

Set up notes for your Sullivan Skywriter Smoke Pump

The Sullivan Skywriter is a proportional device with a built in fail safe that keeps it from turning on if the switch is accidentally in the wrong position when your radio is activated. The Skywriter interprets the signal from your radio as follows (the positive and negative values may be reversed for some radios).

ATV output from Receiver:

-140% to -15%: this is the desired signal when the switch is in the "off" position. The Skywriter must see a signal in this range for at least 5 seconds before it will activate.

0% to +40%: the Skywriter will not come on but this will not over-ride the fail-safe, a negative signal is required for this (see above).

+41% to +100%: This is the proportional band of the control. The motor will turn it's slowest at +41% and will be turning full speed based on the battery it has at 100%.

+101% to +140%: This range is interpreted the same as +100%. The skywriter will still run at full speed

Most people will slave a spare channel to the throttle then use a switch to turn this function on and off. You need to set it up so that the when the switch is off the output from the receiver is negative. (See sample program on next page)

Remember depending on the manufacturer of your radio the + and - percentages could be reversed!

Some additional things to keep in mind:

***The Skywriter can operate at any voltage from 4.8 to 12V nominal. We do however recommend that at battery of at least 6.0V be used until the pump head is broken in (15-20 minutes of operation).

*** Sullivan also recommends the system is programmed and tested outside the aircraft. At this time a substitute fluid can be used for testing such as nitro fuel or water.



Example Set-up for Futaba 9CA/9CH Radio System:

If you are running your radio in ACRO mode this is the program that we recommend:

Program mix 1: (or any free program file)

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MASTER = Throttle

SLAVE = Aux 1 (or Aux 2 if preferred.)

LINK = OFF or ON (this does not matter)

TRIM = ON

SWICH = A (this does not matter either just pick one you are comfortable with)

POSITION = UP (does not matter, same as above)

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RATE DOWN = 0% (this has no effect on the pump)

RATE UP = something between -50 and -100 (higher numbers make the top speed of the pump higher and make it come on at a lower throttle setting.

OFFSET = varies, if everything else is zeroed try about 10%-20%. You set this by putting the throttle stick at or close to your low throttle setting and holding down the dial to set the position.

Subtrim Menu:

Set the subtrim of the auxiliary channel used for the Skywriter to -100% (This provides the negative output to override the failsafe when the switch is off.)

This should complete the set up. Be sure that any knobs that affect this channel are centered (Default is Rotary Knob "C"). You may need to tweak the program to work with your throttle settings if you have adjusted the travels or trims but this is a good point to work from regardless.

Other Troubleshooting Tools:

- 1.) Set this program up on a clean Empty Model then check out the results using the Servo viewer
- 2.) If your radio does not have a servo output viewing function use a "Y" harness to put a spare servo on the same channel so you can monitor the signal being sent to the Skywriter

Hope this helps!

