinitialise assignments' in the Config menu.

Keyboard operation with the sim

<https://github.com/FrSkyRC/ETHOS-Feedback-Community/wiki/Ethos-Simulator---Keyboard-Shortcuts>

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