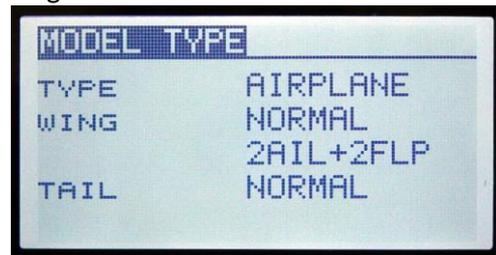


FUTABA 8FG(S) - SIMULATING A SERVO-SLOW FUNCTION

In Glider Mode both the Condition Delay feature and mixes such as Trim Mix and Butterfly allow servo speed to be adjusted. Curiously the only provision made for this in Airplane Mode is in Airbrake which only allows a single setting. Nevertheless, very flexible servo speed control can be achieved by using the Motor Function as the Master in a program mix. **Naturally the Motor Function should not be used to control an electric motor at the same time.** (In a power model the Motor Function is unlikely to be required for its intended purpose. Even with electric power the ESC may be controlled by the throttle function).

In the following example two-stage flaps are set to deploy and retract gradually in response to a toggle switch. The screen shot pictures are based on a model set up with a 2AIL + 2FLP wing (see Diagram 1) using MULT frequency. Other settings will work just as well though the screens may look slightly different.

Diag 1



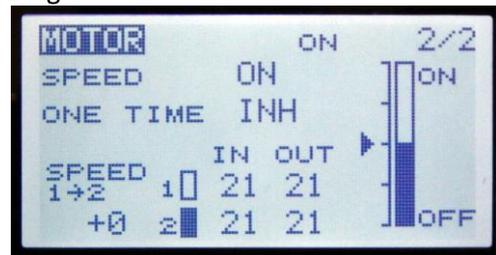
Diag 2



As the Motor Function is not going to operate a servo or ESC directly, it can be assigned to a virtual channel to avoid tying up an active channel. In the FUNCTION MENU assign MOTOR to any of the free virtual channels on screen 3/4. The throttle stick will be assigned by default as the control so change this to a suitable three-position switch for controlling the flaps. SG is used in the example (see Diagram 2).

In the MOTOR MENU change INH to ACT on screen 1/2. Do not assign a switch. On screen 2/2 change speed from INH to ON and change the four 0 IN and OUT speeds at the bottom to 21 (See Diagram 3). These determine the servo speed at each click of the switch and can be adjusted later as required.

Diag 3



Diag 4



Now set up a new Program Mix. On screen 2/2 change INH to ACT. Set the MASTER to MOTOR and change its LINK from OFF to +. This will allow the master to access its related speed control function.

Set the SLAVE to FLAP and change its LINK to +. This will allow related functions such as the second flap or any elevator mix to operate automatically and with reduced speed when the switch is thrown. (See Diagram 4)

Return to Program Mix Screen 1/2 and set the movement to + 100 in both directions. (See Diagram 5)

Diag 5



Check the servo monitor and the flaps should respond to the switch with reduced speed.

Turn off the MOTOR WARNING in the LINKAGE MENU to prevent it sounding every time the transmitter is powered up.

The stage 1 (partly lowered) position of the flaps can be altered by changing the X OFFSET on screen 1/2 of the Program Mix. The amount of flap travel is best set mechanically via the linkages but can also be adjusted by using different values on page 1/2 of the Program Mix screen.

The speed at which the flaps deploy and retract can be adjusted on screen 2/2 of the motor menu. Different speeds may be set for each if required. (0 = no delay 27 = maximum delay)

Additional mixes may be applied at the same time. For example, set up a second Program Mix with MOTOR as the Master and AILERON as the SLAVE to give some crow (butterfly) braking (with slow servo) to aid spot landing when the flaps are lowered to their second stage. In this case set the SLAVE LINK to MINUS to make the second aileron move in the opposite direction to normal.

Control of landing gear and ancillary functions such as turrets are other examples where reduced servo speed may be helpful.

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