

Thanks to Eric Meyers
From BVM customers.

Installing the 12X in a BVM KingCat – easier than ever!

With the 12X, you can install all 12 channels directly into receiver ports of the R1221, assuming you use single-channel ECU operation (our choice, for simplicity.) This will allow you to have independent sub-trim of all surfaces, including the nose gear steering. Also allows you to turn off the nose gear steering when the gear are up. And have easy ruddervators and crow aerodynamic drag with elevator compensation.

There are many ways to accomplish the programming of your KingCat – here's one.

Install your servos direct into these ports:

Throttle - ECU
Ail – R Ail
ELE – R ELE
RUD – R Rud
Gear - Gear
Aux 1 – L Flap
Aux 2 – R Flap
Aux 3 – L Ail
Aux 4 – L Ele
Aux 5 - wheel brake
Aux 6 – Nose gear steering
Aux 7 - L Rud

Radio setup – Set up Mode

- Acro Model type
- Reset model
- Assign name
- Trim system (reduce trims to 1 – personal preference) LST – off
- Warnings – set gear, throttle
- Device select – Change only these settings (leave gear and flap alone)

Aux 2 – INH
Aux 3 – INH
Aux 4 – INH
Aux 5 Flap LVR ACT
Aux 6 – INH
Aux 7 – INH

- Wing type
Wing: Normal
Ail – mate Aux 3
Ele- mate Aux 4
Rud – mate aux 7
Flap – mate aux 2

Function Mode Adjustments

My adjustments are shown in ital – yours may be different

- Get all surfaces working the correct direction (*RAIL, L AIL, L ELE were reversed*)
- In 66, move flaps to up position in norm (*U122*)
- Use subtrim to get all surfaces aligned. Make sure your mechanics are all geometrically correct. Have a value greater than 48? If so, change the spline on the servo)
- Use Travel Adjust to one side only of elevator to get travel perfect. (*LELE had 98% on down only.*) Get travels correct for retract valve (+74 – 34). *All others were 100%/100%*
- Servo speed: Adjust flap to your preference. (*.513 on both sides*)
- Flap system: Establish Mid flap, Land flap (*U45, D9*) and elevator compensation (*U22, U33*) Add ele delay (*.5 sec*)
- Get Rudder to control the nosewheel: Pmix 1 Rudd-Aux6 Pos 0 *125/125* . Next, turn off this mix when gear are up . Under Gear, program POS 1 (leave POS 1 at 0%)
- Set D/R. Personally, I use three aileron rates, and only one elevator and rudder rate. It's simple. (*Ail D/R 100/75/50, EXP 40%/35%/30%. ELE 100% DR, 30% Expo/Linear on all three positions. Rudder 100% D/R, 50% EXP all three positions.*)
- KingCat has some roll coupling. Code 64 Rudder-Ail POS 0 *Left -9, Right +12*

That's the bulk of it. If you want the rudders to go out, ailerons to go up, and elevators to compensate for pitch, here are three easy mixes. I assigned this aerodynamic drag to my left lever, with the thought that my ground brake in on the right lever, air brakes are on the left. But I can sure see where some guys might like the activation to be with the wheel brake for ground use only. Or put it on a switch. It's easy with the 12 X

P-Mix 2 LLVR-RDVT POS 0 +0, - -77

P-Mix 3 LLVR-FPRN POS 0 +0, - -73

P-Mix 4 LLVR-ELE POS) +0, - -25 (adjust to suit – airspeed sensitive)

“Re-learn” your ECU and you're ready to go.