



Programming Guide for the JR XP7202 for the Hangar 9 Ultra Stick

To start with, plug your servos into the correct channels. Below is a listing of what servo to plug into each channel. You will need a 7-channel receiver to use the full set up that the 7202 is capable of doing with the Ultra Stick.

Ch. 1	Throttle	Ch. 5	Left Aileron (Listed as Gear Channel on Receiver)
Ch. 2	Right Aileron	Ch. 6	Right Flap (Listed as Aux 1 on Receiver)
Ch. 3	Elevator	Ch. 7	Left Flap (Listed as Aux 2 on Receiver)
Ch. 4	Rudder		

System Set-Up Mode

To begin setting up the transmitter, press and hold the down and select keys, and turn the 7202 on, then release the down and select keys.

Model Selection

Press the up or down key until Model Select is on the top of the screen, and select the model you want the ultra stick on by pressing the increase or decrease key.

Model Reset

Press the up key and scroll through the menu options until you get to Model Reset. With the arrow pointing at data reset, press the clear key.

Model Type Selection

Press the down key until you get to the Type Select function. Press the increase or decrease button until the arrow points at ACRO. If you change this from heli, it will then request you to press the clear key to say yes to change the model type.

Modulation Selection

Set the modulation as needed to match your receiver by pressing the up key to get to the Modulation function, and select the modulation needed by pressing the increase or decrease keys.

Input Select Set Up

Press the up key until you get to the Input Select function. With the arrow pointing at Aux2, press the increase key until it says INH next to Aux2. Press the select key and the arrow should now point at

Aux2 Trim, this should say INH, if it does not, press the increase key until it does. Press the select key again and the arrow should point at Flap. This should say SYSTEM, if it says something else, press the increase key until this says SYSTEM. Press the select key, and the arrow should now point at flap trim. Press the increase key to set this to INH

This completes the system set up mode, press the down and select keys to exit the system mode. Do not activate flaperon in the wing type menu for this set up. All settings in the wing type menu will remain at the default setting of OFF.

Function Mode

Next we will set up the function mode of transmitter. When you first turn the system on, the system will request you to confirm the channel of operation by pressing the clear key. Once you have confirmed the proper channel and have insured that no one else is on your frequency, press the clear key to use the system. Press the up and select keys together to enter the function list. After completing each step below, press the up and select keys to get back to the function list. To enter a function below from the list on the system, press the down and select keys together with the arrow pointing at that function.

Dual Aileron Set Up

To set up the dual ailerons, we will set up a program mix. We will use program mix 5 for this purpose. Enter program mix 5. Press the increase key until the first channel says AILE. Then press the select key to make the arrow point at the second channel, then press the increase key until the second channel says GEAR. Press the select key to make the arrow point at RATE, then hold left aileron and press the increase key until the percentage says +100%. Then hold right aileron and press the increase key until the second percentage says +100% as well. Both values should say +100%. Next to SW on the screen it should say ON. If it says something other than ON, press the select key to make the arrow point at SW, and press the increase key until it says ON.

Dual Flap Set Up

To set up the dual flaps, we will set up a program mix. We will use program mix 6 for this purpose. Enter program mix 6. Press the increase key until the first channel says FLAP. Then press the select key to make the arrow point at the second channel, then press the increase key until the second channel says AUX2. Press the select key to make the arrow point at RATE, then press the increase key until the percentage says +100%. Then flip the flap switch until the arrow moves to the second mix value, and press the increase key until the second percentage says +100% as well. Both values should say +100%. Next to SW on the screen it should say ON, if it says something other than ON, press the select key to make the arrow point at SW, and press the increase key until it says ON.

Dual Rates and Expo

Set your Dual Rates and Expo as you desire. Enter the D/R & EXP function. Set these as desired. Always use a positive value for expo, as a negative value will make the control response more sensitive around center and could cause you to over control the plane and crash. 30 percent expo on aileron, and

25% on elevator and rudder is recommended to start with. Set your low rates around 70% to start with, and change to your tastes.

Servo Reversing

Set your servo reversing correctly so that each surface goes the correct direction. Do this by entering the REV SW. function. Press select to choose the channel to reverse if needed, and press increase or decrease to reverse the current channel selected. If the flaps go up with the flap switch in the down or LAND position, reverse the direction of channel 6 (FLAP) and/or channel 7 (AUX 2). In most cases in this set up, channel 7 or aux 2 will need to be reversed.

Sub Trims

Set the sub trims as required leveling the control surfaces. Do so by entering the SUB TRIM function. Press select to choose the channel to adjust, and press increase or decrease to adjust as necessary. Try to keep these as close to zero as possible. Using too much sub trim can result in running out of travel on the servos, and the possibility of over-driving the servos.

Travel Adjustment

Set the travel adjustments such that you get the control movements required. To adjust this, enter the TRAV ADJ. Function. Consult your Ultra Stick manual for the required control surface travels. You may need to use 1" long servo arms to achieve the maximum travels listed in the manual. Try to use as high a travel adjustment value possible to achieve the throws so that you use as much of the servos travel as possible. Press the select key until you get to the GEAR channel, then press the decrease key until the travel of the gear is 0%, then flip the gear switch to the other switch position, and repeat, making the travel adjust in both switch positions 0% for the gear channel. This will inhibit the gear switch from affecting your ailerons.

Elevator to Flap Mixing

Enter the EL->FL function. Press the Select key until the arrow points at SW, and then press the increase key until this says MIX next to SW. Now press the select key until the arrow points at RATE, hold down elevator and press increase until the D value is set to about 35 percent. If the flaps go down with down elevator, reverse the value from +35 to -35 or vice versa. Now hold up elevator press the increase key until you get to about 35 percent. If the flaps go up, reverse the value from +35 to -35 or vice versa. This will give you flaps mixed to the elevator for tight loops, etc.

Flap System

Enter the FLAP SYS function. Press the select key until the arrow points at the UP flap value. Press the decrease key until this says U 50%. Adjusting this value will adjust how far the flaps will go in the center position, though you can also make small adjustments to the MID position next to flaps later for final set up. Center the flap servos after setting this position, with the switch all the way up. This is done so that you will not run out of travel for aileron to flap mixing for fast rolls. Next press select until the arrow points at the flap setting in the LAND position, press the increase or decrease value to adjust

this value, you will set this value as needed to get the flap travel needed with the switch in the land position. Next press select so that the arrow points at the ELEV value for the LAND position. Press the increase or decrease value as needed to get roughly ¼” down elevator with the switch in the LAND position.

Aileron to Flap Mixing

The aileron to flap mixing will require 2 programmable mixes. We will use mix 1 and 2 for this set up. The first mix will be an aileron to flap mix, and the second will be an aileron to aux 2 mix. The value of the aileron to aux 2 mix must be exactly double but opposite of the value in the aileron to flap mix. The travel of the flaps as ailerons will not be as much as the travel of the ailerons themselves. This will still increase the roll rate of your ultra stick however.

To set up the first mix, we will use program mix 1. Enter program mix 1. Press the increase key until the first channel says AILE. Then press the select key to make the arrow point at the second channel, and then press the increase key until the second channel says FLAP. Press the select key to make the arrow point at RATE, then hold left aileron and press the increase key until the percentage says +62%. Then hold right aileron and press the increase key until the second percentage says +62% as well. Both values should say +62%. Next press the select key to make the arrow point at SW, and press the increase key until the screen says MIX next to SW.

To set up the second mix needed for the aileron to flap mixing, we will use program mix 2. Enter program mix 2. Press the increase key until the first channel says AILE. Then press the select key to make the arrow point at the second channel, and then press the increase key until the second channel says AUX2. Press the select key to make the arrow point at RATE, then hold left aileron and press the increase key until the percentage says -124% (value double but opposite of the previous mix). Then hold right aileron and press the increase key until the second percentage says -124% as well. Both values should say -124%. Next press the select key to make the arrow point at SW, and press the increase key until the screen says MIX next to SW.

Flap to Aileron Mixing

The flap to aileron mixing will require 2 programmable mixes. We will use mix 3 and 4 for this set up. The first mix will be a flap to aileron mix, and the second will be a flap to gear mix. The value of the flap to gear mix must be exactly double but opposite of the value in the flap to aileron mix. These mixes will set up the “crow” function on the LAND flap switch position.

To set up the first mix, we will use program mix 3. Enter program mix 3. Press the increase key until the first channel says FLAP. Then press the select key to make the arrow point at the second channel, and then press the increase key until the second channel says AILE. Press the select key until the arrow points at OFFSET. Press the decrease key until it says -50 next to OFFSET. Press the select key until the arrow points at RATE, then flap the flap switch into the LAND position, then press the decrease key until the percentage says -30% (adjust this percentage as necessary to get the ailerons to move as “spoilers” ¾” up, keeping in mind that the value of this program mix must be half the value and opposite of the value in the next mix, program mix 4). Next to SW on the screen it should say ON. If it

says something other than ON, press the select key to make the arrow point at SW, and press the increase key until it says ON.

To set up the second mix, we will use program mix 4. Enter program mix 4. Press the increase key until the first channel says FLAP. Then press the select key to make the arrow point at the second channel, and then press the increase key until the second channel says GEAR. Press the select key until the arrow points at OFFSET. Press the decrease key until it says -50 next to OFFSET. Press the select key until the arrow points at RATE, then flap the flap switch into the LAND position, then press the increase key until the percentage says +60% (adjust this percentage as necessary to get the ailerons to move as “spoilers” $\frac{3}{4}$ up, keeping in mind that the value of this program mix must be double the value and opposite of the value in the previous mix, program mix 3). Next to SW on the screen it should say ON. If it says something other than ON, press the select key to make the arrow point at SW, and press the increase key until it says ON.