## Function curve for Butterfly control, ButFlyFN.lc

9. november 2017 12:42

## Function curve for Butterfly control

This script enables a function curve for the Butterfly control input.

The current standard butterfly mixer uses a Control as a input, not a Function, and no function curve is possible.

My workaround is to create a new Function "Butterfly input", and for this function a function curve can be applied.

The function is assigned to an available servo.

The script reads the servo output and passes it on as a control output that can be used by the Butterfly mixer.

Discussed on Jeti forum July 2017.

### Installation

Copy the file ButFlyFN.lc to the Apps folder on the transmitters SD card (via USB)

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Apps	BattMon		20-02-2017	18:08 File fold	der			
Audio	BattVolt		20-02-2017	18:08 File fold	ler			
Config	MainLow		20-02-2017	18:08 File fold	der			
Devices	Preflight		20-02-2017	18:08 File fold	der			
	ThrotBmp		20-02-2017	18:08 File fold	ler			
ing	BattMon.lc		15-02-2017	15:35 LC File			8 KB	
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Log	ButFlyFN.lc		09-11-2017	11:22 LC File			2 KB	
🤰 Manual	MainLow.lc		15-02-2017	15:35 LC File		3	4 KB	
Model	Preflight.lc		15-02-2017	15:35 LC File			4 KB	
Music	Sensors.lc		15-02-2017	15:35 LC File		8	4 KB	
Update	ThrotBmp.lc		15-02-2017	15:35 LC File			2 KB	
Voice	ThrotCut.lc		09-11-2017	11:22 LC File		10	2 KB	
	TrainSw.lc		15-02-2017	15:35 LC File			3 KB	
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# Go to Applications, User Applications

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Press the + sign to add an application and select the ButFlyFN application

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## Create butterfly input function

TX000	Default		12:22:25	64%	
		Model			
👅 Select Model					
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± Ba	asic Prop	erties			
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	Functio	ns Assi	gnment	:	
F	unction	Control	Trim Tri	m-Max	
1	Ailerons 💋	P1	🔽		
2	Elevator 🗹	P2 🗧	🔻	I	
3	Rudder 💋	P3	🔻		
4	Throttle 💋	P4	🔻		
5 /	Airbrake 🛙	P8	🔻		
r	Flanc AR	ъс Г			
	Auto	Add	Del.	Ok	

Select Add function and assign the Control you want to control butterfly

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Functions Assignment						
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4		Throttle 🗹	° P4	🔻	]	
5	A	Airbrake 🛙	r P8	🔻	]	
6		Flaps 🖌	° P5	· 🔻	]	
7		Gear 🖌	🕺 Sn 🗸	• <b>•</b>	]	
8	Butt	erfly ctl 🛿	r P6	🔻	]	
		Auto	Add	Del.	Ok	

#### Create servo output

TXaaa	Default		12:22:29	64%		
Model						
👅 Se	elect Mode	el				
- <u>∄</u> N	ew Model					
±Ва	asic Prope	rties				
🛋 M	odel Imag	ge & (	Colors			
i∦ Fu	unctions A	ssign	ment			
👘 Se	ervo Assig	nmer	nt			
		-				

Select an unused servo and assign the Function Butterfly ctl to it

'2000 <b>-</b>	Default		12:22:53	64%
	Servo As	sigr	nment	
5	Flap 3 💌	6	Fla	ap 4 💌
7	Aileron 2 💌	8	Elevat	or 1 💌
9	Rudder 💌	10	Elevat	or 2 💌
11	Gear 1 💌	12	Airbral	ke 1 💌
13	Airbrake 2 💌	14		💌
15	🔻	16		🔻
47		40		
	A	uto		Ok

Tx	Default		12:22:05	64%	
Select Option					
LICV	מנטו ו				
Rud	der				
Elev	ator 2				
Gea	r 1				
Airb	rake 1				
Airb	rake 2				
Butt	erfly ctl				
Esc				Ok	

Go to "Advanced Properties" "Butterfly function curve input" (the Lua app installed) Configure the servo number configured under servo assignment



## Configure Butterfly mixer

Go to	"Fine Tuni	ing" '	'Butterfl	у"		
TX	Default		12:22:53	64%		
Fine Tuning						
		vhoi	encial			
🏏 Fu	unction Cu	irves				
₽ <b>‡</b> Ai	leron Diff	eren	tial			
📥 Ai	levator					
🧠 Bi	utterfly					
🗘 Sr	🔁 Snap Roll					
🔀 Free Mixes						

#### Select the Control to be used

	-000°	Defa	ault		12:	22:09	64%
			But	terf	ly		
0	ontr	ol	Offset	-	Del	ay +	Mode
		•	0%	0.0	)s	0.0s	₿G
Ailerons/Flaps Adjustment Elevator Adjustment Tuning							
E	ileva unin	tor A	djustme	nt	ent		» » »

## Select Apps

'	2000 <u>-</u>	Default		12:22:15	64%			
Select Input Control								
	Move the desired control to active position. The event will be automatically detected							
	Log.	G SENS.	A∕₿	Мх	Apps			

#### Select BFL

Tx	Default		12:22:37	64%				
Select Input Control								
СUT	ThrCut, s	stick at idl	e for rese	t <b>-100%</b>				
BFL	Butterfly	Butterfly via servo output 0%						
Log	G SENS.	A B	Mx	Apps				

Voila!

T		Default		12:22:05	64%				
_	Butterfly								
Control Offs		et -	Delay +	Mode					
	BFL	BFL 0% 0.0s 0.0s		₿G					
	Aileror Elevato Tuning	» » »							
	Sym.				Ok				

Configure function curve Go to "Fine Tuning" "Function Curves" Tx\_DD Default 12:22:38 64%

-0000							
Fine Tuning							
$\equiv$ FI	$\equiv$ Flight Modes						
💠 Digital Trim							
i밝 Flight Mode Trim							
🔁 Dual Rate/Exponential							
🔀 Fu	unction Curves						
📲 Aileron Differential							
-							

#### Select the Butterfly control TX DI D

Defa	ault	12	2:22:48	1	64%			
Function Curves								
Function	Curve	- De	lay +	FM.	Delay			
Throttle	$\geq$	0.0s	0.0s	×	₿G			
Airbrake	$\geq$	0.05	0.0s	~	₿G			
Flaps	$\geq$	0.05	0.05	~	₿G			
Gear	$\geq$	0.05	0.05	~	₿G			
Butterfly c	tl 🔼	0.05	0.05	•	₿G			
Ê			$\sim$		Ok			

Setup desired curve, e.g. a 7 point curve



#### There you go :-)

Tx	Defau	lt		12:2	22:50		64%		
Function Curves									
Funct	- 1	Dela	iy +	FM.	Delay				
Throt	tle	$\geq$	0.0	5	0.0s	×	₿G		
Airbra	ke	$\geq$	0.0	5	0.0s	~	₿G		
Flaps		$\geq$	0.0	5	0.0s	~	⊕G		
Gear		$\geq$	0.0	5	0.0s	~	₿G		
Butte	rfly ctl		0.0	5	0.05	•	₿G		
	1	•		1	$\checkmark$		Ok		

## TEST !

Test and understand.. Use at own risk.