



MODEL MENU (Airplane/Glider/Multicopter functions)

The dedicated mixes, etc. usable when airplane or glider model type is selected are displayed in this Model menu functions section. First use the Model type function of the Linkage menu to preset the model type, wing type, and tail type matched to the fuselage used. Other settings reset the data used in mixing function, etc.

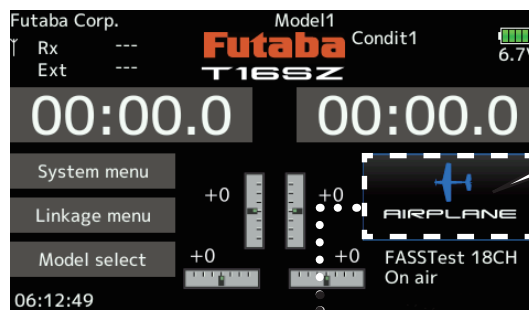
These dedicated mixes can be set for each flight condition, as required. When you want to use the system by switching the settings for each

condition by switch or stick position, use the Condition select function to add flight conditions. (Up to 8 conditions can be used)

Note: The T16SZ is designed so that the airplane and glider model types can handle aircraft of the same wing type.

The functions common to airplanes and gliders, except some dedicated functions, are summarized without regard to the model type.

The setting items are different, depending on the number of servos, etc. according to the wing type used. The setup screens in the instruction manual are typical examples.



Tap this icon to go to the model menu.

- Select the function name and return to the Home screen.

Model menu	Model1	Condit.1	6.4V	1/2
Servo monitor	Condition select	AFR		
Dual rate	Program. mixes	Aileron differential		
Flap setting	AIL → Camber flap	AIL → Brake flap		
Aileron → Rudder	Elevator → Camber	Camber mixing		
Airbrake → ELE	Camber flap → ELE	Rudder → Aileron		
Rudder → Elevator	Snap roll	Air brake		

(Model menu screen example)

*The Model menu screen depends on the model type.

Model menu (Airplane/Glider/Multicopter) functions table

Aileron differential

This function adjusts the left and right ailerons. Roll axis correction and fine tuning with a VR are also possible. This is convenient when making settings during flight.

[Airplane/glider, 2 ailerons or more]

Flap setting

The flaps can be adjusted independently. For a 4 flaps model, the camber flaps can be mixed with the brake flaps. [Airplane/glider, 2 flaps or more]

AIL → Camber flap

This mix operates the camber flaps in the aileron mode. It improves the operation characteristic of the roll axis. [Airplane/glider, 2 ailerons + 2 flaps or more]

AIL → Brake flap

This mix operates the brake flaps in the aileron mode. It improves the operation characteristic of the roll axis. [Airplane/glider, 4 flaps or more]

Aileron → Rudder

This mix is used when you want to operate the rudder at aileron operation. Banking at a shallow bank angle is possible. [Airplane/glider, general]

Elevator → Camber

This mix is used when you want to the mix camber flaps with elevator operation. Lifting force can be increased at elevators up. [Airplane/glider, 2 ailerons or more]



Camber mixing

This mix adjusts the camber and corrects the elevators. [Airplane/glider, 2 ailerons or more]

Airbrake→ELE

This mix is used to correct operation of the airbrakes (spoilers) when landing. [Airplane/glider, general]

Camber flap→ELE

This mix is used to correct for attitude changes when the camber flaps are being used. [Airplane/glider, 2 ailerons + 1 flap or more]

Rudder→Aileron

This function is used to correct roll knife edge, etc. of stunt planes. [Airplane/glider, general]

Rudder→Elevator

This function is used to correct roll maneuvers, knife edge, etc. of stunt planes. [Airplane, general]

Butterfly (Crow)

This function is used when powerful brake operation is necessary. [Glider, 2 ailerons or more]

Trim mix 1/2

The ailerons, elevators, and flaps trim offset rate can be called by switch or condition selection. [Glider general]

Snap roll

This function selects the snap roll switch and adjusts the steering angle of each rudder. Servo speed can also be adjusted. [Airplane general]

Air brake

This function is used when airbrakes are necessary when landing or when diving, etc. during flight. [Airplane, general]

Gyro

This is a dedicated mix when a GYA Series gyro is used. [Airplane/glider/multicopter, general]

Ailevator

This function adjusts the elevators and ailerons of models with elevator specifications. [Airplane/glider, elevator specifications]

Acceleration

Allows a brief "overload" in response to sudden Elevator, Elevator→Camber, and Ail→Rudder. [Glider general]

Motor

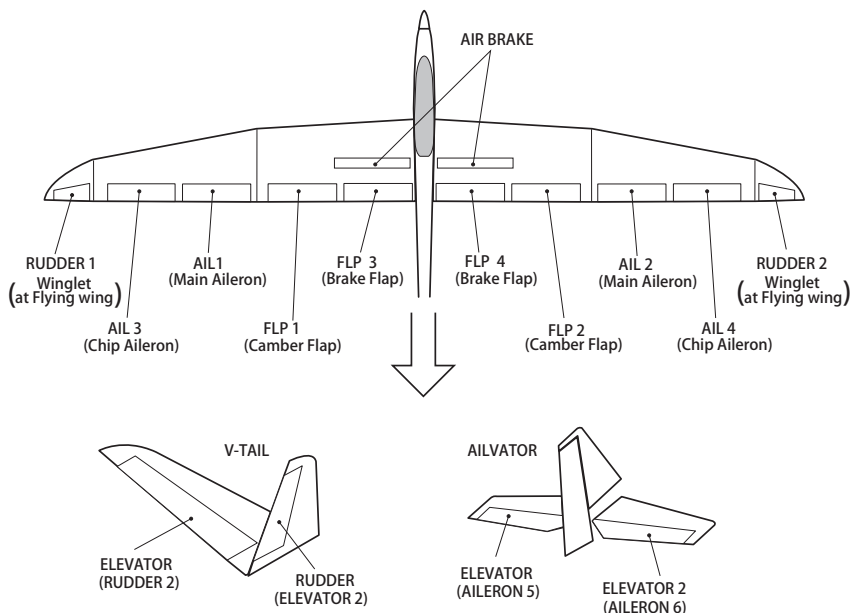
The operation speed when the motor of F5B and other EP gliders is started by switch can be set. [Airplane/glider, general]

V-Tail

This function adjusts the elevators and rudder of V-tail models. [Airplane/glider, V-tail specifications]

Winglet

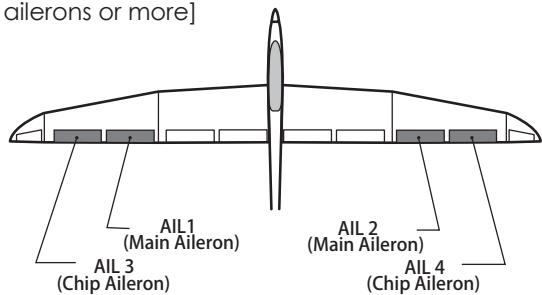
This function adjusts the left and right rudders of winglet models. [Airplane/glider, winglet specifications]





Aileron differential [Airplane/glider, 2 ailerons or more]

The left and right aileron differential can be adjusted independently. The differential rate can also be adjusted according to the flying state by setting a fine tuning VR.



- Select [Aileron differential] at the model menu and call the setup screen shown below.

- Return to Model menu

Currently selected condition name

Aileron differential	Model1 Condit1	6.7V		
	Left	Right	Group	
Aileron	100	100	Gr.	<div style="border: 1px solid black; padding: 2px;"> Condition group/single mode selection (Gr./Sngl) (For more information, see the description at the back of this manual.) </div>
Aileron2	100	100		
Aileron2	100	100		
Aileron4	100	100		

Aileron left/right adjustment

*The display screen is an example. The actual screen depends on the Model Type.

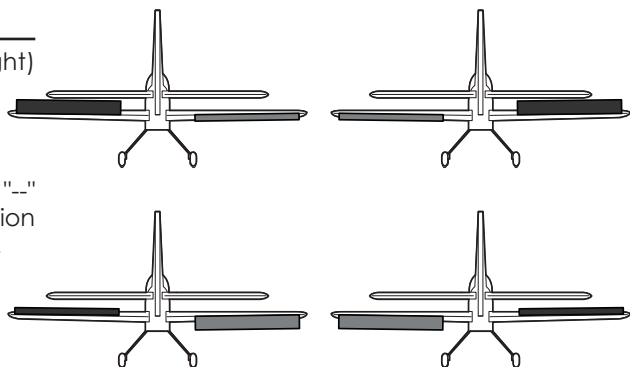
Fine tuning VR setting
*The graph is operated by setting a VR, etc.

Aileron differential	Model1 Condit1	6.7V		
	Pos. +0	Rate +0	EXP 1	Separ.
			Offset	0.0
			Rate A	+100.0
			Rate B	+100.0
			EXP A	0.0
			EXP B	0.0

● Fine tuning VR operation curve setting
(For a description of the setting method, see the description at the back of this manual.)

Setting method

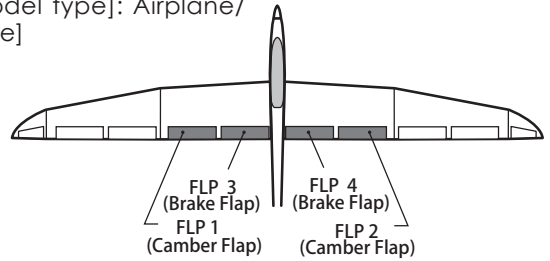
- Tap to the aileron (AIL) 1~4(2) left (or right) setting item.
Adjust the aileron angles.
- When setting the fine tuning VR, tap the "--" item and tap the screen to call the selection screen, and then select the fine tuning VR.
- The fine tuning rate can be set by curve.





Flap setting

[Corresponding model type]: Airplane/
glider, 2 flaps or more]



The up/down travel of each flap (camber flaps: FLP1/2, brake flaps: FLP3/4) can be adjusted independently at each servo according to the wing type.

- The operation reference point of each flap can be offset

The camber flaps of a 4-flap model can be mixed with the brake flaps. (Brake FLP to camber FLP)

- An ON/OFF switch can be set.
- Select [Flap setting] at the model menu and call the setup screen shown below.

•Return to Model menu →

Up side/Down side adjustment

Operation reference point offset

Currently selected condition name

Model1 Condit1 6.7V 1/2

Group	Camber flap		Brake flap	
	Flap	Flap2	Flap3	Flap4
Up	+100	+100	+100	+100
Down	+100	+100	+100	+100
Offset	+0	+0	+0	+0

Camber flap setting
Brake flap setting

Condition group/single mode selection (Gr./Sngl)
(For more information, see the description at the back of this manual.)

Operation is performed via the volume switches, etc., set for each flap control of the function.

→ The operational volume switch is set up by "Function"

Up side/Down side adjustment

Operation reference point offset

Model1 Condit1 6.7V 2/2

Group	Brake flap → Camber flap	
	Status	Switch
Up	+100	INH
Down	+100	--
Offset	+0	

Brake flap to Camber flap setting

Mixing INH ⇄ ON

The ON/OFF switch of mixing is chosen.

*The display screen is an example. The actual screen depends on the Model Type.

Setting method

- Tap flap (FLP) 1~4 up or down according to the wing type.
Adjust the travel independently.
- To offset the operation reference point of each flap, tap the corresponding offset item. Use the "▼▼" "▼" "▲" "▲▲" button offset the reference point.
- When using brake FLP to camber FLP mixing,

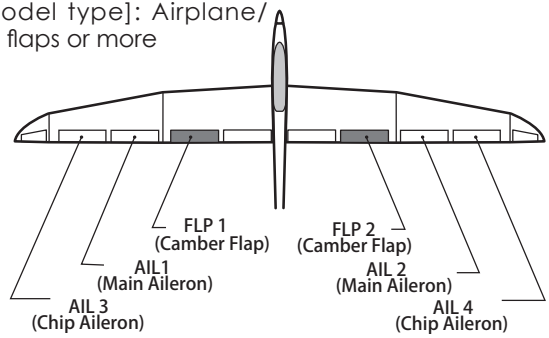
tap the [INH] item and tap the screen. (ON is displayed.)

When setting a switch, tap the [--] item of the switch and tap the screen to call the selection screen. Then, select the switch and set its ON direction. (Always ON at "--" setting)
(For a description of the switch selection method, see the description at the back of this manual.)



AIL → Camber flap [Corresponding model type]: Airplane/glider, 2 ailerons + 2 flaps or more

This mix operates the camber flaps (FLP1/2) in the aileron mode. When the aileron stick is manipulated, the ailerons and camber flaps perform aileron operation simultaneously and the operation characteristic of the roll axis is improved.



- The aileron left/right mixing rate of each flap servo can be fine-tuned.
- A mixing curve can be set.
- An ON/OFF switch can be set.
- Linking is possible: Link this mix to other mixes.
- Select [AIL→Camber flap] at the model menu and call the setup screen shown below.

• Return to Model menu

● **Mixing curve setting**
(For a description of the setting method, see the description at the back of this manual.)

Currently selected condition name

Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.

To set linking, tap to the [OFF] item

Setting method

- Tap [INH].
(ON is displayed.)
- When setting a switch, tap the [--] item of the switch and tap the screen to call the selection screen, and then select the switch and set its ON direction. (Always ON at "--" setting)
(For a description of the switch selection method, see the description at the back of this manual.)
- Tap the left or right item of each flap servo.
Adjust the mixing rate.

*When the mixing direction is reversed by the linkage, adjustments can be made by changing the mixing rate polarity (+ or -).

- A mixing curve can be set. (1/2 page)
(For a description of the mixing curve setting method, see the description at the back of this manual.)
- To set linking, tap the [Link] item.
Set it to ON and tap the screen.

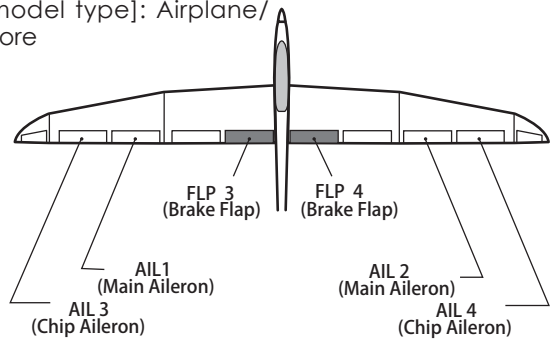


AIL → Brake flap

[Corresponding model type]: Airplane/
glider, 4 flaps or more

This mix operates the brake flaps (FLP3/4) in the aileron mode. When the aileron stick is manipulated, the aileron and brake flaps perform the aileron operation simultaneously and the operation characteristic of the roll axis is improved.

- The aileron left and right mixing rates can be adjusted for each flap servo.
 - A mixing curve can be set.
 - Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [-] setting)
 - Linking can be set: Link this mix to other mixes.
- Select [AIL→ Brake flap] at the model menu and call the setup screen shown below.



- Return to Model menu

● **Mixing curve setting**
(For a description of the setting method, see the description at the back of this manual.)

Currently selected condition name

AIL → Brake flap Model1 Condit1 6.7V 1/2

Pos. +0 Rate +0

EXP 1 Separ.

Offset 0.0

Rate A Rate B

+100.0 +100.0

EXP A EXP B

0.0 0.0

Left/right overall adjustment at Rate A and Rate B

Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.

To set linking, tap to the [OFF] item

AIL → Brake flap Model1 Condit1 6.7V 2/2

Status INH

Group Gr.

Switch --

Link OFF

Travel

	Left	Right
Flap3	+0	+0
Flap4	+0	+0

Adjustment of each flap servo

● Setting method

- Tap to the INH item.
(ON is displayed.)
- When setting a switch, tap to the [--] item of the switch and tap the screen to call the selection screen, and then select the switch and set its ON direction. (Always ON at "--" setting)
(For a description of the switch selection method, see the description at the back of this manual.)
- Tap the left or right button of each flap servo.
Adjust the mixing rate.

*When the mixing direction is reversed by the linkage, adjustments can be made by reversing the mixing rate polarity (+ or -).

- A mixing curve can be set.
(For a description of the curve setting method, see the description at the back of this manual.)
- To set linking, tap to the Link item.
Set it to ON and tap the screen.

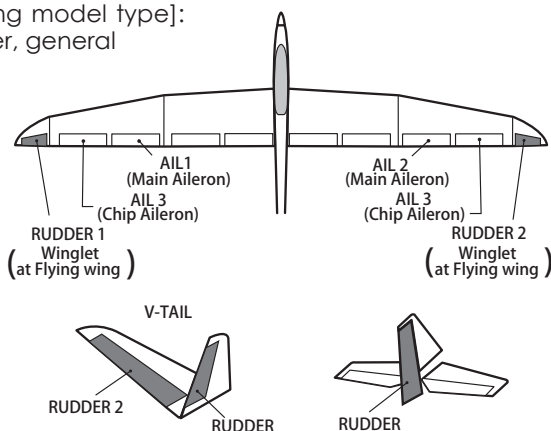
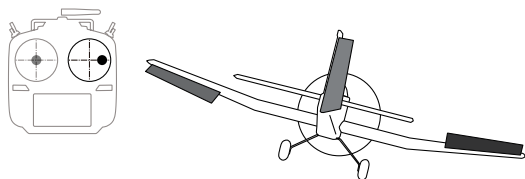


Aileron → Rudder

[Corresponding model type]:
Airplane/glider, general

Use this mix when you want to mix the rudders with aileron operation.

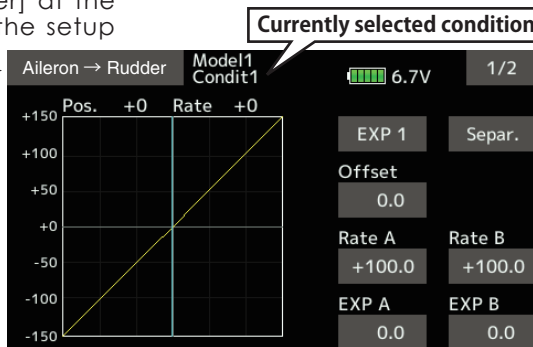
- A mixing curve can be set.
- Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [--] setting)
- The mixing rate can be fine-tuned by setting a VR.



- Select [Aileron→ Rudder] at the model menu and call the setup screen shown below.

- Return to Model menu

● **Mixing curve setting**
(For a description of the setting method, see the description at the back of this manual.)

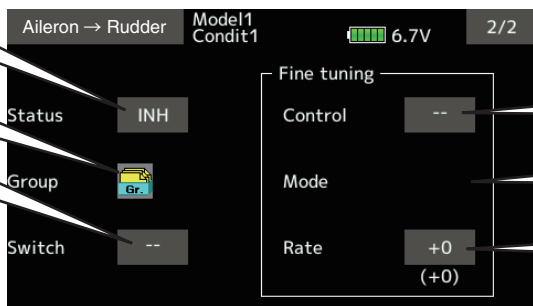


Left/right overall adjustment at Rate A and Rate B

Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.



Setting method

- Tap [INH].
(ON is displayed.)
- When setting a switch, tap to the [--] item of the switch and tap the screen to call the selection screen, and then select the switch and set its ON direction. (Always ON at "--" setting)
(For a description of the switch selection method, see the description at the back of this manual.)
- When setting a VR, tap to the Fine Tuning "--" item and tap the screen to call the selection screen, and then select the VR. The adjustment rate can be set. The VR operation mode can also be selected.
- A mixing curve can be set.

(For a description of the curve setting method, see the description at the back of this manual.)

[Fine tuning VR operation mode]

[LIN.] Mixing rate 0% at center of VR. When the VR is turned clockwise and counterclockwise, the mixing rate increases and decreases, respectively.

[ATL+] Mixing rate 0% at left end of VR. When the VR is turned, the mixing rate increases.

[ATL-] Mixing rate 0% at right end of VR. When the VR is turned, the mixing rate increases.

[SYM.] When the VR is turned to the left or right of the neutral position, the mixing rate increases.



Elevator → Camber [Corresponding model type]: Airplane/glider, 2 ailerons or more

This function is used when you want to mix the camber flaps with elevator operation. When used, the flaps are lowered by up elevator, and lift can be increased.



Note: Tailless wing elevator can be operated when this mix is activated.

- A mixing curve can be set.
- Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [-] setting)
- The mixing rate can be fine-tuned by setting a VR.

- Select [Elevator→Camber] at the model menu and call the setup screen shown below.

- Return to Model menu

● **Mixing curve setting**
(For a description of the setting method, see the description at the back of this manual.)

Currently selected condition name

Overall adjustment by Rate A and Rate B.

Ailerons and flaps rate adjustment

	AIL3	AIL	AIL2	AIL4	RUD
Rate 1	+0 (+0)	+0 (+0)	+0 (+0)	+0 (+0)	+0 (+0)
Rate 2	+0 (+0)	+0 (+0)	+0 (+0)	+0 (+0)	+0 (+0)
Rate 1	+0 (+0)	+0 (+0)	+0 (+0)	+0 (+0)	+0 (+0)
Rate 2	+0 (+0)	+0 (+0)	+0 (+0)	+0 (+0)	+0 (+0)

The value inside the parentheses shows the current rudder position.

Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.

Fine tuning VR setting

Operation mode

Adjustment rate

Setting method

- Tap [INH].
(ON is displayed.)
- When setting a switch, tap the [--] item of the switch and tap the screen to call the selection screen, and then select the switch and set its ON direction. (Always ON at "--" setting)

(For a description of the switch selection method, see the description at the back of this manual.)

- When setting a VR, tap the Fine tuning "--" item and tap the screen to call the selection screen, and then select the VR. The adjustment rate can be set.

The VR operation mode can also be selected.

- A mixing curve can also be set.
(For a description of the curve setting method, see the description at the back of this manual.)



Camber mixing

[Corresponding model type]: Airplane/glider, 2 ailerons or more

This function adjusts the rate of camber operation which operates the wing camber (ailerons, camber flaps, brake flaps) in the negative and positive directions. The aileron, flap, and elevator rates can also be adjusted independently by curve, and attitude changes caused by camber operation can be corrected.

*Initial setting assigns camber operation to side lever LS.

- The up/down side rates of the aileron, flap, and elevator servos can be adjusted by curve. When the mixing direction is reversed by the linkage, adjustments can be made by changing the mixing rate polarity (+ or -).
- Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [-] setting)
- A delay can be set for each condition. A cut switch which can turn OFF the delay function can be set.
- The speed of the aileron, flap, and elevator servos can be set. (In side/Out side)

- Select [Camber mixing] at the model menu and call the setup screen shown below.

Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.

Condition delay cut switch

Condition delay setting

Currently selected condition name

Servo speed setting (For a description of the setting method, see the description at the back of this manual.)

• Return to Model menu

Ailerons, flaps and elevators rate adjustment

• Mixing curve setting (For a description of the setting method, see the description at the back of this manual.)

Overall adjustment by Rate A and Rate B.



Setting method

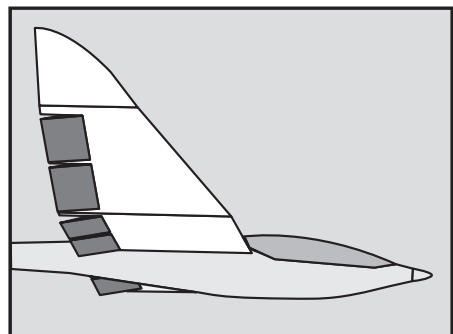
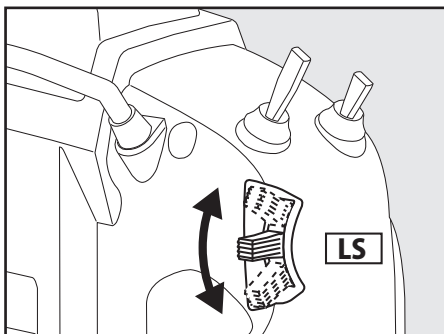
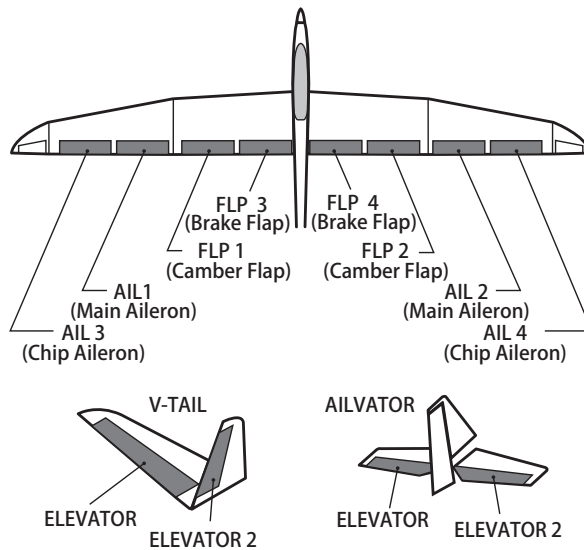
- Tap [INH].
(ON is displayed.)
- When setting a switch, tap to the [--] item of the switch and tap the screen to call the selection screen, and then select the switch and set its ON direction. (Always ON at "--" setting)
(For a description of the switch selection method, see the description at the back of this manual.)
- When setting a condition delay, tap to the [Condition delay] item.
Set the delay.

When setting a cut switch, tap [Cut-switch] and tap the screen to call the selection screen, and then select the switch and set its ON direction. (Always ON at [--] setting)

(For a description of the condition delay function, see the description at the back of this manual.)

(Curve/rate setup screen)

- The curve and rate are adjusted by calling the aileron, flap, and elevator curve/rate screens.
The rate and curve of each servo can be set by calling each screen. (For a description of the curve setting method, see the description at the back of this manual.)
The servo speed can also be adjusted.





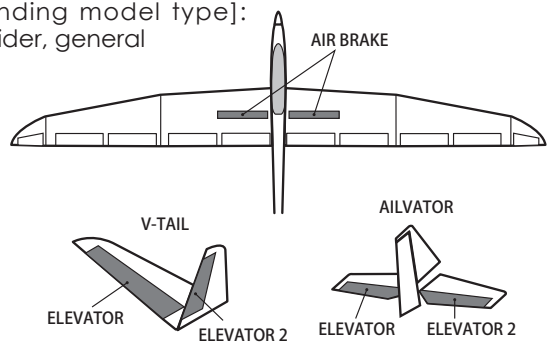
Airbrake → ELE

[Corresponding model type]:
Airplane/glider, general

This mix is used when you want to mix the elevators with airbrake (spoiler) operation. It raises the elevators to correct for dropping of the nose during airbrake operation.

*This function does not operate when airbrake is not assigned at the Function menu in the Linkage menu.

- The Rate 1 side/Rate 2 side mixing rate with the elevator servos can be adjusted.
- A mixing curve can be set.
- Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [--] setting)
- The mixing rate can be fine-tuned by setting a VR.

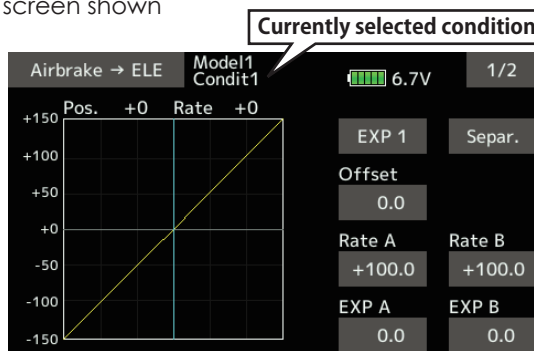


*The display screen is an example. The actual screen depends on the model type.

- Select [Airbrake→ ELE] at the model menu and call the setup screen shown below.

- Return to Model menu

● **Mixing curve setting**
(For a description of the setting method, see the description at the back of this manual.)



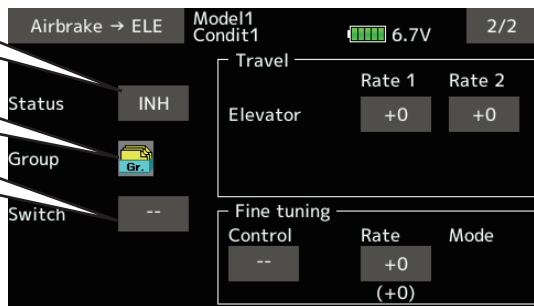
Currently selected condition name

Up/Down overall adjustment at Rate A and Rate B

Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.



Adjustment of elevator servo

Fine tuning setting

Setting method

- Tap [INH].
(ON is displayed.)
- When setting a switch, tap the [--] item of the switch and tap the screen to call the selection screen, and then select the switch and set its ON direction. (Always ON at "--" setting)
(For a description of the switch selection method, see the description at the back of this manual.)
- When setting a VR, tap the Fine tuning

"--" item and tap the screen to call the selection screen, and then select the VR. The adjustment rate can be set. The VR operation mode can also be set.

(For a description of the fine tuning VR setting method, see the description at the back of this manual.)

- A mixing curve can be set.
(For a description of the curve setting method, see the description at the back of this manual.)

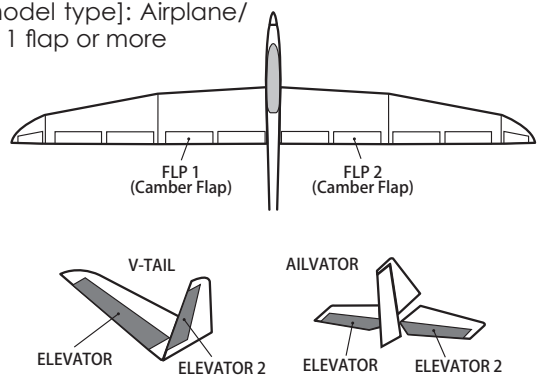


Camber flap → ELE

[Corresponding model type]: Airplane/
glider, 2 ailerons + 1 flap or more

This mixing is used to correct changes (elevator direction) generated when the camber flaps (speed flaps) are used.

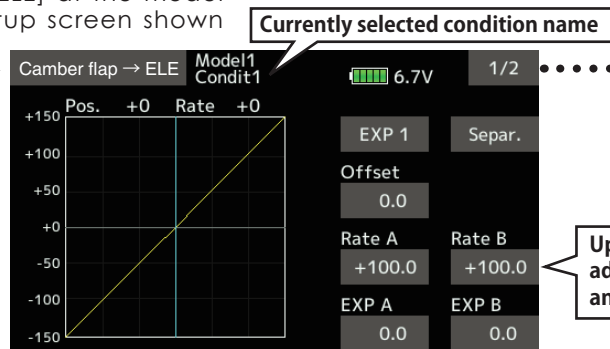
- The elevator servos up side/down side rate can be adjusted. When the mixing direction is reversed by the linkage, adjustments can be made by changing the mixing rate polarity (+ or -).
- A mixing curve can be set.
- Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [--] setting)
- The mixing rate can be fine-tuned by setting a VR.



- Select [Camber flap→ELE] at the model menu and call the setup screen shown below.

- Return to Model menu

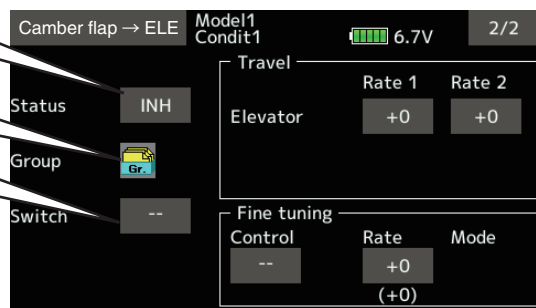
● **Mixing curve setting**
(For a description of the setting method, see the description at the back of this manual.)



Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.



Adjustment of elevator servo

Fine tuning setting

Setting method

- Tap [INH].
(ON is displayed.)
- When setting a switch, tap to the [--] item of the switch and tap the screen to call the selection screen. Then, select the switch and set its ON direction. (Always ON at "--" setting)
(For a description of the switch selection method, see the description at the back of this manual.)
- Tap elevator servos. Adjust the mixing rate.

*When the mixing direction is reversed by the linkage, adjustments can be made by changing the mixing rate polarity (+ or -).

- When setting a VR, tap the Fine tuning "--" item and tap the screen to call the selection screen, and then select the VR. The VR operation mode can be selected.
- A mixing curve can be set.
(For a description of the curve setting method, see the description at the back of this manual.)

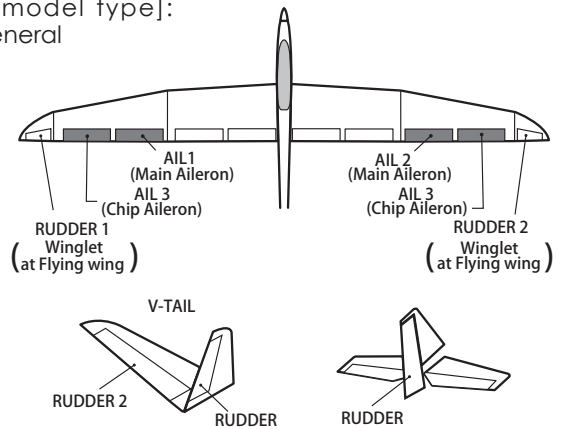


Rudder → Aileron

[Corresponding model type]:
Airplane/glider, general

This function is used when you want to mix the ailerons with rudder operation. It is used when rudder is applied during roll maneuvers, knife edge, etc. of stunt planes. It can be used to bank scale models, large models, etc. like a full size plane.

- A mixing curve can be set.
- Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [-] setting)
- Linking can be set: Link this mix to other mixes.
- The mixing rate can be fine-tuned by setting a VR.



- Select [Rudder→Aileron] at the model menu and call the setup screen shown below.

- Return to Model menu

● **Mixing curve setting**
(For a description of the setting method, see the description at the back of this manual.)

Currently selected condition name

Rudder → Aileron Model1 Condit1 6.7V 1/2

Pos.	+0	Rate	+0
+150			
+100			
+50			
+0			
-50			
-100			
-150			

EXP 1 Separ.

Offset 0.0

Rate A 0.0 Rate B 0.0

EXP A 0.0 EXP B 0.0

Left/right overall adjustment at Rate A and Rate B

Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.

To set linking, tap to the [OFF] item

Rudder → Aileron Model1 Condit1 6.7V 2/2

Status INH

Group Gr.

Switch --

Link OFF

Fine tuning Control Rate Mode

-- +0 (+0)

Fine tuning setting

Setting method

- Tap [INH]. (ON is displayed.)
- When setting a switch, tap to the [--] item of the switch and tap the screen to call the selection screen. Then, select the switch and set its ON direction. (Always ON at "--" setting) (For a description of the switch selection method, see the description at the back of this manual.)
- When setting a VR, tap to the Fine tuning "--" item and tap the screen to call the selection screen and then select the VR. The

adjustment rate can be set.

The VR operation mode can also be set.

(For a description of the fine tuning VR setting method, see the description at the back of this manual.)

- A mixing curve can be set. (For a description of the curve setting method, see the description at the back of this manual.)
- When linking: tap the [Link] item. (ON is displayed.)



Rudder → Elevator

[Corresponding model type]: Airplane, general

This function is used when you want to mix elevator operation with rudder operation. It is used to correct undesirable tendencies when rudder is applied in roll maneuvers, knife edge, etc. of acrobatic planes.

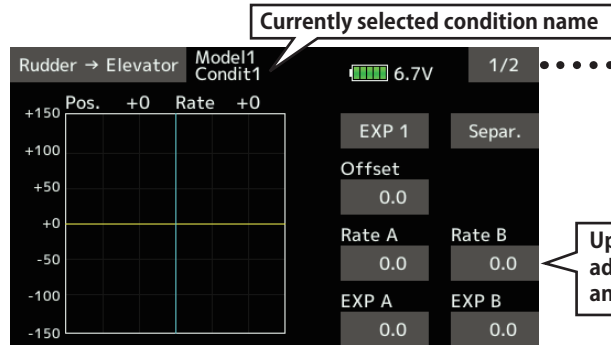
- Link can be set: Links this mixing to other mixings.
- The mixing rate can be fine-tuned by setting a VR. (Fine tuning)

- A mixing curve can be set.
- Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [--] setting)

- Select [Rudder→Elevator] at the model menu and call the setup screen shown below.

- Return to Model menu

● **Mixing curve setting**
(For a description of the setting method, see the description at the back of this manual.)



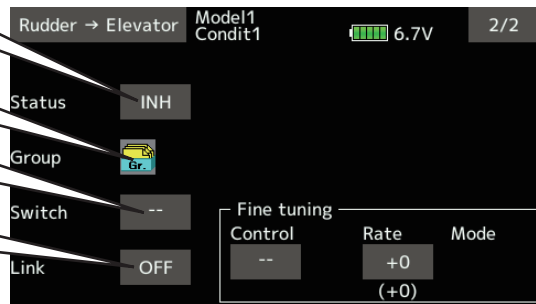
Up/Down overall adjustment at Rate A and Rate B

Activate the function by tapping the [INH].

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of mixing is chosen.

To set linking, tap to the [OFF] item



Fine tuning setting

Setting method

- Tap [INH]. (ON is displayed.)
- When setting a switch, tap to the [--] item of the switch and tap the screen to call the selection screen. Then, select the switch and set its ON direction. (Always ON at "--" setting) (For a description of the switch selection method, see the description at the back of this manual.)
- When setting a VR, tap the Fine tuning "--" item and tap the screen to call the selection screen and then select the VR. The

adjustment rate can be set.

The VR operation mode can also be set.

(For a description of the fine tuning VR setting method, see the description at the back of this manual.)

- A mixing curve can be set. (For a description of the curve setting method, see the description at the back of this manual.)
- When linking: tap the [Link] item. (ON is displayed.)



Butterfly

[Corresponding model type]: Glider, 2 ailerons or more

This function allows powerful brake operation by simultaneously raising the left and right ailerons and lowering the flaps (camber flap, brake flap).

This setting will allow the ailerons to be raised while the flaps are simultaneously lowered. Butterfly (crow) produces an extremely efficient landing configuration by accomplishing the following:

1. Slow the aircraft's velocity.
2. Provide washout at the wing tips to reduce the tendency to tip stall.
3. Create more lift toward the center of the wing allowing it to fly at a slower speed.

- Mixing during flight can be turned ON/OFF by setting a switch. (Always ON at [-] setting)
- The butterfly operation reference point can be offset. When the screen is tapped with the offset item selected when operated to the position to be changed, the reference point is offset. If the reference point is offset too much, unexpected operation may be performed.
- The ailerons and flaps operation speed can be adjusted. (In side/Out side)
- A delay can be set for each condition. A cut switch which can turn OFF the delay function can also be set.
- The differential rate can be adjusted.

*When servo binding occurs when setting the ailerons and flaps in butterfly mixing, use the AFR function to adjust the rate.

*The display screen is an example. The actual screen depends on the model type.

When using this function, Tap [INH]. (ON is displayed.)

Condition group/single mode selection (Gr. / Sngl)

The ON/OFF switch of mixing is chosen.

Condition delay setting

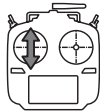
- Select [Butterfly] at the model menu and call the setup screen shown below.

Condition delay cut switch

The differential rate can be adjusted.

To next page

*The display screen is an example. The actual screen depends on the Model Type.



When offsetting the butterfly operation reference point, operate to the throttle stick point you want to change and then touch the Offset button. The reference point displays 0%. When [Yes] is touched, the reference point is changed. Then, "Initialize elevator curve?" appears, allowing you to confirm your setting.



●Return to Model menu →

Butterfly Model1 Condit.1 6.7V 2/2

Mixing rate

AIL3	AIL	AIL2	AIL4	
+0	+0	+0	+0	
FLP3	FLAP	FLP2	FLP4	ABK
+0	+0	+0	+0	+0

ELE setting

Curve	Rate 1	ELE	ELE2
	Rate 2	+0	+0
		+0	+0

Select the Mixing Rate AIL and FLP box. Adjust the mixing rates.

Elevator rate adjustment

(To elevator curve setup screen)

(Elevator correction rate setup screen)

Butterfly Model1 Condit.1 6.7V

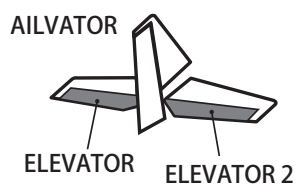
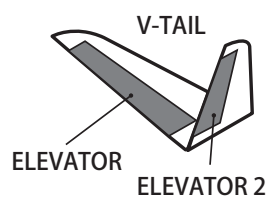
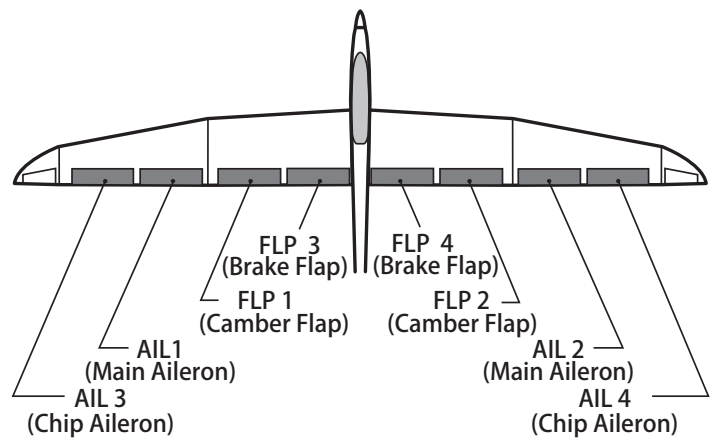
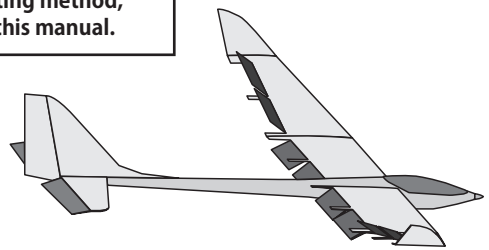
Pos. -84 Rate +0

Point	Separ.
Offset	0.0 Add
Position	0.0 Rate +34.5

The offset position is indicated by a red dotted line by an elevator curve.

Overall adjustment by Rate A and Rate B

Mixing curve setting
*For a description of the curve setting method, see the description at the back of this manual.





Trim mix 1/2

[Corresponding model type]: Glider, general

These functions call the ailerons, elevators, and flaps (camber flaps, brake flaps) trim offset rates preset according to the flight state.

The amount of ailerons, elevator, and flaps (camber flap, brake flap) trim offset can be set to a switch.

As an example **Trim mix 1** can be set up for launching, with speed flaps and ailerons dropped, and a slight amount of up elevator. **Trim mix 2** can be used for high speed flying, with both ailerons and speed flaps reflexed slightly, and a bit of down elevator.

The trim functions can be activated during flight by setting a switch. To prevent sudden trim changes when switching flight conditions, a delay can be set to provide a smooth transition between the two. Trim mix 2 will have priority over Trim mix 1.

Example

1. Move to the [INH] item. Set the trim mix function to [ON].
*When separating the settings for each condition, move to the [Group] item and set it to [Single].
 2. Select the ON/OFF switch.
 3. Select the [Manual] or [Auto] mode.
In the [Auto] mode, also select an auto SW. This switch can be linked to a stick, etc.
- <Speed>
In: The operation speed at switch ON can be set.
Out: The return speed at switch OFF can be set.
- <Fine Tuning>
The offset rate can be varied in the Fine Tuning numeric range set at screen by VR, etc. selection.
- <Condition Delay>
When flight conditions are set, the operation speed can be set for each condition. Condition delay operation can be interrupted and each rudder quickly returned to its original position by selecting a cut switch.

*The display screen is an example. The actual screen depends on the Model Type.

When using this function, Tap [INH]. (ON is displayed.)

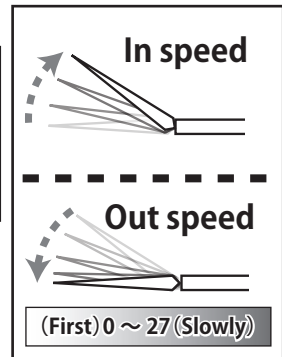
The ON/OFF switch of mixing is chosen.

Manual/Auto mode selection
Manual: Switches the function ON/OFF by switch
Auto: Trim mix function call can be linked to a stick, etc. A stick switch, etc. separate from the function ON/OFF switch is set.

Condition delay setting

- Select [Trim mix1 or 2] at the model menu and call the setup screen shown below.

To next page



Condition delay cut switch

When a fine tuning VR is set, the ailerons flaps and elevators trim rates can be adjusted.

- Return to Model menu

Trim mix 1	Model1 Condit1				
	AIL3	AIL	AIL2	AIL4	ABK
Offset	+0	+0	+0	+0	+0
Fine tuning	+0	+0	+0	+0	+0
	(+0)	(+0)	(+0)	(+0)	(+0)
FLP3	+0	FLAP	FLP2	FLP4	ELE
	+0	+0	+0	+0	+0
	+0	+0	+0	+0	+0
	(+0)	(+0)	(+0)	(+0)	(+0)

The value inside the parentheses shows the current rudder position.

The ailerons, flaps, and elevators offset rate can be adjusted. Tap to the corresponding setting item. Adjust the rate.



Snap roll

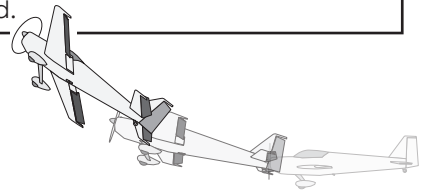
[Corresponding model type]: Airplane, general

This function selects the switch and rate adjustment of each rudder, (ailerons, elevators, or flaps) when a snap roll is performed.

- Four snap roll directions can be set. (Right/up, right/down, left/up, left/down)
- Operation mode: When [Master] mode is selected, the Snap Roll function is turned ON/OFF by master switch in the state in which the direction switch was switched to the direction in which you want to snap roll. When [Single] mode is selected, snap roll in each direction can be executed by means of independent switches.
- A safety switch can be set. As a safety measure, the switch can be set so that snap roll is not executed when, for instance, the landing gear is lowered, even if the switch is turned on accidentally. The snap roll switch is activated only when the safety switch is ON.
- The operation speed of the aileron, elevator, and flap servos can be adjusted for each snap roll direction. (In side/out side)
- Select [Snap roll] at the model menu and call the setup screen shown below.

(Example) Setting example for F3A

- Mode: [Master]
- Safety SW: [SW-G] (Safety measure)
- Master SW: [SW-H] (Main switch for executing snap roll)
- Direction switches:
 *The snap roll up side left and right and down side left and right direction switches are selected here.
 Right/Up: [SW-D] OFF-OFF-ON
 Right/Down: [SW-D] ON-OFF-OFF
 Left/Up: [SW-A] OFF-OFF-ON
 Left/Down: [SW-A] ON-OFF-OFF
- Speed adjustment
 The operation speed of each control surface when the snap switch is ON can be changed and snap roll executed by stick while there is switch operation can be performed.



•Return to Model menu →

Master or Single is chosen

Snap roll directions

The ON/OFF switch of snap roll is chosen.

The safety switch is chosen.

To next page

Condition group/ single mode selection (Gr./Sngl)

Snap roll		Model1 Condit1	6.7V	1/2
Mode	Master	Master-SW	Safety-SW	Gr
	ACT/INH	Switch	Aileron	Elevator
Right/Up	OFF	--	+100	+100
Right/Down	OFF	--	+100	-100
Left/Up	OFF	--	-100	+100
Left/Down	OFF	--	-100	-100
			Rudder	
			+100	

Master mode : Direction switches
Single mode : Snap roll switches

Aileron, elevator and Rudder rate adjustment

Snap roll		Model1 Condit1	6.7V	2/2
Speed				
		Aileron	Elevator	Rudder
		In	Out	In
		Out	In	Out
Right/Up		0	0	0
Right/Down		0	0	0
Left/Up		0	0	0
Left/Down		0	0	0

In speed

Out speed

(First) 0 ~ 27 (Slowly)

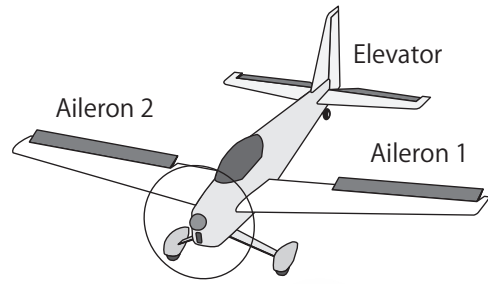


Air brake

This function is used when an air brake is necessary when landing or diving, etc.

The preset elevators and flaps (camber flap, brake flap) offset amount can be activated by a switch.

The offset amount of the aileron, elevator, and flap servos can be adjusted as needed. Also the speed of the aileron, elevator, and flap servos can be adjusted. (In side/Out side) A delay can be set for each condition, and a Cut switch which will turn OFF the delay can be chosen. Trim amounts can be fine-tuned by setting a VR. You can also set the Auto Mode, which will link Airbrake to a stick, switch, or dial. A separate stick switch or dial can also be set as the ON/OFF switch.



- Select [Air brake] at the model menu and call the setup screen shown below.

*The display screen is an example. The actual screen depends on the Model Type.

When using this function, Tap [INH]. (ON is displayed.)

The ON/OFF switch of air brake is chosen.

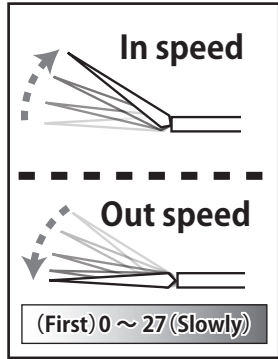
Manual/Auto mode selection
Manual: Switches the function ON/OFF by switch
Auto: Air brake function call can be linked to a stick, etc. A stick switch, etc. separate from the function ON/OFF switch is set.

Air brake		Model1	6.7V		1/2
Condit1					
Status	INH	Speed	In	Out	
Switch	--	Aileron	0	0	
Mode	Manual	Flap	0	0	
Auto switch	--	Elevator	0	0	
Delay	0	Air brake	0	0	
Cut switch	--	Fine tuning	Control		
			--		

Condition delay setting and cut switch setting.

Fine tuning setting

To next page



Offset : The ailerons, flaps, and elevators offset rate can be adjusted. Tap to the corresponding setting item. Adjust the rate.

Fine tuning : When a fine tuning VR is set on the next page, the ailerons', flaps', and elevators' trim rates can be adjusted. Tap to the corresponding setting item. Adjust the rate.

- Return to Model menu

Air brake		Model1	6.7V		2/2
Condit1					
Offset	AIL3	AIL	AIL2	AIL4	ABK
	+0	+0	+0	+0	+0
Fine tuning	(+0)	(+0)	(+0)	(+0)	(+0)
	FLP3	FLAP	FLP2	FLP4	ELE
	+0	+0	+0	+0	+0
	(+0)	(+0)	(+0)	(+0)	(+0)

The value inside the parentheses shows the current rudder position.



Gyro

[Corresponding model type]: Airplane/glider/multi-copter, general

This function is used when a GYA Series gyro is used to stabilize the aircraft's attitude. The sensitivity and operation mode (Normal mode/GY mode) can be switched with a switch.

- Three rates (Rate 1/Rate 2/Rate 3) can be switched.
- Up to 3 axes (Gyro/Gyro 2/Gyro 3) can be simultaneously controlled.

*Initial setting does not assign a sensitivity channel. Use the Function menu of the Linkage menu to assign the sensitivity channel (Gyro/Gyro2/Gyro3) used to a vacant channel beforehand.

Set [Control] and [Trim] other than Function to [--].

- Select [Gyro] at the model menu and call the setup screen shown below.

•Return to Model menu →

Tapping this will change INH to either ON or OFF and enable operation. Adjustment of the three rates (sensitivity) and switching between Normal and AVCS is possible.

Gyro		Model1 Condit1		6.7V	
Rate 1		Rate 2		Rate 3	
INH	Gr.	INH	Gr.	INH	Gr.
Type	Switch	Type	Switch	Type	Switch
GY	--	GY	--	GY	--
Mode	Rate	Mode	Rate	Mode	Rate
GYRO	Normal 0	Normal 0	Normal 0	Normal 0	Normal 0
GYR2	Normal 0	Normal 0	Normal 0	Normal 0	Normal 0
GYR3	Normal 0	Normal 0	Normal 0	Normal 0	Normal 0

Condition group/single mode selection (Gr. /Sngl)

The ON/OFF switch of gyro is chosen.

3 rate (gyro gain) adjustment

The operation mode (AVCS/NOR) and sensitivity of the 3 axes Gyro/Gyro2/ Gyro3 can be set.

- Three rates (Rate 1/Rate 2/Rate 3) can be used.
Tap to the [Rate] item. Adjust the rate.
- When using this function, Tap [INH].
- When a Futaba GYA gyro is used, when [GY] type is selected, the sensitivity set value is directly read in both the AVCS and Normal modes.
- When setting a switch, tap the Switch item and tap the "--" button to call the selection screen, and then select the switch and set its ON direction.
(For a description of the switch selection method, see the description at the end of this manual.)

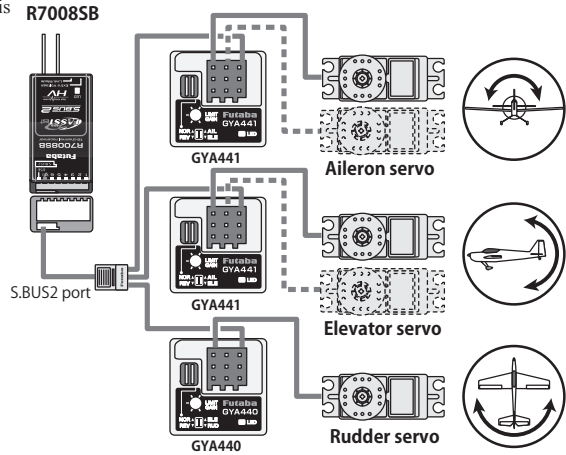
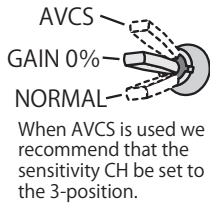


(Example) Setting three axis using a GYA440 and GYA441 (2)

- Wing type: Aileron 2 servos mounted fuselage selected
- Set **5CH → Gyro** (GYA441AIL), **7CH → Gyro2** (GYA441ELE), **8CH → Gyro3** (GYA440RUD), **Control and Trim → "-"** : at the Function menu of the Linkage menu.
- Gyro setting of the Model menu.

Rate	ACT	Type	Switch	Gyro	Gyro 2	Gyro 3
1	OFF/ON	GY	SE	AVCS : 60%	AVCS : 60%	AVCS : 60%
2	INH					
3	ON/OFF	GY	SE	Normal : 60%	Normal : 60%	Normal : 60%

*Set so that Rate 1 is turned on at the back position of switch E and Rate 3 is turned ON at the front position. Since switch E is turned OFF at the center, Rate 2 remains [INH].



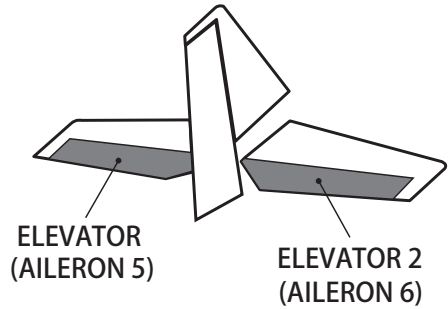


Ailevator

[Corresponding model type]: Airplane/glider, Tail type
 Ailevator (Effective only when 2 servos used at the elevators)

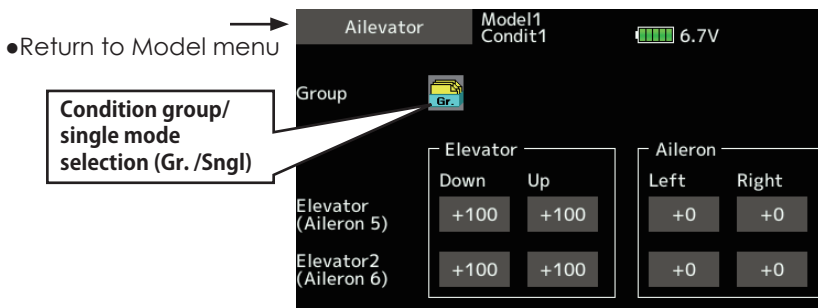
This function improves the operating performance of the roll axis by operating the elevators as ailerons.

Ailevator is where each elevator in a standard (conventional) or v-tail moves independently, like ailerons on a wing. In addition to each elevator side moving up and down together, each side moves in opposite directions when moving as an ailevator. On a V-tail, this is also known as a ruddervator, as they can serve the same purpose. Typically, both ailevator and ailerons are coupled together to maximize roll performance, especially on larger wingspan planes.



Note: Select ailevator as the Model type at the Model type screen. This changes the output channel. Check the Function menu.

- Select [Ailevator] at the model menu and call the setup screen shown below.

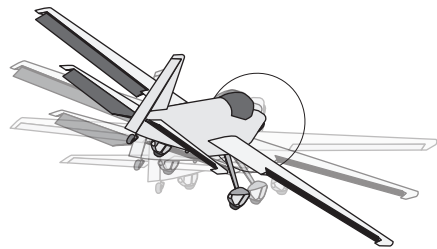


Condition group/
 single mode
 selection (Gr./Sngl)

(Elevator function)
 The up and down rates of the left and right elevators when the elevator stick is manipulated can be individually adjusted.

(Aileron function)
 When the elevators are used as ailerons, aileron travel of the left and right elevators can be adjusted.

- Travel adjustment
 Tap to the item you want to adjust.
 Adjust the rate by "▼▼" "▼" "▲" "▲▲" button.
- *If the mixing direction is reversed by the linkage, adjustments can be made by changing the mixing rate polarity (+ or -).
- *If a large value of travel is specified, when the sticks are moved at the same time, the controls may bind or run out of travel. Decrease the travel until no binding occurs.

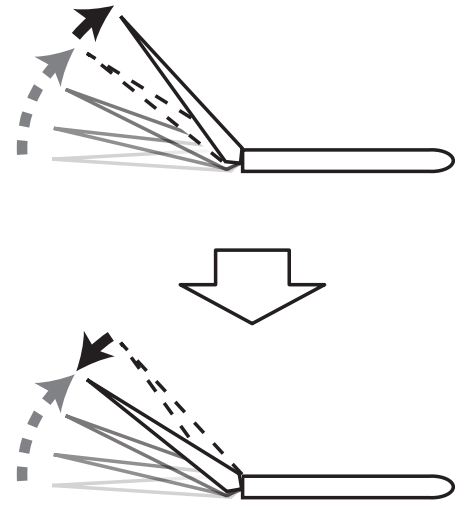




Acceleration

[Corresponding model type]: Glider, general

Acceleration setting can be performed at Elevator, Elevator → Camber and Aileron → Rudder. (Glider only)



- This setting is divided into elevator setting and camber setting. The setting method is the same.
- Camber setting sets the acceleration function for Ele to camber mixing. Setting is not performed when Ele to camber mixing is INH.
- The acceleration function can be set for both the up side and down side.
- Function ON/OFF switch setting is performed for Aileron→ Rudder setting only.
- Aileron→ Rudder setting is acceleration function setting for Aileron→ Rudder mixing. It is not performed when Aileron→ Rudder mixing is INH.

- Select [Acceleration] at the model menu and call the setup screen shown below.

When using this function, Tap [INH]. (ON is displayed.)

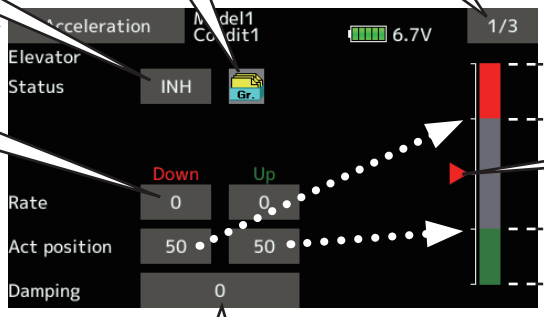
Condition group/ single mode selection (Gr./Sngl)

**To next page
2/3 : Elevator → Camber
3/3 : Aileron → Rudder**

•Return to Model menu

The rate the angle increases.

**The return time after operation (Damping) can be set.
(First return) 1 ~ 100 (Slow return)
(Acceleration doesn't function as 0.)**



Operation up to this range will initiate acceleration.

Act position

Current position

Setting method

- Acceleration rate setting (Rate)
- The return time after operation (Damping) can be set.
- The operation point at acceleration and deceleration can be set. When an operation point is exceeded, acceleration is performed.

Note: When using the acceleration function, since the servo stroke is large, make your settings so there is no binding of your linkage.



Motor

[Corresponding model type]: Airplane/glider, general

This function lets you set the operation speed when the motor of a F5B or other EP glider is started by switch. The operation speed can be set in 2 ranges of slow speed flight and high speed flight (Speed 1/Speed 2). This function can also be operated as a safety function by setting 2 switches.

- The in side and out side operating speeds can be adjusted independently in 2 ranges (Speed 1/ Speed 2).
- The boundary between the 2 ranges can be set. (From speed 1 to speed 2)
- Select [Motor] at the model menu and call the setup screen shown below.

- The set operation speed operation can be activated at initial operation only. (1 time operation) However, operation can be repeated by setting the switch to OFF before operation is finished. When you want to reset 1 time operation, set the ACT/INH item to [INH] and then reset it to [ON].
- The motor (CH3) is controlled by SW-G. (Initial setting) When changing the switch or stick which controls the motor, first change Function of the Linkage menu.

Note: When using this function, always check initial operation with the propeller removed.

•Return to Model menu →

Motor Model1 Condit1 6.7V

Speed

Status INH ACT/INH INH

Group Gr. One time INH

Switch -- Speed1 → 2 +0

Motor off +0 Speed 2 In Out 0 0

- When using this function, Tap [INH].
- Group/single mode switching (For more information, see the description at the back of this manual.)
- Switch
A switch that turns the function itself ON/OFF can be selected.
- Motor off position
Tap the motor off button when [SW-G] is in the motor OFF position you want to set. The direction of the motor switch is memorized. The screen graph display OFF direction also changes.

- When using this function, Tap [INH].
- When you want to set the "One time mode", tap to the [One time] item and tap the screen.
- Speed 1 to 2
The speed 1 and speed 2 region boundary can be changed,
- Operation speed adjustment
The speed when speed 1 and speed 2 are ON (In) and OFF (Out) can be adjusted.

Notes

- First decide the motor OFF direction, and then set the speed. When you want to reset the motor OFF direction, also reset the speed.
- We recommend that motor OFF be set in combination with F/S.
- Set the basic operation direction with the reverse function to match the ESC used.
- Always set the motor OFF position.

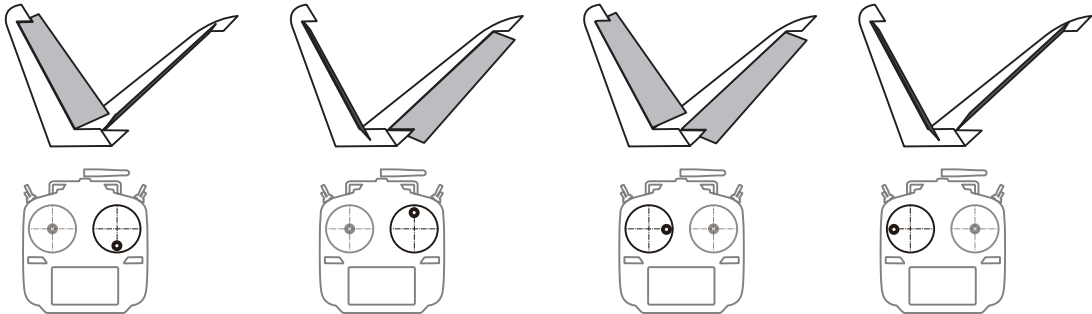
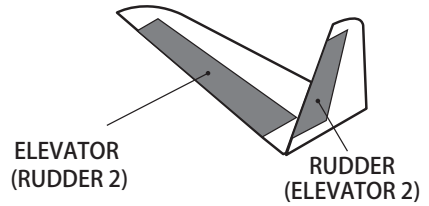


V-Tail

[Corresponding model type]: Airplane/glider, Tail type V-tail

This function lets you adjust for left and right rudder angle changes at elevator and rudder operation of a V-tail airplane.

V-tail is when 2 servos are used together to control rudder movement as elevators. In addition to each rudder side moving up and down together, each side moves in opposite directions when moving as elevators. On a V-tail, this is also known as a ruddervator, as they can serve the same purpose.



- Select [V-Tail] at the model menu and call the setup screen shown below.

- Return to Model menu

V-Tail
Model1
Condit1
 6.7V

Group

	Elevator		Rudder	
	Down	Up	Left	Right
Elevator (Rudder 2)	+50	+50	+50	+50
Rudder (Elevator 2)	+50	+50	+50	+50

(Elevator function)
Up and down travel adjustment at CH1 and CH2 elevator operation

(Rudder function)
Left and right travel adjustment at CH1 and CH2 rudder operation

Condition group/
single mode
selection (Gr. /Sngl)

- Travel adjustment
Tap to the item you want to adjust.
Adjust the rate by "▼▼" "▼" "▲" "▲▲"
button.

*If the mixing direction is reversed by the linkage, adjustments can be made by changing the mixing rate polarity (+ or -).

*If a large value of travel is specified, when the sticks are moved at the same time, the controls may bind or run out of travel. Decrease the travel until no binding occurs.



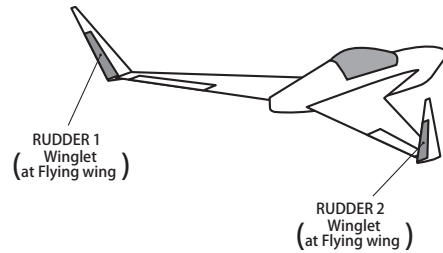
Winglet

[Corresponding model type]: Airplane/glider, winglet(2RUD)

This function adjusts the left and right rudder angles of airplanes with winglets.

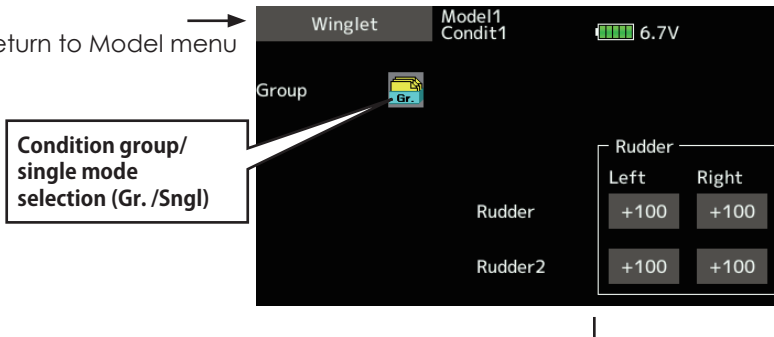
Winglets are used to improve the efficiency of aircraft lowering the lift-induced drag caused by wingtip vortices. The winglet is a vertical or angled extension at the tips of each wing.

Winglets work by increasing the effective aspect ratio wing without adding greatly to the structural stress and hence necessary weight of its structure - an extension of wing span would also permit lowering of induced drag, though it would cause parasitic drag and would require boosting the strength of the wing and hence its weight - there would come a point at which no overall useful saving would be made. A winglet helps to solve this by effectively increasing the aspect ratio without adding to the span of the wing.



- Select [Winglet] at the model menu and call the setup screen shown below.

- Return to Model menu



(Rudder 1/2)
The travel at rudder stick left and right operation can be individually set.

• Travel adjustment
Tap to the item you want to adjust.
Adjust the rate by "▼▼" "▼" "▲" "▲▲▲"
button.

*If the mixing direction is reversed by the linkage, adjustments can be made by changing the mixing rate polarity (+ or -).



MODEL MENU (Helicopter functions)

This section contains information on the commands that apply to helicopters only. For instructions on airplane, glider and multi-copter, refer to the sections pertaining to those aircraft.

Use the Model type function in the Linkage menu to select the swash type matched to the fuselage beforehand.

Also, add flight conditions at the Condition Select screen if necessary before setting the model data at each function. (Up to 8 conditions can be used)

The AFR function, dual rate function and other functions common to all model types, are described in a separate section.

◆ Condition hold

When performing adjustments, such as idling up, when the engine is engaged, keep the throttle stable so as to prevent the engine from revving too high. Once your adjustments are complete, always make sure to set the function to [OFF].

⚠ WARNING

! For safety reasons, when performing individual adjustments it is recommended that you shut off the engine and disconnect the motor to prevent rotation.

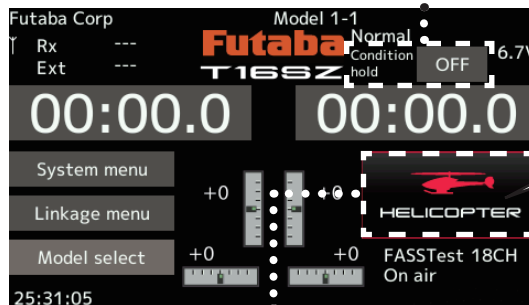
*Sudden, abrupt rotation can result in death or serious injury.

*Condition hold ON/OFF operation is possible under normal conditions and the throttle stick is more than 1/3rd into the slow throttle range. Throttle servos will remain at the throttle stick position during ON operation.

● ON/OFF operation on the Home screen

Under the conditions described above, tap the Condition hold [OFF] displayed on the screen.

During function operation, Condition hold will display [ON] and an alarm will sound.



Tap this icon to go to the model menu.

- Select the function name and return to the Home screen.



(Model menu screen example)

*The Model menu screen depends on the model type.

Model menu (Helicopter) functions table

Pitch curve: Pitch curve and hovering trim adjustment

Throttle curve: Throttle curve and hovering trim adjustment

Acceleration: Allows a brief "overload" in response to sudden throttle and pitch commands

Throttle hold: Moves the throttle to idle during autorotation

Swash mixing: Compensates for each control response

Throttle mixing: Compensates for power loss when cyclic applied

Pitch→Needle: Adjusts response curve in different flight conditions

Pitch→Rudder: Handles torque changes from pitch angle inputs

Gyro: Used to switch gyro sensitivity

Governor: Used to switch RPM of the helicopter's head



Pitch curve / Pitch trim

Pitch curve

This function adjusts the pitch operation curve for each flight condition for the optimal flight state relative to movement of the throttle stick.

*Up to 17 points can be set for the point curve types. However, when using the 3 points or 5 points specified to create a curve, a simple curve can be created by reducing the number of input points to 3 or 5, and then entering the specified value at the corresponding points that you created a curve.

- Select [Pitch curve] at the model menu and call the setup screen shown below.
- Return to Model menu

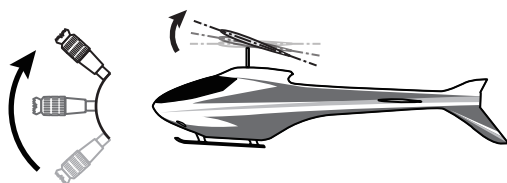
Currently selected condition name

● **Mixing curve setting**
 *For a description of the curve setting method, see the description at the back of this manual.

Point curve type is 9 points (initial), but for simple use, 4~5 points are sufficient.

Normal curve adjustment

- For normal curve, usually use [Point] type and create a basic pitch curve centered about hovering. Use this function together with the THR curve (normal) function and adjust the curve so that up/down control is best at a constant engine speed.



Idle up curve adjustment

- For the high side pitch curve, set the maximum pitch which does overload the engine. For the low side pitch curve, create curves matched to loop, roll, 3D, and other purposes and use the idle up curves according to the performance.

Throttle hold curve adjustment

- The throttle hold curve is used when executing auto rotation dives.

Operation precautions

⚠ WARNING

- ❗ When actually starting the engine and flying, always set the idle up condition switch to OFF and start the engine in the idling state.



Setting method

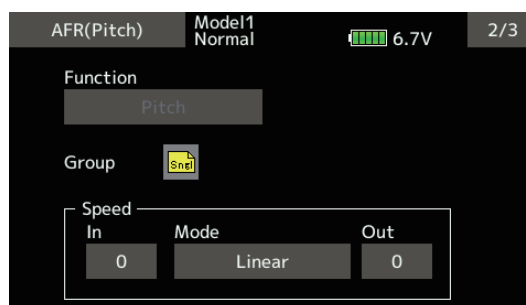
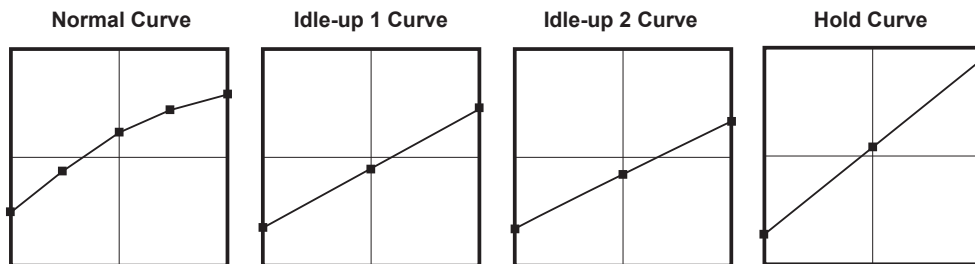
- **Group/Single item:** When you also want to input the same setting contents at other conditions, perform setting in the group mode. In this case, the same contents are input to the other conditions set in the group mode. When you want to set each condition independently, select the single mode (initial setting). Other conditions can be set independently.

Curve setting examples

The screens shown below are curves created by entering the pitch rate at low, center, and high side (3 points or 5 points) at each condition. When actually creating a curve, input the rate specified at the fuselage (or the reference value).

*For a description of the curve setting method, see the description at the back of this manual.

•Pitch Curve (Example)



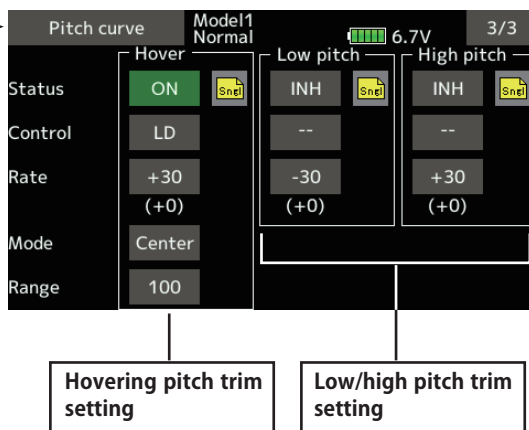
Pitch servo speed setting
(For a description of the setting method, see the description at the back of this manual.)



Pitch trim (Hovering pitch, high pitch, low pitch)

The hovering pitch, low pitch, and high pitch trim setup screen can be called from the Pitch curve setup screen.

- Return to Model menu



Hovering pitch trim

The Hovering Pitch trim function trims the pitch near the hovering point. Normally, it is used with the hovering condition. The hovering pitch can be fine tuned for changes in rotor speed accompanying changes in temperature, humidity, and other flight conditions. Adjust the hovering pitch so that rotor speed is constant. This function can be used together with the hovering Throttle Trim function for more delicate operation.

Setting method

- When using only the hovering (normal) condition, switch the group mode to the single mode (initial setting) before setting.
- Tap [INH]. (ON is displayed.)
- Select the adjustment knob.
Selection example: LD
- The trim operation mode (Mode: Center/Normal) can be selected.
Center mode: Maximum amount of change near center by center trim operation (recommended)
Normal mode: Normal trim (parallel movement trim) operation. The advantage of using this mode is that the hovering pitch can be adjusted without changing the curve.
- Trim adjustment range (Range) setting
When this value is made small, trim can only be used near the center.
- The trim rate can be adjusted and the operation direction can be changed.

High Pitch/Low Pitch Trim

High Pitch/Low Pitch Trim is the pitch servo high side and low side trim function.

Setting method

- When setting the adjustment knobs common to all the conditions, set them in the group mode.
- Tap [INH]. (ON is displayed.)
- Select the adjustment knobs.
Selection example: LS (high side), RS (low side)
- The trim rate can be adjusted and the operation direction can be changed.
- Trim acts as high side or low side trim with the center as the standard.



Throttle curve / Throttle Hover trim

Throttle curve

This function adjusts the throttle operation curve for each condition for optimum engine speed to throttle stick movement.

Up to 17 curve points can be set for the point curve type. However, when the 5 points and other

- Select [Throttle curve] at the model menu and call the setup screen shown below.

- Return to Model menu

Currently selected condition name

● **Mixing curve setting**
 *For a description of the curve setting method, see the description at the back of this manual.

Throttle hover trim operating position (White line)

Point curve type is 9 points (initial), but for simple use, 4~5 points are sufficient.

Normal curve adjustment

- Normal curve creates a basic curve centered around hovering. Use it along with the normal pitch curve and adjust so that up/down control at a constant engine speed is easiest.

Idle up curve adjustment

- Set an idle up curve that maintains a constant speed at all times, even during operation which reduces the pitch performed in flight. Create a curve matched to loop, roll, 3D, or other purposes and the idle up curve according to the performance.

Setting method

- Group/single item: When you want to simultaneously enter the same settings to other functions, make the settings in the group mode. In this case, the same setting

point data is used, a simple curve can be easily created by reducing the number of input points of the curve to 5 and entering the specified value at the corresponding points.

Operation precautions

⚠ WARNING

- ❗ When actually starting the engine and flying, always set the idle up condition switch to OFF and start the engine in the idling mode.

contents are entered to the all conditions. When you want to set each condition independently, make the settings after selecting the single mode (Initial setting).



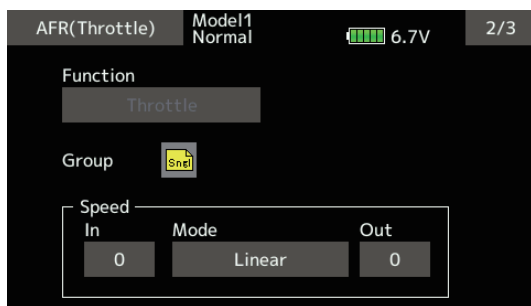
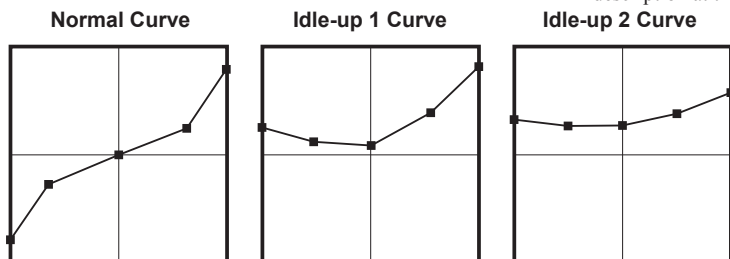
Curve setting examples

The curves shown below are created by using the point curve type and inputting the data of the 5 points 0% (low side), 25%, 50% (center), 75%, 100% (high side) at each condition. They are

created by reducing the number of points on the line to 5. When actually creating a curve, enter the data specified per the aircraft (or the reference value).

*For a description of the curve creation method, see the description at the back of this manual.

●Throttle Curve (Example)



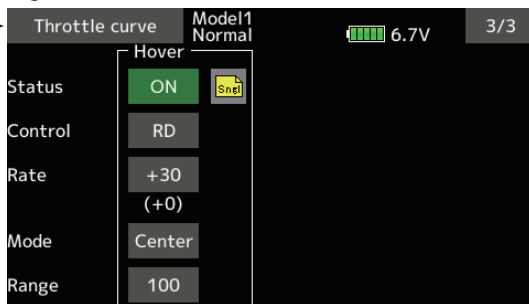
Throttle servo speed setting

(For a description of the setting method, see the description at the back of this manual.)

Throttle Hover trim

The Throttle Hover trim setup screen can be called from the Throttle curve setup screen.

- Return to Model menu



The Throttle Hover function trims the throttle near the hovering point. Normally, use it with hovering conditions. Changes in rotor speed accompanying changes in the temperature, humidity, and other flight conditions can be trimmed. Adjust the throttle so that rotor rotation is most stable. More delicate trimming is also possible by using this function along with the Hover Pitch function.

Setting method

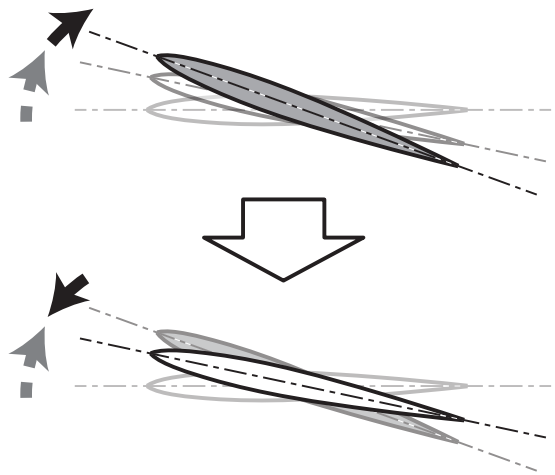
- When using the hovering (normal) condition only, switch the group mode to the single mode (initial setting) and make the settings.
- Tap [INH]. (ON is displayed.)

- Select the adjustment knob.
Selection example: RD
- The trim operation mode (Mode: Center/Normal) can be selected.
Center mode: Maximum rate of change near center by center trim operation (recommended)
Normal mode: Normal trim (horizontal movement trim) operation.
- Trim adjustment range (Range) setting
When the value is made small, trim acts only near the center.
- The trim rate can be adjusted and the operation direction can be set.



Acceleration

This function is used to adjust the pitch and the throttle rise characteristic at acceleration/deceleration operation. An acceleration function which temporarily increases the pitch and throttle operations at throttle stick acceleration/deceleration operation can be set.



Example of acceleration function use

- When used at pitch, the acceleration function is effective when you want to quicken the response of the fuselage at 3D flight flip, etc.
When used, high pitch temporarily exceeds maximum pitch, but immediately returns to maximum pitch.

- Select [Acceleration] at the model menu and call the setup screen shown below.

When using this function, Tap [INH]. (ON is displayed.)

Condition group/ single mode selection (Gr./Sngl)

**To next page
1/2 : Pitch
2/2 : Throttle**

Operation up to this range will initiate acceleration.

Act position

Current position

• Return to Model menu

The rate the angle increases.

The return time after operation (Damping) can be set.
(First return) 1 ~ 100 (Slow return)
(Acceleration doesn't function as 0.)

Setting method

- Acceleration can be set at both setting at acceleration (high) and setting at deceleration (low).
(The operation point is displayed on a graph.)
- Acceleration rate setting (Rate)
- The return time after operation (Damping) can be set.

- The operation point at acceleration and deceleration can be set. When an operation point is exceeded, acceleration is performed.

Note: When using the acceleration function, since the pitch stroke is large, make your settings so there is no binding of your linkage.



Throttle hold

This function sets the throttle cut position for auto rotation. The throttle position can also be set to an idling position. Setting of these 2 positions can be selected by switch. This allows use for switching during training.

- Select [Throttle hold] at the model menu and call the setup screen shown below.

• Return to Model menu →

Throttle hold		Model1	6.7V	
Cut mode		Normal	Idle mode	
Status	INH	[Snel]	Status	INH [Snel]
Switch	--		Switch	--
Hold pos.	17		Hold pos.	50
Speed	0		Speed	0
Mode	Manual		Mode	Manual
Auto pos.	50		Auto pos.	50

Annotations for the screenshot:

- Current position**: Points to the 'Hold pos.' field in Cut mode (17).
- Set to the engine stop position.**: Points to the 'Hold pos.' field in Cut mode (17).
- Hold position**: Points to the 'Hold pos.' field in Cut mode (17).
- Set to the idling position.**: Points to the 'Hold pos.' field in Idle mode (50).
- Engine cut setting**: Points to the Cut mode section.
- Engine idle setting**: Points to the Idle mode section.

Example of use

- Since throttle hold has 2 modes (Cut) and (Idle), using it in the Idling mode during training and in the Cut mode when stopping the engine at contest, etc. is convenient.

Note: When throttle hold is set to ON in the normal condition, throttle hold acts and the throttle servo is deactivated. Always set throttle hold to ON in the hold condition.

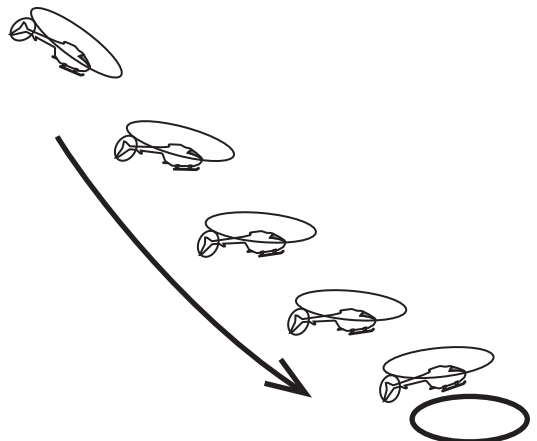
Setting method

- Operation mode selection
 - Manual mode(Manual): The throttle hold function is operated by switch operation only.
 - Auto mode(Auto): The throttle hold operation is linked to the throttle stick position.
 - Auto position setting: When the auto mode is selected, the throttle position (auto position) can be selected. Move the throttle stick to the position you want to set and tap the screen. (Auto position is displayed.)
- Hold position adjustment
 - Throttle Hold (Cut) sets the throttle cut position. Adjust it so that the carburetor is full close.
 - Throttle Hold (Idle): Make this adjustment to maintain idling for training. Adjustments can be made based on the throttle curve idle position.
- The throttle servo operating speed can be adjusted. (Speed)
- Throttle cut or training function can be switched by hold function selector switch.

Operation precautions

⚠ WARNING

! When starting the engine, confirm that the idle up condition and throttle hold condition are OFF.





Swash mixing

The swash mix function is used to correct the swash plate in the aileron (roll) direction and elevator (cyclic pitch) corresponding to each operation of each condition.

Adjustment by independent curve for aileron, elevator, and pitch operations is possible. The operation can be smoothly adjusted by calling up the “Curve setup” screen by tapping the mixing item that corresponds to the mixing and direction which needs correction.

Example of use

- As an example, use swash mixing to correct undesirable tendencies in the roll direction.
- For a condition which uses Aileron to Elevator, set this function to ON. When raising the nose at a right roll, when the Rate B side is input and the right aileron is operated, the elevator moves to the down side. Tune by adjusting the Rate. For right roll, adjust to the rate A side.

- Select [Swash mixing] at the model menu and call the setup screen shown below.

Mixing	Status	Switch	Trim	
Aileron → Elevator	INH	--	OFF	Sngl
Elevator → Aileron	INH	--	OFF	Sngl
Pitch → Aileron	INH	--		Sngl
Pitch → Elevator	INH	--		Sngl

- Return to Model menu

● Mixing curve setting
 *For a description of the curve setting method, see the description at the back of this manual.

Setting method

- When using this function, Tap [INH]. (ON is displayed.)
- When you want to set the same contents at other conditions, select the group mode. When you want to set the selected condition only, select the single mode (initial setting).
- The correction rate can be set by curve.
- A switch can be set.

When [--] is set, the swash mixing function is operated by merely selecting the condition. When setting an [ON]/[OFF] switch, tap to the [--] item and tap the screen to call the selection screen and set the switch and its ON position.



Throttle mixing

This function corrects slowing of engine speed caused by swash plate operation during aileron or elevator operation. The method of applying clockwise or counterclockwise torque when pirouetting can also be corrected.

An acceleration function which temporarily increases the throttle side correction rate relative to rapid stick operation can also be set.

- Select [Throttle mixing] at the model menu and call the setup screen shown below.

- Return to Model menu



"CTRM" : The correction rate maximum when the throttle stick is centered.
"Linear" : Correction applied for the entire throttle range.



- **Mixing curve setting**
 *For a description of the curve setting method, see the description at the back of this manual.

When correction is necessary, tap to the mixing item corresponding to the mixing that needs correction and tap the screen to call the curve setup screen, and then correct the slowing.

Setting example

- Aileron to Throttle applies a load to the engine and corrects slowing of the engine speed when the aileron stick was operated. Engine racing can be adjusted independently at the right aileron and left aileron by Rates A and B.



<Acceleration function setting>

- Acceleration can be set for both settings (Left) and (Right)
- Acceleration rate setting (Rate)
- The return time (Damping) after operation can be set.
- The operation point (Act position) when the correction rate is increased and decreased can be set independently. When an operation point is exceeded, acceleration operation is performed.

Setting method

- When using this function, Tap [INH]. (ON is displayed.)
- When you want to set the same contents at other conditions, select the group mode.
 When you want to set the selected condition only, select the single mode (initial setting).
- The correction rate can be set by curve.
- A switch can be set.

When [--] is set, the swash mixing function is operated by merely selecting the condition.

When setting an [ON]/[OFF] switch, tap to the [--] item and tap the screen to call the selection screen and set the switch and its ON position.



Pitch → Needle

This mixing is used when the engine is equipped with needle control or other fuel-air mixture adjustment. A needle curve can be set.

An acceleration function which temporarily increases needle operation at throttle stick

acceleration/deceleration operation can be set. The rise characteristic of the needle servo at acceleration and deceleration operation can be adjusted.

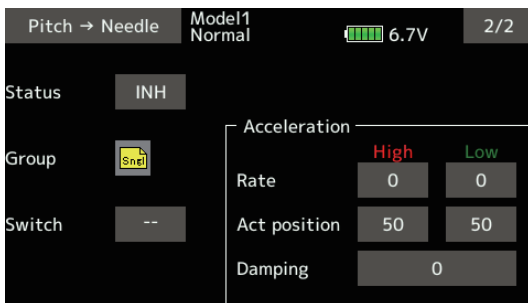
- Select [Pitch→Needle] at the model menu and call the setup screen shown below.

- Return to Model menu

● **Mixing curve setting**
 *For a description of the curve setting method, see the description at the back of this manual.



Normally, use [Point] type.



Setting method

- When using this function, Tap [INH]. (ON is displayed.)
- When you want to set the same contents at other conditions, select the group mode. When you want to set the selected condition only, select the single mode (initial setting).
- A needle curve can be set.
- A switch can be set.

When [--] is set, the mixing function is operated by merely selecting the condition.

When setting an [ON]/[OFF] switch, tap to the [--] item. Tap the screen to call the selection screen and set the switch and its ON position.

< Acceleration function setting >

- Acceleration can be set at both setting at acceleration (high) and setting at deceleration (low).
- The acceleration rate (rate) and the return time after operation (damping) can be set.
- An operation point (Act position) at acceleration and deceleration can be set. When an operation point was exceeded, acceleration operation is performed.



Pitch → Rudder (Revolution mixing)

Use this mix when you want to suppress the reaction torque generated by main rotor pitch and speed changes during pitch operation. Adjust so that the nose does not move in the rudder direction.

An acceleration function which temporarily increases the correction rate at throttle stick acceleration/deceleration operation can be set. The mixing rate at acceleration/deceleration can be set.

- Select [Pitch→Rudder] at the model menu and call the setup screen shown.

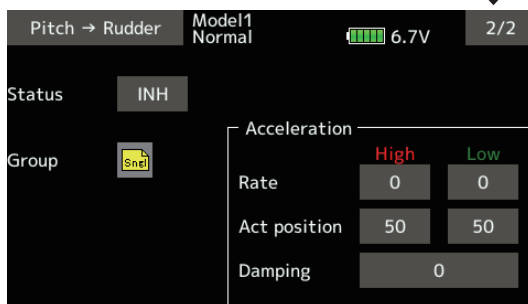
● **Mixing curve setting**
 *For a description of the curve setting method, see the description at the back of this manual.



Setting method

- When using this function, Tap [INH]. (ON is displayed.)
- When you want to set the same contents at other conditions, select the group mode.
 When you want to set the selected condition only, select the single mode (initial setting).
- A mixing curve is set.

However, when a GY Series or other heading hold gyro is used, since correction is performed by the gyro, this mix is not used. If this function is used when the gyro operation mode is the AVCS mode, the neutral position will change.



<Normal condition mixing curve>

The mixing curve rate starts from a small value.
 For a rotor with a clockwise operation direction (polarity), when pitch was operated at the plus side, set so that mixing is in the clockwise direction. First, trim at hovering and then adjust the neutral position.

1. Adjustment between slow and hovering
 Repeatedly hover from take off and land from hovering at a constant rate matched to your own rhythm, and adjust the pitch so the nose does not deflect when the throttle is raised and lowered.
2. Throttle high side (climbing and diving from hovering)
 Repeat climbing and diving from hovering at a constant rate matched to your own rhythm and adjust the pitch so that the nose does not deflect when the throttle is raised and lowered.

<Idle up condition mixing curve>

Set the mixing rate so that the rudder direction at high-speed flight is straight ahead. Adjust for each condition used.

<Acceleration function setting>

- Acceleration operation can be performed for both setting at acceleration (High) and setting at deceleration (Low).
- Acceleration rate setting (Rate)
- The return time after operation (Damping) can be set.
- An operation point (Act position) at acceleration and deceleration can be set independently. When an operation point was exceeded, acceleration operation is performed.



Gyro [Helicopter]

This function is used to adjust gyro sensitivity. The sensitivity and operation mode (Normal mode/AVCS mode) can be set for each condition.

The gyro sensitivity can be switched with each condition or the switch. (3 sensitivities)

*Compatible with 3 axis gyro (CGY750).

Note: [Gyro] [Gyro2] [Gyro3] Default function

[Gyro]: **CH6**(FASSTest12CH) **CH5**(Other system type)

[Gyro2] : **CH9**

[Gyro3] : **CH10**

Always set to [--] both (control) and (trim) for the [Gyro] function at the Function menu in the Linkage menu.

- Select [Gyro] at the model menu and call the setup screen.

- Return to Model menu

The operation mode (AVCS/NOR) and sensitivity of the 3 axes Gyro/Gyro2/Gyro3 can be set.

Gyro (RUD) setting

Gyro2 (AIL) setting

Gyro3 (ELE) setting

Tapping these will pull up the detailed selection screen for each.

Rate1 Gyro type and gain

Rate2 Gyro type and gain

Rate3 Gyro type and gain

When using Rate2/Rate3, make it INH → ON or OFF.

Use this when you want to adjust sensitivity via VR, etc., and not on-screen data entry. Tap "--", select "VR", etc., and then tap the value to adjust. (Won't operate when value is "0".)

Condition group/single mode selection (Gr./Sngl)

The ON/OFF switch of gyro is chosen.

3 rate (gyro gain) adjustment

Setting method

- When using this function, Tap [INH]. (ON is displayed.)
- When you want to set the same contents at other conditions, select the group mode.
When you want to set the selected condition only, select the single mode (initial setting).
- Three rates can be switched for each condition. (Rate 1/Rate 2/Rate 3)
- A fine tuning VR can be set.



Usage example #1: Using gyro for only the rudder and adjusting sensitivity for each condition

* Gyro gain channel

Gyro : CH5

For the FASSTest12CH, Gyro/RUD is 6ch. The gyro sensitivity adjustment connector connects to 6ch.

- Select [Gyro] at the model menu and call the setup screen.

Tapping here will let you select either Normal or AVCS.

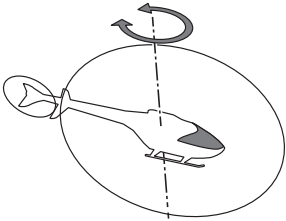
This is all that is needed for use in this case.

Set gain of a rudder

	Gyro	Mod Normal	6.7V			
	Gyro(RUD)	Gyro2(AIL)	Gyro3(ELE)			
Rate 1	Normal	80	Normal	50	Normal	50
	ON	(80)	ON	(50)	ON	(50)
		80	Normal	50	Normal	50
		(80)	INH	(50)	INH	(50)
Rate 3	Normal	80	Normal	50	Normal	50
	INH	(80)	INH	(50)	INH	(50)

Because the sensitivity is switched (Sngl) per condition, Rate 2 and Rate 3 are not used.

Because sensitivity changes for hovering and idleup, perform switchover for each condition and adjust sensitivity.



Usage example #2: Using 3-axis gyro CGY750 and adjusting sensitivity for each condition

* Gyro gain channel

Gyro RUD : CH5 For the FASSTest12CH, Gyro/RUD is 6ch.

Gyro2 AIL : CH9

Gyro3 ELE : CH10 For the CGY750, simply connect the S.BUS; functions do not need to be set.
(For the FASSTest12CH, change Gyron/RUD to 6ch.)

- Select [Gyro] at the model menu and call the setup screen.

Tapping here will let you select either Normal or AVCS for each of the three axes.

This is all that is needed for use in this case.

Set gain of a rudder

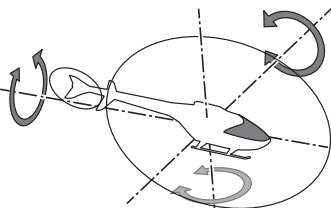
Set gain of an aileron

Set gain of an elevator

	Gyro	Model1 Normal	6.7V			
	Gyro(RUD)	Gyro2(AIL)	Gyro3(ELE)			
Rate 1	Normal	80	Normal	50	Normal	50
	ON	(80)	ON	(50)	ON	(50)
		80	Normal	50	Normal	50
		(80)	INH	(50)	INH	(50)
Rate 3	Normal	80	Normal	50	Normal	50
	INH	(80)	INH	(50)	INH	(50)

Because the sensitivity is switched (Sngl) per condition, Rate 2 and Rate 3 are not used.

Because sensitivity changes for hovering and idleup, perform switchover for each condition and adjust sensitivity.





Governor

When using a Futaba governor, this function is used to switch the RPM of the helicopter's head. Up to 3 rates can be set for each condition.

*The governor is used by connecting the governor speed setting channel to CH7 (initial setting).

*When using an independent governor [ON]/[OFF] switch, connect the AUX([ON]/[OFF]) connector of the governor to CH8 (initial setting) and set the switch to CH8 (Governor2) at the Function menu of the Linkage menu.

*When using the Fuel Mixture function, the mixture servo is controlled from the governor. When transmitting the mixture curve data from the transmitter to the governor, the governor AUX (m.trm) connector must be connected to CH8 (initial setting) and governor side setting performed. See the governor instruction manual.

Note: Always set (Control) and (Trim) to [--] for [Governor] and [Governor 2] of the Function menu of the Linkage menu.

- Select [Governor] at the model menu and call the setup screen shown below.

- Return to Model menu

	Rate 1	Rate 2	Rate 3
INH	[INH]	[INH]	[INH]
Rate	50.0 (50.0)	50.0 (50.0)	50.0 (50.0)
Tuning	+0 (+0)	+0 (+0)	+0 (+0)
Unit	%	%	%

Mode: 1000 - 2000 rpm

Setting method

• Activate the mixing

When using this function, Tap [INH]. (ON is displayed.)

*When the function is set ON/OFF at the governor setup screen, the governor rpm setting channel end point servo travel and limit point are now initialized.

*When changed from INH to ACT (ON), the servo travel is initialized to 100 and the limit point is initialized to 155.

*When operation is changed to INH at all conditions, the servo travel is initialized to 100 and the limit point is initialized to 135.

• RPM adjustment

Tap to the rate item .
Adjust the rpm by "▼▼▼" "▼" "▲" "▲▲▲" button.
Initial value: 50% (1500rpm)
Adjustment range: OFF, 0~110% (OFF, 700~3500rpm)

*When the value is tapped reset to the initial value.

• Unit display selection

Tap to the UNIT item [%] [rpm]. Select the unit.



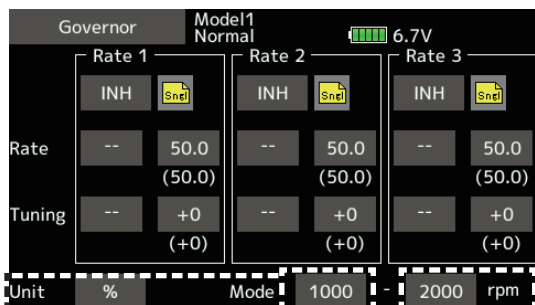
●Display mode selection

*When [rpm] mode is selected above setting, the display mode can be selected.

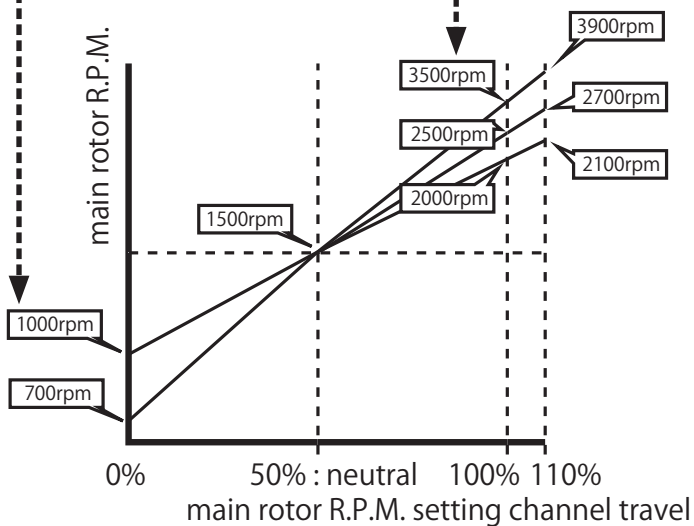
*There is no change in the transmitter output even when the "Mode" is changed. Calibration should be performed via the governor.

*In order to use the Governor function of the T16SZ, it is necessary to change the settings on the governor for the low side 700 rpm mode.

When the Mode of the Governor screen's model menu is changed, the change is also indicated on-screen.



The chart below indicates the mode percentage and the corresponding RPM.



●Fine tuning VR settings

Tap to the [--] item and tap the screen to access the selection screen. Select the control.

*For a description of the switch selection method, see the description at the back of this manual.

Tap to the rate item .

Adjust the trim rate by "▼▼" "▼" "▲" "▲▲" button.

Initial value: 0% (0rpm)

Adjustment range: -20~+20%

*When the screen is tapped for one second, the sensitivity is reset to the initial value.

Tap the screen to return to the cursor mode.

Common operations used in function setup screen

This section describes the functions often used at the function setup screen. Refer to it when setting each function.

Operations value setting

EXP B
-100.0

Pressing and holding a value will return it to its default setting.

Tapping the value setting buttons each screen will cause value input buttons to appear at the top of the panel.

Value input buttons display at the top of the panel

Large change in value

Small change in value

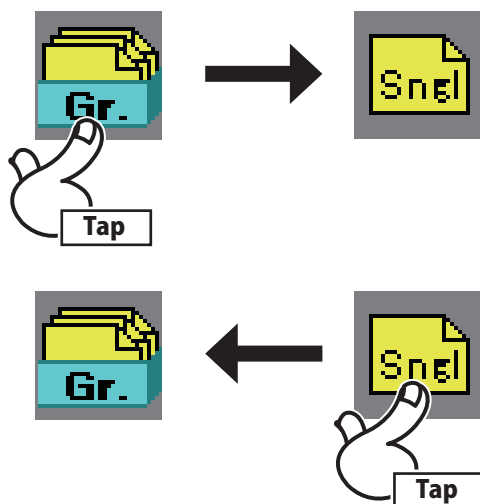
Large change in value

Operations related to flight conditions

Group/single mode switching (Gr/Singl)

When setting multiple flight conditions, linking the setting contents with all conditions (group mode) or setting independently (single mode) can be selected. The mode can be changed at the [Gr] item on each setup screen.

[Group/single mode switching]



- Group mode (Gr)
The same setting contents are set to all the flight conditions.
- Single mode (Singl)
Set this mode when the setting contents are not linked with other conditions.

Condition delay setting

Unnecessary fuselage motion generated when there are sudden changes in the servo position and variations in the operating time between channels can be suppressed by using the condition delay function of the condition select function [Condition select].

When the delay function is set at the switching destination condition, a delay corresponding to that amount is applied and the related functions change smoothly.

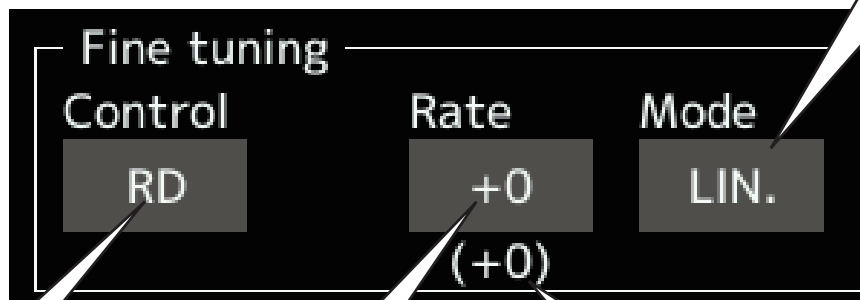
[Setting method]



1. Switch to the condition you want to set and tap the delay[0 (value)].
2. Set the delay by "▼▼" "▼" "▲" "▲▲" button.
Initial value: 0
Adjustment range: 0~27 (maximum delay)
(When the value is tapped, the delay is reset to the initial value.)

Operations related to fine tuning VR

Operation mode selection
 *The operation modes which can be selected depend on the function.



VR selection

Rate adjustment

(Fine tuning VR operation position)

[Setting method]

1. Control selection

Tap the [Control] "--" button to call the <Hardware select> screen, and then select the switch and its ON direction.

2. Mode selection

Tap the [Mode] button, and then select the mode ([LIN.], [ATL+], [ATL-], or [SYM.]).

3. Rate adjustment

Tap the [Rate] "value" button.

Set the rate by "▼▼" "▼" "▲" "▲▲" button.

Initial value: 0%

Adjustment range: -100%~+100%

(When the value is tapped, the rate is reset to the initial value.)

[Fine tuning VR operation mode]

[LIN.] Mixing rate 0% at center of VR. When the VR is turned clockwise and counterclockwise, the mixing rate increases and decreases, respectively.

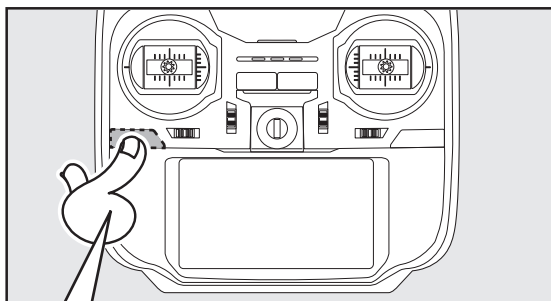
[ATL+] Mixing rate 0% at left end of VR. When the VR is turned, the mixing rate increases.

[ATL-] Mixing rate 0% at right end of VR. When the VR is turned, the mixing rate increases.

[SYM.] When the VR is turned to the left or right of the neutral position, the mixing rate increases.

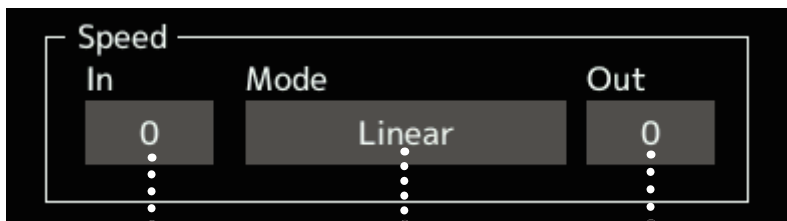


LIN. ATL+ ATL- SYM.



After setting, press a HOME/EXIT button

Operations related to servo speed



(First) 0 ~ 27 (Slowly)

Servo speed setting

The servo speed at each function operation (including flight condition switching) can be adjusted. The servos operate smoothly at a fixed speed corresponding to the set speed. The operating speed (In side) and return speed (Out side) can be set individually.

Switch the operation mode according to the set function.

"Symmetry" mode: Used with ailerons and other self neutral functions.

"Linear" mode: Used with functions which hold the operation position of the throttle and switch channel, etc.

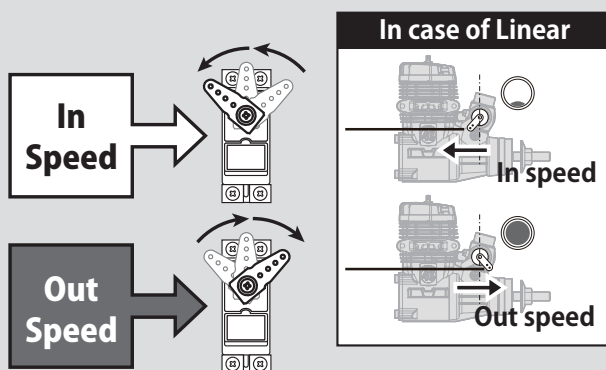
[Setting method]

1. Select the mode ([Linear] or [Symmetry]). Each time the button is tapped, it toggles between [Linear] and [Symmetry].
2. Tap the In or Out Speed button and set the servo speed.

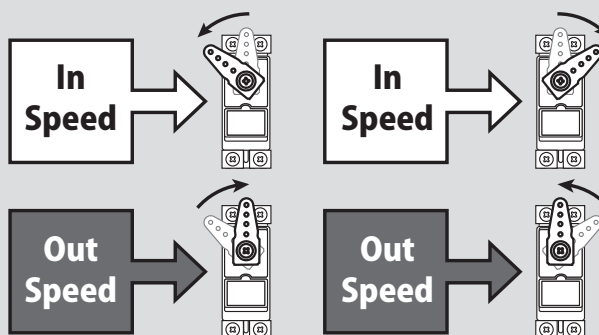
Initial value: 0

Setting range: 0~27

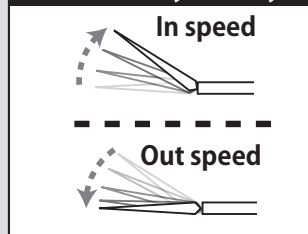
Linear



Symmetry



In case of Symmetry

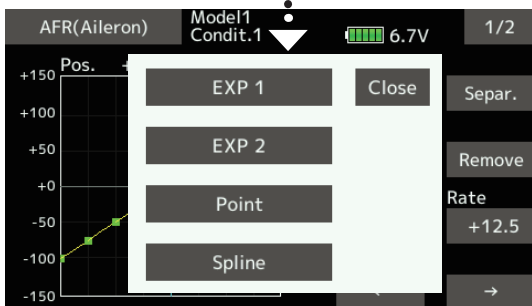
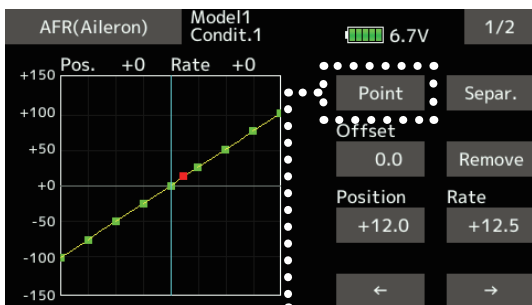


Curve setting operation

This section describes the setting procedure of curves which are used with the AFR function and each mixing function.

Curve type selection

Four types of curves (EXP1, EXP2, Point and Spline) can be selected.



Curve type selection

1. Tap the button of the curve type you want to use.

*The curve type changes and the display returns to the original screen.

[EXP1]: EXP1 curve

[EXP2]: EXP2 curve

[Point]: point curve

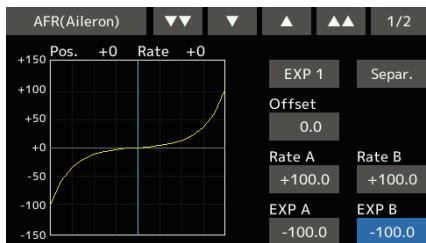
[Spline]: spline curve

Setting by curve type

When the curve type is selected as described above, adjustment items corresponding to the curve type appear on the screen. Adjust each curve as described below.

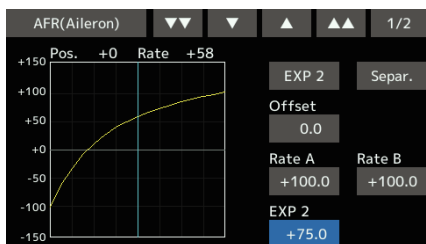
EXP1/EXP2 curve adjustment

(EXP1 curve)



Using the EXP1 curve is effective in smoothing starting of the ailerons, elevator, rudder, etc.

(EXP2 curve)



Using the EXP2 curve is effective in engine rise and other engine control.

The curve left and right rates ([Rate A], [Rate B]) and EXP curve rate ([EXP A], [EXP B]) can be adjusted individually. ([EXP] for EXP2)

The curve can also be offset horizontally ([Offset]) in the vertical direction.

[Rate setting]

1. Tap to the [Rate A], [Rate B], [EXP A], or [EXP B] setting item.
2. Set the rate by "▼▼" "▼" "▲" "▲▲" button.
Initial value: +100.0% (rate)/+0.0% (EXP rate)

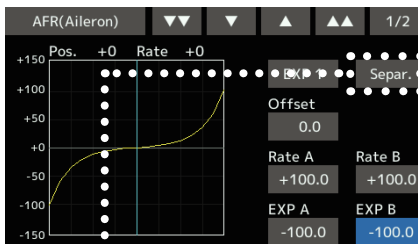
*Initial value differs depending on function.

Adjustment range: -200.0~+200.0% (rate)/-100.0~+100.0% (EXP rate)

(When the value is tapped, the rate is reset to the initial value.)

[Offsetting the curve horizontally in the vertical direction]

1. Tap to the [Offset] setting item.
2. Move the curve in the vertical direction by "▼▼" "▼" "▲" "▲▲" button.
Initial value: +0.0%
(When the value is tapped, the rate is reset to the initial value.)



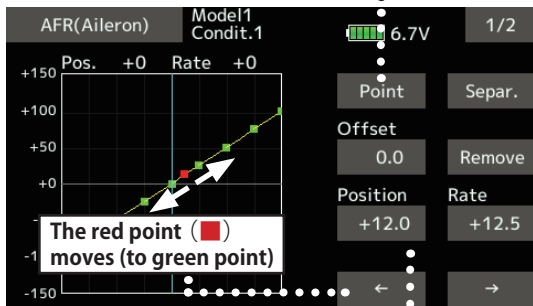
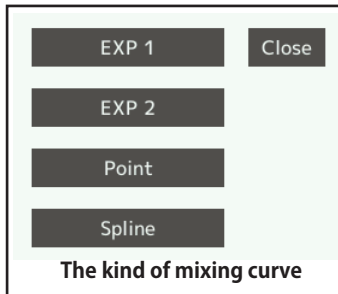
*[Separ.] mode: Normal setting

*[Comb.] mode: Creates a left and right symmetrical curve.

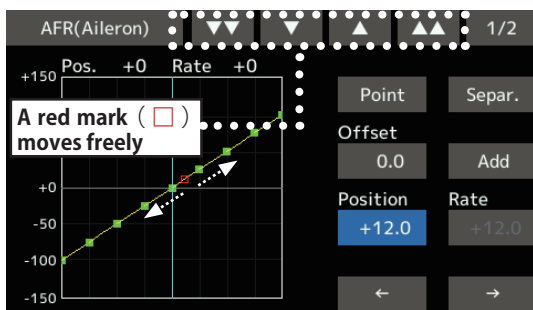
Point curves or spline curves of up to 11/17 points can be used. (Initial value: 7/9 points) **The set points can be freely increased, decreased, and offset.**

Point addition method

1. Open the screen of a mixing curve with the curve function.



2. Tap the "Position" button.

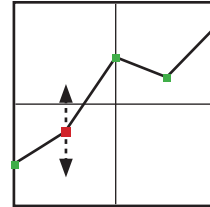


3. Tap the "▼▼" "▼" "▲" "▲▲" button and select the position (mark □) you want to add.

4. When the "Add" is tapped, the point is added. (□) → (■)

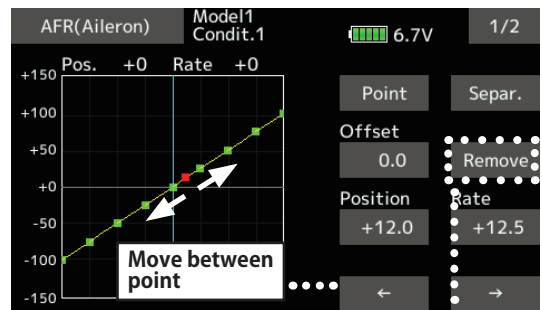
*A new point is created.

5. Press "Rate" and use the up/down arrows to adjust the rate points up or down.



Point deletion method

1. Use the move between points button [←] or [→] and select the point. (The red point ■ is the selected point.)



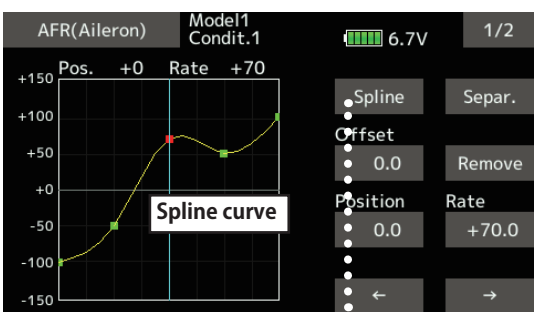
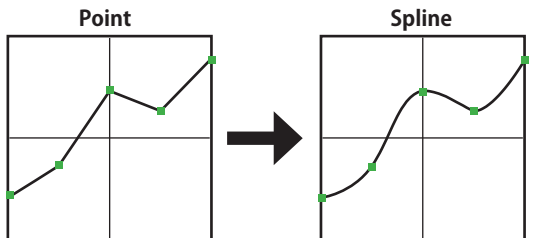
2. Tap the [Remove] button. (The selected point becomes an outlined point □)

3. Use the move between points button [←] or [→].

*The point is deleted.

Curve setting operation Spline curve

A smoother curve is made.
Setting method is same at spline and point.



EXP 1 Close

EXP 2

Point

Spline

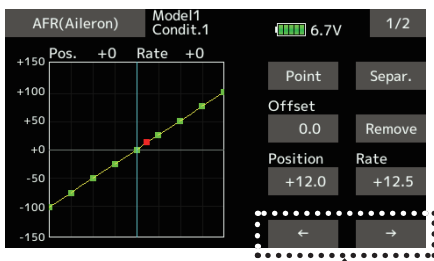
The kind of mixing curve

Up to 11 or 17 points curve can be used. (differs with function)

Initial point number: 9 points (17 points curve), 7 points (11 points curve)

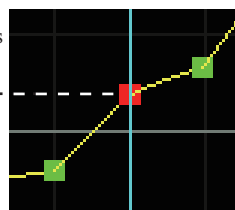
*The set points can be freely increased, decreased, and offset.

[Rate adjustment of each point]

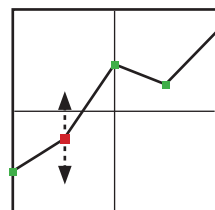


1. Tap to the ← → item and select the point whose rate you want to set.

*The mark ■ on the curve shows the currently selected point.



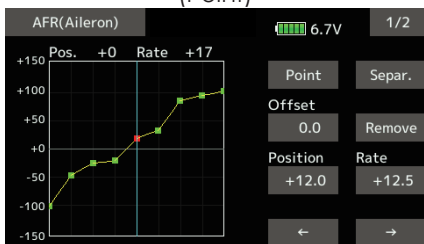
2. Tap to the [Rate] item. And set the rate by "▼" "▲" button.



Repeat steps 1 through 2 and adjust the curve.

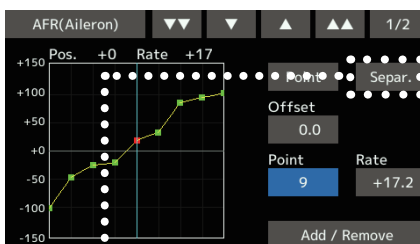
Point curve (Point) adjustment

(Point)



Up to 11 or 17 points curve can be used. (differs with function)

Initial point number: 9 points (17 points curve), 7 points (11 points curve)

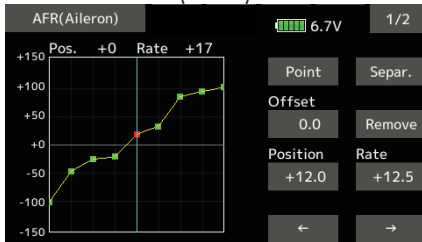


*[Separ.] mode: Normal setting

*[Comb.] mode: Creates a left and right symmetrical curve.

Point curve (Point) adjustment

(Point)

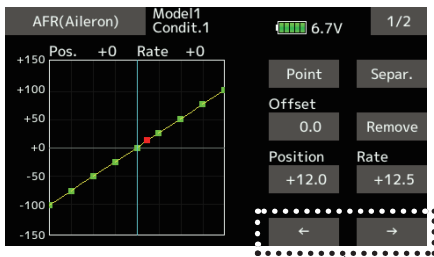



Up to 11 or 17 points curve can be used.
(differs with function)


Initial point number: 9 points (17 points curve), 7 points (11 points curve)

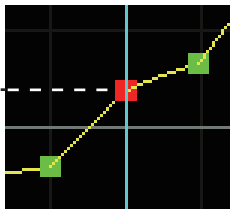
*The set points can be freely increased, decreased, and offset.

[Rate adjustment of each point]

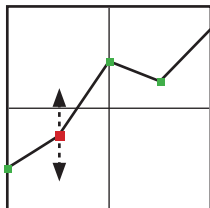


1. Tap to the  item and select the point whose rate you want to set.

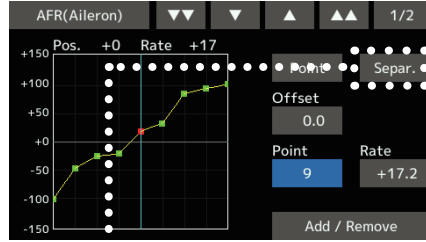
*The mark  on the curve shows the currently selected point.



2. Tap to the [Rate] item. And set the rate by "▼▼" "▼" "▲" "▲▲" button.



Repeat steps 1 through 2 and adjust the curve.



*[Separ.] mode: Normal setting

*[Comb.] mode: Creates a left and right symmetrical curve.

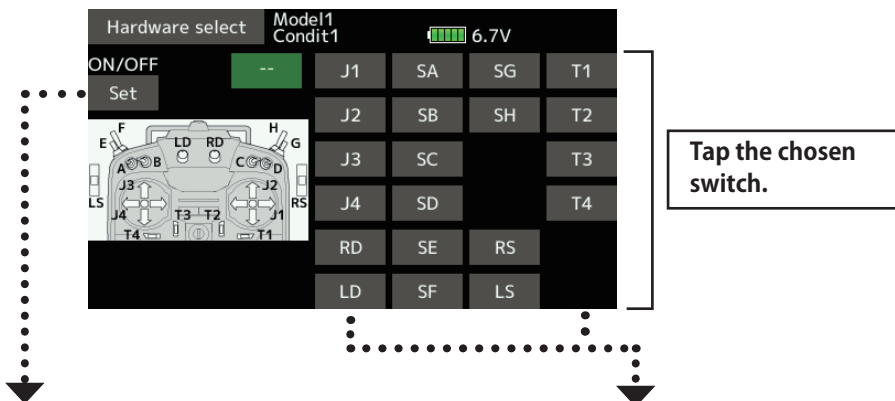
Switch selection method

The various functions used in the T16SZ can be selected by switch. The switch (including when stick, trim lever, or VR are used as a switch) setting method is common to all functions.

Switch selection

When a switch is selected at a mixing function, etc., the selection screen shown below is called.

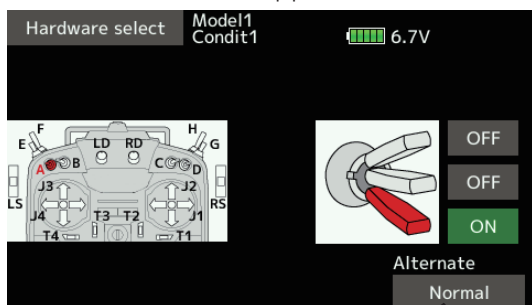
(Switch selection screen example)



When switch is selected

Switch ON/OFF setting is possible at each position.

1. When the ON/OFF "Set" position switch is tapped after the switch was selected, the screen shown below appears.



Normal or Alternate: Alternate switching mode is available depending on mixing function.

When stick, trim lever, or VR is selected.

When a stick, trim lever, or VR is used as a switch, the following 4 modes can be selected.

Next page

*When the button of each position is tapped, it toggles between ON and OFF.

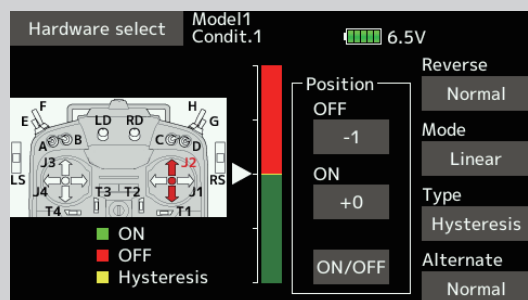
2. Tap the button and set to the ON position.
3. Close the screen by tapping [Hardware select].

Hysteresis-type and box-type can be selected in a hardware select screen.

When a stick, trim lever, or VR is used as a switch, the following 4 modes can be selected.

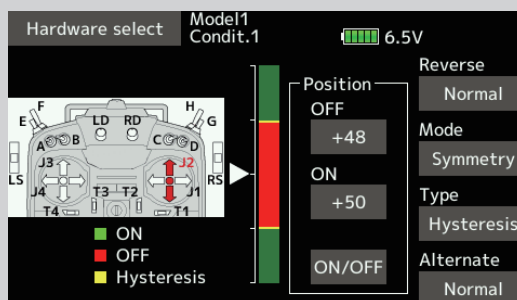
◆ Linear • Hysteresis mode

This setting method selects function ON/OFF based on the set point. Hysteresis (dead band) can be set to ON and OFF. The ON and OFF positions can be reversed with the Reverse button.



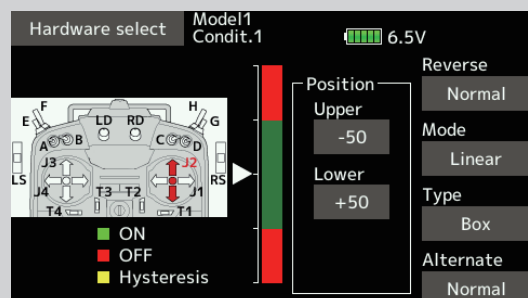
◆ Symmetry • Hysteresis mode

The operation is the same as the linear hysteresis mode, but left and right (up and down operations) are symmetrical about the neutral position. For example, when you want to switch DR1 with the aileron stick, when the stick is moved to the left or right, DR1 can be turned ON at the same left and right position.



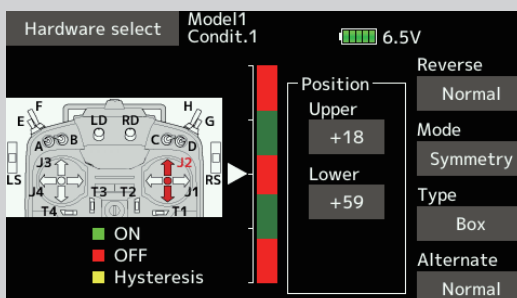
◆ Linear • Box mode

This mode turns on the switch within a range of 2 points. Each point can be set. The ON and OFF positions can be reversed with the Reverse switch.



◆ Symmetry • Box mode

The operation is the same as the linear box mode, but left and right (up and down) operation is symmetrical about the neutral position.



When shifting the ON/OFF point

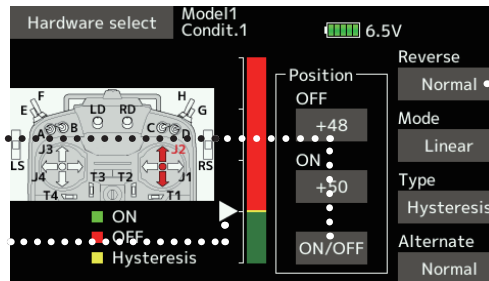
The ON/OFF and hysteresis (dead band) boundary point (there are 2 points: top and bottom) position can be shifted. ON/OFF is possible at a free position.

- ◆ Area Green : ON
- ◆ Area Red : OFF
- ◆ Area Yellow : Hysteresis (Dead band)

[Setting method]

1. Move the stick, etc. to the point you want to shift and touch the [ON/OFF] button. The boundary points change.

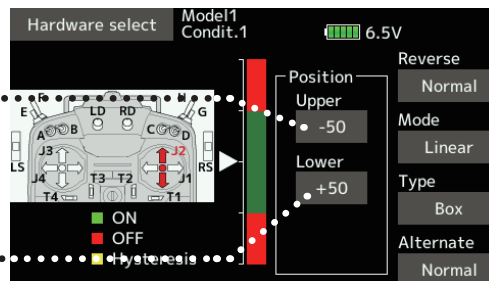
Current stick position



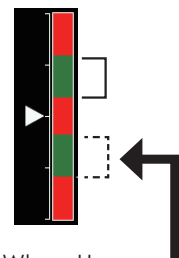
Reverse of ON/OFF direction

[Setting method] → Box Type

1. Move the stick to the point you want to shift upper side.
2. Touch the [Upper] button. The boundary points change.
3. Move the stick to the point you want to shift lower side.
4. Touch the [Lower] button. The boundary points change.



● Symmetry

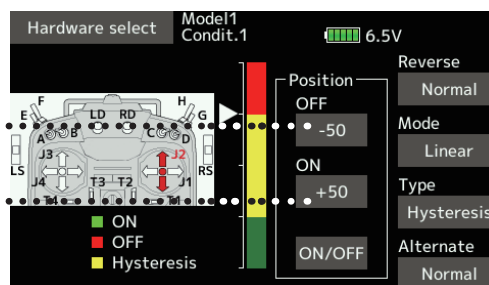


When Upper (Lower) is set, at the same time, Lower (Upper) is also set.

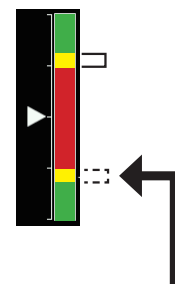
Hysteresis : Hysteresis (dead band) can be set to ON and OFF

[Setting method] → Linear Type

1. Move the stick to the off point you want to shift and touch the [OFF] button. The off points change.
2. Move the stick to the on point you want to shift and touch the [ON] button. The on points change.



● Symmetry



When Upper (Lower) is set, at the same time, Lower (Upper) is also set.

Logic switch (Condition select and DG1, DG2)

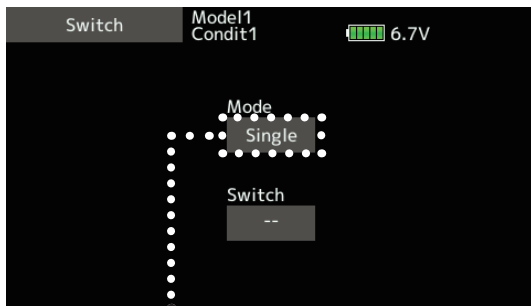
The logic switch function lets you turn operation on and off by combining two switches. For instance, the condition is activated when 2 switches are turned on.

Logic mode

AND: When both switches are ON, the condition is ON.

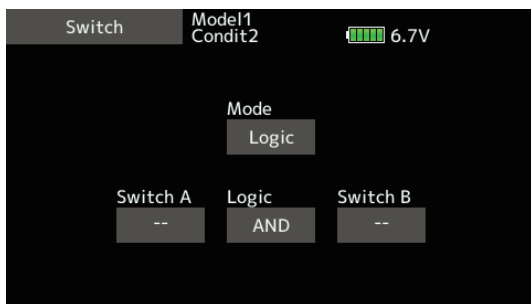
OR: When either switch is ON, the condition is ON.

EX-OR: When the two switches are in different states, the condition is ON.



Switch mode selection

1. Tap to the [Mode] "Single" item.
(Logic switch setting screen)



Switch selection

1. Select the switch A and B.

Logic mode selection

1. Tap to the [Logic] item.
2. Select the logic mode.

Updating

Your Futaba T16SZ transmitter programming can be updated easily online. When functions are added or improved, the update file can be downloaded from our website. Copy the update files to the SD card and then use the following procedure to update the program.

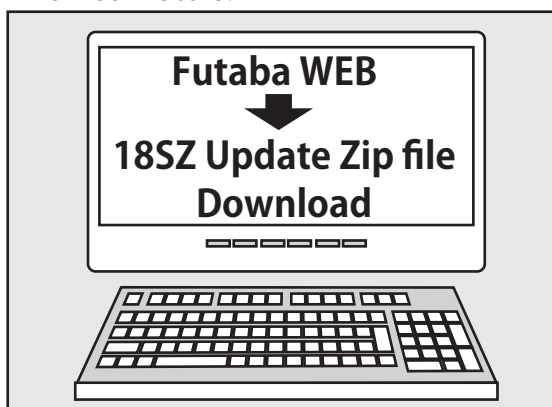
Check our web site for the FAQ regarding updating for more information.

Updating procedure

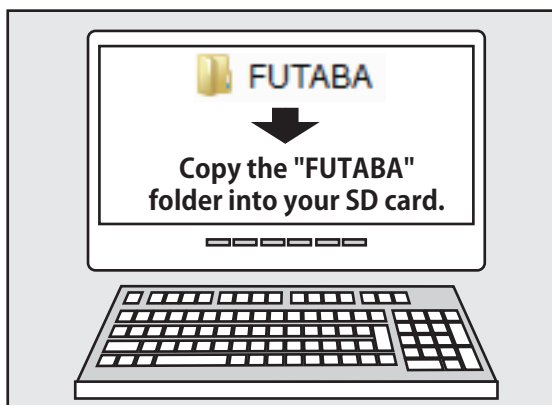
Note: If the battery fully discharges during program updating, updating will fail. When the remaining battery capacity is 50% or less, always recharge the battery before updating.

Note: The model data in the transmitter can be used unchanged after updating, but to be safe, back up the model data before updating.

1. Download the zip file of the update data from our website.

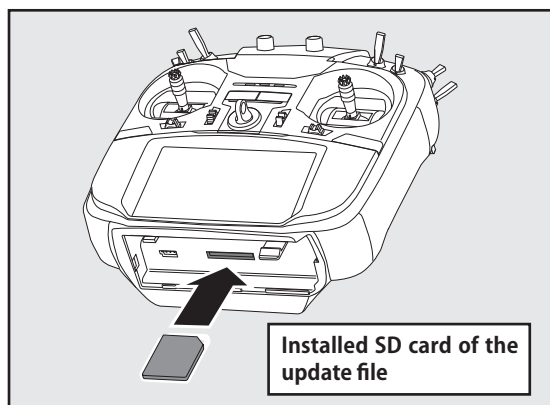


2. Extract the zip file on your computer.
3. The "FUTABA" folder will be created on your computer.
4. Copy the "FUTABA" folder into your SD card.

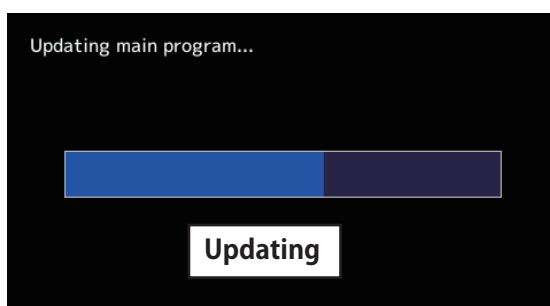
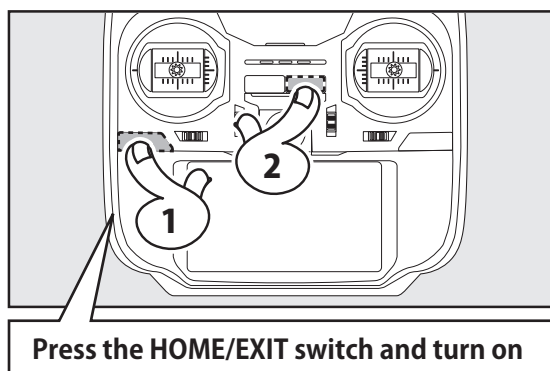


Note: If the SD card has already had "another FUTABA" folder before you make a copy, the "FUTABA" folder is OVERWRITTEN.

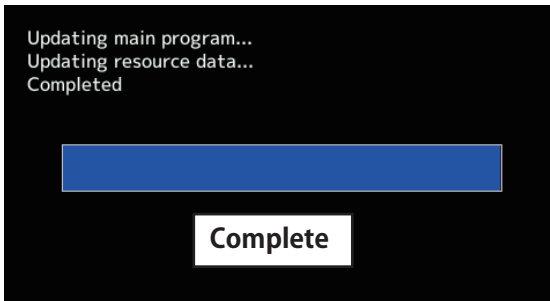
5. Insert the SD card with "FUTABA" folder that contained the update software into the SD card slot on your T16SZ radio transmitter.



6. Turn on the transmitter power while pressing down the "HOME/EXIT" button. The update screen appears on the LCD display of your T16SZ and the software update is started.



7. When the software update is completed, "Completed" message is shown on the LCD display of your T16SZ. (Show below picture.)



8. Turn off the power switch of your T16SZ and remove the SD card from the card slot.

Possible Problems

When one of the error messages shown below appears on the LCD screen your T16SZ, the software update will not be completed.

"Low battery."

Software update is postponed because of low battery. Retry the software update after the battery is recharged.

"Update file not found."

The T16SZ cannot find the update file on the SD card. Check to be sure all the update files have been copied onto the SD card.

"Broken file."

The T16SZ detects the update file error. The update file may be broken or for another transmitter.

"Write error."

The software update procedure is stopped for an unknown reason. Contact your local service center when this error message appears on the LCD screen of your T16SZ.



Don't absolutely remove the battery and the SD card from the transmitter during the update.

There is a possibility that the transmitter will be damaged.

Recovering a failed update

If you failed to update for any reason, it may transmitter will not start.

In that case, please update again transmitter in the following procedure.

1. Detach the battery from the transmitter.
2. Insert the SD card that contained the update files to the transmitter.
3. Attach the battery to the transmitter while pressing down the "HOME/EXIT" button.
4. The update will start.

Even after the above steps, if the transmitter fails to update or does not start, please have it serviced.

T14SG/FX-22 → T16SZ MODEL DATA CONVERSION

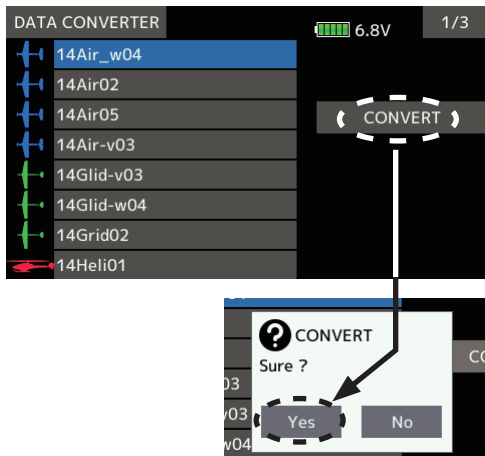
The model data (only latest version) of T14SG/FX-22 can be copied to T16SZ.

* SD card is required.

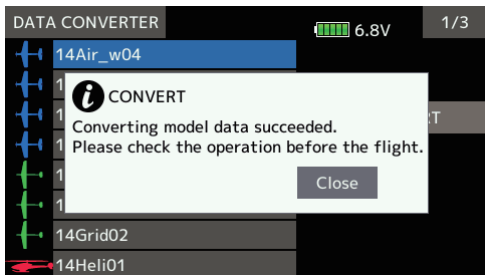
* The model data of T16SZ cannot be copied to T14SG/FX-22.

[Model data conversion method]

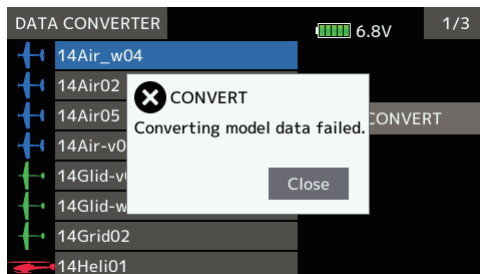
1. Attach a SD card that contains model data of T14SG or FX-22 to the SD slot of a T16SZ.
2. Turn on the power switch, and the Data Converter should run.



3. The converter shows a list of model data in the card. Select a model data that you want to convert and push "CONVERT" → "Yes" key, and the converter should begin converting data.
4. If the convert succeeds, the converter will show the following message. The converted data are copied to the internal memory of the T16SZ. Hence, if the T16SZ does not have free spaces of its internal memory, converts must fail.



5. The converter can accept model data made by T14SG or FX-22 with the latest software only. If you try to convert model data made by old version software, the converter must fail to convert and show the following error message. If this message is shown, do the following procedure to update the model data in order to avoid this limitation.



- (a) First, update a T14SG or FX-22 to the latest software.
- (b) Load the model data failed to convert into the T14SG or FX-22 with the latest software, and the model data should be updated to the latest format.
- (c) Save the updated model data to a SD card.
- (d) Retry to convert the updated model data on a T16SZ.

* When SD card cannot be recognized, it may be able to be used if it reformats by SD formatter offered from SD Association.
SD formatter is downloadable from SD Association
<https://www.sdcard.org/> (As of June, 2017)

⚠ CAUTION

- ❗ After the completion of a data copy should fully perform a check of operation on the model to be used.
- ❗ Check well all the directions of operation and all the operation switches.