

# Flysky FS-I6 Programming

## Topics for Discussion

By Ted Monetta #237

**Failsafe Setup** - Pre-programs your boat on how to react when there is a loss of communications between the handheld transmitter & receiver in the boat.

Note: There are detailed instruction on entering the programming mode, menu navigation, making changes and saving settings in this section. These skills are the same for all changes being made in other sections.

**Assign Switches**- Re-assigns toggle switch function closer to the stick (rudder/sail) it relates to.

**Battery Level Display & Alarms** – Set battery voltage display on remote & low battery alarm

**Rudder Control** - Softening the rudder response to make steering smoother.

**Sail Control** – Similar to softening the rudder response, but for the sail control.

**Normal & Sport Mode** - The ability to change how the rudder respond with the flick of a toggle switch.

**Normal & Idle Mode** - The ability to change how the sails respond with the flick of a toggle switch.

# Fail Safe Setup

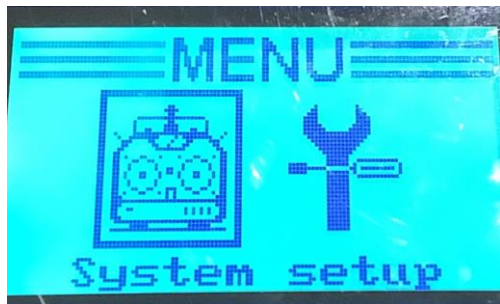
**Purpose:** This function establishes a pre-programmed action that activates when the handheld transmitter and the receiver in the boat stops communicating with each other.

It will activate if the transmitter stops working such as:

- Dead / low power battery in transmitter
- Remote turned off (accidentally or on purpose)
- Damaged - dropped in the water?
- Boat out of range.

Notes:

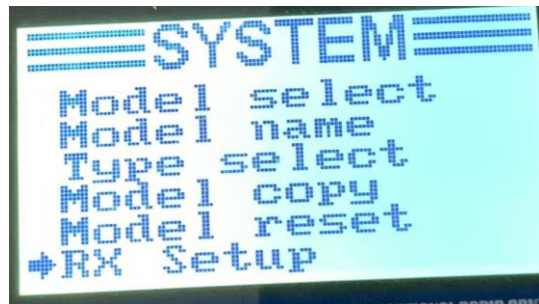
- This only works if the battery & receiver on the boat still has power and is functioning properly.
- The remote controller default is set to OFF - This means the servo settings will maintain at the last commanded settings.  
Example: If you are headed downwind from Mark 2 to Mark 3 and you lose communication, your boat could end up across the bay.



Press and hold "OK" to enter programming mode

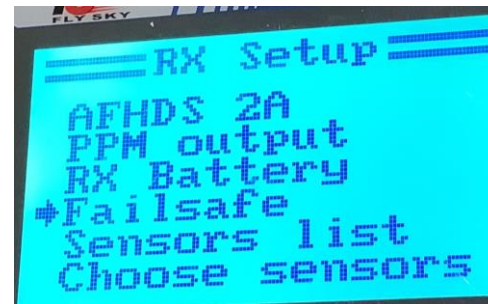
Use "Up" or "Down" button to toggle between "**System Setup**" and "**Function Setup**" mode

Select **System Setup** & press "OK"



Use "Up" or "Down" button to scroll through menu

Select **RX Setup** & press "OK"



Use "Up" or "Down" button to scroll through menu

Select **Failsafe** & press "OK"



Use "Up" or "Down" button to scroll through menu

Select **Channel 1** (Rudder position) & press "OK"

Or

Select **Channel 3** (Sail trim position) & press "OK"



Use "Up" or "Down" button to toggle between "ON" or "OFF"

Select "ON"

**Channel 1 – Rudder Position**

Move Rudder stick to desired position and hold it there while you press the OK button.

**Note:** I hold the rudder stick all the way to the right so the boat will sail in a small circle



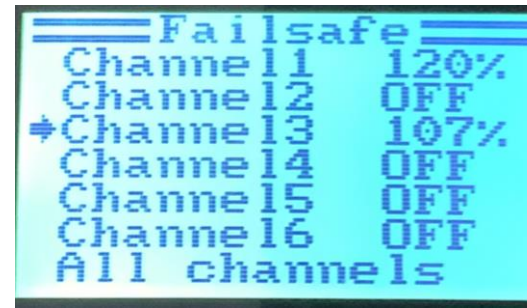
Use "Up" or "Down" button to toggle between "ON" or "OFF"

Select "ON"

**Select Channel 3 – Sail Position**

Move sail position to desired position and press "OK"

**Note:** I set the sails all the way out to de-power the sails



**The Failsafe screen should look something like this when your done**

**Repeat if necessary**

# Save Changes

"Long Press" (HOLD 1 second) the "CANCEL" button to **SAVE** and move back one menu selection.

Note: Using the "Cancel" button to save sounds / is counter-intuitive. What do you want for a \$50 remote control? They needed to save money on buttons.

However: If you listen carefully the "Long Press of Cancel" (SAVE) beep is a higher pitch.

A Quick Press of the "Cancel" button actually is **Cancel**. The quick press produces a lower pitched beep.

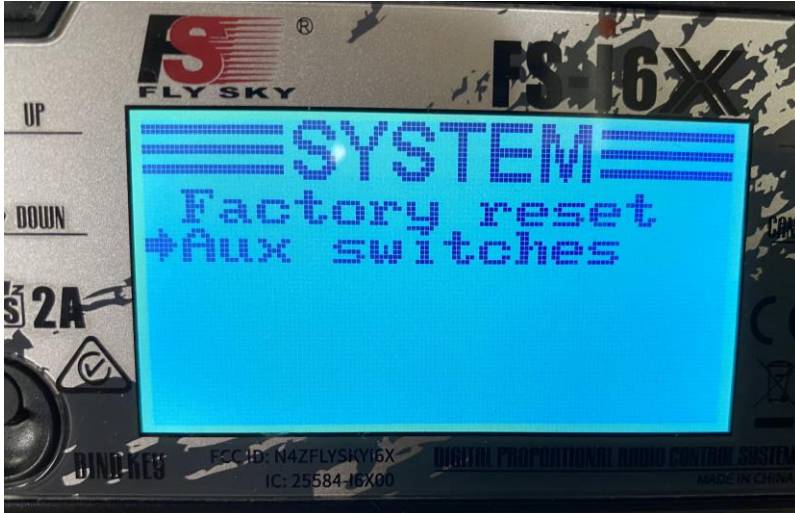
Use QUICK PRESS "CANCEL" button multiple time to return to main screen

## Confirmation and testing:

- 1) Go back into programming mode and go to the failsafe menu. The results should look the same as you programed. If incorrect, the changes did not save. (probably too short of time holding the cancel button" Try again.
- 2) Turn your boat and remote on like your ready to sail with sails close hauled. Next turn the remote control off.
- 3) The rudder should move to hard over and the sails should move to full out.

Pro-Tip: It is best to turn your boat off before turning off the controller so the rudder stays straight.

# FS:I6 X -Turn on Switches (if necessary)



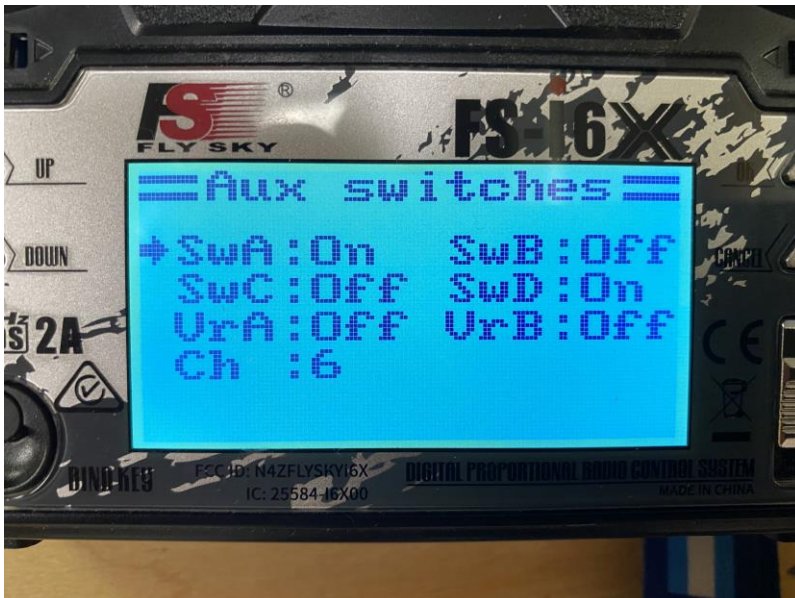
If you have a FS:I6X remote and you want to turn on / assign the toggle switches.

Enter Programming mode  
Select :System Icon

Scroll through the menu – All the way to the end until you see:  
Aux Switches

Turn on SwA and SwD as desired.

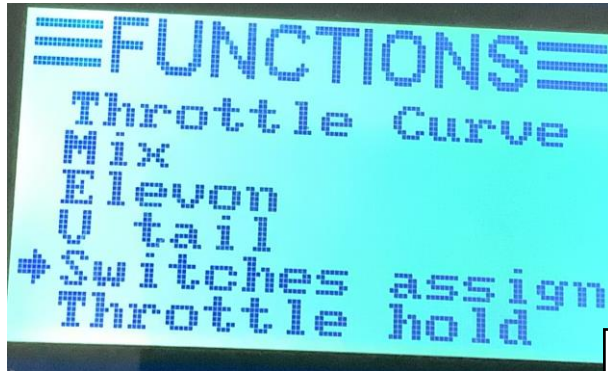
Note: SwB (Idle up) can also be tied to the sail control, however I have not explored how it can be used.



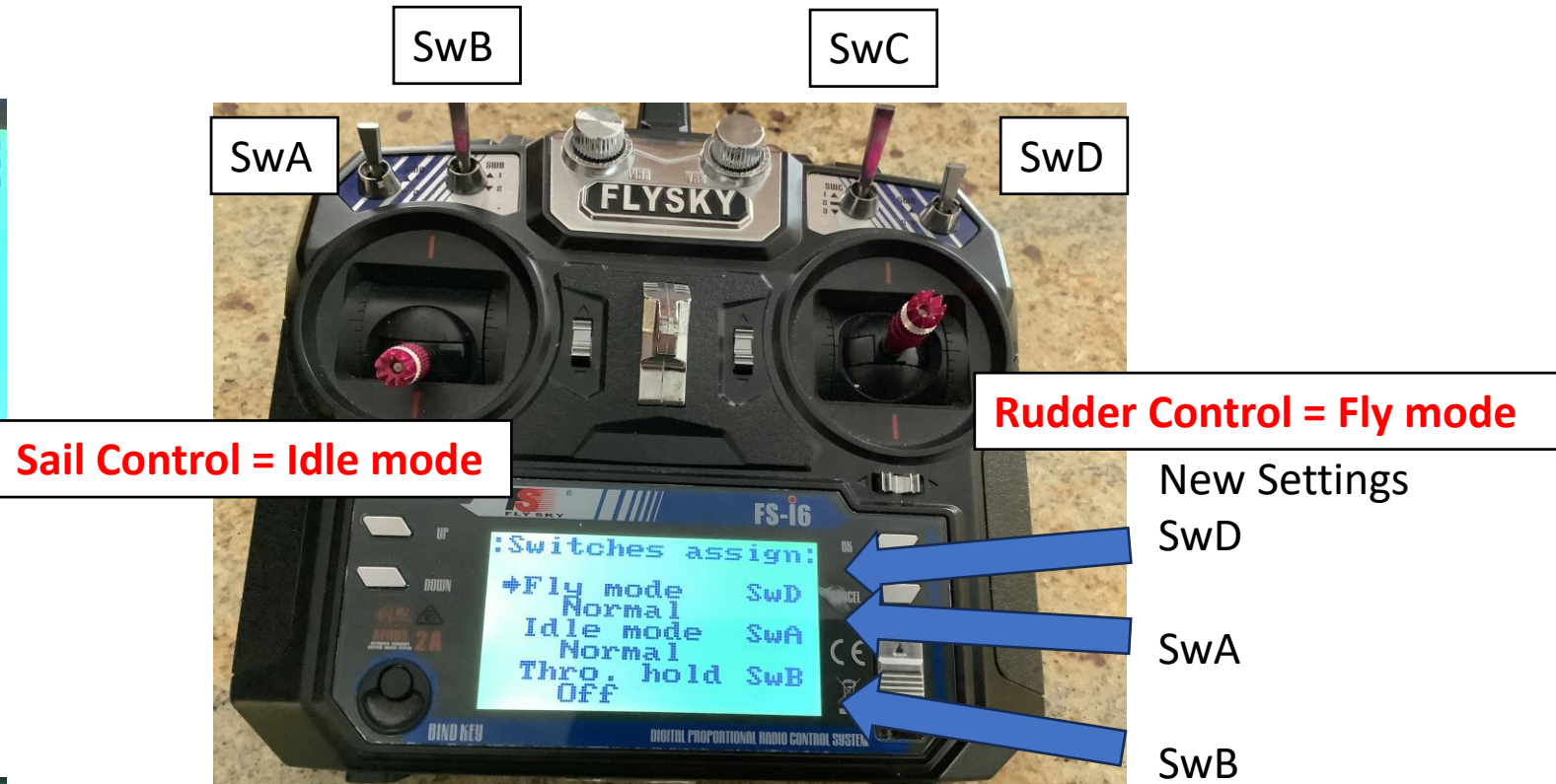


# Assign Switches

Purpose: Move / Assign switch functions closer to the stick they are associated with.



Default Settings



**Rudder Control** = Fly mode = **SwD** (Assigns SwD to rudder control )

**Sail Control** = Idle mode = **SwA** (Assigns SwA to sail control)

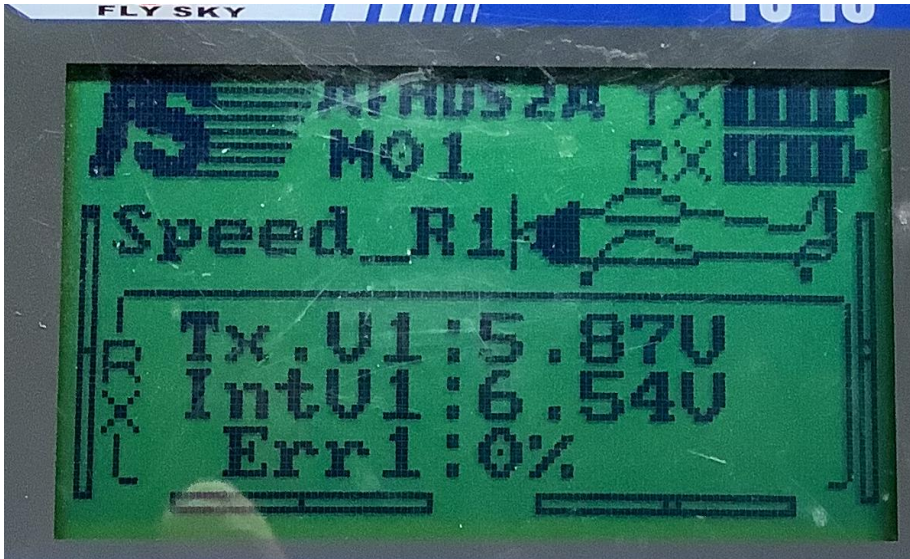
**Thro. hold** = SwB ( this is not used, but should not be A or D to avoid conflicts

Once changes are made – “Long Press Cancel” to SAVE changes.

# Battery Level Display & Alarms

There are / can be two battery displays on the transmitter.

- 1) Upper right corner of the display shows two graphics of battery levels (Each bar is 25%)
- 2) The battery levels can also be displayed showing actual voltage levels in the bottom half



**Handheld Transmitter (TX / TX.V1)** Voltage 6.0+ volts to show full charge.

Transmitter will alarm (beeps) at 4.2 volts. It is setup for 4 AA ( 4 x 1.5 volts) = 6 volts

I use NiMh rechargeable batteries, they are usually rated at 1.2 v each, but fully charged tend to be 1.35v ( 5.4v total)

**Boat Receiver (RX/ Int V1)** Voltage varies depending on what battery you use in the boat. Different alarm levels can be programmed. Its very important to set correctly so :

- the graphic displays properly
- unnecessary alarms are not triggered
- you do not run out of power on your boat.

Note: different types of batteries have different kinds of discharge rates. Most Lithium Ion batteries have voltage discharge cut-off levels that turn them off once they hit that level.

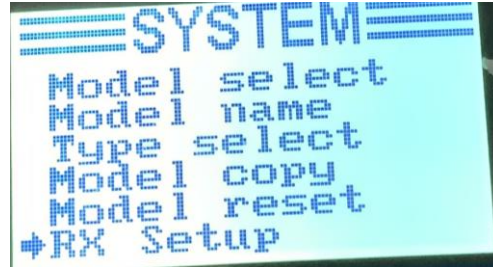
# Setup Battery Level Alarms for RX (Boat)



Press and hold "OK" to enter programming mode

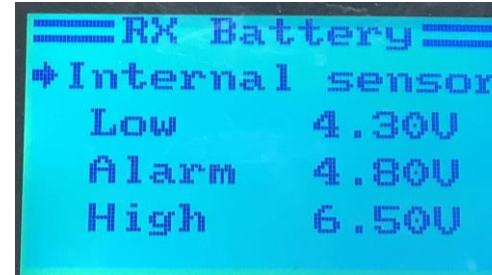
Use "Up" or "Down" button to toggle between "System Setup" and "Function Setup" mode

Select **System Setup** & press "OK"



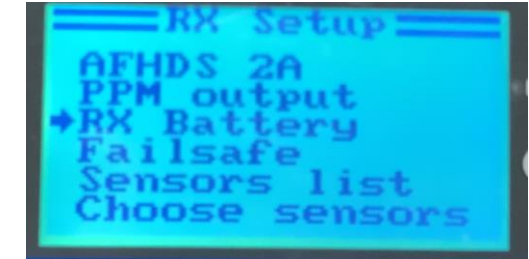
Use "Up" or "Down" button to scroll through menu

Select **RX Setup** & press "OK"



Use "Up" or "Down" button to scroll through menu

Select **RX Battery** & press "OK"



Use "Up" or "Down" button to scroll through menu

Select **Internal Sensor** & press "OK"

The arrow moves to **Low**, Use "Up" or "Down" button to set voltage & Press "Ok"

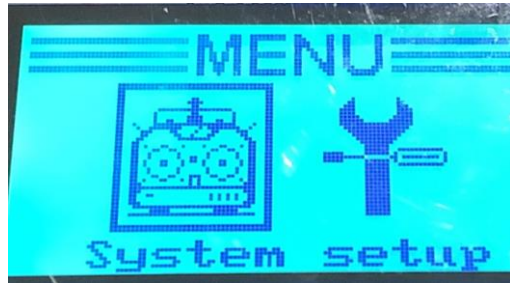
The arrow moves to **Alarm**, Use "Up" or "Down" button to set voltage & Press "Ok"

The arrow moves to **High**, Use "Up" or "Down" button to set voltage & Press "Ok"

	(4 )AA	5 cell NiMh	6.6 Volt LiFe-PO4
Low	4.0	4.3	6.0
Alarm	4.2	4.8	6.3
High	6.0	5.9	6.6



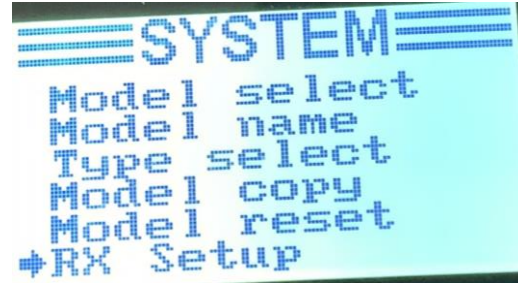
# Setup Battery Level Display on Remote



Press and hold "OK" to enter programming mode

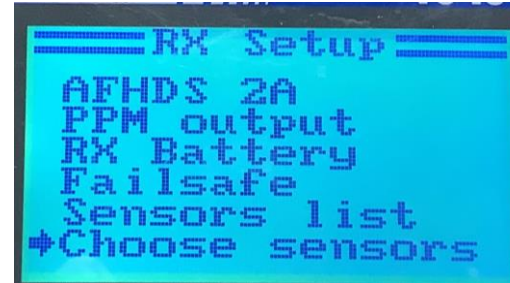
Use "Up" or "Down" button to toggle between "System Setup" and "Function Setup" mode

Select **System Setup** & press "OK"



Use "Up" or "Down" button to scroll through menu

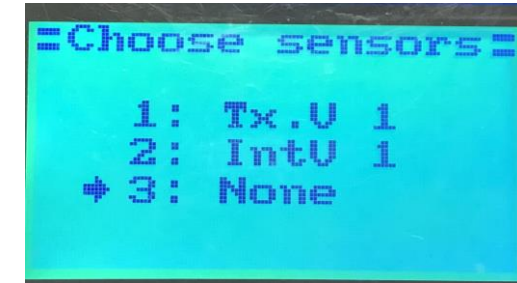
Select **RX Setup** & press "OK"



Use "Up" or "Down" button to scroll through menu

Select **Choose Sensors** & press "OK"

Note: The boat receiver must be turned on for it to show up on the list.



Press "OK" to toggle through line 1, 2 or 3.

Use "Up" or "Down" button to scroll through which sensor to display for each line number.

**"Long Press" (HOLD 1 second)** the "CANCEL" button to **SAVE** and move back one menu selection.

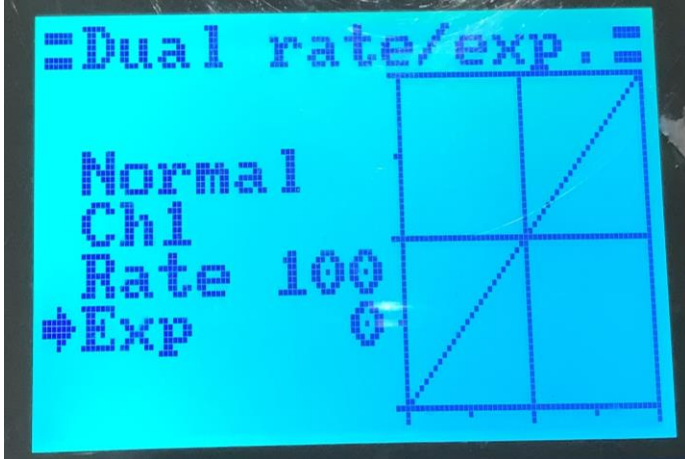


It should look like this when you are done

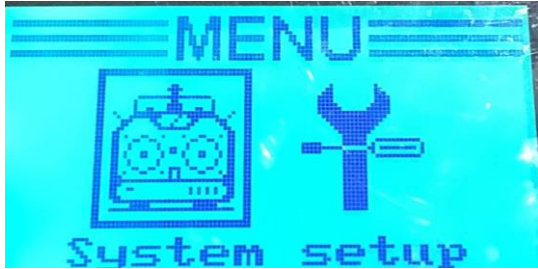
# Rudder Control – Soften Response

## Flysky Term – Dual rate /exp (Channel 1)

- Purpose – Reduce sensitivity to stick movement for smoother turning
- Default setup is shown below



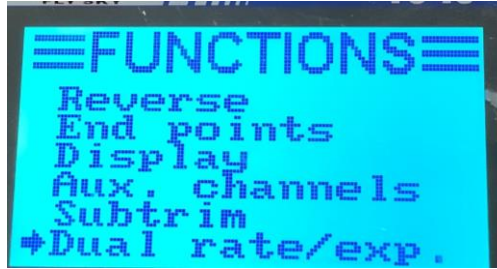
- **Normal /Sport** – Toggle switch SW-D is used because it is closer to the rudder control.
  - (Note: Sw-A is the default set up).
  - Switch in UP position is Normal, Down position is Sport
  - Default - Normal & Sport mode settings are the same.
- CH1 – Rudder
- Rate – 100% These settings use full travel of rudder based on programmed endpoints
- Exp – “0” - Straight Line – The line represents a 1:1 movement of stick position to rudder movement. Sounds logical, but it makes small rudder moves harder to control unless you have real steady hands.



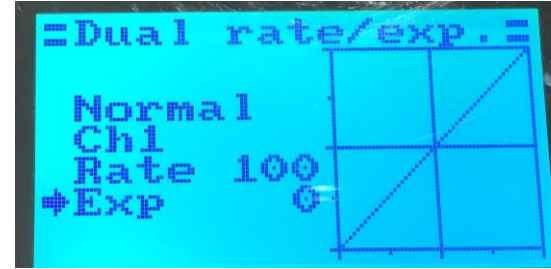
Press and hold "OK" to enter programming mode

Use "Up" or "Down" button to toggle between "System Setup" and "Function Setup" mode

Select "Function Setup" & press "OK"



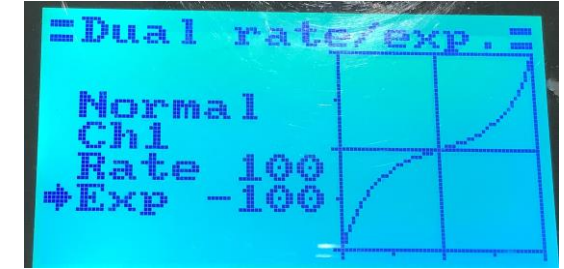
Use "Up" or "Down" button to scroll through menu  
Select **Dual Rate/exp** & press "OK"



Use Toggle Switch to move between Normal and Sport (Switch D or A) - Try it figure out which one is used.

Use "Up" or "Down" button to scroll through menu

Ensure toggle switch is set to "NORMAL"



Use "Up" or "Down" button to scroll through menu, and the "OK" to enter menu item and make changes.

Select **Channel 1** (Rudder position) press "OK", Use Up / Down to Select channel

Rate - Leave at 100

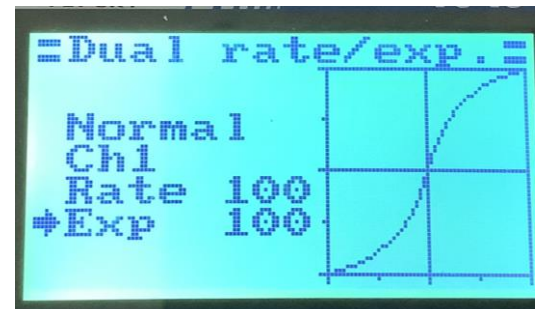
Exp – Range is -100 to + 100

Note: I set mine at **-100** so there is a slow response in the middle of the rudder travel and faster at the end for more aggressive turns.

Recommend to experiment and see what feels good to you. There is no one right answer.

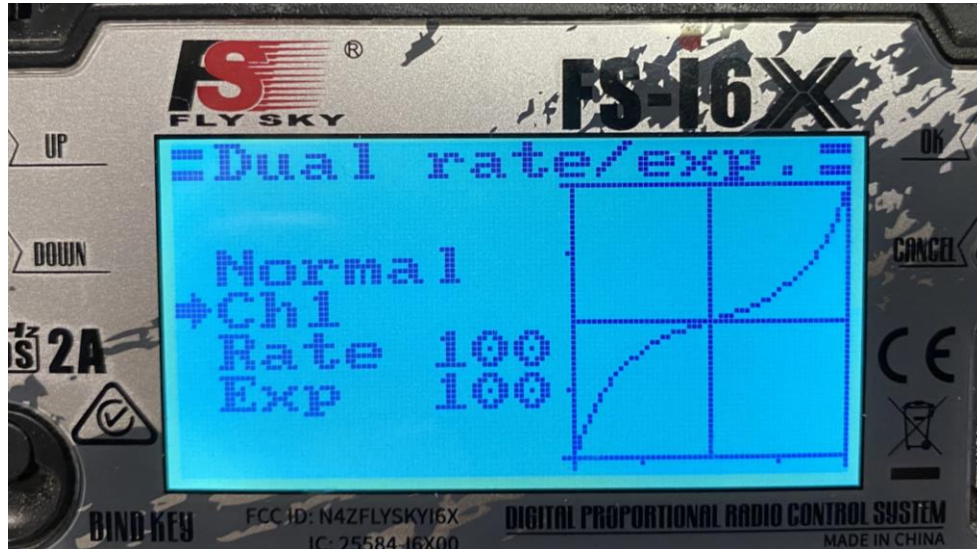
Do not program the curve like this

However, going from 0 to +100 will have the opposite effect and increase rudder sensitivity around the middle of the travel. See picture to the right.



# FS:I6 X -Turn on Switches (if necessary)

## Rudder Control – Soften Response



For FS:I6 X remotes

Exp = +100

The object to flatten the response (left to right).



# Normal & Sport Mode

The remote makes you have the switches in the “UP” when you turn it on. This is “Normal” mode.

**Basic Level** - Ensure the settings you have in Normal Mode are duplicated in the Sport mode also. This will make sure the remote reacts the same if you accidentally hit the toggle switch.

**Advanced Level** – You can program a different rudder response in SPORT mode

Use toggle Switch D to turn on sport mode.

Select **Channel 1** (Rudder position) press “OK” , Use Up / Down to Select channel

Rate = 25

I set mine at **25%** (reduced rudder travel)

Exp – -100

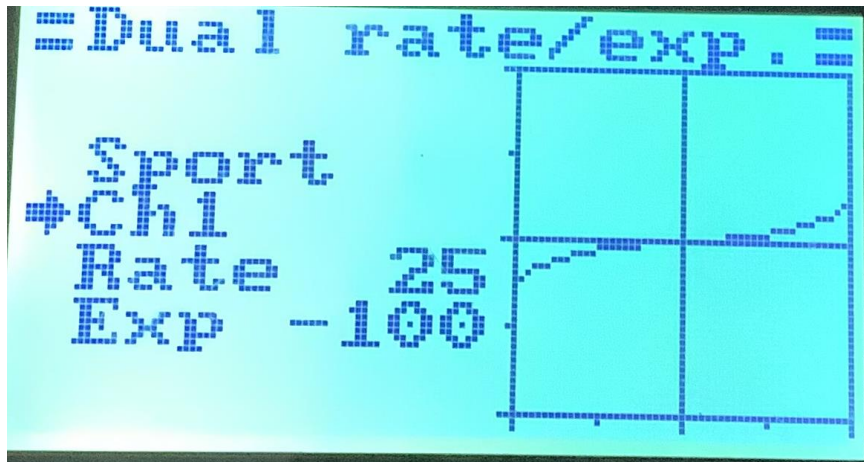
Note: I set mine at **-100** so there is a slow response in the middle of the rudder travel and faster at the end for more aggressive turns.

This is mostly for an example of the possibilities available.

The original purpose was for going downwind for slow subtle moves.

In reality, I don’t use it much. I usually forget. Also forgetting that the switch is down and in sport mode has made for a very unresponsive boat and a few difficult /failed mark roundings. This is usually followed by a couple WTF is wrong with my boat curse words. So, Buyer Beware.

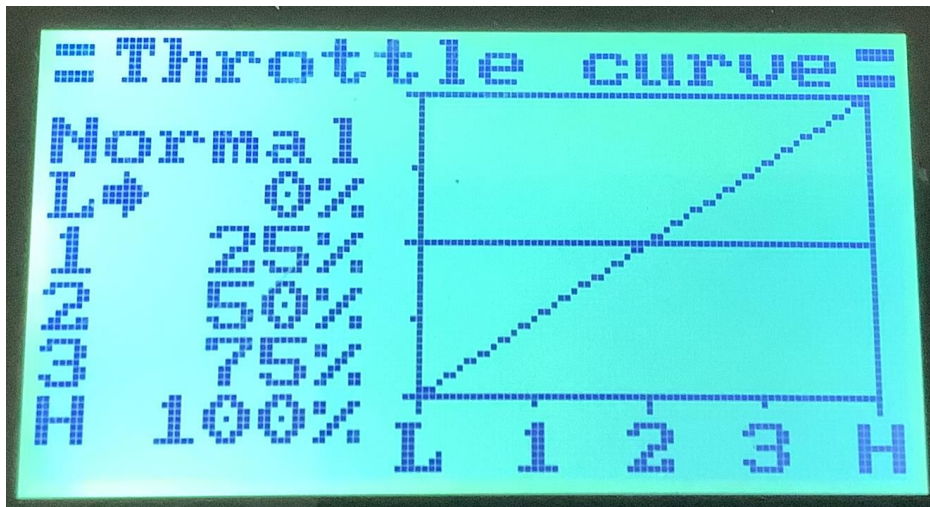
**Note: Sport mode can also be left at Rate 100 / Exp 0 to maintain original settings.**



# Sail Control – Soften Response

## Flysky Term – Throttle Curve / Channel 3

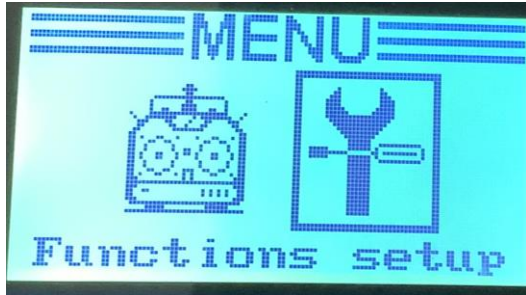
- Purpose – Reduce sensitivity to stick movement for finer control of sail adjustments
- Default setup is shown below



- Normal / Idle Up – Toggle switch SW-A is used because it is closer to the sail control.
  - ( Note: Sw-B is the default set up).
  - Switch in UP position is Normal, Down position is Idle Up
  - Default - Normal & Idle Up mode settings are the same.

### CH3 – Sail Control

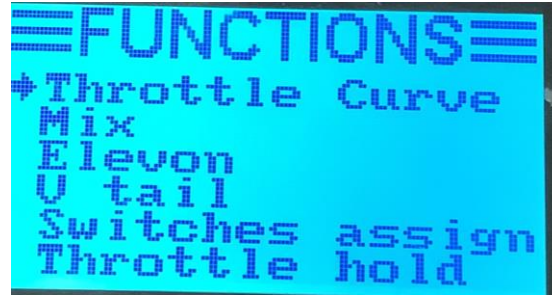
- Straight Line – The line represents a 1:1 movement of stick position to sail arm movement. Sounds logical, but it makes small sail moves when close hauled harder to control unless you have real steady hands.



Press and hold “OK” to enter programming mode

Use “Up” or “Down” button to toggle between “System Setup” and “Function Setup” mode

Select “Function Setup” & press “OK”



Use “Up” or “Down” button to scroll through menu

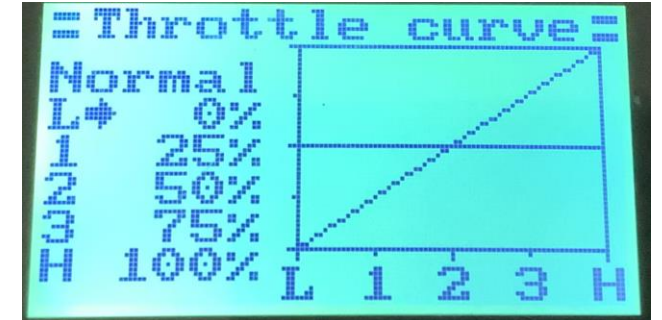
Note: it is on page 2 – keep scrolling

Select **Throttle Curve** & press “OK”

Use Toggle Switch to move between Normal and Idle Up ( Switch A o B) - Try it figure out which one is used.

Use “Up” or “Down” button to scroll through menu

**Ensure switch is set to “NORMAL”**



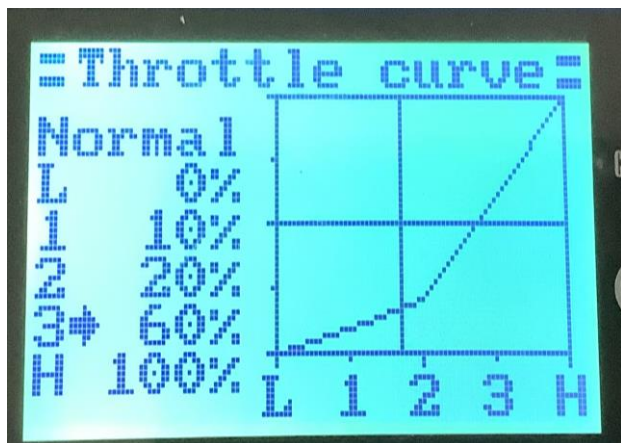
Use “Up” or “Down” button to scroll through menu, and the “OK” to enter menu item and make changes.

There are 5 values to enter.  
**(See next page for recommendations)**

The “OK” button scrolls through each value.

Use Up or Down to change value  
Use “OK” to jump to next line.

When all the values are entered  
**“Long Press on Cancel” to SAVE**



	Normal
L	0
1	10
2	20
3	60
H	100

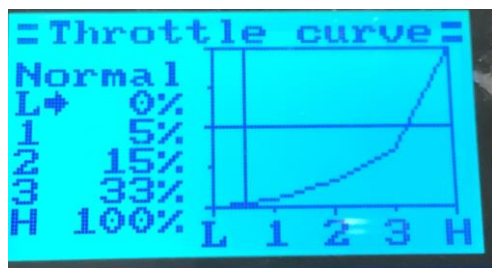
These values allow for fine sail adjustments when going up wind. The first 50% of the stick travel up move the sails 20% of the sail arm travel.

The second 50% of stick travel moves the sails 80% in a mostly linear line.

These are probably a good starting position without getting to complicated.

Recommend to experiment and see what feels good to you. There is no one right answer.

Here is a more complicated option: More control, more things to remember



	Normal (Close Hauled)	Idle Up (Downwind)
L	0	0
1	5	16
2	10	73
3	30	90
H	100	100

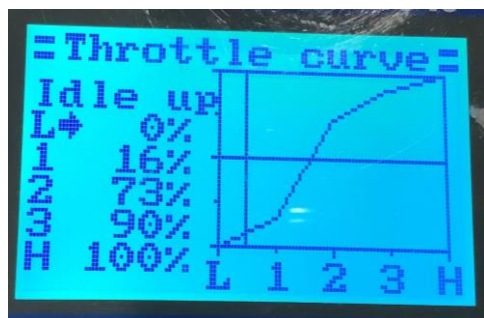
These values allow for finer sail adjustments when going up wind. However, the last ¼ of stick movement, moves the sail in/or out very quickly.

To address this, you can program an alternate curve (Idle up) for downwind. You can switch between the two modes using Switch A.

When Sw A is down, Idle Up settings are ON

Idle up settings allow finer sail control on the upper half of the stick position.

Recommend to experiment and see what feels good to you. There is no one right answer.





# Reference Material

Here are a few YouTube Links of people programming their remotes for RC sailing

They are not necessarily Solings or US 12s but the same principles apply.

## **2024-03-09 Newport Model Sailing Club - DF95 Clinic**

<https://youtu.be/1M-gYp64zFA?si=s5yxKLKMSmPcF7oB>

## **FlySky FS-i6 SailBoat Setup**

<https://youtu.be/MuDpQPF1kQk?si=cjuYEX9zmPG8mK9f>