

# Advanced Snapflap Script (snp500.lua)

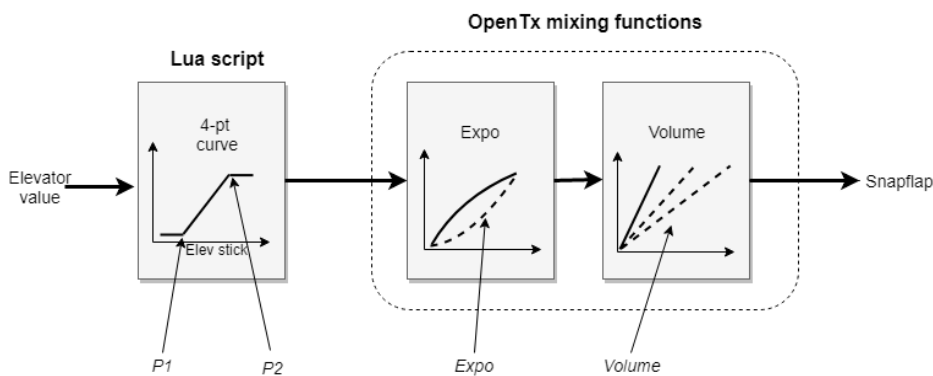
**Snp500** is a mixer script which allows upper and lower snapflap deadband to be adjusted in flight. The script is designed for competition pilots who wish to optimise snapflap for racing.

This document describes how to install the script in the author's F3F template v6.2 for OpenTX/EdgeTX. Some basic skills in Open/EdgeTX are required.

## 1 How it works

The script generates a 4-point curve and applies it to the elevator stick. The curve end points are fixed. Inflection points P1 and P2 are adjustable via inputs SL1 and SL2, and define lower and upper deadband.

Expo and Volume adjustment can be added using standard o/s features. A complete snapflap system can therefore be represented as follows:



## 2 Requirements

- Transmitter running F3F template for OpenTX/EdgeTX v6.2
- Optionally, sliders/knobs for deadband adjustment

**Snp500** must be installed as a mixer script. At the time of writing, mono screen radios running EdgeTX do not support mixer scripts.

## 3 Script parameters

- CP1 = channel number supplying P1 x-value
- CP2 = channel number supplying P2 x-value

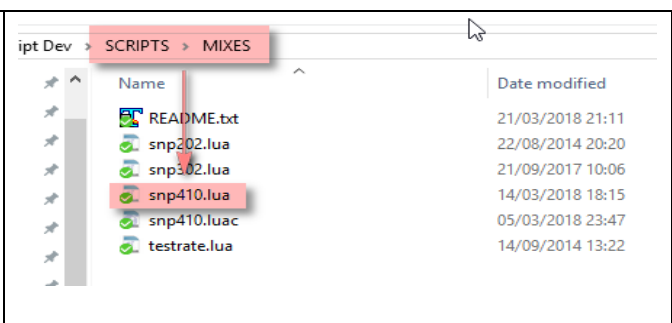
In the author's F3F template v6.2, channels 24 and 25 are already configured.

## 4 Installation

Okay, so let's do the installation. It'll be a question of copying the script to the radio, then configuring it. Next, you'll edit the snapflap mix to use the script instead of the elevator. And finally you'll test it all works! Make sure to back up your setup before you start, that way you won't panic if you make a mistake.

### Copy script to radio:

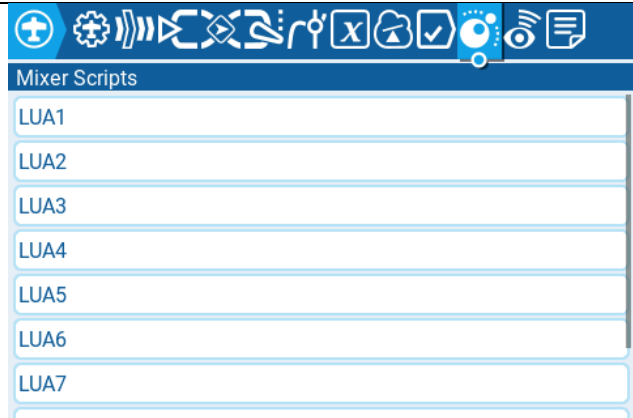
1. Activate your F3F v6.2 model
2. Make a backup (duplicate)!
3. Establish a USB connection with radio
4. Copy snp500.lua to folder \SCRIPTS\MIXES. (The folder will already exist on the SD card or internal drive).



**Prepare for installation:**

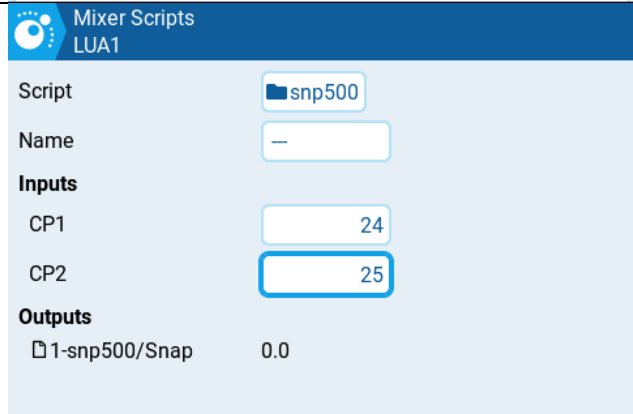
If using EdgeTX, make sure that the 'Mixer scripts' menu is enabled in both System and Model settings.

1. Open the Mixer Scripts menu
2. Clear any entries already present



**Configure the script**

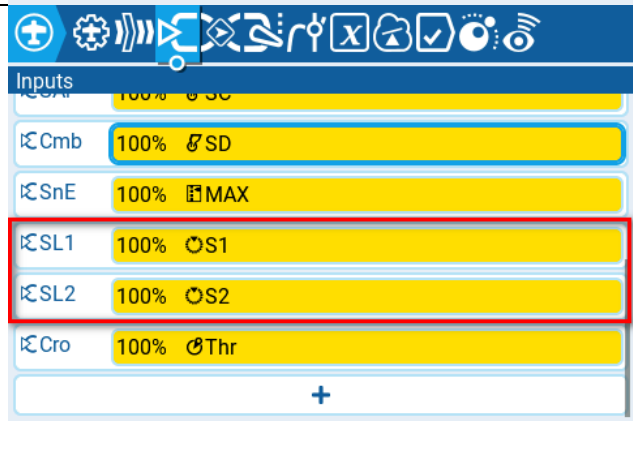
1. Highlight LUA1
2. Press Enter to open the configurator
3. Set script = 'snp500'.
4. Set CP1 to 24
5. Set CP2 to 25
6. Check that output varies as the elevator stick is moved
7. Exit the script configurator



**Configure the inputs.** These define the controls used to adjust the deadband and are used as sources in CH24 and CH25.

1. Open the Inputs menu
2. Scroll down to SL1 and SL2
3. Set each source to a slider or knob.
4. Set the weights to 100%

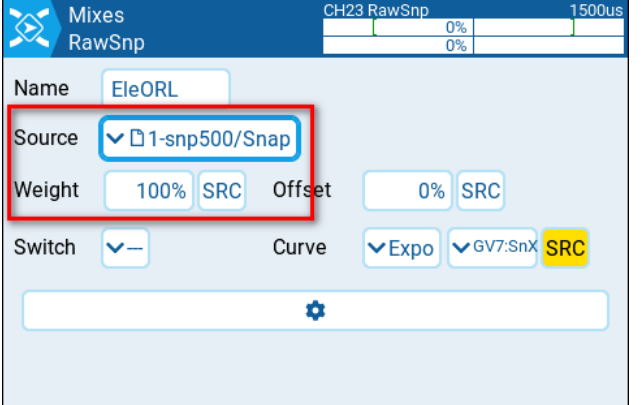
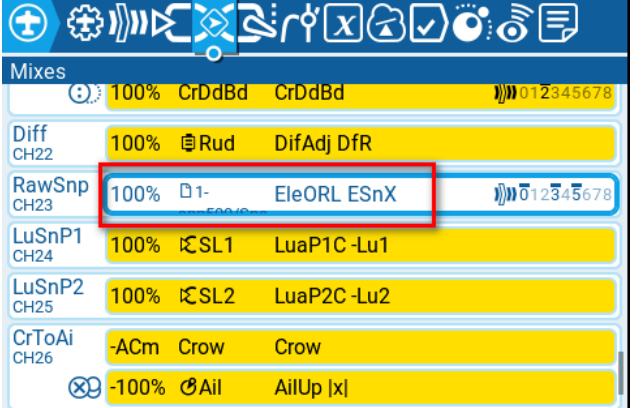
To reverse an adjuster, change weight to -100%.  
To lock an adjustment, set the source to MAX and set the weight as required.



**Prepare to edit the snapflap mix:**

5. Open the Mixers menu
6. Scroll down to RawSnp mix (CH23)
7. Press Long Enter and open the mixer editor.



<p><b>Edit the snapflap mix:</b></p> <ol style="list-style-type: none"> <li>1. Change the source of the mix from 'Ele' to Lua script 'Snap'</li> <li>2. Set weight to 100%</li> </ol>	
<p><b>Finish up:</b></p> <ol style="list-style-type: none"> <li>1. Exit the mixer editor.</li> <li>2. Check the new Lua source is displayed in the mix line.</li> </ol>	

## 5 Testing

Okay, so now for final testing with the model:

1. Activate NORMAL flight mode.
2. Open the Outputs menu
3. Highlight the snapflap mix (CH23 in the F3F template).
4. Check the output as the elevator stick is moved.
5. Now vary the upper and lower deadband and observe the effects.

## 6 Range of deadband adjustment

The range of adjustment of P1 and P2 are defined by curves **Lu1** and **Lu2** respectively which are applied in CH24 and CH25. Each curve has two points defining the range of adjustment, such that the upper and lower deadbands cannot overlap. It should not be necessary to alter the curves.

## 7 Operation with radios without sliders

Some radios don't have suitable sliders or spare trims for adjusting P1 and P2. You can preset the P1 and P2 by specifying MAX as the source of inputs SL1 and SL2, and setting weight as required.

**Test thoroughly before flight  
- if in doubt... don't fly !!**