

Instructions for the FM-9retract_twin flight manager

The timer can be programmed by the FM-9 Programmer for flight parameters in the usual fashion. With the extended programmer chip, you can also change the default retract times: the length of time after the flight time begins that the gear is retracted and, second, the length of time that the power is left on after the five seconds of extra power have ended (so you can fly at least part of the circle in level flight with the gear down).

The timer and gear servos are powered by the BEC of the ESC that is plugged into the top six-pin connector. It must be capable of powering the gear servos. The CC ICE and Edge can do it. It should be set for 5.0 volts, if adjustable. This ESC should power the motor that is equal or slightly lower in RPMs than the other one; this is probably the right motor. The BEC on the other ESC is not connected on the timer circuit, so there is no

possibility of a conflict over slightly different BEC voltages from the two ESCs.

Assuming you use a single battery to power both motors and the timer, you will need to use a "Y" power cable to connect to the two ESCs. A commercial version with Dean's Ultra plugs is the Mpi #6932.

The potentiometer ("pot") below the second ESC connection allows this second ESC to receive a throttle increment of 0 (fully counterclockwise) to 3.5% (fully clockwise), in seven steps. Because there are 10 tiny increments marked on the pot, for its 270° rotation, this means that the throttle is incremented by 0.5% for every 1.4 or so of these tiny increments; in the constant-RPM, governed mode of the ESCs, this would correspond with an increment of about 50 to 70 RPM.

You will find that you can increase line tension by letting the inboard motor run a little faster.

