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FW: 113 Rocketeer A - Fourth Flight Test Series

1 message

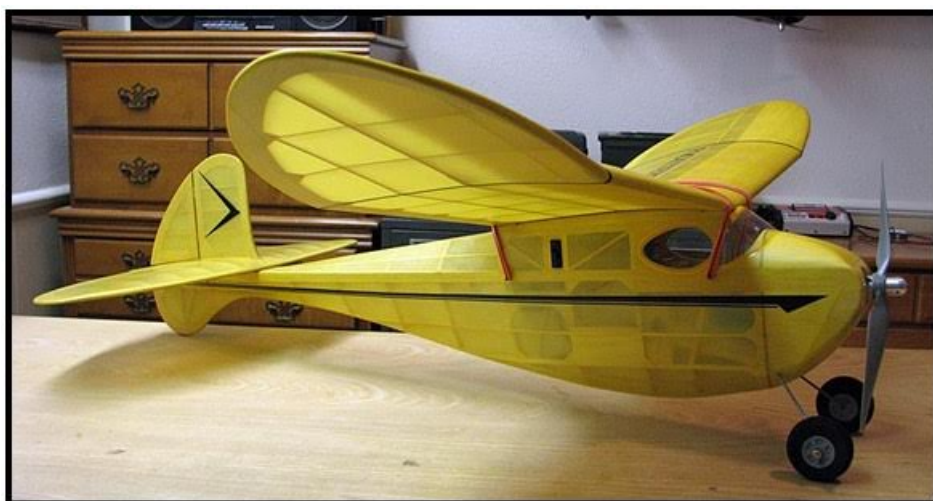
Tandy Walker <rdb435021@icloud.com>
To: Trevor Boundy <trevor@boundy39.com>

Fri

From: Tandy Walker [<mailto:aerotan1503@outlook.com>]
Sent: Friday, September 16, 2016 2:35 PM
Subject: 113 Rocketeer A - Fourth Flight Test Series

Rocketeer A

September 16, 2016



Based on yesterday's flight test results, I decided to eliminate the elevator's dual rate function and use only the reduced value of deflection due to the model's sensitivity to elevator control. This was accomplished by setting U(D/R) to 100% and then reducing the elevator's U and D End Point settings to 42% each. These programming changes are shown in red in the table on the right below. Now Switch A in either the up or down position has no effect on the elevator's deflection. In addition, the throttle/elevator mix P-MIX3 was increased to +60% to try and eliminate the model's climbing with throttle advance.

9/15/16 - Yesterday's TX Settings

9/16/16 - Today's TX

Setting	Aileron (Rudder)	Elevator	Throttle
	1	2	3

Setting	Aileron (Rudder)	Elevator	Throttle
	1	2	3

Reverse	REV	REV	REV	Reverse	REV	REV	REV
E. Point	R 75%	U 75%	Off 100%	E. Point	R 75%	U 42%	Off 100%
	L 75%	D 75%	On 100%		L 75%	D 42%	On 100%
(D) D/R	SWB100%	SWA 100%	N/A	(D) D/R	SWB100%	SWA 100%	N/A
(D) Exp.	SWB -50%	SWA -50%	0%	(D) Exp.	SWB -50%	SWA -50%	0%
(U) D/R	SWB 55%	SWA 55%	N/A	(U) D/R	SWB 55%	SWA 100%	N/A
(U) Exp.	SWB -50%	SWA -50%	0%	(U) Exp.	SWB -50%	SWA -50%	0%
Sub Trim	(+) 20	0	0	Sub Trim	(+) 20	0	0
F/S	N/A	N/A	Nor	F/S	N/A	N/A	Nor
PMix3 T-Down Elevator		PMix2 T-Right Rudder		PMix3 T-Down Elevator		PMix2 T-Right Rudder	
M3>S2	RT +60%	M3>S1	RT-15%	M3>S2	RT +60%	M3>S1	RT-15%
SWE	RT 0%	SWG	RT 0%	SWE	RT 0%	SWG	RT 0%
SWD > Flt Timer Count Up to 45 Min				SWD > Flt Timer Count Up to 45 Min			

I arrived at Veteran's Park again around 10:00 a.m. this morning. The wind was out of the NE at 6 mph and there were no clouds in the clear blue sky. I hand launched the Rocketeer model again using only ~ 15% throttle with the throttle/elevator mix off. Slowly adding power to reach up to a high altitude, the throttle was cut and the model entered gliding flight. Quite a bit of down elevator and a slight amount of right rudder was required to achieve a hands-off trim glide. Some time was spent at this high altitude just enjoying the little Rocketeer A's gliding flight back and forth across the direction of the wind.

After some descent, the +60% throttle/elevator mix was turned on with Switch A and power was gradually added. As the power increased it started to dive and suddenly veered off into almost a vertical spiral down to the right. However with power off, the model recovered quickly, thank goodness!

The model was brought down and the throttle/elevator mix P-MIX3 setting was reduced to +45%. On the last test flight when power was gradually added, the model tracked straight for a short time, but as the power increased it started into a gentle dive, but did not go into the spiral. Upon recovering, the battery was depleted so I returned home.

Flight Behavior Observations

- The R/C version of the Rocketeer A is difficult to fly and keep on track in the power climb due to the wings continual rocking back and forth side to side.
- It has a tendency to want to fall off into a vertical downward spiral if you don't stay ahead of it on the controls.
- The rear wing stop that was added yesterday worked well as the wing never shifted aft again today.
- The elevator and rudder push rods will be adjusted to the trim settings determined from today's test results.
- The throttle/elevator mix P-MIX3 will be decreased to +35% to try and eliminate the model's slight diving with throttle advance.

You just have to be patient and keep adjusting settings based on flight test results until you get the model dialed in. Once I get the Rocketeer A trimmed out using this procedure, the experience will be most useful in flight testing and trimming the scaled up 1/2A Fubar 600.....Tandy

By the way, if you have any suggestions or recommendation for what I am doing, please send them to me.