MULTIPLEX

Profi Tx – Example– Elevator Flap Compensation

Revision 1

21st Nov 2017

Profi – Example – Elevator Flap Compensation

Revision history

Revision 1 – 21st Nov 2017 – Initial Issue

Profi – Example – Elevator Flap Compensation

This example runs through the set up Elevator compensation as Flaps are depolyed on the Profi (v3.56)

1 – Overview

2 – Control assignments, mixer definitions, servo assignment

3 – Mixer settings

Profi – Example – Mini Blade Glider

1 – Overview

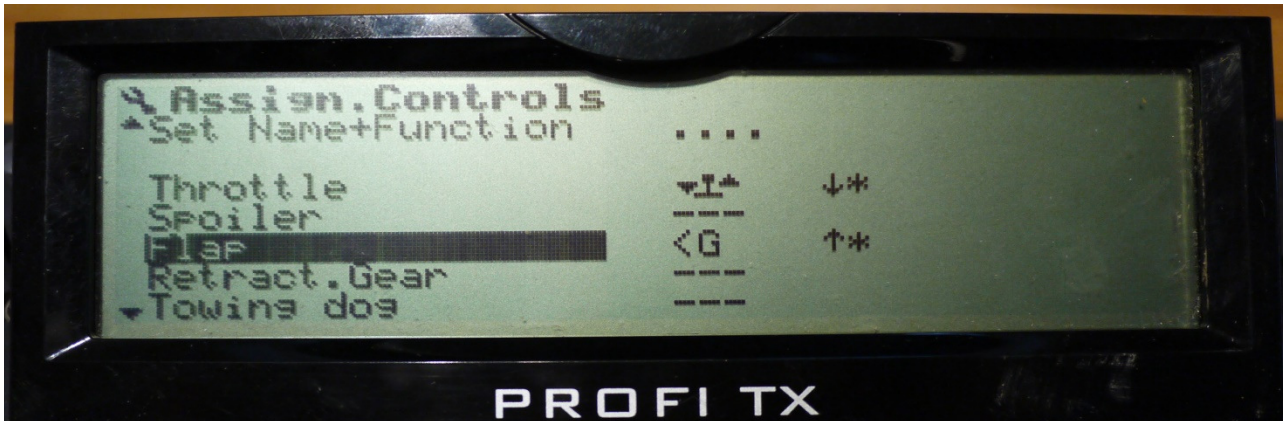
This example shows the setup of Elevator compensation as flaps are deployed either by a slider or 3 position switch.

Typical uses would be on a powered model where down elevator is required as the flaps are deployed to stop the model from nosing up.

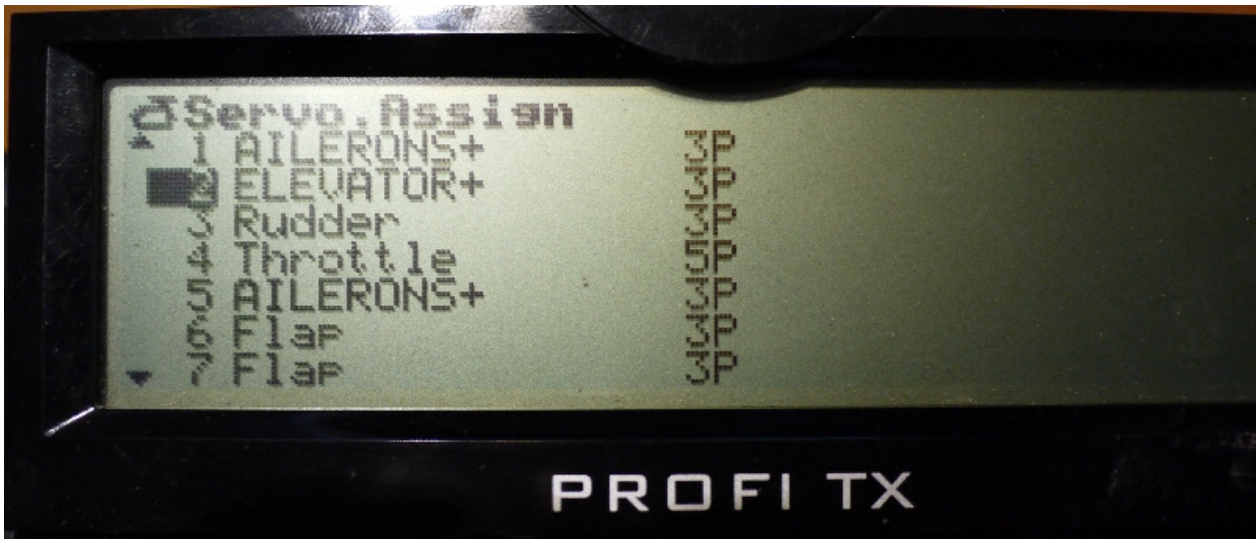
The example is from a Ranger FPV model, note in this example the flaps are only controlled by the slider and have no inputs from any other controls, if this was required then the flaps would have to be assigned to a mixer (e.g. Flaps+) too.

Profi – Example – Elevator Flap Compensation

2 – Control assignments, mixer definitions, servo assignment



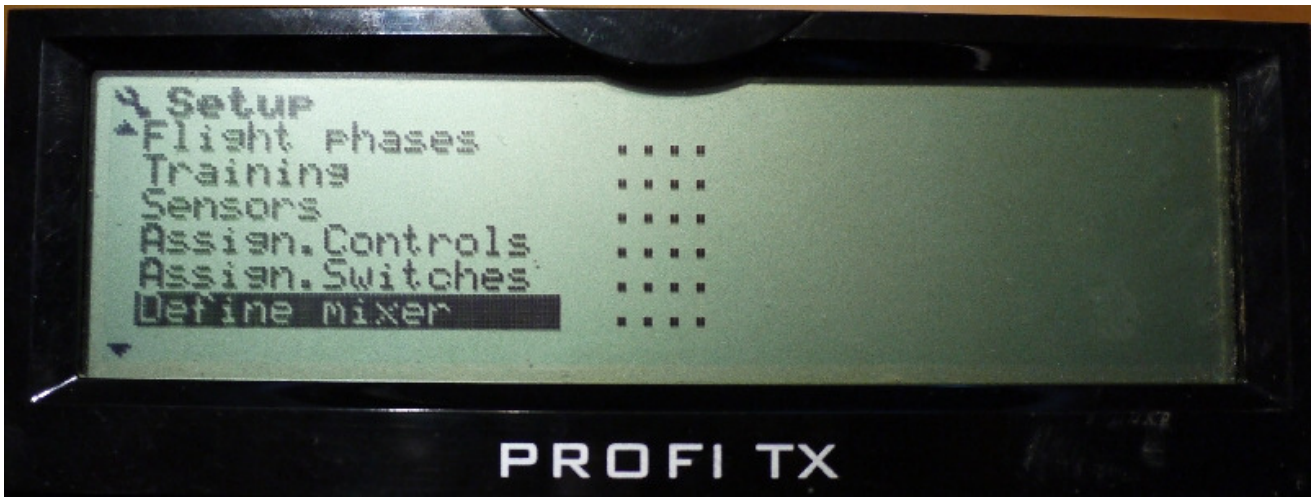
In the assign controls menu, select the required Flap control, here side slider G has been assigned, but they can be assigned to a 3 position switch if preferred



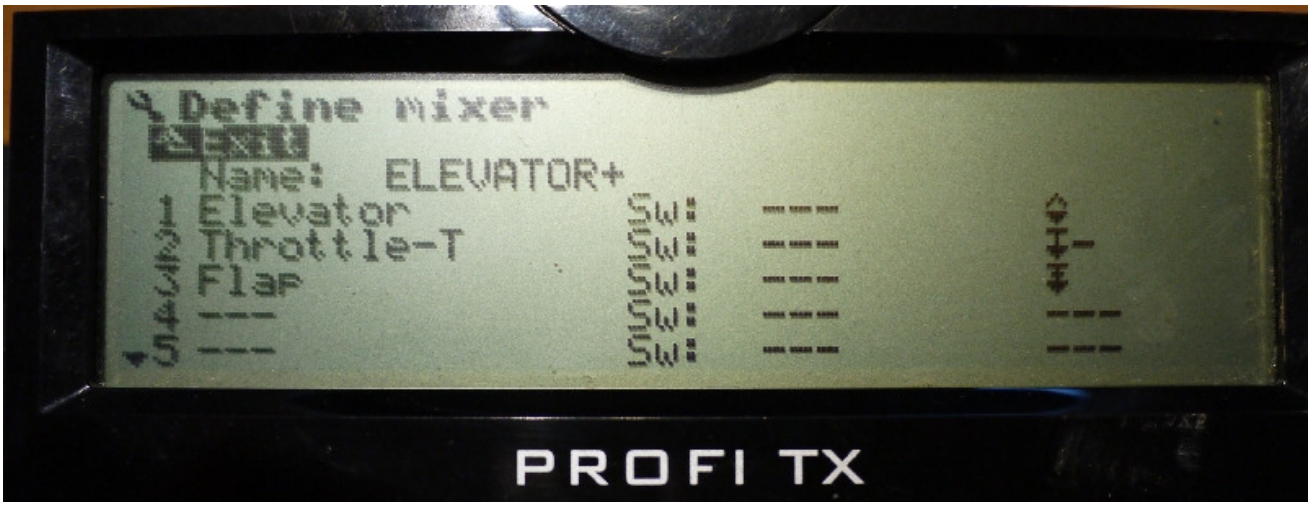
Then in the servo assignment, assign the elevator servo to the ELEVATOR+ mixer, channel 2 here. Note here that the models flaps are assigned to channels, 6 and 7, on this model the flaps are used for take off and landing only and have no input from the aileron control (for full span wing ailerons), elevator (for snap flap) or spoiler for crow braking. If these were required then flaps would need to be assigned to a mixer (e.g. FLAPS+), the movement of the two flaps servos can then be set in the servo calibrate menu (not shown)

Profi – Example – Elevator Flap Compensation

2 – Control assignments, mixer definitions, servo assignment



Enter the define mixer menu

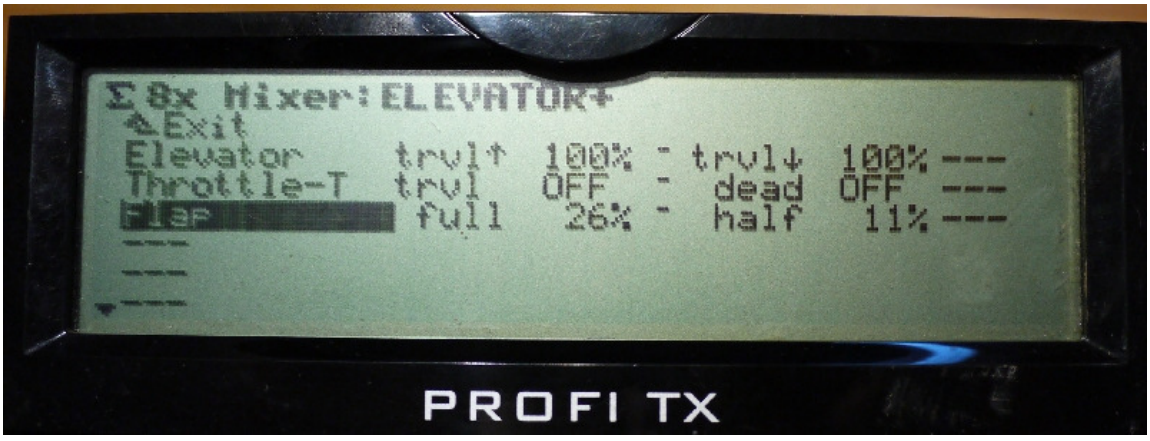


Select the ELEVATOR+ mixer and add Flap as one of the control inputs using the single side curve with two positions, the curves are covered in the mixer tutorial but this curve applies a mix which can be adjusted at the middle and end flap settings. Note other inputs are elevator, obviously, and also throttle without trim to allow some elevator compensation to be added if the model climbs or dives under power

Profi – Example – Elevator Flap Compensation

3 – Mixer settings

Enter the mixer settings menu and select ELEVATOR+



The Flap control input to the ELEVATOR+ servo can now be set at the mid and end position of the Flap control. Note if you find that the full position corresponds to the flaps in their up position and not fully down, you will need to enter the controls menu and reverse the action of the flap control by selecting the flap control and pushing the Rev/Clr button this will then change where the full mix has effect.

Profi – Example – Elevator Flap Compensation

Notes

- These are my settings and controls layout on this model, you can change them to suit your preference and use a different control input for the flaps
- You could if desired in the Mixer Setting menu assign the half and full flap inputs to the digiadjusters (see Didgiadjuster tutorial) this would then allow you to adjust the mix input in flight, so you could do the set up over one flight without having to land reset and then re-test.
- This is one method of adding elevator compensation others would be
    - Use a Control Mixer, but this does not allow the two position curve so you can only specify a straight line mix.
    - Use flight phases and have a different flap position per flight phase, then by selecting Phase Trim ON in the elevator controls menu you can set the trim the elevator in each flight phase.
- Although this tutorial is written for the Profi the procedure is the same for the Royal Pro/Sx.
- ANY QUESTIONS PLEASE ASK