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163 Cleveland Cloudster 600 - Preflight Preparations (Part 2)

1 message

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Report No. 163

*Cleveland Cloudster 600*

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*In Report No. 162, I did not explain each of the Futaba 7C transmitter's program values in the table which is shown below. I am no expert on programmable transmitters. However, I will do my best to discuss the meaning and purpose of each of the Tx settings in the table above. This description is meant for those modelers who may not be all that familiar with programmable transmitters.*

The table below is a record of the Futaba 7C transmitter's programmed values for the Cloudster 600 in the (02) memory bank for the maiden flight.

<b>(02) Cloudster 600</b>		<b>4.26.21</b>	
<b>Tx Setting</b>	<b>Aileron (Rudder)</b>	<b>Elevator</b>	<b>Throttle</b>
	<b>1</b>	<b>2</b>	<b>3</b>
Reverse	NOR	NOR	REV
E. Point	R 54%	U 86%	Off 100%
	L 54%	D 69%	On 100%
(D) D/R	SWB 100%	SWA 100%	N/A
(D) Exp.	SWB -76%	SWA -76%	0%
(U) D/R	SWB 50%	SWA 50%	N/A
(U) Exp.	SWB -20%	SWA -20%	0%
Sub Trim	0	0	0
F/S	N/A	N/A	Nor
<b>PMix3 T-Down Elevator</b>		<b>PMix2 T-Right Rudder</b>	
M3>S2	RT+10%	M3>S1	RT-10%
SWE	RT 0%	SWG	RT 0%
<b>SWD &gt; Flt Timer Count Up to 45 Min</b>			

1. Radio assist SAM Old Timer models do not have ailerons and are controlled with rudder, elevator, and throttle. For this reason I prefer to use three of the Tx's primary channels with *the rudder servo plugged into the aileron* channel (Ch-1) as shown in the header of the table above. This way the model is flown with rudder (Ch-1) and elevator (Ch-2) controlled with the right Tx stick and only throttle (Ch-3) controlled with the left Tx stick.
2. **REVERSE** - The orientation and push rod linkage for the rudder and elevator servo installations were normal (NOR) and did not require Tx "Reverse" settings for Ch-1 and Ch-2 to provide the correct control surface deflection responses to the Tx stick deflections. However, the throttle Ch-3 had to be reversed (REV) to be compatible with the electronic speed control of the electric motor, throttle down - motor off and throttle up - motor full on.
3. **E. Point** - The End Point setting is used to adjust the servo rotation as follows:  
(CH-1): 54% rudder right and 54% rudder left.  
(Ch-2): 69% elevator up and 86% down (Ch-2).  
(Ch-3): 100% throttle in both motor "ON" and "OFF" positions.
4. **(D) D/R & (U) D/R** - The dual rate setting is used to reduce the amount of control surface deflection. Full rudder deflection with Switch B in the down (D) direction and 50% deflection in the up (U) direction. Full elevator deflection with Switch A in the down (D) direction and 50% deflection in the up (U) direction.
5. **(D) Exp. & (U) Exp.** - The negative Exponential setting is used to make the control surface deflections less sensitive around neutral. The rudder is -76% for with Switch B in the down (D) direction and -20 up (U) directions. Elevator is -76% for with Switch A in the down (D) direction and -20 up (U) directions.
6. **Sub Trim** - This setting makes small changes in the control surfaces neutral positions. All three channels are (0).
7. **F/S** - Fail Safe applies to the throttle Ch-3 only and sets responses in case of loss of signal. The two options are fail safe (F/S) or normal (NOR). I do not use this function so the setting is (NOR).

*There are 3 programmable channel mixes (PMix1, PMix2, & PMix3) that may be programmed to use any combination of the Tx's 7 channels. Each mix can be enabled by assigning any of the Switches A, B, D, E and G. The channel mixes also have a programmable OFFSET function, but it will not be discussed since it was not used.*

8. **PMix2** - This channel mix has the rudder slaved to the throttle with -10% (RT-10%) right rudder deflection at full throttle when Switch G is in either up positions. The mix is disabled with the Switch G in the down position. This mix is to compensate for prop torque producing left turn due to lack of right thrust and helps keep the model from turning left in the climb under power if necessary and will be adjusted during flight test.
9. **PMix3** - This channel mix has the elevator slaved to the throttle with +10% (RT+10%) down elevator deflection at full throttle when Switch E is up. The mix is disabled with the Switch E in the down position. This channel mix is to compensate for lack of enough down thrust and helps keep the model from pitching up in the climb under power if necessary and will be adjusted during flight test. The channel mix also has a programmable OFFSET function, but since it was not used, it not be discussed.
10. **Timer** - This timer is displayed on the Tx's LCD panel. It can be programmed to count up or down in seconds and minutes from 0 to 99 minutes 59 seconds. The timer can also be programmed to start and stop with any Tx switch as well as the throttle channel. The table above shows the Timer count starts and stops with Switch D and counts up from 0 to 45 minutes. The Timer count starts when Switch D is switched from down to up just before take-off. By switching Switch D from up to down upon landing to stop the Timer, the total flight time can be recorded.....Tandy