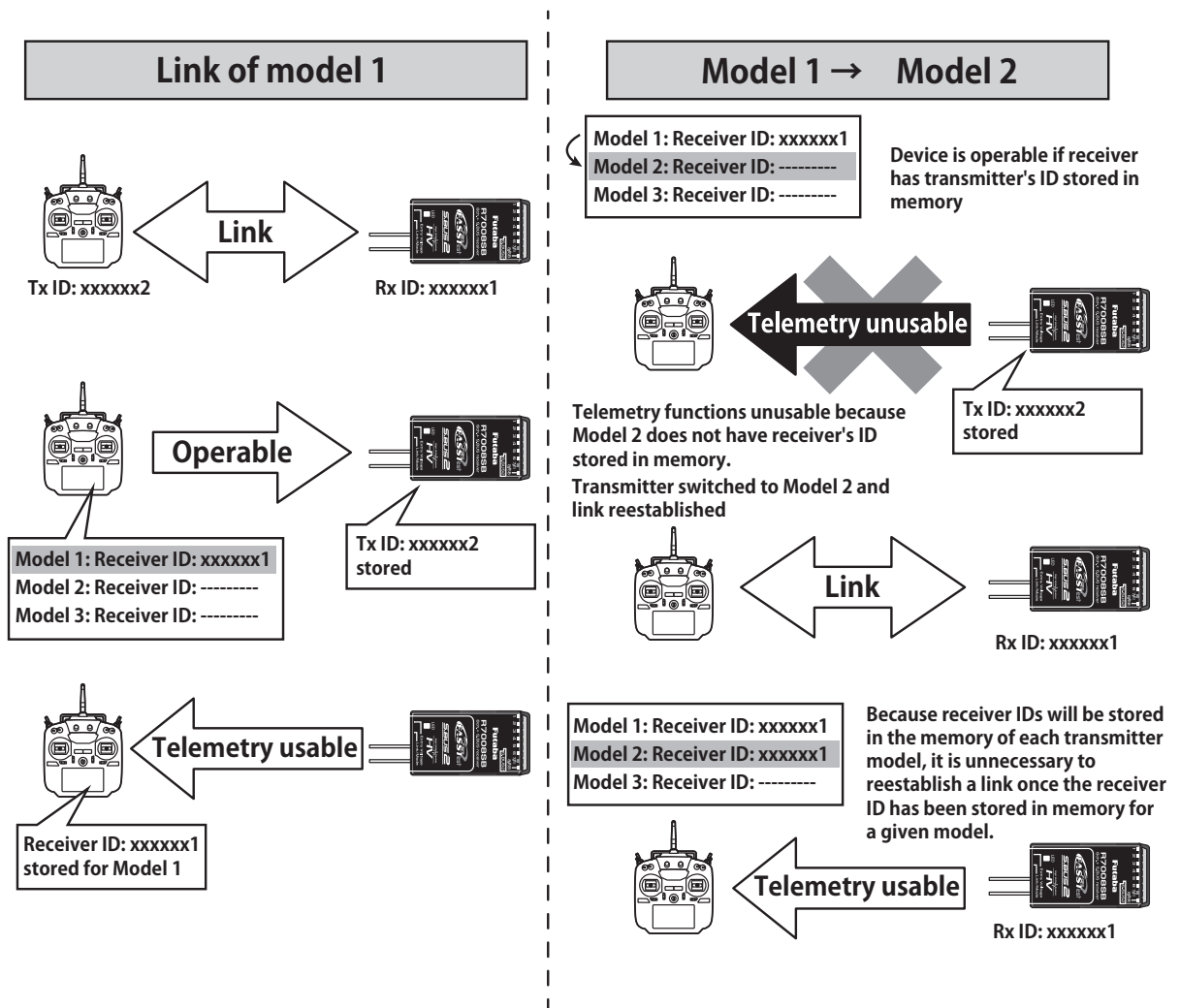


## If the receiver's voltage does not display on the transmitter

- ◆ When the receiver has the transmitter's ID in memory, a link is established and normal operation is allowed.
- ◆ When the transmitter has the receiver's ID in memory, a link is established and telemetry functions are usable.

The transmitter stores receiver IDs by model; thus, if it does not have a particular receiver model ID stored in memory or has a different receiver ID stored, telemetry functions will be unusable. However, the device is operable as long as the receiver has the transmitter's ID stored in memory.



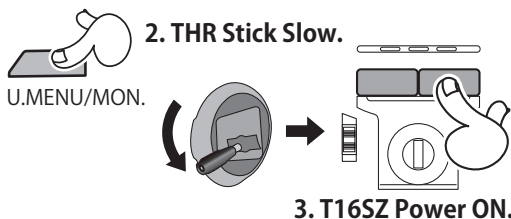
**When setting up a new model, before using it, first establish a link with the receiver that will be used with it.**

# Range Testing Your R/C System

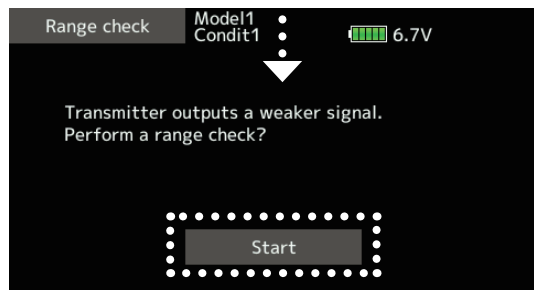
It is extremely important to range check your models prior to each flying session. This enables you to ensure that everything is functioning as it should and to obtain maximum enjoyment from your time flying. The T16SZ transmitter incorporates a system that reduces its power output and allows you to perform such a range check.

## Range check mode

1. While pushing previously "U.MENU/MON." button.



4. Select "Range check" at the System menu.



5. "Start" tap.



6. An HOME/EXIT button is pressed to end a range check.

### WARNING

Do not fly in the range check mode.

\*Since the range of the radio waves is short, if the model is too far from the transmitter, control will be lost and the model will crash.

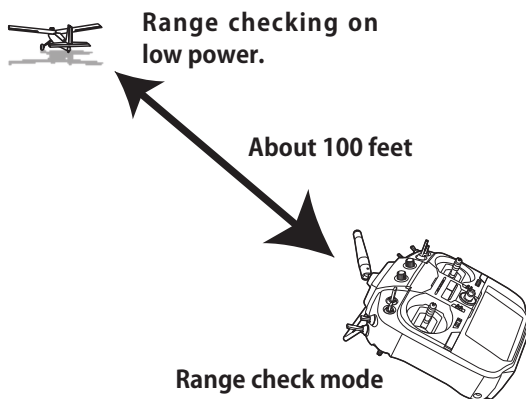
During this mode, the RF power output is reduced so the range test can be performed. In addition, when this mode is activated the right LED on the front of the transmitter starts blinking and the transmitter gives users a warning with a beeping sound.

The "Range check mode" continues for 60 seconds and after that the power will return to the normal level. To exit the "Range check mode" before the 60 seconds, press the "HOME/EXIT" button. NEVER start flying when the "Range check mode" is active.

Should you require additional time to perform a range check, highlight Restart before your time expires and tap the screen one time.

## Range check procedure

1. With the "Range check mode" on, walk away from the model while simultaneously operating the controls. Have an assistant stand by the model to confirm that all controls are completely and correctly operational. You should be able to walk approximately 30-50 paces from the model without losing control.
2. If everything operates correctly, return to the model. Set the transmitter in a safe, yet accessible, location so it will be within reach after starting the engine or motor. Be certain the throttle stick is in the low throttle position, then start the engine or motor. Perform another range check with your assistant holding the aircraft with the engine running at various speeds. If the servos jitter or move inadvertently, there may be a problem. We would strongly suggest you do not fly until the source of the difficulty has been determined. Look for loose servo connections or binding pushrods. Also, be certain that the battery has been fully charged.



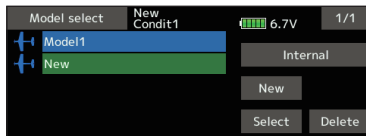


# MODEL BASIC SETTING PROCEDURE

## Airplane basic setting procedure

### 1. Model addition and call

Initial setting assigns 1 model to the T16SZ transmitter. The Model Select function is used to add models and to select models which are already set.



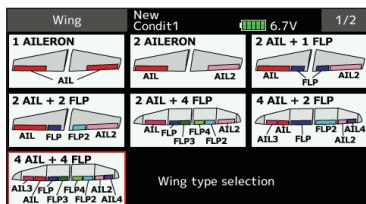
The data for up to 30 models can be saved to the transmitter. Data can also be saved to the optional SD card.

The currently selected model name is displayed at the top of the screen. Before flying and before changing any settings, always confirm the model name.

### 2. Model type selection

Select the model type matched to the aircraft with the Model type select function of the Linkage menu. For an airplane, select the model type from among the 2 types: airplane and glider. After the wing type is selected the tail type select screen is displayed. Select the tail type matched to the aircraft.

There are 13 wing types and 3 tail types for airplane and glider.



### 3. Fuselage linkage

Connect the ailerons, elevators, throttle, rudder, etc. in accordance with the model's instruction manual. For a description of the connection method, see the "Servos connection by model type".

Note: The channel assignment of the T16SZ is different from that of our existing systems. Note that even for the same "airplane model", when the wing type and tail type are different, the channel assignment may be different. (The channel assigned to each function can be checked at the "Function" of the Linkage menu.)

Ch	Function	New Condit1	Control	6.7V	Trim
1	Aileron	J1	Gr	Gr	Gr
2	Elevator	J3	Er	Er	T3
3	Throttle	J2	Er	Er	T2
4	Rudder	J4	Er	Er	T4
5	Gear	SG	Er	Er	--
6	Aileron2	--	Er	Er	Er

- If the direction of the servo is incorrect, adjust the direction with the Reverse function of the Linkage menu.

Servo reverse	New Condit1	6.7V	1/2
1 Aileron	Normal	7 Aileron2	Normal
2 Elevator	Normal	8 Aileron4	Normal
3 Throttle	Reverse	9 Flap	Normal
4 Rudder	Normal	10 Flap2	Normal
5 Gear	Normal	11 Flap3	Normal
6 Aileron2	Normal	12 Flap4	Normal

- Adjust the neutral position and control surface angle with the linkage, and fine tune them with the Sub trim and End point functions (angle adjustment). To protect the linkage, a limit position can also be set with the End point function. The End point function can adjust the amount of up/down and left/right movement, limit, and servo speed of each channel.

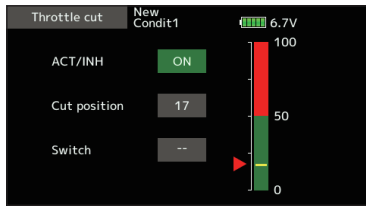
Sub-trim	New Condit1	6.7V	1/2
1 Aileron	+0	7 Aileron2	+0
2 Elevator	+0	8 Aileron4	+0
3 Throttle	+0	9 Flap	+0
4 Rudder	+0	10 Flap2	+0
5 Gear	+0	11 Flap3	+0
6 Aileron2	+0	12 Flap4	+0

End point	New Condit1	6.7V	1/3
Ch Function	Limit	Travel	Travel
1 Aileron	135	100	100 135
2 Elevator	135	100	100 135
3 Throttle	135	100	100 135
4 Rudder	135	100	100 135
5 Gear	135	100	100 135

### 4. Throttle cut setting

Throttle cut can be performed with one touch by a switch without changing the throttle trim position.

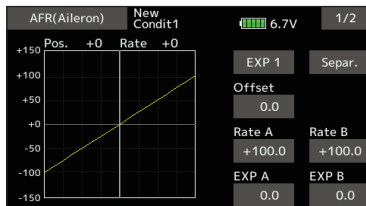
Set throttle cut with the Throttle cut function of the Linkage menu. After activating the throttle cut function and selecting the switch, adjust the throttle position so that the carburetor becomes fully closed. For safety, the throttle cut function operates the throttle stick in the 1/3 or less (slow side) position.



## 5. Idle down setting

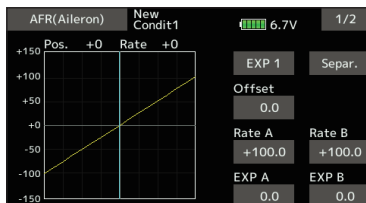
The idling speed can be lowered with one touch by a switch without changing the throttle trim position. Perform this setting with the Idle down function of the Linkage menu. After activating the Idle down function and selecting the switch, adjust the idle down speed. For safety, the idle down function acts only when the throttle stick is slow side.

\*While the Throttle cut function is in operation, the Idle down function does not work.



## 6. AFR (D/R)

AFR function is used to adjust the throw and operation curve of the stick, lever, and switch functions for each flight condition. This is normally used after End point has defined the maximum throw directions.



Dual rate	Status	Function	Switch
1 D/R 1	ON	Aileron	SD
2 D/R 2	INH	Elevator	SA
3 D/R 3	INH	Rudder	SB
4 D/R 4	INH	Aileron	--
5 D/R 5	INH	Aileron	--
6 D/R 6	INH	Aileron	--

## 7. Airbrake

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

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

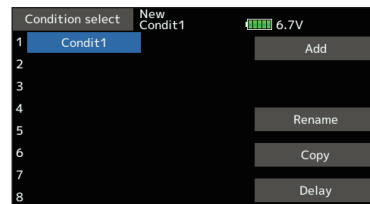
The offset amount of the aileron, elevator, and flap servos can be adjusted as needed. Also the speed of the aileron, elevator, and flap servos can be adjusted. (In side/Out side) A delay can be set for each condition, and a cut switch which will turn OFF the delay can be chosen. Trim amounts can be 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.



## 8. Addition of flight conditions

The Condition select function automatically allocates the Condition 1 for each model. Condition 1 is the default condition and is the only one active when a new model type is defined.

If you want to add flight conditions, please refer to a description of the Condition select function.



\*The Condition 1 is always on, and remains on until other conditions are activated by switches.

\*When a new condition is added, the model data of the Condition 1 is automatically copied to the new condition.

\*You can set the model data of new condition in the switch ON state. However, if the group mode (Gr) was selected in advance, the same data will be input at all the conditions. Select the single mode (Sngl) and adjust only the condition you want to change. For Group/Single mode switching, refer to the description at the back of this manual.

\*The Condition delay can be programmed for each channel. The Condition delay is used to change the servo throw smoothly when switching conditions.

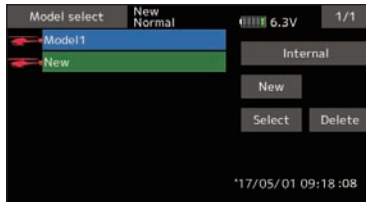


## Helicopter basic setting procedure

This section outlines examples of use of the helicopter functions of the T16SZ. Adjust the actual values, etc. to match the fuselage used.

### 1. Model addition and call

Default setting assigns 1 model to the T16SZ. To add new models or to call a model already set, use the Model select function.

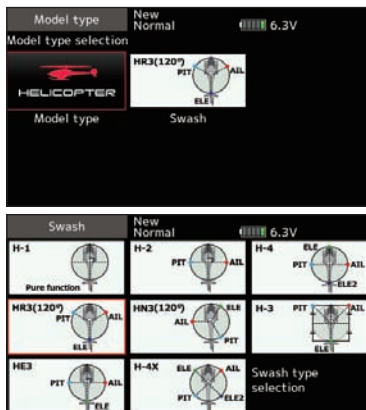


This is convenient when calling a model after registering the model names in advance. (The data of up to 30 models can be saved at the transmitter. Data can also be saved to the optional SD card.)

The currently called model is displayed at the top of the screen. Before flying and before changing any settings, always confirm the model name.

### 2. Model type and swash type selection

If a different model type is already selected, select helicopter with the Model type function of the Linkage menu, and then select the swash type matched to the helicopter.

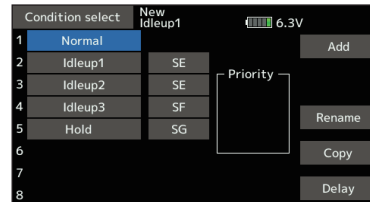


\*The Model type function automatically selects the appropriate output channels, control functions, and mixing functions for the chosen model type. Eight swash types are available for helicopters.

\*For a description of the swash type selection, refer to the Model type function.

### 3. Flight condition addition

The transmitter can install up to eight flight conditions per model.



The Condition select function automatically allocates five conditions for helicopter.

(General setting)

- Normal
- Idle up1
- Idle up2
- Idle up3
- Hold

Note: Delete conditions you have not set up and will not use. Otherwise you may accidentally activate them during flight and cause a crash.

\*For a description of the condition deletion, refer to the Condition select function.

The Normal condition is always on, and remains on until other conditions are activated by switches.

The priority is throttle hold/idle up 2/idle up 1/normal. Throttle hold has the highest priority.

Add other conditions, as required.

The Condition delay can be programmed for each channel. The Condition delay is used to change the servo throw smoothly when switching conditions.

#### (General flight condition setting example)

- Normal: (Use initial setting conditions/operate when switch OFF)  
Use from engine starting to hovering.
- Idle up 1: (Operate at SW-E center)  
Use in 540° stall turn, loop, rolling stall turn, and other maneuvers.
- Idle up 2: (Operate at SW-E forward side)  
Use in rolls.
- Throttle hold: (Operate at SW-G forward side)  
Use in auto rotation.



## 4. Fuselage linkage

Connect the throttle rudder, aileron, elevator, pitch, and other servos in accordance with the kit instruction manual. For a description of the connection method, see "Servos connection by model type".

Note: The channel assignment of the T16SZ is different from that of our existing systems. (The channel assigned to each function can be checked at the Function menu of the Linkage menu.)

Ch	Function	New Idleup1	Control	Trim
1	Aileron	J1	T1	
2	Elevator	J3	T3	
3	Throttle	J2	T2	
4	Rudder	J4	T4	
5	Gyro	--	--	
6	Pitch	J2	--	

- If the direction of operation of the servo is incorrect, use the Reverse function of the Linkage menu. Also use the swash AFR function in other than the H-1 mode.

Ch	Function	Servo reverse	Ch	Function
1	Aileron	Normal	7	Governor
2	Elevator	Normal	8	Governor2
3	Throttle	Reverse	9	Gyro2
4	Rudder	Normal	10	Gyro3
5	Gyro	Normal	11	Needle
6	Pitch	Normal	12	Auxiliary5

Swash	New Idleup1	Swash AFR
100		Aileron +50
50	Neutral point	Elevator +50
0	Enter	Pitch +50

- Adjust the direction of operation of the gyro. (Gyro side function)
- Connect the throttle linkage so that the carburetor can fully close at full trim throttle cut.
- Adjust the neutral position at the linkage side and fine tune with the Sub-Trim function and End point function (rudder angle adjustment). To protect the linkage, a limit position can also be set with the End point function.

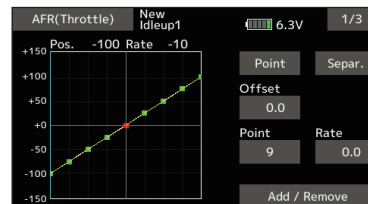
Ch	Function	Sub-trim	Ch	Function
1	Aileron	+0	7	Aileron2
2	Elevator	+0	8	Aileron4
3	Throttle	+0	9	Flap
4	Rudder	+0	10	Flap2
5	Gear	+0	11	Flap3
6	Aileron2	+0	12	Flap4

Ch	Function	End point Limit	New Condit1 Travel	6.7V Travel	1/3 Limit
1	Aileron	135	100	100	135
2	Elevator	135	100	100	135
3	Throttle	135	100	100	135
4	Rudder	135	100	100	135
5	Gear	135	100	100	135
6	Aileron2	135	100	100	135

- Swash plate correction (Except H-1 mode)
  - \*If any interactions are noticed, for a description of the linkage correction function, please refer to the SWASH function.

## 5. Throttle/Pitch curve setting

This function adjusts the throttle or pitch operation curve in relation to the movement of the throttle stick for each condition.



### <Throttle curve setting example>

Call the throttle curve of each condition with the condition select switch.

- Normal curve adjustment**  
Normal curve creates a basic throttle curve centered near hovering. This curve is adjusted together with the pitch curve (Normal) so that the engine speed is constant and up/down control is easiest.
- Idle up curve adjustment**  
The low side Throttle curve creates a curve matched for aerobatics (loop, roll, 3D, etc.).
- Throttle hold curve adjustment**  
The curve is not used when performing auto rotation dives.  
Confirm that the rate of the slowest position (0%) of the stick is 0% (initial setting).

### <Example of pitch curve setting>

Call the pitch curve of each condition with the condition select switch.

- Pitch curve (Normal)**  
Make the pitch at hovering approximately +5°~6°. Set the pitch at hovering with the stick position at the 50% point as the standard.  
\*Stability at hovering may be connected to the throttle curve. Adjustment is easy by using the hovering throttle function and hovering pitch function together.
- Pitch curve (Idle up 1)**  
The idle up 1 pitch curve function creates a curve





matched to airborne flight.  
Set to  $-7^{\circ}$ ~ $+12^{\circ}$  as standard.

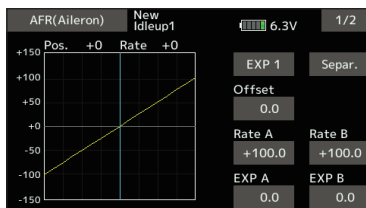
- Pitch curve (Idle up 2)  
The high side pitch setting is less than idle up 1.  
The standard is  $+8^{\circ}$ .
- Pitch curve (Hold)  
At auto rotation, use the maximum pitch at both the high and low sides.  
[Pitch angle setting example]  
Throttle hold:  $-7^{\circ}$ ~ $+12^{\circ}$

## 6. AFR (D/R)

AFR (D/R) function is used to adjust the throw and operation curve of aileron, elevator and rudder for each condition.

\*For throttle and pitch curve settings, refer to the above-mentioned "Throttle/Pitch curve setting"

This is normally used after End point has defined the maximum throw directions.



Dual rate	Status	Function	Switch
1 D/R 1	ON	Aileron	SD
2 D/R 2	INH	Elevator	SA
3 D/R 3	INH	Rudder	SB
4 D/R 4	INH	Aileron	--
5 D/R 5	INH	Aileron	--
6 D/R 6	INH	Aileron	--

## 7. Gyro sensitivity and mode switching

The gyro sensitivity and mode switching function is dedicated gyro mixing of the Model menu, and can be set for each condition.

Gyro	New Idleup1 6.2V					
	Gyro(RUD)	Gyro2(AIL)		Gyro3(ELE)		
Rate 1	AVCS ON	50	AVCS ON	50	AVCS ON	50
Rate 2	AVCS INH	50	AVCS INH	50	AVCS INH	50
Rate 3	AVCS INH	50	AVCS INH	50	AVCS INH	50

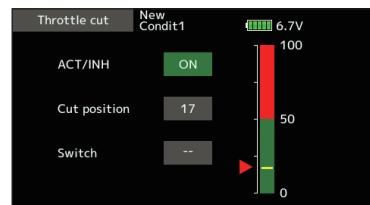
- Normal condition (hovering): Gyro sensitivity maximum
- Idle up 1/Idle up 2/Throttle hold: Gyro sensitivity minimum
- However, at auto rotation of a tail-driven helicopter, this function may not have any effect at high gyro sensitivity.

## 8. Throttle hold setting

\*If throttle hold is necessary, please refer to the Throttle hold function.

## 9. Throttle cut setting

Throttle cut provides an easy way to stop the engine, by flipping a switch with the throttle stick at idle. The action is not functional at high throttle to avoid accidental dead sticks. The switch's location and direction must be chosen, as it defaults to INH.



\*With throttle stick at idle, adjust the cut position until the engine consistently shuts off, but throttle linkage is not binding.

## 10. Swash Mix corrects aileron, elevator and pitch interaction

The swash mixing function is used to correct the swash plate in the aileron (Left/Right Cyclic) and elevator (Forward/Aft Cyclic) direction corresponding to each operation of each condition.

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

## 11. Throttle mixing setting

\*If throttle mixing is necessary to compensate for engine slowing caused when the swash plate operates at the same time as ailerons or elevator, please refer to the Throttle mixing function.

## 12. Other special mixings

- Pitch to Needle mixing  
This mixing is used with engines that allow needle control during flight (fuel-air mixture adjustment). A needle curve can be set. The needle servo rise characteristics at throttle stick acceleration/ deceleration operation can be adjusted. (Acceleration function)
- Governor mixing  
This mixing is dedicated governor mixing when a governor is used. Up to 3 rates (speeds) can be switched for each condition.



## Servo connection by model type

The T16SZ transmitter channels are automatically assigned for optimal combination according to the type selected with the Model type function of the Linkage menu. The channel assignment (initial setting) for each model type is shown below. Connect the receiver and servos to match the type used.

\*The set channels can be checked at the Function screen of the Linkage menu. The channel assignments can also be changed.

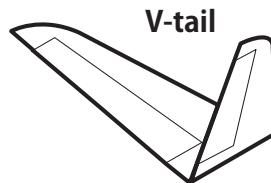
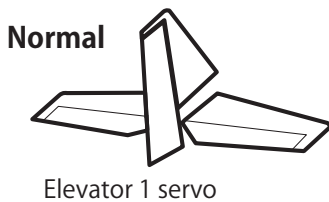
For more information, read the description of the Function menu.

### Airplane/glider

#### ●Normal tail and V tail

RX CH	1AIL		2AIL		2AIL+1FLAP		2AIL+2FLAP		2AIL+4FLAP		4AIL+2FLAP		4AIL+4FLAP	
	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider
1	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron
2	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator
3	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Rudder	Throttle	Rudder	Throttle	Rudder
4	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Aileron2	Rudder	Aileron2	Rudder	Aileron2
5	Gear	AUX6	Gear	AUX6	Gear	AUX6	Aileron2	Aileron2	Gear	Flap	Gear	Aileron3	Gear	Aileron3
6	Airbrake	Airbrake	Aileron2	Aileron2	Aileron2	Aileron2	Flap	Flap	Aileron2	Flap2	Aileron2	Aileron4	Aileron2	Aileron4
7	AUX5	AUX5	AUX5	AUX5	Flap	Flap	Flap2	Flap2	Flap	Flap3	Aileron3	Flap	Aileron3	Flap
8	AUX4	AUX4	AUX4	AUX4	AUX5	AUX5	Gear	AUX6	Flap2	Flap4	Aileron4	Flap2	Aileron4	Flap2
9	AUX3	AUX3	AUX3	AUX3	AUX4	AUX4	AUX5	AUX5	Flap3	Motor	Flap	Motor	Flap	Flap3
10	AUX2	AUX2	AUX2	AUX2	AUX3	AUX3	AUX4	AUX4	Flap4	AUX6	Flap2	AUX6	Flap2	Flap4
11	AUX1	AUX1	AUX1	AUX1	AUX2	AUX2	AUX3	AUX3	AUX5	AUX5	AUX5	AUX5	Flap3	Motor
12	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX2	AUX2	AUX4	AUX4	AUX4	AUX4	Flap4	AUX6
13	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX3	AUX3	AUX3	AUX3	AUX5	AUX5
14	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX2	AUX2	AUX2	AUX2	AUX4	AUX4
15	AUX1	AUX1	AUX1	Butterfly	AUX1	Butterfly	AUX1	Butterfly	AUX1	Butterfly	AUX1	Butterfly	AUX3	Butterfly
16	AUX1	AUX1	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber
DG1	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
DG2	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW

The output CH of each system  
 FASTest 18CH  
 FASTest 12CH  
 S-FHSS  
 FAST 7CH  
 FAST MULT  
 T-FHSS





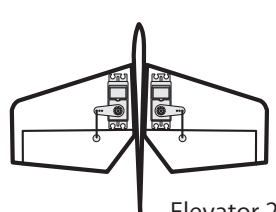


# Airplane/glider

## •Ailevator

RX CH	1AIL		2AIL		2AIL+1FLAP		2AIL+2FLAP		2AIL+4FLAP		4AIL+2FLAP		4AIL+4FLAP	
	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider
1	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron
2	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator
3	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor
4	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder
5	Gear	AUX6	Gear	AUX6	Elevator2	Elevator2	Elevator2	Elevator2	Elevator2	Elevator2	Elevator2	Elevator2	Elevator2	Elevator2
6	Airbrake	Airbrake	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2
7	Elevator2	Elevator2	Elevator2	Elevator2	Flap	Flap	Flap	Flap	Flap	Flap	Aileron3	Aileron3	Aileron3	Aileron3
8	AUX5	AUX5	AUX5	AUX5	Gear	AUX6	Flap2	Flap2	Flap2	Flap2	Aileron4	Aileron4	Aileron4	Aileron4
9	AUX4	AUX4	AUX4	AUX4	AUX5	AUX5	Gear	AUX6	Flap3	Flap3	Flap	Flap	Flap	Flap
10	AUX3	AUX3	AUX3	AUX3	AUX4	AUX4	AUX5	AUX5	Flap4	Flap4	Flap2	Flap2	Flap2	Flap2
11	AUX2	AUX2	AUX2	AUX2	AUX3	AUX3	AUX4	AUX4	Gear	AUX6	Gear	AUX6	Flap3	Flap3
12	AUX1	AUX1	AUX1	AUX1	AUX2	AUX2	AUX3	AUX3	AUX5	AUX5	AUX5	AUX5	Flap4	Flap4
13	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX2	AUX2	AUX4	AUX4	AUX4	AUX4	Gear	AUX6
14	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX3	AUX3	AUX3	AUX3	AUX5	AUX5
15	AUX1	AUX1	AUX1	Butterfly	AUX1	Butterfly	AUX1	Butterfly	AUX2	Butterfly	AUX2	Butterfly	AUX4	Butterfly
16	AUX1	AUX1	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber
DG1	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
DG2	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW

The output CH of each system  
 FASSTest 18CH  
 FASSTest 12CH  
 5-FHSS  
 FASST ZCH  
 FASST MULT  
 1-FHSS



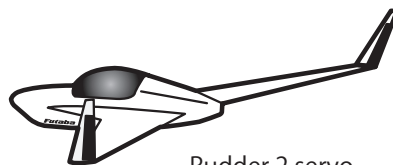




## Airplane/glider

### •Tailless wing Winglet 2Rudder

RX CH	2AIL		2AIL+1FLAP		2AIL+2FLAP		2AIL+4FLAP		4AIL+2FLAP		4AIL+4FLAP	
	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider	Airplane	Glider
1	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron
2	Rudder2	Rudder2	Rudder2	Rudder2	Rudder2	Rudder2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2	Aileron2
3	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor
4	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder
5	Gear	AUX6	Gear	AUX6	Aileron2	Aileron2	Flap	Flap	Aileron3	Aileron3	Aileron3	Aileron3
6	Aileron2	Aileron2	Aileron2	Aileron2	Flap	Flap	Flap2	Flap2	Aileron4	Aileron4	Aileron4	Aileron4
7	AUX5	AUX5	Flap	Flap	Flap2	Flap2	Flap3	Flap3	Flap	Flap	Flap	Flap
8	AUX3	AUX3	AUX5	AUX5	Gear	AUX6	Flap4	Flap4	Flap2	Flap2	Flap2	Flap2
9	AUX2	AUX2	AUX3	AUX3	AUX5	AUX5	Rudder2	Rudder2	Rudder2	Rudder2	Flap3	Flap3
10	AUX1	AUX1	AUX2	AUX2	AUX3	AUX3	Gear	AUX6	Gear	AUX6	Flap4	Flap4
11	AUX1	AUX1	AUX1	AUX1	AUX2	AUX2	AUX5	AUX5	AUX5	AUX5	Rudder2	Rudder2
12	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX3	AUX3	AUX3	AUX3	Gear	AUX6
13	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX2	AUX2	AUX2	AUX2	AUX5	AUX5
14	AUX1	AUX1	AUX1	Butterfly	AUX1	Butterfly	AUX1	Butterfly	AUX1	Butterfly	AUX3	Butterfly
15	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber
16	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator
DG1	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
DG2	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW



\* Output channels differ by each system of a table. When using a system with few channels, there is a wing type which cannot be used. It cannot be used when there is a function required out of the range of the arrow of a figure.



## Helicopter

### ● FASSTest 18CH / FASST MULTI / FASST 7CH / S-FHSS

CH	H-4/H-4X Swash	All other
1	Aileron	Aileron
2	Elevator	Elevator
3	Throttle	Throttle
4	Rudder	Rudder
5	Gyro	Gyro
6	Pitch	Pitch
7	Governor	Governor
8	Elevator2	Governor2
9	Gyro2	Gyro2
10	Gyro3	Gyro3
11	Governor2	Needle
12	Needle	AUX5
13	AUX4	
14	AUX3	
15	AUX2	
16	AUX1	
DG1	SW	
DG2	SW	

The output CH of each system  
 S-FHSS FASST 7CH  
 FASSTest 18CH FASST MULTI T-FHSS

### ● FASSTest 12CH

CH	H-4/H-4X Swash	All other
1	Aileron	Aileron
2	Elevator	Elevator
3	Throttle	Throttle
4	Elevator2	Rudder
5	Pitch	Pitch
6	Gyro	Gyro
7	Governor	Governor
8	Rudder	Governor2
9	Gyro2	Gyro2
10	Gyro3	Gyro3
DG1	SW	
DG2	SW	

The output CH of each system  
 FASSTest 12CH



# Multicopter

CH	Multicopter	
1	Aileron	The output CH of each system FASTest 18CH FASTest 12CH S-FHSS FAST 7CH FASTest 18CH FASTest 12CH S-FHSS FAST 7CH FAST MULT T-FHSS
2	Elevator	
3	Throttle	
4	Rudder	
5	Gyro	
6	Gyro2	
7	Gyro3	
8	Camera TILT	
9	Camera PAN	
10	Camera REC	
11	Mode	
12	AUX5	
13	AUX4	
14	AUX3	
15	AUX2	
16	AUX1	
DG1	SW SD	
DG2	SW SA	



## SYSTEM MENU

The System menu sets up functions of the transmitter. This does not set up any model data.

- When the System menu button is tapped, the menu shown below is called up. Tap the function button that you want to enter.



- Return to Home screen



### System menu functions table

[Display]: Display adjustment.

[Sound volume]: Adjust the volume of: Other sound, Warning, Voice

[Date and Time]: Resets the system timer.

[H/W setting]: Stick mode selection (Mode 1 - Mode 4). J1-J4 sticks correction can be performed.

[Battery]: Battery alarm voltage setting. Auto power off time setting.

[Range check]: The output of the transmitter is lowered, for Range checking.

[S.Bus servo]: S.Bus servo setting.

[Information]: Sets the User name, Language, and Unit system. Displays the program version, and SD card information.



# Display

The following LCD screen adjustments:

- Backlighting brightness adjustment
- Backlighting decrease time adjustment
- Touch screen calibration

- Tap the [Display] button in the System menu to call the setup screen shown below.

- Return to System menu



## Backlight max. brightness adjustment

1. Adjust the backlighting brightness with the value input buttons.

\*When the ▲ button is tapped, the backlighting becomes brighter. When the ▼ button is tapped, the backlighting becomes darker.

## Backlight min. brightness adjustment

1. Adjust the backlight decrease brightness with the value input buttons.

\*When the ▲ button is tapped, the backlighting becomes brighter. When the ▼ button is tapped, the backlighting becomes darker.

\*It cannot be made brighter than Backlighting brightness adjustment.

## Backlight decrease time

1. You can set a time period to decrease the LCD backlight. This function counts the period that the Touch Panel has been not operated. This time can be set by ten-second steps. You can also turn off the backlight decrease\* if you like.

\*The backlight consumes a large amount of power. We recommend that you turn off the backlight by setting the backlight power-off time to about one minute.

## Touch calibration

This function adjusts the location of the Touch Panel. Press the "Touch calibration" button. The calibration screen will then pop up. Tap the center of the cross hair cursor on the screen with the soft pen. As soon as the system recognizes the position, the cursor will move on to the next position. Repeat this procedure as long as the cursor moves to next position. You will do this five times. Calibration will be carried out based on the five positions. Disappearance of the cross hair cursor means the calibration has been completed.

\*In ordinary operation, this calibration is not necessary. If you notice the Touch Panel is not functioning correctly after long use, we recommend that you carry out this calibration.



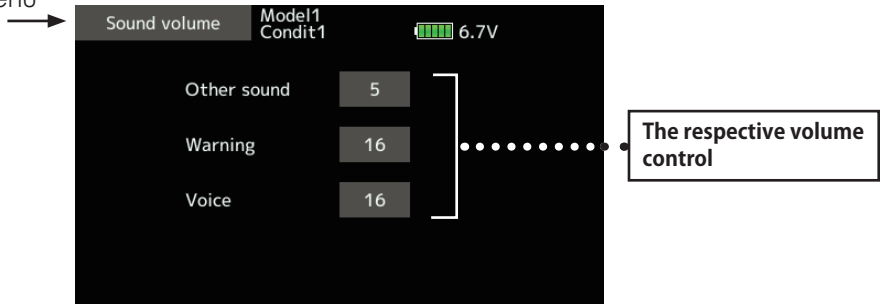


## Sound volume

Sound volume setting

This function can set the volume of "Other sound" "Warning" "Voice" respectively.

- Tap the [Sound volume] button in the System menu to call the setup screen shown below.
- Return to System menu



### Sound volume Setting method

1. When the Sound volume box is tapped, the above screen will appear.

2. You can change the sound volume by tapping the "▲▲" "▲" "▼▼" "▼" button of four items.

\*If you tap "▲", the volume will increase. If you tap the "▼", the volume will decrease.

## Date and Time

Integrating timer resetting

This function adjusts the system timer of the T16SZ transmitter. The system timer can also be reset.

\*The system timer is displayed on the Home screen.

- Tap the [Date and Time] button in the System menu to call the setup screen shown below.
- Return to System menu

- **Total** : Regardless of a model, additional time in case a power supply is ON is displayed.
- **Model** : The additional time when the power supply was set to ON is displayed for every model.



### System timer reset

The system timer shows the total time that has elapsed since the last "reset".

1. Tap "Total" or "Model", to reset is chosen.
2. When the [System timer] button is tapped.
3. Tap "Yes" in the next screen, the timer is reset.



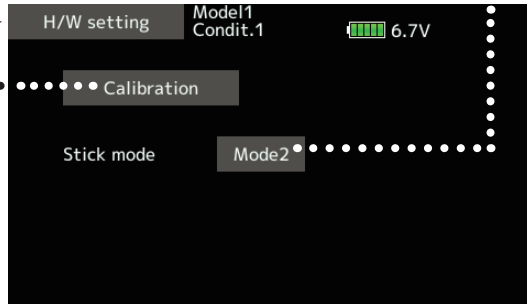
# H/W setting

Stick mode selection and J1-J4 sticks calibration

Usually, this H/W setting is unnecessary.  
Please perform this calibration only if a change at the center of a stick should arise after prolonged use.

- Tap the [Calibration] button in the System menu to call the setup screen shown below.

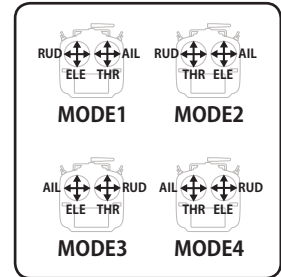
- Return to System menu



## Stick mode

Mode 1-4 can be chosen.  
But, it isn't changed until data is reset.

To change the mode the stick ratchet must be changed. Request that this be done by Futaba Service. (Charged modification)

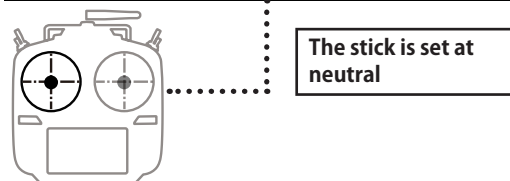
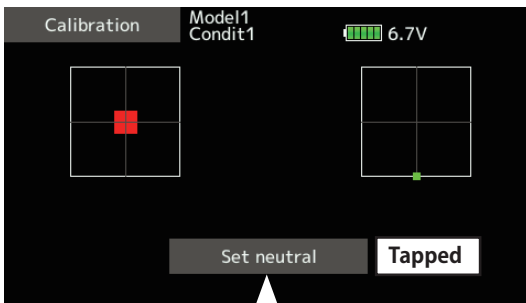


## How to Calibrate

1. Tap the "Calibration".



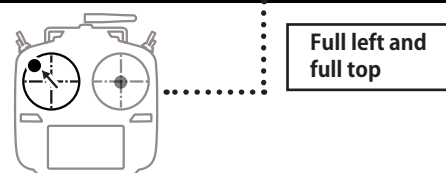
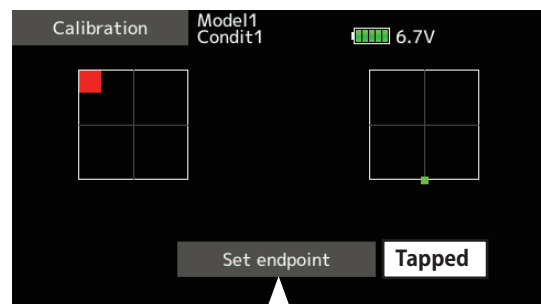
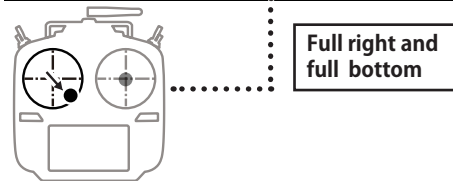
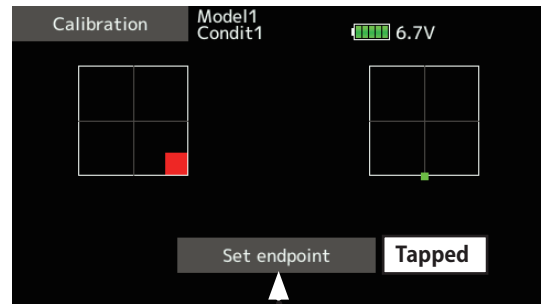
2. Choose the stick to calibrate right and left.
3. The stick is set at neutral and the [Set neutral] button is tapped.



4. The stick is held at full right and full bottom (diagonal). The [Set endpoint] button is tapped.
5. The stick is held at full left and full top (diagonal). The [Set endpoint] button is tapped.

\*Please do not press the stick too firmly in any direction when doing the calibration.

\*Check after calibration to make sure that neutral is 0%, the bottom right side is +100%, and the top left side is -100%.



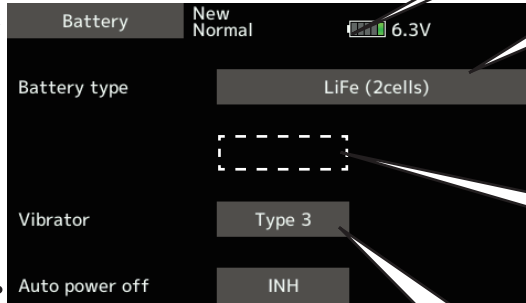


# Battery

Low battery alarm voltage set

Select the battery alarm voltage according to the battery to be used.

●Return to System menu



It isn't indicated in case of manual setting.

Battery type change :  
LiFe(2cells) → NiMH(5cells)  
→ Manual setting

When choosing manual setting, the numerical value can be input.



It's dangerous to set it manually in the low voltage.

## Auto power off time setting

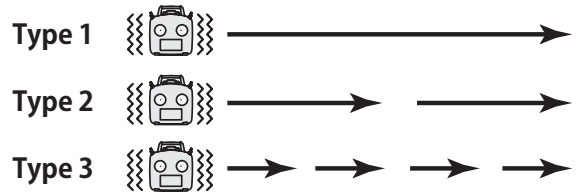
This function prevents battery discharging if the transmitter power supply does not erase.

1. Adjust the auto power off time with the value input buttons.

\*When the time the transmitter is inactive reaches the set time, the power is turned off automatically. This time can be set up to 1 hour in 10 minutes increments. The auto power off function can also be deactivated.

\*An audible alarm is sounded from 3 minutes before auto power off. When a stick or switch is operated while the alarm is cleared.

## Vibrator Types



\*About low battery voltage, all the models included in one transmitter are changed in common. It cannot set to different voltage for every model. Moreover, data reset is not carried out.

# Range Check

Before a flight ground range check.

The 'range check mode' reduces the transmission range of the radio waves to allow for a ground range check.

\*The range check mode, when activated, will continue for 60 seconds unless the user exits this mode early. When the progress bar reaches 60 second mark, the RF transmission automatically returns to the normal operating power.



## WARNING



**Do not fly in the range check mode.**

\*Since the range of the radio waves is short, if the model is too far from the transmitter, control will be lost and the model will crash.



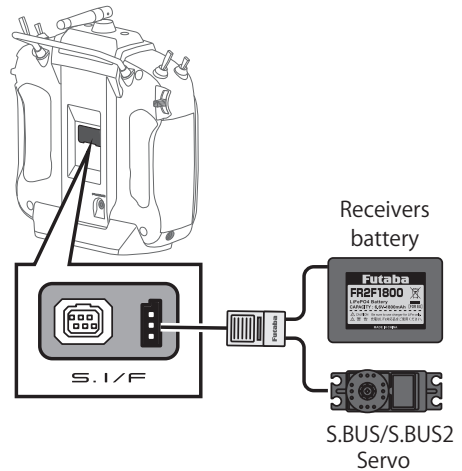


# S.Bus servo

## S.BUS servo setting

An S.BUS(2) servo can memorize the channel and various settings you input. Servo setting can be performed on the T16SZ screen by wiring the servo as shown in the figure.

- \* With some S.BUS(2) servos, there are some functions which cannot be used. If a function cannot be used, the display screen will change. (Only the function which can be used by a servo is displayed.)
- \* After reading completion, with connection of the above figure, if a stick is moved, servo operation can be tested.



- Call the following setting screen by pressing the [S.BUS Servo] button in the System menu.
- Return to System menu

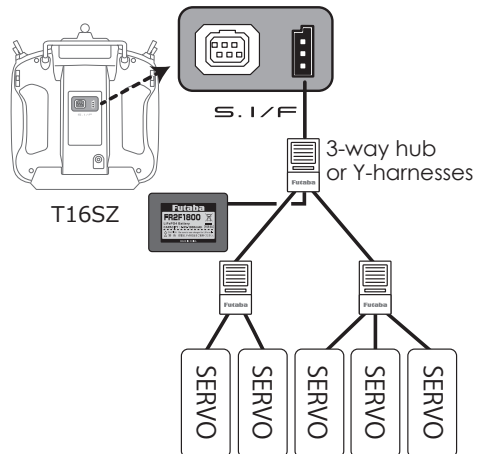
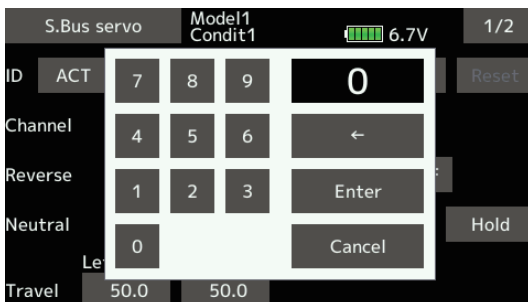


### Procedure for changing S.BUS servo setting

1. Select [S.Bus servo] of the System menu.
2. Wire the servo as shown in the figure above.
3. Press [Read]. The ID and current setting of that servo are displayed.
4. When multiple servos are connected change [INH] at the right side of the ID number on the screen to [ACT] and enter the ID of the servo you want to set.
5. Set each item. (Please see the next page.)
6. Press [Write]. The settings are changed.

### Servo ID number

If you use multiple S.BUS servos, only the desired servo in the group can be set by entering the ID of that specific servo.





## S.BUS Servo Description of function of each parameter

\*There are functions that can and cannot be performed according to the servo type.

- **ID**

Displays the ID of the servo whose parameters are to be read. It cannot be changed.

- **Channel**

Channel of the S.BUS system assigned to the servo. Always assign a channel before use.

- **Reverse**

The direction in which the servo rotates can be changed.

- **Soft Start**

Restricts operation in the specified direction the instant the power is turned on. By using this setting, the first initial movement when the power is turned on slowly moves the servo to the specified position.

- **Stop Mode**

The state of the servo when the servo input signal is lost can be specified. The "Hold" mode setting holds the servo in its last commanded position even if using AM or FM system.

- **Smoother**

This function changes smoothness of the servo operation relative to stick movement changes. Smooth setting is used for normal flight. Select the "OFF" mode when quick operation is necessary such as 3D.

- **Neutral Offset**

The neutral position can be changed. When the neutral offset is large value, the servo's range of travel is restricted on one side.

- **Speed Control**

Speeds can be matched by specifying the operating speed. The speed of multiple servos can be matched without being affected by motor fluctuations. This is effective for load torques below the maximum torque.

However, note that the maximum speed will not exceed what the servo is capable of even if the servos operating voltage is increased.

- **Dead band**

The dead band angle at stopping can be specified.

**[Relationship between dead band set value and servo operation]**

Small → Dead band angle is small and the servo is immediately operated by a small signal change.

Large → Dead band angle is large and the servo does not operate at small signal changes.

**(Note)** If the dead band angle is too small, the servo will operate continuously and the current consumption will increase and the life of the servo will be shortened.

- **Travel Adjust**

The left and right travels centered about the neutral position can be set independently.

- **Boost**

The minimum current applied to the internal motor when starting the servo can be set. Since a small travel does not start the motor, it essentially feels like the dead band was expanded. The motor can be immediately started by adjusting the minimum current which can start the motor.

**[Relationship between boost set value and servo operation]**

Small → Motor reacts to a minute current and operation becomes smooth.

Large → Initial response improves and output torque increases. However, if the torque is too large, operation will become rough.



### • Boost ON/OFF

OFF : It is the boost ON at the time of low-speed operation.(In the case of usual)

ON : It is always the boost ON.(When quick operation is hope)

### • Damper

The characteristic when the servo is stopped can be set.

When smaller than the standard value, the characteristic becomes an overshoot characteristic. If the value is larger than the standard value, the brake is applied before the stop position.

Especially, when a large load is applied, overshoot, etc. are suppressed by inertia and hunting may occur, depending on the conditions. If hunting (phenomena which cause the servo to oscillate) occurs even though the Dead Band, Stretcher, Boost and other parameters are suitable, adjust this parameter to a value larger than the initial value.

#### [Relationship between damper set value and servo operation]

Small → When you want to overshoot. Set so that hunting does not occur.

Large → When you want to operate so that braking is not applied. However, it will feel like the servo response has worsened.

**(Note)** If used in the hunting state, not only will the current consumption increase, but the life of the servo will also be shortened.

### • Stretcher

The servo hold characteristic can be set. The torque which attempts to return the servo to the target position when the current servo position has deviated from the target position can be adjusted.

This is used when stopping hunting, etc., but the holding characteristic changes as shown below.

#### [Relationship between stretcher and servo operation]

Small → Servo holding force becomes weaker.

Large → Servo holding force becomes stronger.

**(Note)** When this parameter is large, the current consumption increases.

### • Buzzer

When the power supply of a servo is previously turned on at the time of a power supply injection without taking transmit of a transmitter, the buzzer sound of about 2.5Hz continues sounding from a servo.

(Even when the transmit of a transmitter is taken out previously, a buzzer becomes until the signal of a servo is outputted normally, but it is not unusual.)


The transmitter has been turned OFF ahead of a servo power supply → The buzzer sound of about 1.25 Hz continues sounding as servo power supply end failure alarm.

(Do not insert or remove the servo connector while the receiver power is ON. A buzzer may sound by incorrect recognition.)

\* Buzzer sound is generated by vibrating the motor of a servo.

Since current is consumed and a servo generates heat, please do not operate the number more than needed or do not continue sounding a buzzer for a long time.

## WARNING

 While S.BUS servo writes, you aren't supposed to remove a connection of a servo and turn off a power supply of a transmitter.

■ Data of S.BUS servo is damaged and breaks down.



## Information

The program version, and SD card size are displayed. The User name, language and Unit system used by the system can also be changed.

This function registers the T16SZ user name and the language displayed at proportional can be changed.

The Information screen displays the T16SZ system program version information, SD card (memory size, card free size) information.

Telemetry numerical values can be displayed in either metric or SAE (yard-pound) units.

\*If an SD card is not inserted, no memory card information will be displayed.

- Tap the [Information] button at the System menu to call the setup screen shown below.
- Return to System menu

2/3 : WEB Manual QR code  
3/3 : Manufacturer Information

### Telemetry Display Unit

#### [Metric]

Distance --- m (meter)  
Speed --- km/h (kilometers per hour)  
Variometer --- m/s (meter per second)  
Temperature --- °C (centigrade)

#### [Yard]

Distance --- yard  
Altitude --- feet  
Speed --- mph (mile per hour)  
Variometer --- fpm (ft per min)  
Temperature --- F (fahrenheit)

Information	Model1 Normal	6.7V	1/3
User name	Futaba Corp		
Language	English		
Unit system	Metric		
Version	0.2.443J		
Memory card size	122MB		
Card free size	121MB		

Movement of a cursor of an input box

Back space (Input box)

fix and return to an information screen.

Next page (Character list 2/4 - 4/4)

Input box

An input box is reset

User name	Model1 Normal	6.7V	1/4						
F u t a b a C o r p ← → BS Undo									
0	1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z	a	b	c	d
e	f	g	h	i	j	k	l	m	n

## Registration of the user's name

T16SZ transmitter can register user's name.

### How to register user's name

1. Turn on the power of the transmitter.
2. Select "user's name" and then the keyboard will pop up.
3. You can use up to 15 characters as a user's name. Use the keyboard on the screen to enter user's name.

Language	Model1 Normal	6.7V
English	French	
Japanese	Spanish	
German	Czech	
Dutch	Italian	

The language displayed at proportional can be changed. The initial setting is English, but different languages can be selected.





## LINKAGE MENU

The Linkage menu is made up of functions which perform model addition, model type selection, end point setting, and other model basic settings.

- Tap the [Linkage menu] button in the Home screen to call the setup screen shown below.

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

Linkage menu	New Condit.1	6.3V	1/2
Servo monitor	Model select	Model type	
Servo reverse	End point	Servo speed	
Sub-trim	Function	Fail safe	
System type	Trim setting	Throttle cut	
Idle down	Stick alarm	Timer	
Function name	Sensor	Telemetry	

### Linkage menu functions table

- [Servo monitor]: Displays the servo test and operation position
- [Model select]: Model addition, call, deletion, copy, model name setting
- [Model type]: Model type, wing type, tail type, swash type, selection
- [Servo reverse]: Servo direction reversal
- [End point]: Servo basic rate adjustment and limit setting
- [Servo speed]: Servo speed setting
- [Sub-trim]: Adjusts the neutral position of each servo
- [Function]: Channel assignment of each function can be changed
- [Fail safe]: Fail safe function and battery fail safe function setting
- [System type]: System mode selection, link of a transmitter and receiver, telemetry mode selection
- [Trim setting]: Control step amount and mode selection of the digital trim
- [Throttle cut]: Stops the engine safely and easily
- [Idle down]: Lowers the idle speed of the engine
- [Swash ring]: Limits the swash plate travel to within a fixed range. (helicopter only)
- [Swash]: Swash AFR and linkage correction function (helicopter only except swash type H-1)
- [Stick alarm]: Can be set so that an audible alarm sounds when the throttle stick reaches the set position.
- [Timer]: Timer setting
- [Function name]: Function name can be changed
- [Sensor]: Various telemetry sensors setting
- [Telemetry]: Displays various data sent from the receiver
- [Tele.setting]: Telemetry data log
- [Trainer]: Starts and sets the trainer system.
- [Warning setting]: Mixing, throttle position warning reset
- [User menu setting]: Original menu making
- [Date reset]: Model memory set data reset (by item)



# Servo monitor

Servo Test & Graph Display / Displays servo positions.

This is used for testing servo movement. “Moving Test” (repetition mode) and “Neutral Test” (fixed position mode) are available.

The “Neutral Test” is good for finding the neutral position of a servo horn.

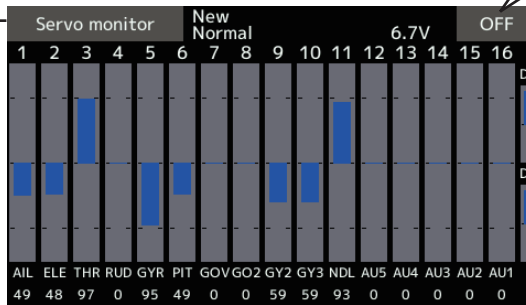
In order to prevent any potential difficulties, the servo test function will be inoperable, or inaccessible, under certain conditions. Specifically, the Servo Test function is not operational if the Throttle cut is ON in either airplane or helicopter modes; or if the Throttle hold is ON in helicopter mode.

- Select [Servo monitor] at the linkage menu and call the setup screen shown below.

< or >

● Long press the [U.MENU/MON.] button in the Home screen to call the setup screen shown.

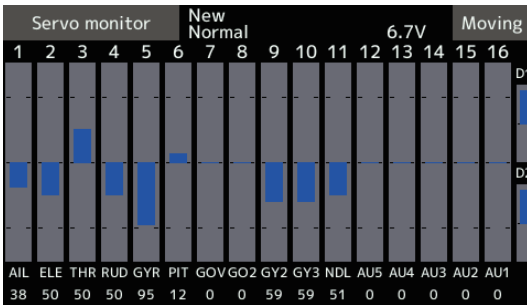
- Return to Home or Linkage menu



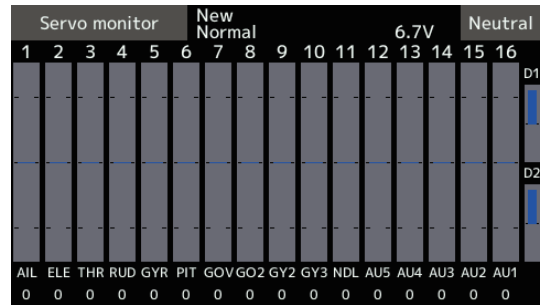
Each channel movement can be checked.

Failure ?

Yes



[Moving]: Mode which repeats operation of each servo



[Neutral]: Mode which locks each servo in the neutral position

Select the [OFF] or pushing the HOME/EXIT button → Testing is stopped

## ⚠ WARNING

❗ Don't set a servo test mode when the drive motor is connected and the engine has been started.

- Inadvertent rotation of the motor or acceleration of the engine is extremely dangerous.



# Model select

The Model selection function performs model addition, call, deletion, copy, and model name setting.

This function is used to load the settings of the desired model into the T16SZ's memory.

The settings may be selected from either the transmitter's built-in memory or a SD card (32MB-2GB). Remember that up to 30 model memories are available in the transmitter.

The name of the model stored in the transmitter and the SD card may be changed. This can be very useful to tell different models settings apart. Each model name can be as long as 15 characters, and the model name always appears in the display

screen.

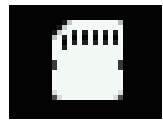
The Copy function is used to copy one set of model data into a second memory within the transmitter and the SD card. It may be used for getting a head-start on setting up models with almost the same settings (only differences need to be modified, instead of entering the complete model from scratch). Also, this function may be used to make a backup copy of a model setup before any changes are made.

- Select [Model select] at the linkage menu and call the setup screen shown below.

< or >

- Tap the [Model select] button in the Home screen to call the setup screen shown below.



- When model data on a SD card is used, this icon appears.
- 

- Return to Home or Linkage menu

Current model is green.

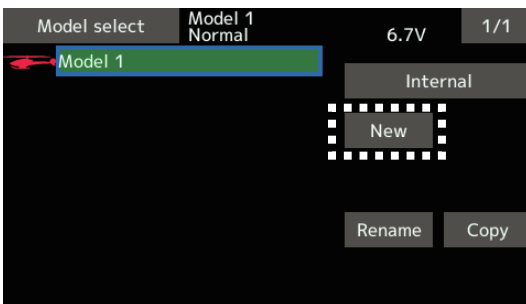


- "Save to" [Internal]: transmitter memory [SD card]: SD card

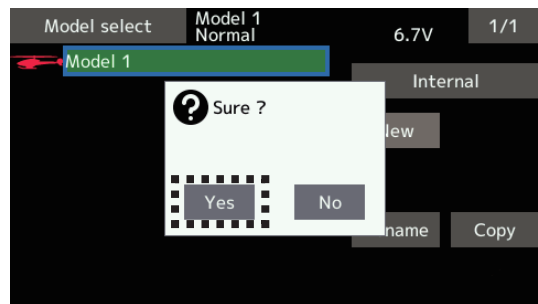
The date by which the model was made first. In case of a model on a SD card, the file name is indicated. (The file name can't be changed.)

## Model addition

1. Tap the [New] button.



2. Tap [Yes] to add the model. (When you want to cancel model addition, tap [No].)



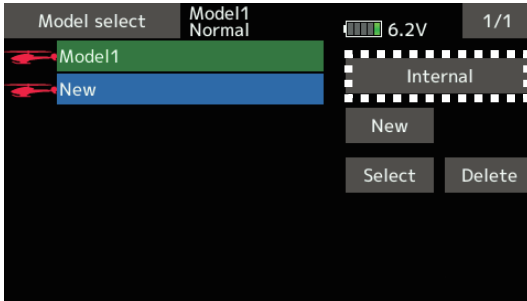
\*The added model is displayed in the model list.

\*When a model is added, a receiver link is required.

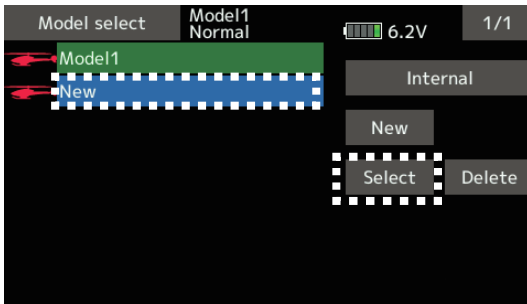


## Model call

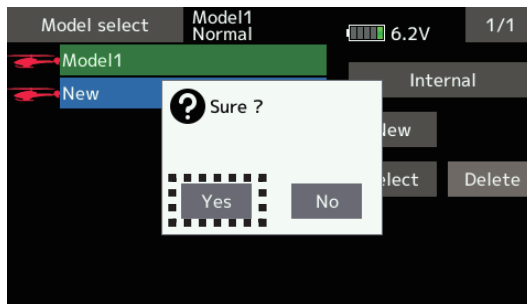
1. Tap the Internal or SD card. Select the location to which the desired model is to be saved.



2. Tap the desired model in the model list.
3. Tap the [Select] button.



4. Tap [Yes] to call the model. (When you want to cancel model call, press [No].)



## Model deletion

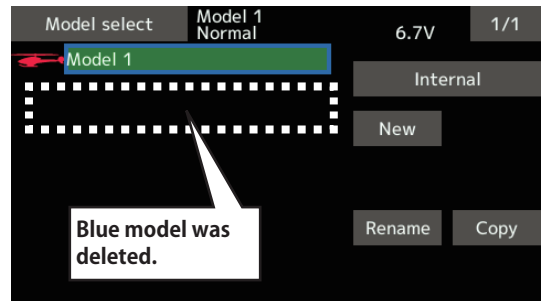
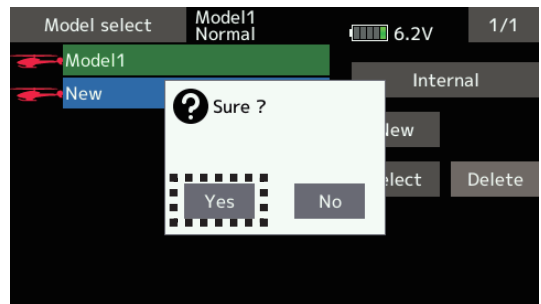
1. Tap the select model name or the model you want to delete in the model list.

**(The model currently selected cannot be deleted.)**

2. Tap the [Delete] button.



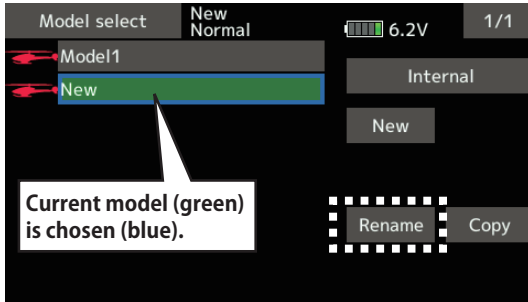
3. Tap [Yes]. (When you want to stop model deletion, tap [No].)





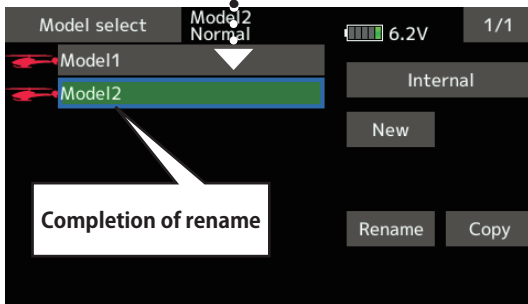
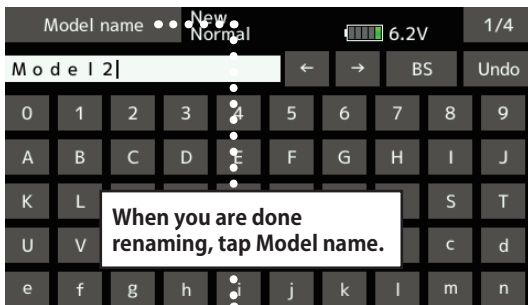
## Model name change

1. The model data chosen at current model can be changed. The current model name, tap.
2. When [Rename] is tapped, a keyboard appears on the screen.



3. Enter the model name from this keyboard.

\*Up to 15 characters can be input at the model name.



### ⚠ WARNING



**Never launch the Model Selection function while the engine is starting or the motor drive wiring is connected.**

- Careless spinning of propellers or rotors is extremely dangerous.

### ⚠ WARNING

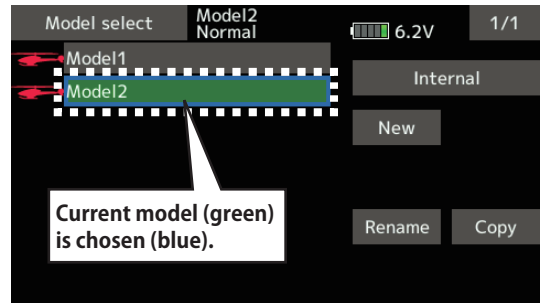


**Carefully check that the aircraft to be used and the model selected match up.**

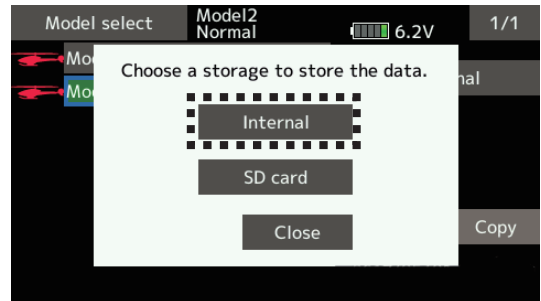
- Using a model which does not match the aircraft runs the risk of the aircraft flying out of control and crashing. Perform a careful operations check prior to flight.

## Model copy

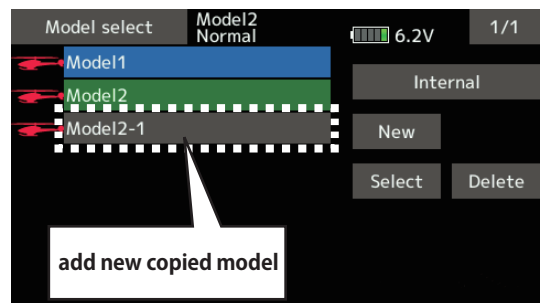
1. The model data chosen at current model can be copied. The current model name, tap.



2. Tap the "Copy" button and tap the destination button and select the copy storage destination. (Internal or SD card)



3. When [Internal] or [SD card] is tapped, copying is executed.



\*If there is no model with the same name in the copy destination, the name of the copied model is saved. If there is a model of the same name, a number is added at the end of the model name and the model is copied. You can change the name later.

\*Indication date : When the model data is copied, the creation date for the current model is recorded.



## Model type

This function selects the model type from among airplane, glider, helicopter, and multicopter.

Seven types of main wings (six types of flying wing) and three types of tail wings are available for airplanes. Eight swash types are available for helicopters. Seven types of main wings and three types of tail wings are available for gliders. Functions and mixing functions necessary for each model type are set in advance at the factory.

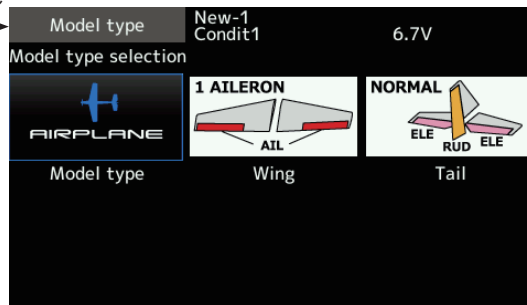
Note: The Model Type function automatically selects the appropriate output channels, control functions, and mixing functions for the chosen model type.

When the Model Type Selection command is accessed, all of the data in the active memory is cleared. Be sure that you don't mind losing this data, or back it up to another memory using the copying functions.

(The display screen is an example. The screen depends on the model type.)

- Select [Model type] at the linkage menu and call the setup screen shown below.

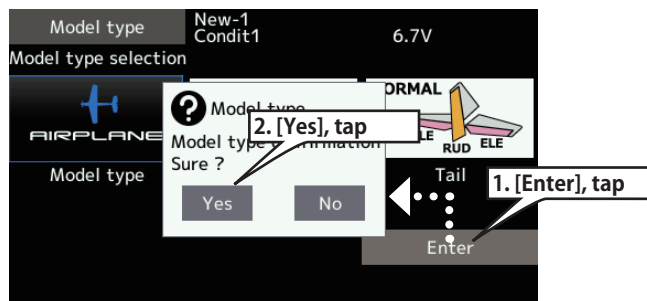
- Return to Linkage menu →



### Model type selection

1. Model type selection [Model icon], tap.
2. Set the Model type, Wing type (Airplane/Glider), Tail type (Airplane/Glider), or Swash type (Helicopter) by using the appropriate button.
3. Set the type you choose by tapping [Enter] → [Yes] at the confirmation screen. (When you want to cancel model type selection, tap [No].)

- When a data change will occur, the confirmation screen of data initialization menu will be displayed. A push on [yes] will initialize data and allow changes. A push on [no] will stop data changes.





Model type New-1 Condit1 6.7V

Model type selection

AIRPLANE	HELICOPTER	GLIDER
Airplane	Helicopter	Glider
MULTICOPTER		
Multi-copter		

Set the type you choose by tapping

Airplane/Glider : Choose the wing type and tail.

Helicopter : Choose the swash type.

Model type New-1 Condit1 6.7V

Model type selection

AIRPLANE	1 AILERON AIL	NORMAL ELE RUD ELE
Model type	Wing	Tail

Swash New-1 Condit1 6.7V

H-1 Pure function	H-2 PIT AIL	H-4 ELE PIT AIL ELE2
HR3(120°) PIT AIL ELE	HN3(120°) AIL ELE PIT	H-3 PIT AIL ELE
HE3 PIT AIL ELE	H-4X ELE PIT AIL ELE2	Swash type selection

Wing New-1 Condit1 6.7V 1/2

1 AILERON AIL	2 AILERON AIL AIL2	2 AIL + 1 FLP AIL FLP AIL2
2 AIL + 2 FLP AIL FLP FLP2 AIL2	2 AIL + 4 FLP AIL FLP FLP4 AIL2 FLP3 FLP2	4 AIL + 2 FLP AIL FLP FLP2 AIL4 AIL3
4 AIL + 4 FLP AIL3/FLP/FLP4/AIL2 AIL FLP3 FLP2 AIL4	Wing type selection	

Tail New-1 Condit1 6.7V

NORMAL ELE RUD ELE	V-TAIL ELE RUD	AILVATOR ELE RUD ELE2
Tail type selection		

Wing New-1 Condit1 6.7V 2/2

Flying Wing 2AIL AIL AIL2	Flying Wing 2AIL+1FLP AIL FLP AIL2
Flying Wing 2AIL+2FLP AIL FLP FLP2 AIL2	Flying Wing 2AIL+4FLP FLP FLP2 AIL2 AIL3 FLP3 FLP4
Flying Wing 4AIL+2FLP AIL3 FLP FLP2 AIL4	Flying Wing 4AIL+4FLP AIL3 FLP FLP4 AIL2 AIL4
Wing type selection	

Tail New-1 Condit1 6.7V

Normal Rudder RUD
Winglet (2RUD) RUD RUD2
Tail type selection





## Servo Reverse

Use to reverse the servo throw direction.

Servo Reverse changes the direction of an individual servo's response to a control stick movement.

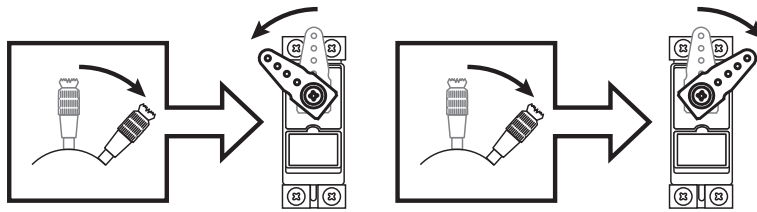
For CCPM helicopters, be sure to read the section on Swash AFR before reversing any servos. With CCPM helicopters, always complete your servo reversing prior to any other programming. If you use pre-built Airplane/Glider functions that control multiple servos, it may be confusing to tell whether the servo needs to be reversed or a setting in the function needs to be reversed. See the instructions for each specialized function for further details. Always check servo direction prior to every

flight as an additional precaution to confirm proper model memory, hook ups, and radio function.

### ⚠ WARNING

❗ Before a flight, it always check that your model's servo operation, the direction of control surfaces, and switch setup are correct.

❗ Default setting of the throttle/motor channel is always reverse.



- Tap the [Servo reverse] button in the Linkage menu to call the setup screen shown below.

•Return to Linkage menu →

Servo reverse		New-1 Condit1	6.7V	1/2
Ch	Function	Ch	Function	
1	Aileron	7	Auxiliary5	Normal
2	Elevator	8	Auxiliary4	Normal
3	Throttle	9	Auxiliary3	Normal
4	Rudder	10	Auxiliary2	Normal
5	Gear	11	Auxiliary1	Normal
6	Air brake	12	Auxiliary1	Normal

Tap the channel you wish to reverse.

sure ?

Yes No

Tap the "Yes" → Reverse

(The display screen is an example. The screen depends on the model type.)

### Servo reversing procedure

After setting up a new model, be sure to define all special menus. Be sure that all servos are plugged into the proper receiver channels. Now, determine whether you need to reverse any channels by moving each stick and observing the corresponding movement in the model's controls.

1. Tap the desired channel's setting button to choose the proper direction for the servo.
2. Tap "Yes" in the next screen.
3. Repeat for each servo needing reversal.

When done, tap "Servo reverse" to return to the Linkage menu.

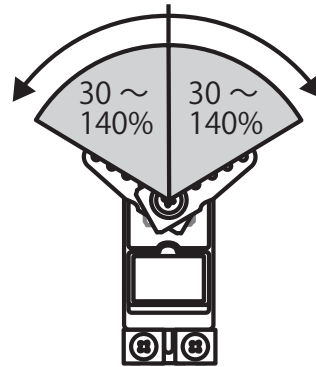


# End point

Sets the travel, limit point.

The End point function adjusts the left and right servo throws, generates differential throws, and will correct improper linkage settings.

The travel rate (normal full stick movement at high rates) can be varied from 30% to 140% in each direction on channels 1 to 16. Also, the limit point (how far the servo travels when a mix is involved) where servo throw stops may be varied from 0% to 155%.



- Tap the [End point] button in the Linkage menu to call the setup screen shown below.
- Return to Linkage menu →

End point		New-1 Condit1		6.7V	
Ch	Function	Limit	Travel	Travel	Limit
1	Aileron	135	100	100	135
2	Elevator	135	100	100	135
3	Throttle	135	100	100	135
4	Rudder	135	100	100	135
5	Gear	135	100	100	135
6	Air brake	135	100	100	135

Labels: Travel rate, Limit point, Next page Ch7-16, Tap the values you wish to adjust and value input buttons will appear on-screen.

Left / Top, Right / Bottom

Indicates the current direction of the stick, etc.

(The display screen is an example. The screen depends on the model type.)

## Servo travel adjustment

1. Tap the travel button of the channel you want to set. Value input buttons appear on the screen.
2. Use these buttons to adjust the rate.
  - Initial value: 100%
  - Adjustment range: 30%~140%
3. Repeat the procedure above for each rate.

## Limit point adjustment

1. Tap the limit button of the channel you want to set.
2. Use the value input buttons to adjust the limit point.
  - Initial value: 135%
  - Adjustment range: 0%~155%
3. Repeat this procedure for each limit point.



## Servo speed

Sets the speed of each servo.

The Servo speed setting is used to set the servo delay for each channel, from channel 1 to channel 16. The system uses the programmed speed (delay) to slow down servo position changes. The Servo

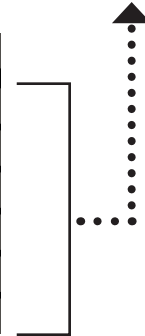
speed setting can be varied from 0 to 27 in each channel.

- Tap the [Servo speed] button in the Linkage menu to call the setup screen shown below.

(First) 0 ~ 27 (Slowly)

- Return to Linkage menu

Servo speed		New-1 Condit1	6.7V	1/2
Ch	Function		Ch	Function
1	Aileron	0	7	Auxiliary5
2	Elevator	0	8	Auxiliary4
3	Throttle	0	9	Auxiliary3
4	Rudder	0	10	Auxiliary2
5	Gear	0	11	Auxiliary1
6	Air brake	0	12	Auxiliary1



### Servo speed setting

1. Tap the speed button of the channel you want to set.
2. Use the value input buttons to adjust the servo speed.
  - Initial value: 0
  - Adjustment range: 0~27 (steps)

3. Repeat this procedure for each channel.

To close this screen, tap the [Servo speed] button.

## Sub-trim

Setting of neutral position of each servo.

The Sub-Trim function is used to set the servo neutral position, and may be used to make fine adjustments to the control surface after linkages

and pushrods are hooked up. When you begin to set up a model, be sure that the digital trims are set to their center position.

- Tap the [Sub-trim] button in the Linkage menu to call the setup screen shown below.

- Return to Linkage menu

Sub-trim		New-1 Condit1	6.7V	1/2
Ch	Function		Ch	Function
1	Aileron	+0	7	Auxiliary5
2	Elevator	+0	8	Auxiliary4
3	Throttle	+0	9	Auxiliary3
4	Rudder	+0	10	Auxiliary2
5	Gear	+0	11	Auxiliary1
6	Air brake	+0	12	Auxiliary1

### Sub-trim adjustment

1. Tap the trim display part of the channel you want to adjust.  
Value input buttons appears on the Sub-trim menu screen.

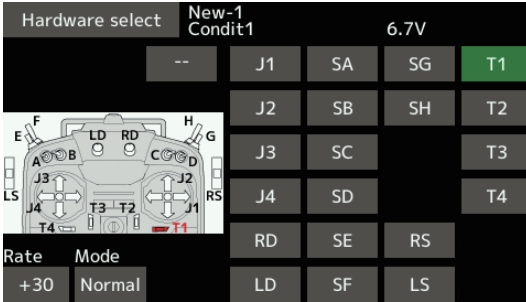
2. Use the value input buttons to adjust the sub trim.
  - Initial value: 0
  - Adjustment range: -240~+240 (steps)
  - \*See above
3. Repeat this step for each channel.





## Trim change

1. Tap the trim button to call the trim setup screen.



2. The following items can be set at the trim setup screen.

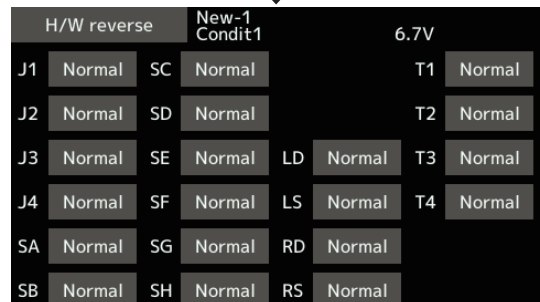
- Hardware setting (Selection of switch, etc. which controls trim)
- Rate setting
- Trim mode setting  
 Normal mode: Normal trim (linear) operation  
 ATL mode: ATL operation mode. (Works at only one end of operation) Reverse is also possible.  
 Center mode: Maximum change near center by center trim operation (Does not change at end of the stick movement)

**The Motor function is used when switching the motor ON/OFF (mostly for motor gliders). For most EP plane, the throttle can be left as-is when controlling the motor by stick. This means that the various throttle-related functions are usable via motor control.**

## H/W reverse

This function reverses the operation signal of the sticks, switches, trimmer levers, and knobs.

Note: This setting reverses the actual operation signal, but does not change the display of the indicators on the display. Use the Normal mode as long as there is no special reason to use the reverse mode.



Tap the channel you wish to reverse.

Tap the "Yes" → H/W reverse

? Sure ?  
 Yes    No



## Fail safe

Sets the servos' operating position when transmitter signals can no longer be received or when the receiver battery voltage drops.

The Fail safe function is used to set up positions that the servos will move to in the case of radio interference. Defines servo position when signals are lost and when receiver battery voltage becomes low.

You may set either of two positions for each channel: Hold, where the servo maintains its last commanded position, or fail safe, where each servo moves to a predetermined position. You may choose either mode for each channel.

The T16SZ system also provides you with an advanced battery monitoring function that warns you when the receiver battery has only a little power remaining. In this case, each servo is moved to the defined failsafe position. The battery failsafe may be released by operating a predefined control on the transmitter (default is throttle). **Do not continue to fly. Land as soon as possible.** Remember, if the predefined control suddenly

moves to a position you did not command, land at once and check your receiver battery.

**Do not continue to fly. Land as soon as possible.** Defines servo position when signals are lost and when receiver battery voltage becomes low.

### WARNING

#### For safety, always set the fail safe functions.

- Especially set the throttle channel fail safe function so that the servo moves to the maximum slow side for airplanes and to the slow side from the hovering position for helicopters. Crashing of the model at full high when normal radio waves cannot be received due to interference, etc., is very dangerous.
- If fail safe is reset by throttle stick movement, the fail safe may be mistaken as an engine malfunction and will be reset at low throttle and the model will continue to fly. If you have any doubts, immediately land.

- Tap the [Fail safe] button in the Linkage menu to call the setup screen shown below.

•Return to →  
Linkage menu

Fail safe		New-1 Condit1	6.7V		1/3
Ch	Function	Mode	B.F/S	F/S-POS	Release battery F/S
1	Aileron	Hold	OFF	+0	
2	Elevator	Hold	OFF	+0	--
3	Throttle	Hold	OFF	+0	
4	Rudder	Hold	OFF	+0	
5	Gear	Hold	OFF	+0	
6	Air brake	Hold	OFF	+0	

### Fail safe setting procedure

Decide which channels you want to go to preset positions, and which ones you want to maintain their last commanded position. To select the fail safe mode you wish to set, use the F/S button. This button toggles between the two modes. (Hold, F/S)

#### F/S mode setting:

1. Tap the F/S button of the channel you want to set, and set that channel to the [F/S] mode.
2. Hold the corresponding stick, control, slider, or other control in the position you want the servo to move to when the fail safe function is activated, and tap the F/S position button. That position is displayed in percentage.

\*When you want to return that channel to the Hold mode, tap the [F/S] button again.

### Battery fail safe setting procedure

To select the B.F/S mode, tap the [B.F/S] button. Each time the button is tapped, it toggles between [OFF] and [B.F/S].

#### B.F/S setting:

1. Tap the [B.F/S] button of the desired channel to set it to the B.F/S mode.
2. Hold the corresponding stick, VR, slider, or other control in the position you want the servo to move to when the battery fail safe function is activated, and tap the F/S position button. This position is displayed in percentage.

\*When you want to return that channel to OFF, tap the [B.F/S] button again.

### Battery Fail safe release function

This function releases the predefined control from its held position after indicating that your receiver battery is low.

1. Enter the control setting screen by tapping the Battery F/S release button. Now, you may choose whether moving the throttle resets the condition, or select a stick or switch to deactivate it. To set a desired throttle release position, move the throttle stick to the point at which you wish the B.F/S to be released.



# System type

System mode setting, Receiver link

## System Type selection

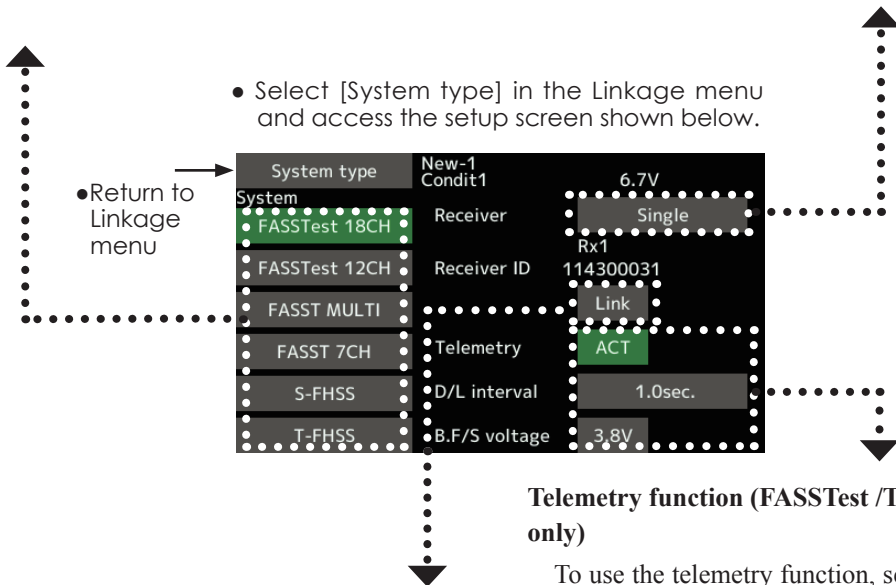
The T16SZ is for 2.4GHz only. The system can be changed from among 6 choices: FASSTest 18CH, FASSTest 12CH, FASST MULTI, FASST 7CH, T-FHSS, S-FHSS. It is FASSTest18CH and FASSTest12CH which can be chosen by R7008SB set. The method of selection is to the next page.

- \*If you change the System type, other model data is not reset.
- \*After any change, remember to test the model and fully check servo direction and motion.
- \*Analog servos cannot be used with the R7008SB in the FASSTest 12CH mode.

## Dual receiver function (only FASSTest 18CH )

Dual receivers can be linked with the T16SZ. Two receivers are recognized individually by ID numbers. For example, in R7008SB, CH output setting function is used, by setting the first as "1-8CH", and setting the second as "9-16CH". Two sets of receivers can be used as a set in the model, allowing you 16 channels. Separate fail-safe voltage can be set to each receiver.

However, telemetry cannot be used for the 2nd receiver.



## Telemetry function (FASSTest /T-FHSS mode only)

To use the telemetry function, set "Telemetry" to "ACT".

## Receiver linking

The receiver will only be controlled (without being affected by other transmitters) by the transmitter it is linked to. When using a receiver other than one purchased as a set, linking is necessary.

Moreover, a re-link is required when a new model is added by model selection, and at the time of system type change.

### Linking method



- Cases when linking is necessary:
- When using a receiver other than the initial setting.
  - When the communication system was changed. (FASSTest18CH ↔ FASSTest12CH etc.)
  - When a new model was created by model selection.

## DL Interval (FASSTest/T-FHSS mode only)

When a telemetry function is enabled, the receiving interval (down-link interval) of sensor data can be changed.

If a DL interval is increased, the response of the sensor data display becomes slower, but stick response will improve.

## Battery fail-safe voltage setup (FASSTest / T-FHSS mode only)

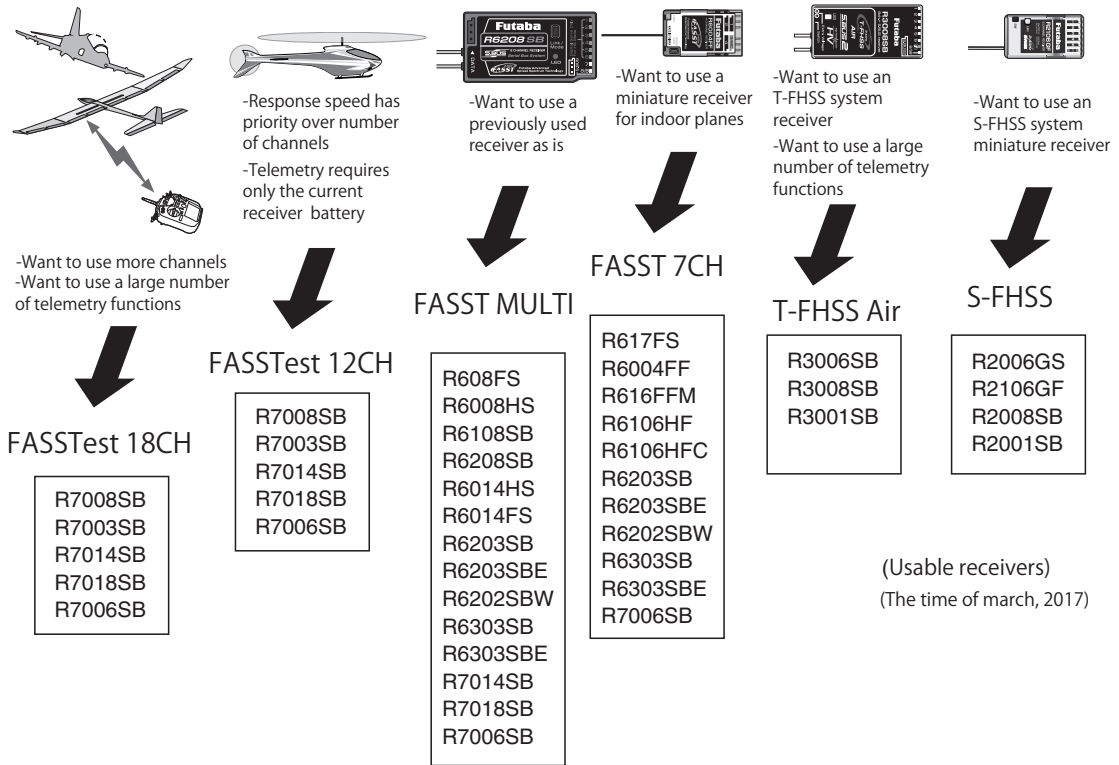
The voltage at which battery fail-safe activates can be set when you link. (3.5-8.4V) The receiver memorizes the setting as it was at link.

Since power consumption varies with battery type, servos and condition, please select the fail-safe activation voltage for your own model.





## The example for choosing System Type



### System type

- **FASSTest 18CH** --- FASSTest system receiver mode. Applicable with the telemetry sensor unit. Up to 18 channels (linear16+ON/OFF2) can be used.
- **FASSTest 12CH** --- FASSTest system receiver mode. Applicable with receiver voltage display. Up to 12 channels (linear10+ON/OFF2) can be used. Telemetry Sensor cannot be used, but the response speed is faster than that of the 18CH mode.
  - **Analog servos cannot be used with the R7008SB in the FASSTest 12CH mode.**
- **FASST MULTI** --- FASST-MULTI system receiver mode. Up to 18 channels (linear16+ON/OFF2) can be used.
- **FASST 7CH** --- FASST-7CH system receiver mode. Up to 7 channels can be used.
- **T-FHSS Air** --- T-FHSS system receiver mode. Applicable with the telemetry sensor unit. Up to 18 channels (linear16+ON/OFF2) can be used. (\*R3106GF is different.)
- **S-FHSS** --- S-FHSS system receiver mode. Up to 8 channels can be used.



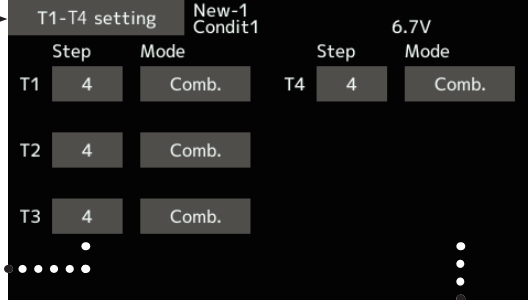
# Trim setting

Digital trim settings

This function adjusts the digital trim's control step amount and operation mode (T1-T4).

When the flight conditions are set, the trim operation can be coupled with among all the conditions which combination mode is selected.

- Select [Trim setting] at the linkage menu and call the setup screen shown below.
- Return to Linkage menu →



## Control step amount setting

1. The [Step] item tap the screen to the data input mode.

Set the control step amount by tapping the "▲▲" "▲" "▼▼" "▼" button.

Initial value: 4

Adjustment range: 1~200

(When the value is tapped, the control step amount is reset to the initial value.)

\*When the value is made large, the change per step becomes larger.

## Separate/combination mode selection

**[Comb.]:** Combination mode. The trim data are reflected at all the flight conditions.

**[Separ.]:** Separate mode. Trim adjustment for each flight condition.



# Throttle cut Stops the engine safely and easily.

Throttle cut provides an easy way to stop the engine, by flipping a switch with the throttle stick at idle. The action is not functional at high throttle to avoid accidental dead sticks. The switch's location and direction must be chosen, as it defaults to " — ".

- Tap the [Throttle cut] button in the Linkage menu to call the setup screen shown below.

•Return to →  
Linkage menu

Throttle cut
New-1  
Condit1

ACT/INH    INH

Cut position    17

Switch    --

**Tapping this will change INH to either OFF or ON and activated.**

**This is the throttle cut position. Tapping this will display value input buttons on-screen. Set the engine stop position.**

**Tapping this will pull up the hardware selection screen. Select the throttle cut switch and ON-OFF direction.**

**This indicates the throttle stick's current position. Throttle cut will only function when the throttle stick is more than 1/3rd into the slow throttle range.**

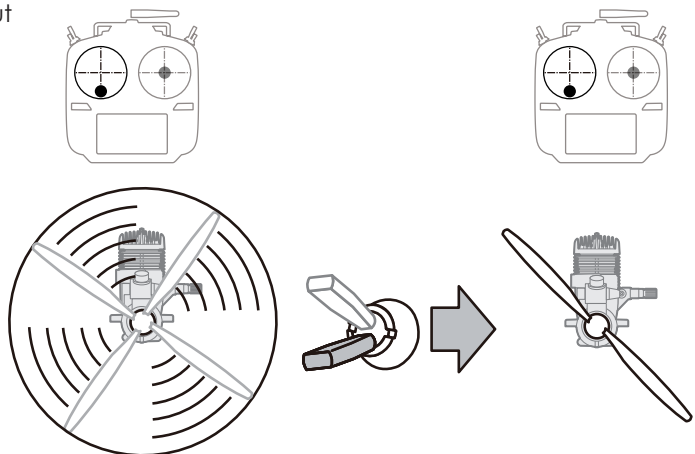
**The yellow line is the cut position. When the cut switch is ON, the throttle will move to this position.**

## Throttle cut setting procedure

1. Tap the "INH" button.
2. Throttle cut function switch setting:  
Tap the "--" button to call the <Hardware select> screen, and then select the switch and its ON direction.  
(For a detailed description of the selection method, see [Switch selection method] at the back of this manual.)
3. Throttle cut position setting:  
Tap the cut position button. Value input buttons appear on the screen.  
Use these buttons to adjust the cut position rate.

- Initial value: 17%
  - Adjustment range: (LOW) 0%~50% (Middle)
- \*With throttle stick at idle, adjust the rate until the engine consistently shuts off.

To exit the setting, tap the [Throttle cut] button.





# Idle down

Lowers the engine idling speed.

The Idle down function lowers the engine's idle by flipping a switch with the throttle stick at idle. The action is not functional at high throttle to avoid accidental dead sticks. The switch's location and direction must be chosen, as it defaults to " -- ".

- Select [Idle down] at the linkage menu and call the setup screen shown below.

- Return to Linkage menu

This is the idle down throttle position. Tapping this will display value input buttons on-screen. Set the engine's max. low position.

Range:  
(↑) -100 ~ +100 (↓)  
Pressing and holding a value will reset it to 0.

Tapping this will pull up the hardware selection screen. Select the idle down switch and ON-OFF direction.

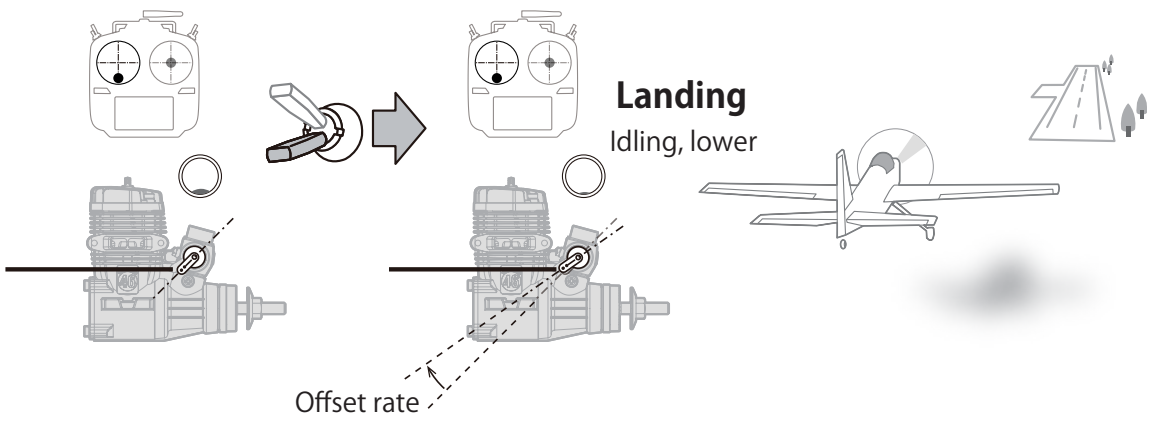
This is the current position bar for the throttle stick. Throttle cut will only function when the throttle stick is more than halfway into the low throttle range.

## Idle down setting procedure

1. Tap the "INH" button to activate the Idle down function.
2. Idle down function switch setting:  
Tap the "--" button to call the <Hardware select> screen, and then select the switch and its ON direction.  
(For a detailed description of the selection method, see [Switch selection method] at the back of this manual.)

3. Offset rate setting:  
Tap the offset rate button. Value input buttons appear on the screen.  
Use these buttons to adjust the offset rate.  
• Initial value: 0%  
• Adjustment range: -100%~100%  
\*(-) becomes an idle up.

To exit the setting, tap the [Idle down] button.





## Swash ring

Limits the swash travel within a fixed range to prevent linkage damage (Helicopter only)

This function limits the travel of the swash plate to prevent linkage damage as the aileron and elevator operation is used. It is useful for 3D heli setting.

- Tap the [Swash ring] button in the Linkage menu to call the setup screen shown below.

• Return to Linkage menu →

The movement range display shows control input for elevator and aileron direction.

The marker represents the stick's position.

Setting the function to "ACT" will display the swash ring and [Rate] percentage.

### Swash ring setting procedure

1. Push the Swash ring button on the linkage menu.
2. Push ACT/INH button to activate.
  - \*The movement area monitor shows the current aileron and elevator values and limit ranges by the yellow circle.
3. Adjust the rate to the maximum amount of swash plate decline.
  - \*The swash movement is limited within the circle.
  - Adjustment range: 50 - 200%.



# Swash

Swash operation linkage correction function (helicopter only, except swash type H-1).

## Neutral Point

At your linkages, if the servo horn deviates from a perpendicular position at neutral, the linkage compensation functions in this menu may not compensate effectively. To correct this use the neutral point function. This will move the neutral point of the servos to the actual perpendicular position. However, this adjustment changes only the axis point of the compensation functions in this menu, and does not affect the neutral position of other functions.

## Swash AFR

Swash AFR function reduces/increases/reverses the rate (travel) of the aileron, elevator and collective pitch functions, by adjusting or reversing the motion of all servos involved in that function, only when using that function.

## Mixing Rate

This compensation mixing is used to correct the tendency of the swash-plate for each control. The following compensation mixing is possible; PIT to AIL, PIT to ELE, AIL to PIT, ELE to AIL, and ELE to PIT (HR3 mode.) It adjusts the swash-plate to operate correctly for each control using the corresponding compensation mixing.

## Linkage Compensation

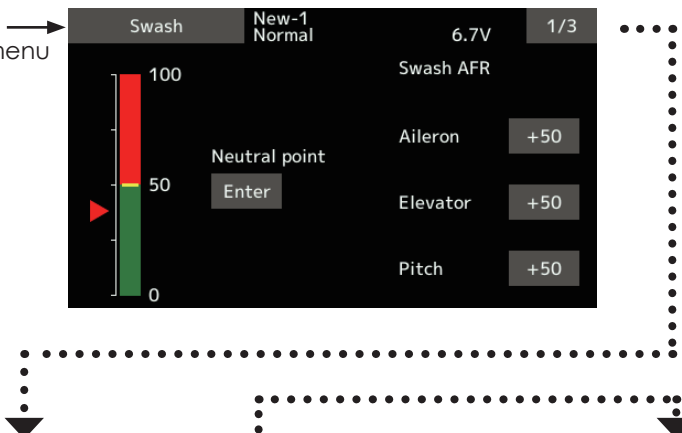
This compensation mixing is used to correct the tendency of the swash-plate for pitch control at low pitch and high pitch.

## Speed Compensation

This function is used to cancel the reaction that is generated by the difference of the operation amount of each servo when the swash-plate moves.

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

- Return to Linkage menu



Swash New-1 Normal 6.7V 1/3

Swash AFR

Aileron +50

Elevator +50

Pitch +50

Neutral point Enter

100

50

0

Swash New-1 Normal 6.7V 2/3

Mixing rate

	←↑	↓→
PIT→AIL	100	100
PIT→ELE	100	100
AIL→PIT	100	100
ELE→AIL	50	50
ELE→PIT	50	50

Swash New-1 Normal 6.7V 3/3

Linkage compensation Low pitch

Function	Direction	←↑	↓→
Aileron	+	0	0
Elevator	+	0	0

Speed compensation 0



## Neutral point setting procedure

\*Becomes the compensation reference point.

\*Adjusting the servo horn so that the neutral point position is near the 50% position makes the mixing amount small.

1. Hold the servo horn at a right angle to the linkage rod, and then tap the [Enter] button and read the actual neutral point.

\*The neutral point is displayed on the screen.

After reading this neutral point, use other compensation functions to make further adjustments.

To exit the setting, tap the [Swash] button.

## Swash AFR setting procedure

Adjust so that the specified operation amount is obtained by aileron, elevator, and pitch operation.

1. Tap the button of the AFR rate to be adjusted. Value input buttons appear on the screen.
2. Use the value input buttons to adjust the AFR rate.

Initial value: +50%

Adjustment range: -100%~+100%

+or- the direction of operation changes.

To exit setting, tap the [Swash] button.

## Mixing rate setting procedure

HR-3 is described as an example. The mixing applied in other swash modes is different, but the setting procedure is the same.

1. Set the throttle stick to the set neutral point. Adjust the length of the linkage rod so that the swash plate is horizontal at this position.

\*A little adjustment using sub trim should be OK.

\*Adjust so that pitch operation when the pitch curve is straight is maximum.

2. Adjust the AIL->PIT amount so there is no interference in the elevator or pitch direction when the aileron stick is moved to the left and right.

\*Adjust the left and right sides separately.

3. Adjust the ELE->AIL and ELE->PIT amounts so there is not interference in the aileron or pitch direction when the elevator stick is moved up and down.

\*Adjust the up and down sides separately.

4. Adjust the PIT->AIL and PIT->ELE amounts so that the swash plate is horizontal when the throttle stick is set to maximum slow and full high.

\*Adjust the slow and high sides separately.

To exit setting, tap the [Swash] button.

## Linkage correction setting procedure

\*Set the linkage compensation after setting the mixing rate.

\*This function compensates for elevator interference by aileron operation or aileron interference by elevator operation at Low pitch and Hi pitch at collective pitch (HR3, etc.) control.

1. Set the throttle stick to the maximum slow position. Move the aileron stick to the left and right and adjust the aileron compensation amount so that interference in the elevator or pitch direction at that time is minimal.

\*The left and right sides can be adjusted separately.

\*If the interference increases when the compensation amount is increased, make the compensation direction "-".

2. Adjust the elevator compensation amount so that the interference in the aileron or pitch direction when the elevator stick was moved up and down is minimal.

3. Perform aileron and elevator compensation similarly for the throttle stick full high side.

To exit setting, tap the [Swash] button.

## Speed compensation setting procedure

1. Set the throttle stick to the neutral point position. Move the elevator stick quickly and adjust the speed compensation amount so that the interference in the pitch direction is minimal.

To exit setting, tap the [Swash] button.

### Notes:

If the linkage is too long or short, correct compensation will not be applied. Correct this before continuing. The pitch angle changes after any adjustment. Reset the pitch angle when actually flying after compensation processing.



# Stick alarm

An alarm (single beep) can be sounded at the specified throttle stick position.

- Alarm function ON/OFF can be set by switch.

•Return to Linkage menu

Stick alarm New-1 Normal

ACT/INH INH

Position 50

Switch --

6.7V

100

50

0

Tapping this will change INH to ON and activated.

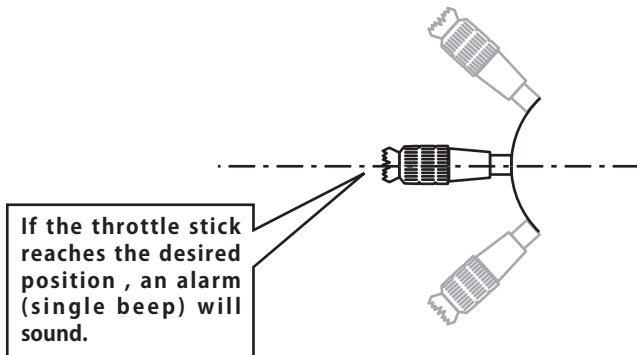
If the throttle stick reaches the yellow line, an alarm will sound.

This is the current position display bar for the throttle stick.

This is the throttle stick alarm position. Push the throttle stick to the desired position and tap the value.

Range:  
(Low) 0 ~ 100 (High)

Tapping this will pull up the hardware selection screen. Select the switch and ON-OFF direction if turning the function ON-OFF by switch.







# Timer

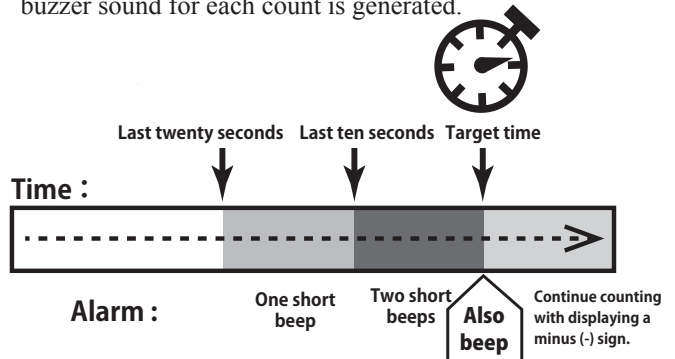
## Timer setting

The Timer function may be set for any desired time, i.e. engine run time, specified times for competitions, etc. Two independent timers are provided for your use. The timers are stored independently with each model, meaning that when you switch between model setups, the timer associated with the new model is brought up automatically.

The timers may be set to start and stop from the motion of any switch or stick. You may set the ON and OFF directions freely. Each timer has a capacity of up to 59 minutes 59 seconds.

Each timer may be set for count-down or count up operation with a target time.

If a target time is set and the timer reaches the set time, a buzzer sound for each count is generated.



- Select [Timer] at the linkage menu and call the setup screen shown below.

• Return to Linkage menu



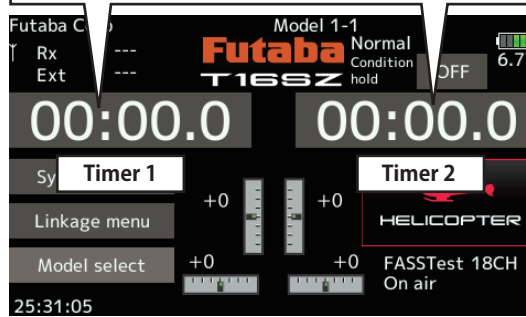
Elapsed: Minute-by-minute alarm starting from 00:00  
Remainder: Minute-by-minute alarm counting down from a designated time

A Buzzer or Speech can be chosen

[Inhibit] → [Type1-4]  
If it carries out like this, a vibration function will work.

OFF: Turning the power OFF and switching models will reset the timer.  
ON: Previous timer is put into memory and will restart from where it stopped.

[Start/Stop] → Home screen  
A timer on the home screen starts and stops its countdown directly from there when tapped. Tapping and holding the display will reset the timer.



### Up timer/Down timer selection

1. Tap the mode button and select the type of timer.
2. Timer time setting.  
Tap the Mode minutes or seconds button. Value input buttons appear on the screen. Use these buttons to set the timer time.

### Start/Stop/Reset switch setting

1. Tap the Start/Stop/Reset SW "--" button to call the <Switch> screen, and then select the switch and its ON direction.  
(For a detailed description of the selection method, see [Switch selection method] at the back of this manual. The timer switches can be set for each condition.)



## Function name

Function name can be changed

The name of the spare functions (Auxiliary 1-8) can be changed for the full name (10 characters) or for the abbreviated name (4 characters).

- Tap the [Function name] button in the Linkage menu to call the setup screen shown below.

- Return to Linkage menu →

Function name	New-1 Normal	6.7V
AUX1	Auxiliary1	AUX1
AUX2	Auxiliary2	AUX2
AUX3	Auxiliary3	AUX3
AUX4	Auxiliary4	AUX4
AUX5	Auxiliary5	AUX5
AUX6	Auxiliary6	AUX6
AUX7	Auxiliary7	AUX7
AUX8	Auxiliary8	AUX8

Rename

Reset

### Function name change method

1. Select [Function name] of the Linkage menu and tap the screen.
2. The Function name setup screen is displayed.
3. When the function whose name is to be changed is selected and the screen is tapped, a modification screen is displayed.
4. Select the function to be renamed and select [Rename] and tap the screen. A character input screen is displayed. Input the function name.
6. The function name may be displayed in 10 characters or 4 characters, depending on the setup screen. For 4-character display, input the function name as required.

Function name	New-1 Normal	6.7V	1/4
	←	→	BS Undo
0	1	2	3
4	5	6	7
8	9	A	B
C	D	E	F
G	H	I	J
K	L	M	N
O	P	Q	R
S	T	U	V
W	X	Y	Z
a	b	c	d
e	f	g	h
i	j	k	l
m	n		

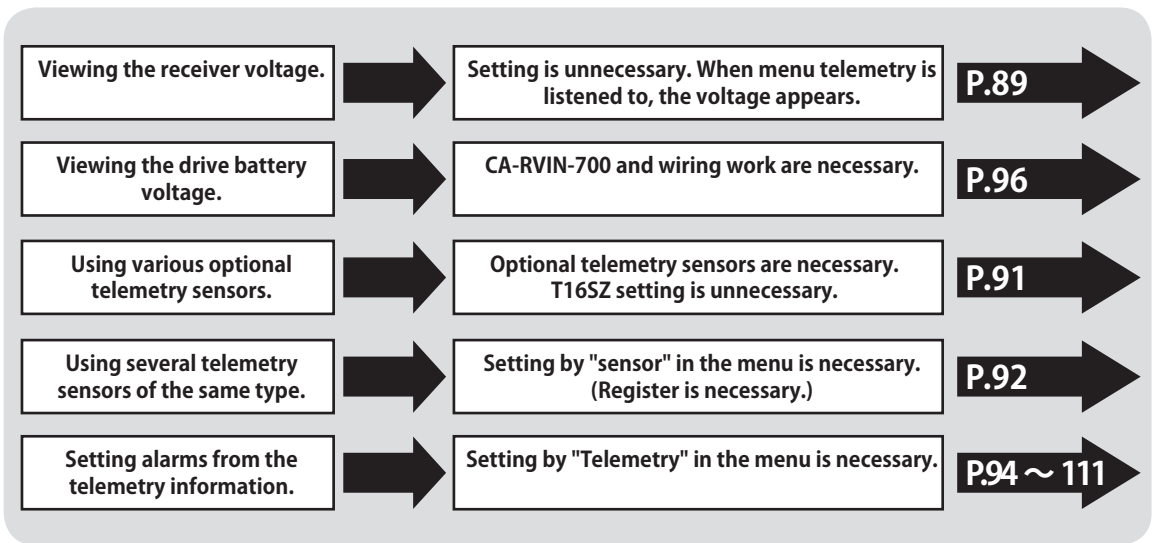
5. When [Reset] is selected and the screen is held down, the function name is set to the initial state function name.



# Telemetry system

This screen displays and sets the various information from the receiver. An alarm and vibration can be generated depending on the information. For example, a drop in the voltage of the receiver battery housed in the aircraft can be reported by an alarm.

- This function can only be used in the FASSTest 18CH mode and T-FHSS mode. The FASST/S-FHSS mode cannot use telemetry.
- FASSTest 12CH mode. Applicable with receiver voltage display.
- Telemetry sensors sold separately can be mounted in the aircraft to display a variety of information. (Receiver voltage does not require a sensor.)
- The telemetry function cannot be used if the telemetry mode of the parameters is not ACT.
- T-FHSS : When 2 receivers are used with 1 transmitter, the telemetry function cannot be used.
- If the transmitter and receiver are linked, but the receiver's ID is not recorded in the transmitter's memory, the telemetry function cannot be used.
- Turning OFF the receiver after use will cause the telemetry data just prior to this to be displayed. (Even when the receiver's power is turned OFF, the receiver voltage is not 0.0V.)



## Viewing the telemetry data

Receiver → Transmitter. The reception of the signal from the receiver to the transmitter is shown. This does not affect flight.

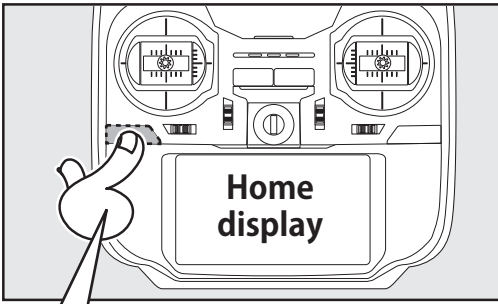
Receiver voltage and Ext voltage display

**⚠ CAUTION**

**! Do not stare at or set the transmitter setting screen while flying.**

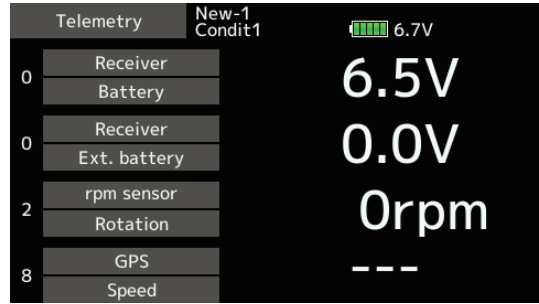
- Losing sight of the aircraft during flight is very dangerous.
- When you want to check the information during flight, call the telemetry screen before flight and have the screen checked by someone other than the operator.



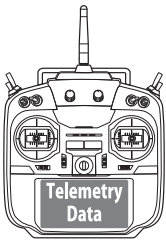
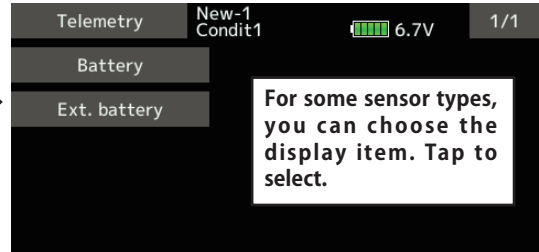
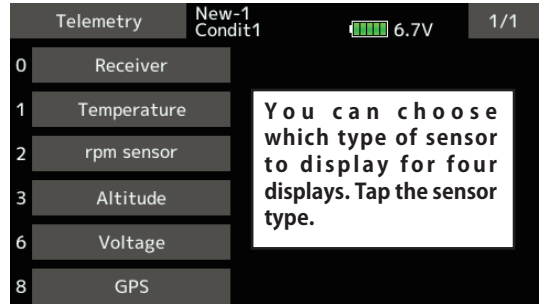
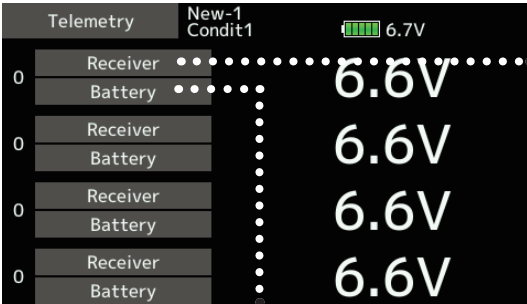


**HOME/EXIT is pushed**

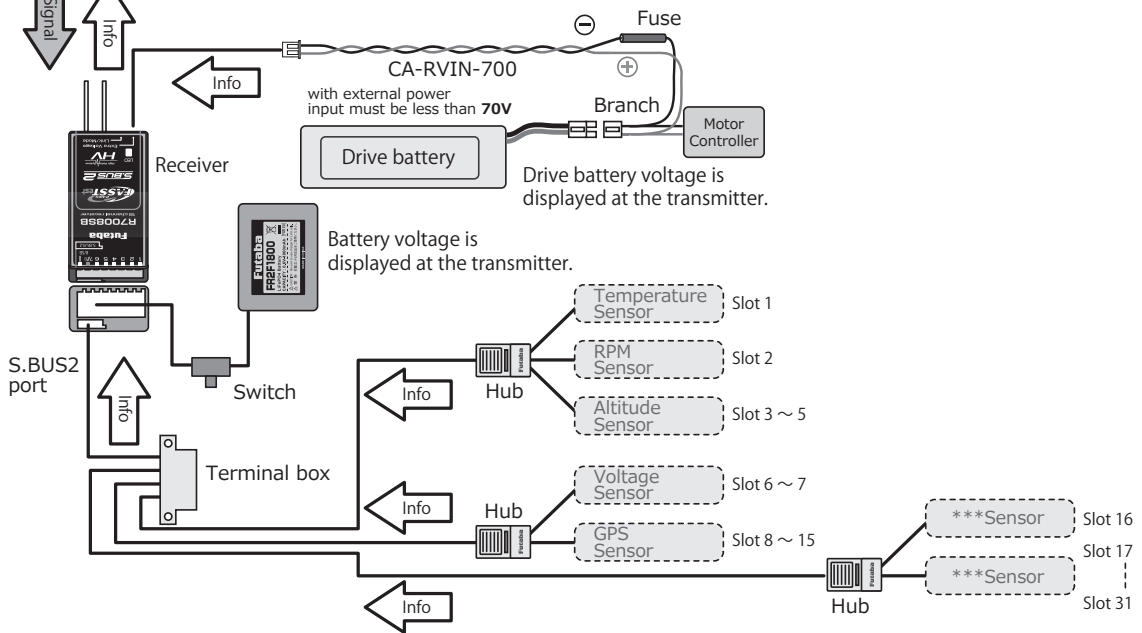
\*Be aware that pressing and holding this activates the key lock



**4 of telemetry data is displayed**



**Telemetry Schematic**





# Sensor

## Various telemetry sensors setting

This screen registers the telemetry sensors used with the transmitter. When only one of a certain type of sensor is used, this setting is unnecessary and the sensor can be used by simply connecting it to the S.BUS2 port of the transmitter.

When using 2 or more of the same kind of sensor, they must be registered here.

- Tap the [Sensor] button in the Linkage menu to call the setup screen shown below.

**[What is a slot?]**

Servos are classified by CH, but **sensors** are classified in units called “slot”. There are **slots** from **No. 1** to **No. 31**.

**Altitude sensors, GPS sensors** and other data sensor units may use **multiple slots**.

Using a sensor which uses two or more slots, the required number of slots is automatically assigned by setting up a **start slot**.

When 2 or more of the same kind of sensor are used, the sensors themselves must allocate unused slots and memorize that slot.

Sensor	New-1 Condit1 ID	6.7V Sensor type	1/3 ID
1 Temperature	0	Voltage	
2 rpm sensor	0	GPS	0
3 Altitude	0	GPS	
4 Altitude	10	GPS	
5 Altitude	11	GPS	
6 Voltage	0	GPS	

Sensor	New-1 Condit1 ID	6.7V Sensor type	2/3 ID
13 GPS		-----	
14 GPS		-----	
15 GPS		-----	
16 -----		-----	
17 -----		-----	
18 -----		-----	

**Slot Number**

**Registered sensor**

**Sensor ID : Multiple usage of sensors of the same type requires an ID be input. Tapping this will allow for manual input, but see the next page about how to perform auto-registration via sensor registration.**

**Tap the slot to display sensors which can be used for the start slot. Tap to register the sensor.**

**This is what displays when no sensor is registered in a slot. Tapping the slot and selecting "-----" will erase whatever was registered there, freeing up the slot.**

- As shown in the table below, an altimeter requires 3 contiguous slots and a GPS sensor requires 8 contiguous slots. The GPS (SBS-01/02G) start slots are 8, 16, and 24.

### < Assignable slot >

\*Altimeter, GPS, and other sensors that display a large amount of data require multiple slots.  
 \*Depending on the type of sensor, the slot numbers that can be allocated may be limited.

Sensor	The required number of slots	The number which can be used as a start slot	Selling area
TEMP (SBS-01T/TE)	1slot	1-31	Global
RPM (SBS01RM/RO/RB)	1slot	1-31	
Voltage (SBS-01V)	2slots	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30	
Altitude (SBS-01/02A)	3slots	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29	
Current (SBS-01C)	3slots	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29	
S.BUS Servo sensor (SBS-01S)	6slots	1, 2, 8, 9, 10, 16, 17, 18, 24, 25, 26	
GPS(SBS-01/02G)	8slots	8, 16, 24	Europe
TEMP125-F1713	1slots	1-31	
VARIO-F1712	2slots	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30	
VARIO-F1672	2slots	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30	
CURR-F1678	3slots	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29	
GPS-F1675	8slots	8, 16, 24	
Kontronik ESC	8slots	8, 16, 24	
Castle TL0	8slots	8, 16, 24	
JetCat V10	14slots	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	
PowerBox	16slots	8, 16	



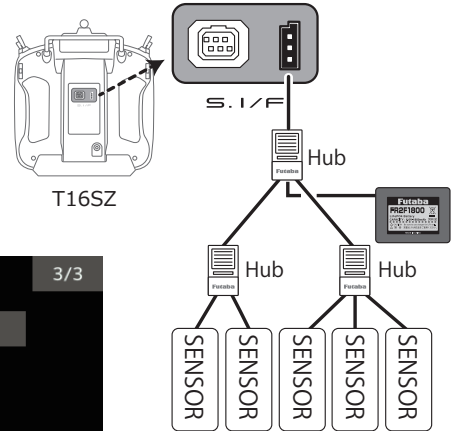
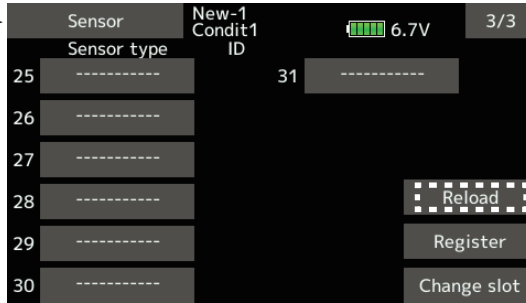
## Sensor : Reload

This page is set when using multiple telemetry sensors of the same type.

When using multiple sensors of the same type the sensors must be registered in the transmitter. Connect all the sensors to be used to the T16SZ as shown in the figure at the right and register them by the following procedure. The ID of each sensor is registered in the transmitter.

- Call page 3/3 from the [Sensor] menu.

- Return to Linkage menu →



\*It is not necessary to carry out multiple battery connections like a T18MZ/T14SG.

### Reading all the sensors to be used

1. Connect the sensor to the T16SZ as shown in the figure above.
2. Tap "Reload" on page 3/3 of the [Sensor] screen.
3. Tap "Reload".

All the sensors are registered and can be used.

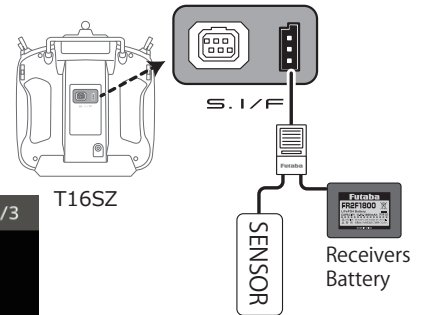
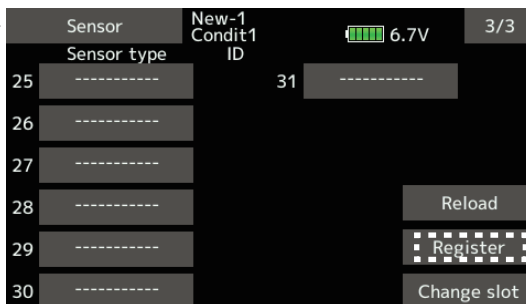
## Sensor : Register

This page is set when using multiple telemetry sensors of the same type.

This function registers an additional sensor. Connect the sensor as shown in the figure at the right and register it by the following procedure. The sensor ID is registered in the transmitter.

- Call page 3/3 from the [Sensor] menu.

- Return to Linkage menu →



### Additional sensor registration

1. Connect the sensor to the T16SZ as shown in the figure above.
2. Tap "Register" on page 3/3 of the <Sensor> screen.
3. The sensor is registered and can be used.

\*When the number of slots needed in registration is insufficient, an error is displayed and registration cannot be performed. Disable unused slots or perform the following reload.