Thread: Discussion ETHOS - V-Tail Differential w/ Live adjustment

View Single Post

Dec 05, 2022

🔘 mawz



## ETHOS - V-Tail Differential w/ Live adjustment

If you fly anything V-tail on ETHOS, you know one of the frustrations is that the rudder mix lacks differential. That lack makes a lot of sense for the normal rudder mixer, but for V-Tail it prevents you from easily dialing out yaw-pitch coupling in the V-tail (ie where you get a pitch excursion with only a rudder input). You need V-tail differential to tune that out.

The good news is there is an easy fix for this. It requires a single mixer addition, the Rud=>Ele mixer and a 3-point custom curve.

To start off, go and add a Rud => Ele mixer, it will auto-populate with the correct channels

This image has been resized. Click this bar to view the full image. The original image is sized 800x480.							
< Mixer	ETHOS			Π	L ■ G_ ( 7.9∨ <sub>TxBatt</sub>		
Name	Source	Channels		Rud => E			
Ailerons	Aileron	1, 5		A	ways On		
Elevators	Elevator	2, 4			100%		
Throttle	Throttle	3					
Rudders	Rudder	2, 4			0%		
Rud => Ele	Rudder	2, 4		-100%			

Now in the edit screen for the mixer, add a Custom Curve



RC Groups - View Single Post - ETHOS - V-Tail Differential w/ Live adjustment

Kud => Ele	ETHO	S		L • G ♥ 7.9∨ ™Batt
Name	Rud => Ele 📝			100%
Active condition	Alway	s On 🔻		
Curve	VTAIL DIFF 🔻	Edit		0%
	+ Add a new curve			
Channels count		2	-100%	
Weight	Pot2 🔻		U	
Output1	CH2 (Elevat	or1) 🔻		
CH2 Channe				

The curve is of the Custom type, 3 points and the points will be 100,0,100 so that you get the same input on each side of the rudder.

This image has been resized. Click this bar to view the full image. The original image is sized 800x480.							
< Curve1	ETHOS				Г <b>∟ е сј  ¶ 7.9</b> ∨ <sub>т×ваtt</sub>		
		Points Count			3points		
		Smooth					
		Easy Mode					
		Points Config				$\sim$	
		Point1	x	-100%	у	100%	
		Point2	x	0%	у	0%	
		Point3	x		у	100%	

Then go back to the edit page for the Rud => Ele mixer and either adjust the weights for the two output channels to get the setting you want, or if you need to tune it, long press the Weight box, select use a source, then select the adjuster you want. I've used S2/Pot2 in this case. Make sure you have the same input setup for each channel. Once tuned, you can long-press the source and select 'Convert to Value' to ensure you don't accidentally lose the setting.

