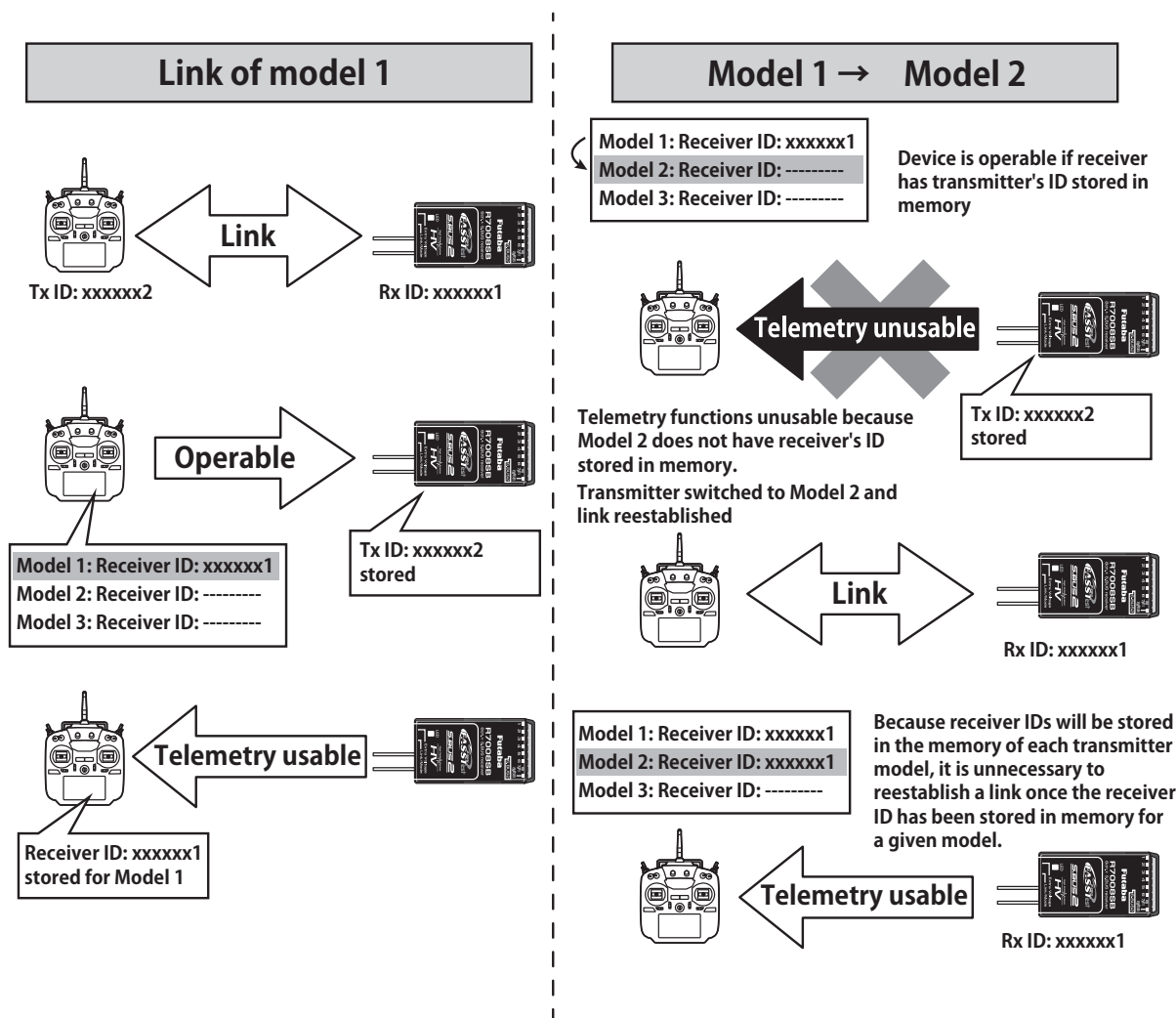


If the receiver's voltage does not display on the transmitter

- ◆ 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.



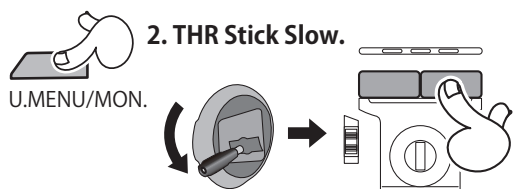
When setting up a new model, before using it, first establish a link with the receiver that will be used with it.

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.

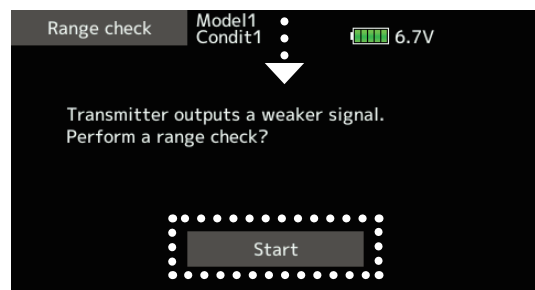
Range check mode

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



3. T16SZ Power ON.

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.

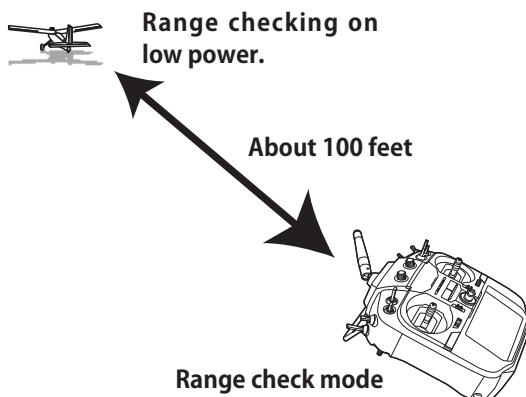
During this mode, the RF power output is reduced so the range test can be performed. In addition, when this mode is activated the right LED on the front of the transmitter starts blinking and the transmitter gives users a warning with a beeping sound.

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.



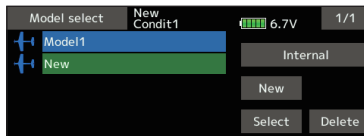


MODEL BASIC SETTING PROCEDURE

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.



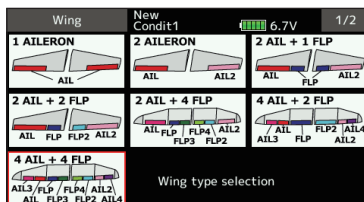
The data for up to 30 models can be saved to the transmitter. Data can also be saved to the optional SD card.

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.)

Function		New Condit1	6.7V	1/3
Ch	Function	Control	Trim	
1	Aileron	J1	Gr	T1
2	Elevator	J3	Gr	T3
3	Throttle	J2	Gr	T2
4	Rudder	J4	Gr	T4
5	Gear	SG	Gr	--
6	Aileron2	--	Gr	--

- 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
Ch	Function	Ch	Function	
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.

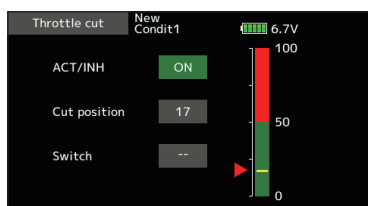
Sub-trim		New Condit1	6.7V	1/2
Ch	Function	Ch	Function	
1	Aileron	+0	7 Aileron2	+0
2	Elevator	+0	8 Aileron4	+0
3	Throttle	+0	9 Flap	+0
4	Rudder	+0	10 Flap2	+0
5	Gear	+0	11 Flap3	+0
6	Aileron2	+0	12 Flap4	+0

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

4. Throttle cut setting

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

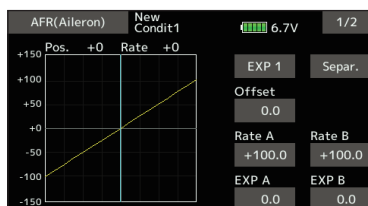
Set throttle cut with the Throttle cut function of the Linkage menu. After activating the throttle cut function and selecting the switch, adjust the throttle position so that the carburetor becomes fully closed. For safety, the throttle cut function operates the throttle stick in the 1/3 or less (slow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



5. Idle down setting

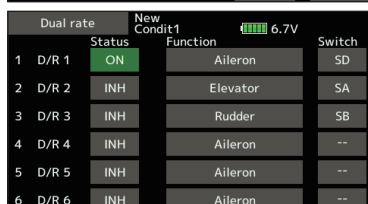
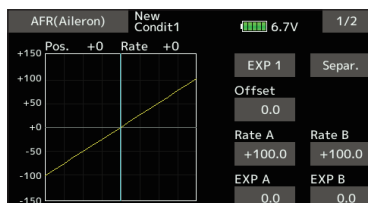
The idling speed can be lowered with one touch by a switch without changing the throttle trim position. Perform this setting with the Idle down function of the Linkage menu. After activating the Idle down function and selecting the switch, adjust the idle down speed. For safety, the idle down function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



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.

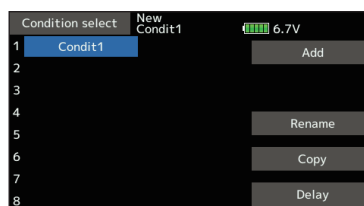
The offset amount of the aileron, elevator, and flap servos can be adjusted as needed. Also the speed of the aileron, elevator, and flap servos can be adjusted. (In side/Out side) A delay can be set for each condition, and a cut switch which will turn OFF the delay can be chosen. Trim amounts can be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

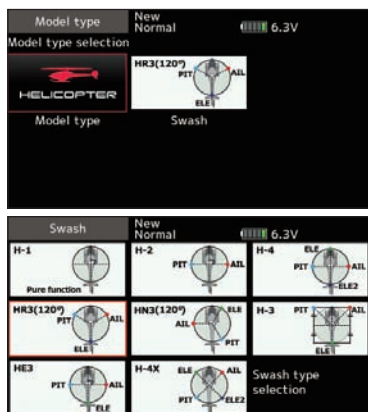


This is convenient when calling a model after registering the model names in advance. (The data of up to 30 models can be saved at the transmitter. Data can also be saved to the optional SD card.)

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.

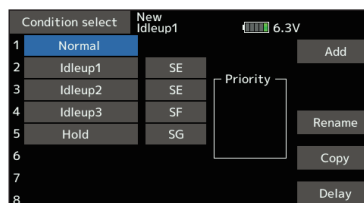


*The Model type function automatically selects the appropriate output channels, control functions, and mixing functions for the chosen model type. Eight swash types are available for helicopters.

*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.)

Function	New	6.3V	1/3
Ch Function	Idleup1		
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.

Servo reverse	New	6.3V	1/2
Ch Function	Idleup1		
1 Aileron	Normal	7 Governor	Normal
2 Elevator	Normal	8 Governor2	Normal
3 Throttle	Reverse	9 Gyro2	Normal
4 Rudder	Normal	10 Gyro3	Normal
5 Gyro	Normal	11 Needle	Normal
6 Pitch	Normal	12 Auxiliary5	Normal

Swash	New	6.3V	1/3
Idleup1			
Swash AFR			
Neutral point			
Enter			
Aileron	+50		
Elevator	+50		
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.

Sub-trim	New	6.7V	1/2
Ch Function	Condit1		
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

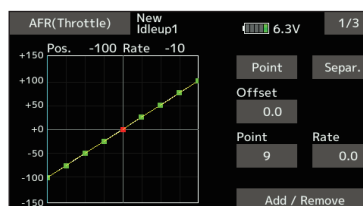
End point	New	6.7V	1/3
Ch Function	Condit1		
1 Aileron	Limit	Travel	Limit
2 Elevator	135	100	100
3 Throttle	135	100	100
4 Rudder	135	100	100
5 Gear	135	100	100
6 Aileron2	135	100	100

- 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 $-7^{\circ} \sim +12^{\circ}$ as standard.

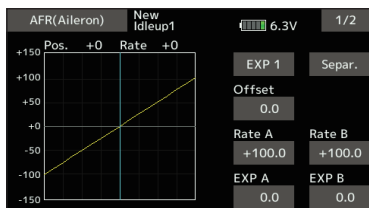
- Pitch curve (Idle up 2)
The high side pitch setting is less than idle up 1.
The standard is $+8^{\circ}$.
- Pitch curve (Hold)
At auto rotation, use the maximum pitch at both the high and low sides.
[Pitch angle setting example]
Throttle hold: $-7^{\circ} \sim +12^{\circ}$

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	Gyro2(AIL)	Gyro3(ELE)
Rate 1	AVCS 50 ON 50	AVCS 50 ON 50	AVCS 50 ON 50
Rate 2	AVCS 50 INH 50	AVCS 50 INH 50	AVCS 50 INH 50
Rate 3	AVCS 50 INH 50	AVCS 50 INH 50	AVCS 50 INH 50

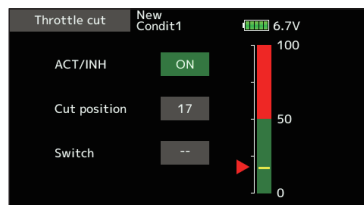
- Normal condition (hovering): Gyro sensitivity maximum
- Idle up 1/Idle up 2/Throttle hold: Gyro sensitivity minimum
- However, at auto rotation of a tail-driven helicopter, this function may not have any effect at high gyro sensitivity.

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

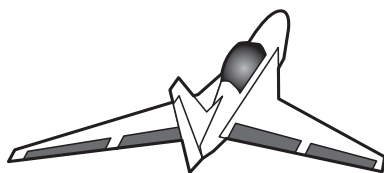
- Pitch to Needle mixing
This mixing is used with engines that allow needle control during flight (fuel-air mixture adjustment). A needle curve can be set. The needle servo rise characteristics at throttle stick acceleration/ deceleration operation can be adjusted. (Acceleration function)
- Governor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



Airplane/glider

•Tailless wing

RX CH	2AIL		2AIL+1FLAP		2AIL+2FLAP		2AIL+4FLAP		4AIL+2FLAP		4AIL+4FLAP		The output CH of each system
	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	FASSTest 18CH FASSTest 12CH 5-FHSS FASST 7CH FASST MULT T-FHSS
2	AUX4	AUX4	AUX4	AUX4	AUX4	AUX4	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	AUX4	AUX4	AUX4	AUX4	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	AUX4	AUX4	
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	



Flying Wing



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

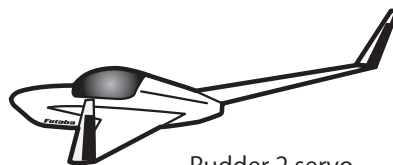
The output CH of each system

FASTest 18CH
FASTest 12CH
S-FHSS
FAST 7CH

FASTest 18CH
FASTest 12CH
S-FHSS
FAST 7CH

FASTest 18CH
FASTest 12CH
S-FHSS
FAST 7CH

FASTest 18CH
FASTest 12CH
S-FHSS
FAST 7CH



Rudder 2 servo

* 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

FASTest 18CH FAST MULTI T-FHSS

S-FHSS

FASST 7CH

●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

FASTest 12CH



Multicopter

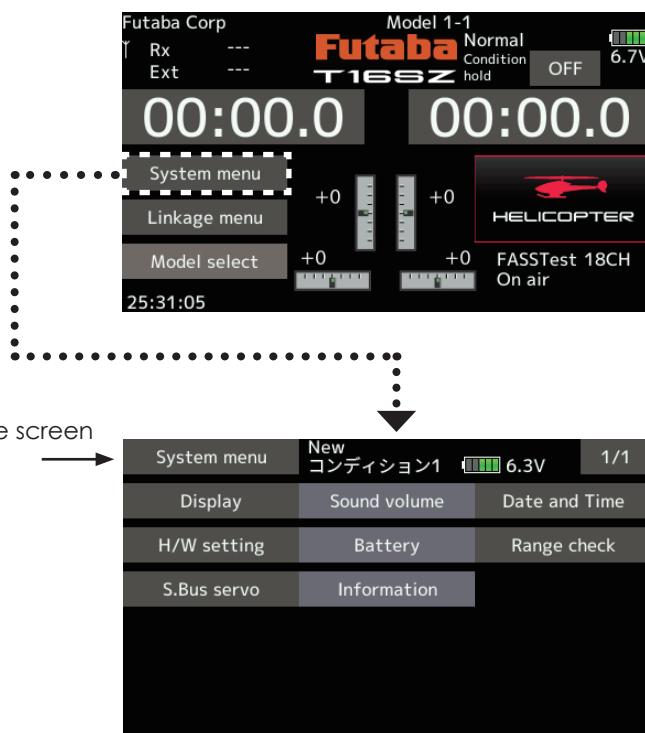
CH	Multicopter	
1	Aileron	The output CH of each system FASTest 18CH FASTest 12CH FAST MULT T-FHSS S-FHSS FAST 7CH
2	Elevator	
3	Throttle	
4	Rudder	
5	Gyro	
6	Gyro2	
7	Gyro3	
8	Camera TILT	
9	Camera PAN	
10	Camera REC	
11	Mode	
12	AUX5	
13	AUX4	
14	AUX3	
15	AUX2	
16	AUX1	
DG1	SW SD	FASTest 18CH FASTest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



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.

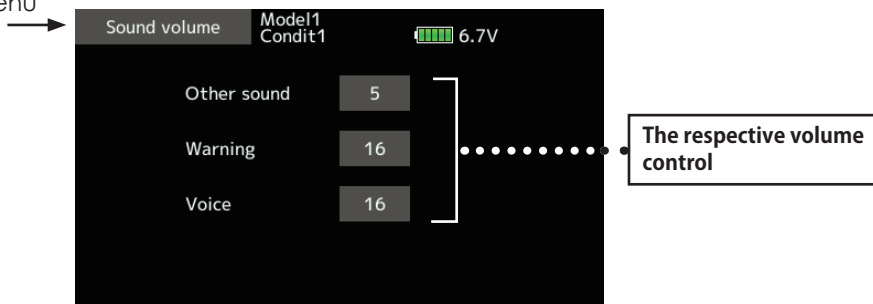


Sound volume

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

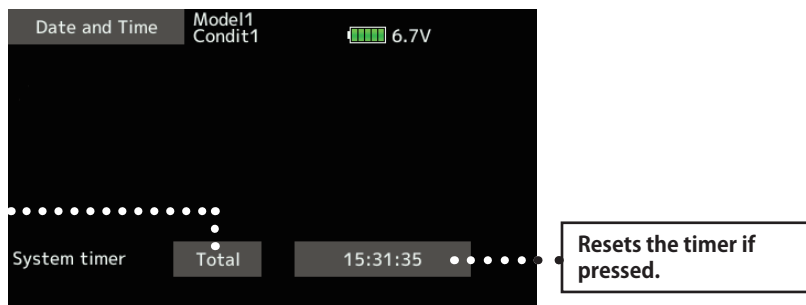
Integrating timer resetting

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.



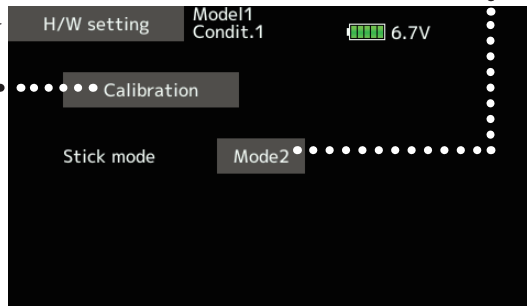
H/W setting

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

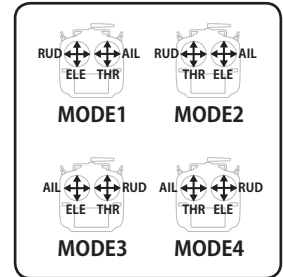


Stick mode

Mode 1-4 can be chosen.

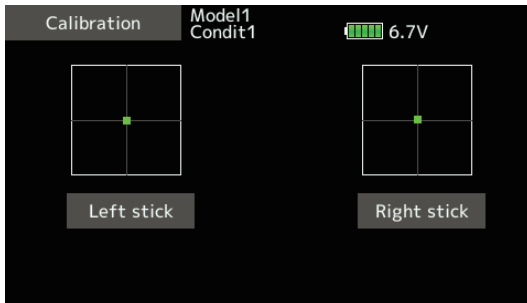
But, it isn't changed until data is reset.

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

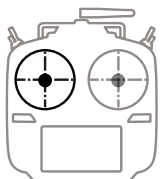
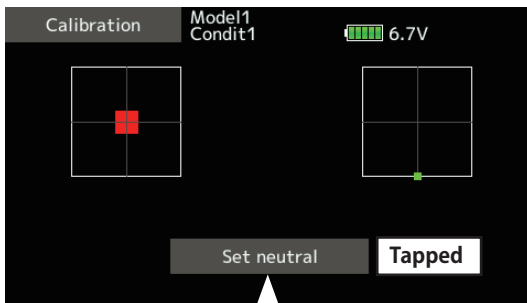


How to Calibrate

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.

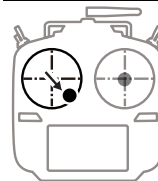
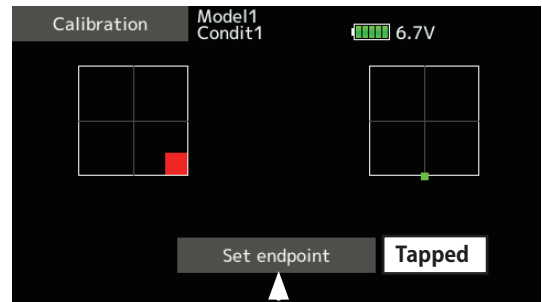


The stick is set at neutral

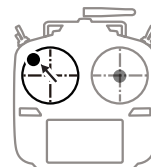
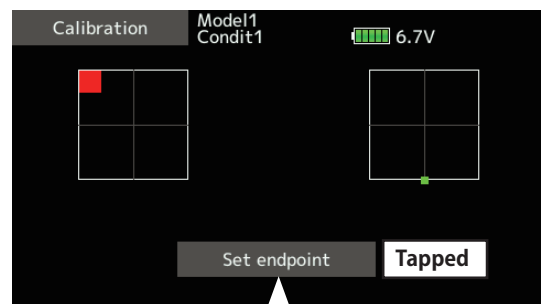
4. The stick is held at full right and full bottom (diagonal). The [Set endpoint] button is tapped.
5. The stick is held at full left and full top (diagonal). The [Set endpoint] button is tapped.

*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%.



Full right and full bottom



Full left and full top

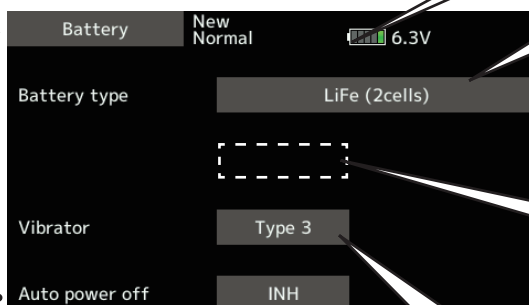


Battery

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

Type 1



Type 2



Type 3



*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.





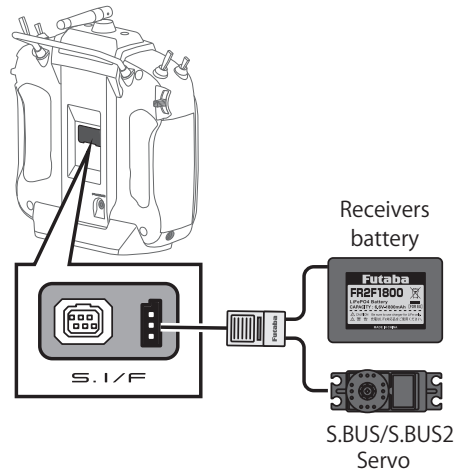
S.Bus servo

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

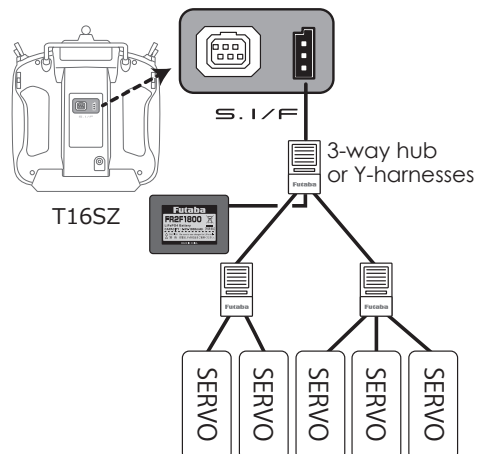


Procedure for changing S.BUS servo setting

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.

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

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

*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 →

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		

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

Movement of a cursor of an input box

Back space (Input box)

fix and return to an information screen.

Input box

User name	Model1 Normal	6.7V	1/4
Futaba Corp			
←	→	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		

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

An input box is reset

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.

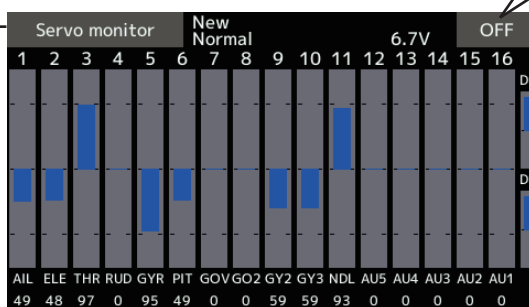
In order to prevent any potential difficulties, the servo test function will be inoperable, or inaccessible, under certain conditions. Specifically, the Servo Test function is not operational if the Throttle cut is ON in either airplane or helicopter modes; or if the Throttle hold is ON in helicopter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

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

< or >

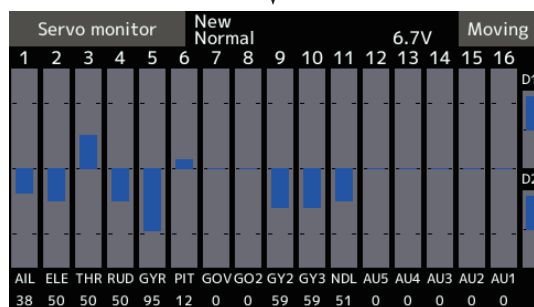
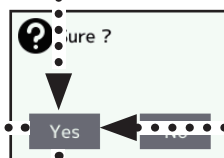
- Long press the [U.MENU/MON.] button in the Home screen to call the setup screen shown.

- Return to Home or Linkage menu

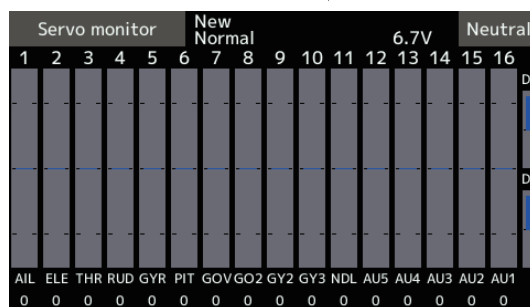


Each channel movement can be checked.

Test mode change :
OFF → Neutral → Moving



[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.

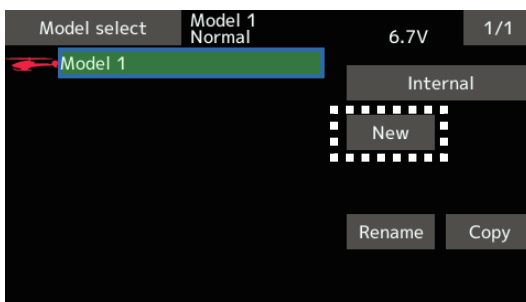


- "Save to"
[Internal]: transmitter memory
[SD card]: SD card

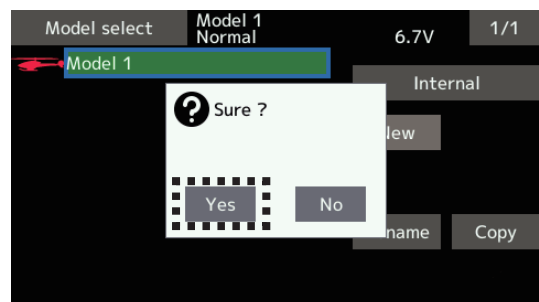
The date by which the model was made first. In case of a model on a SD card, the file name is indicated. (The file name can't be changed.)

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.

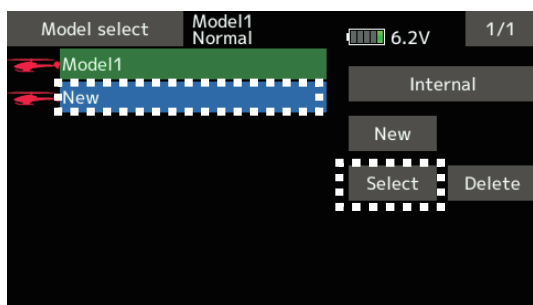


Model call

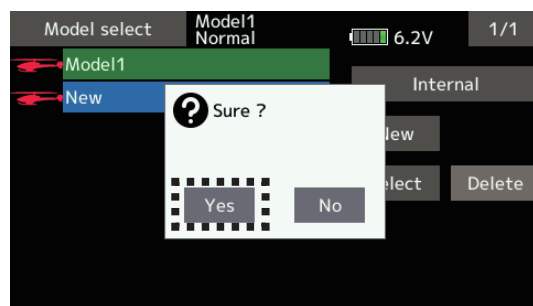
1. Tap the Internal or SD card. Select the location to which the desired model is to be saved.



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

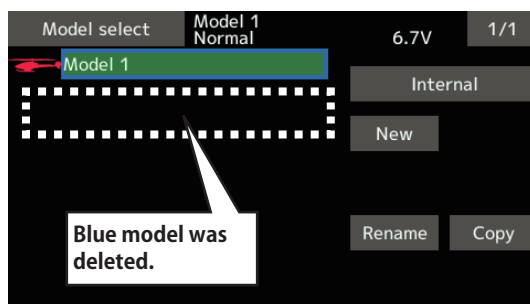
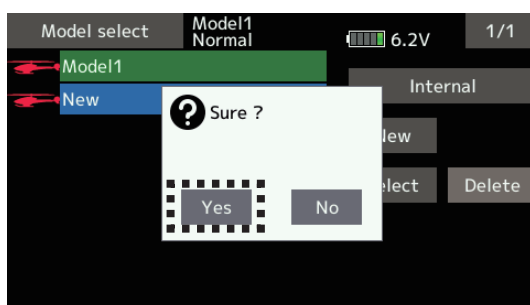
1. Tap the select model name or the model you want to delete in the model list.

(The model currently selected cannot be deleted.)

2. Tap the [Delete] button.



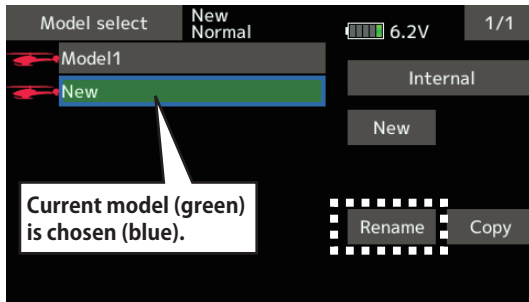
3. Tap [Yes]. (When you want to stop model deletion, tap [No].)





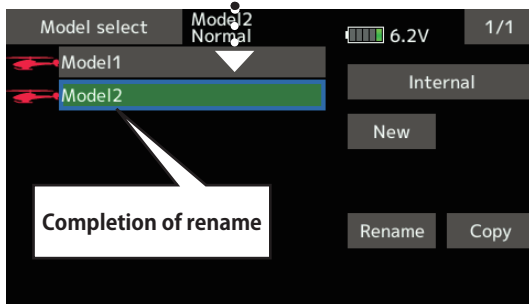
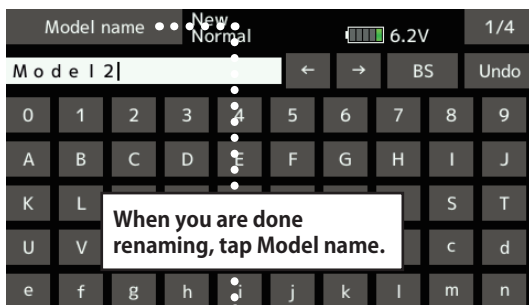
Model name change

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

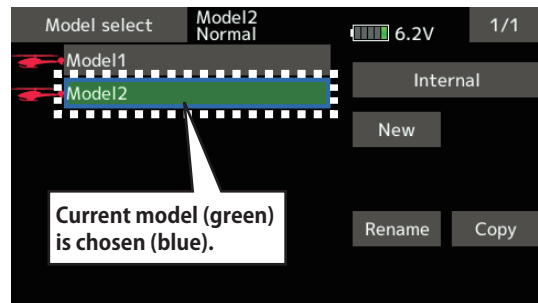


Carefully check that the aircraft to be used and the model selected match up.

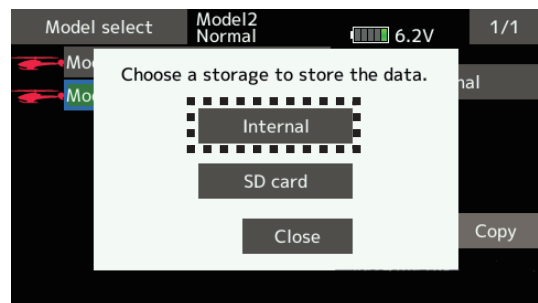
- Using a model which does not match the aircraft runs the risk of the aircraft flying out of control and crashing. Perform a careful operations check prior to flight.

Model copy

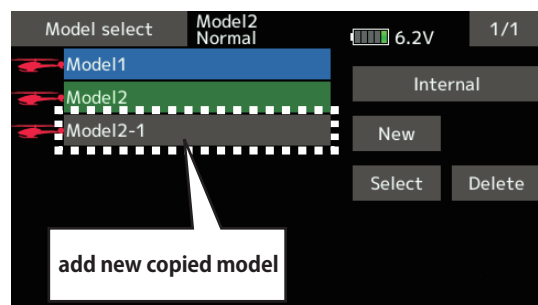
1. The model data chosen at current model can be copied. The current model name, tap.



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.

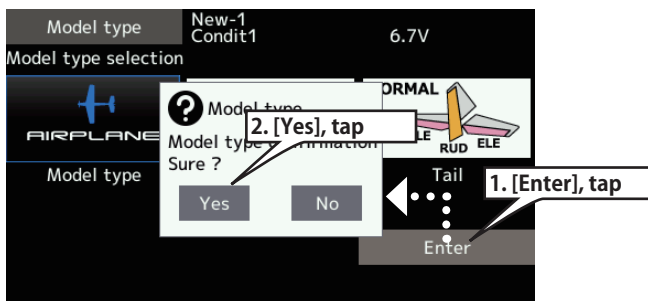
- Return to Linkage menu



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.

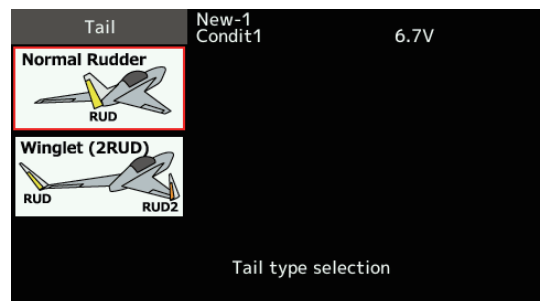
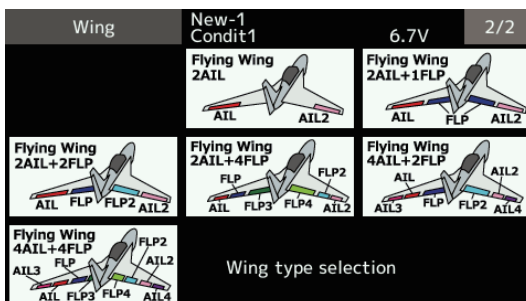
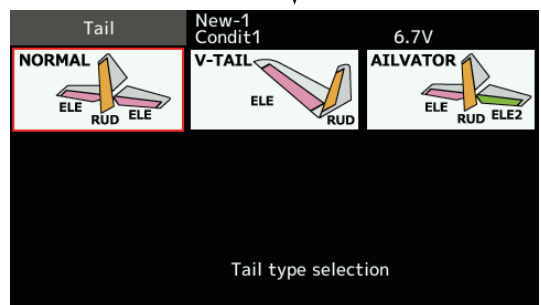
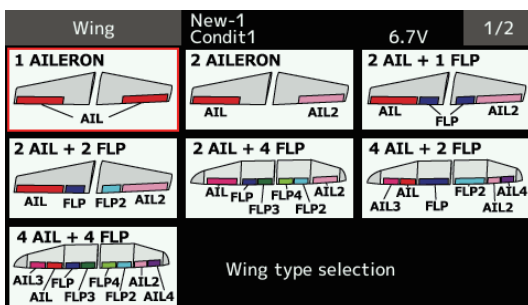
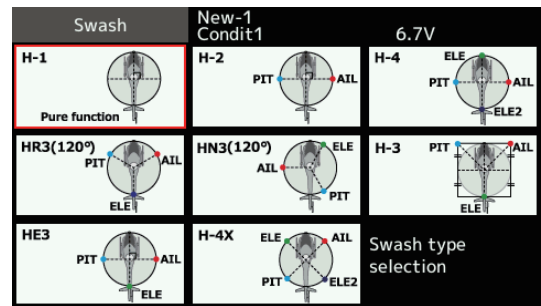
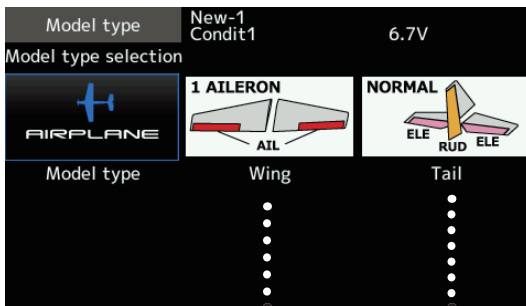




Set the type you choose by tapping

Airplane/Glider : Choose the wing type and tail.

Helicopter : Choose the swash type.





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.

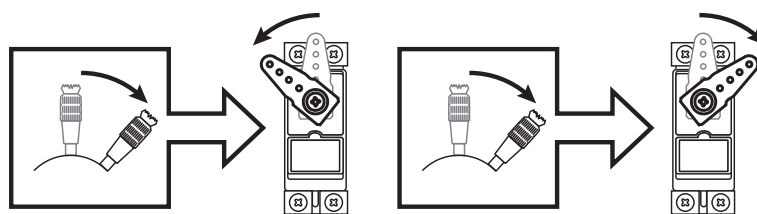
For CCPM helicopters, be sure to read the section on Swash AFR before reversing any servos. With CCPM helicopters, always complete your servo reversing prior to any other programming. If you use pre-built Airplane/Glider functions that control multiple servos, it may be confusing to tell whether the 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	Normal	7	Auxiliary5
2	Elevator	Normal	8	Auxiliary4
3	Throttle	Reverse	9	Auxiliary3
4	Rudder	Normal	10	Auxiliary2
5	Gear	Normal	11	Auxiliary1
6	Air brake	Normal	12	Auxiliary1

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.

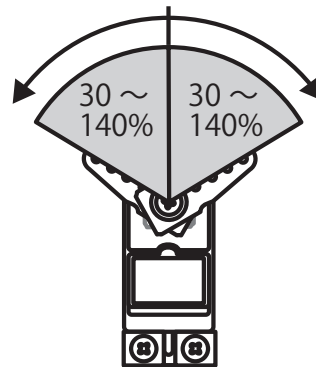


End point

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		1/3	
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	

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.

- 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

(First) 0 ~ 27 (Slowly)

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.



Function

Channel assignment for each function can be changed to suit your needs.

When you select model and wing (swash) types, you will find that the optimized combinations of servo output channels and functions have been already preset. If you would like, on the function-setting screen of the linkage menu, you can freely change combinations of servo output channels, functions (aileron, elevator, etc), and input controllers (sticks, switches, trim levers and trim switches). You can also assign the same function to multiple servo output channels such as assigning elevator function to CH2 and CH3.

DG1, DG2 (switch channels)

These two channels can be used as switch (On/Off) channels. You can freely change combinations between servo output channels and input controllers (sticks, switches, trim levers and trim switches).

Channel restrictions by a System Type

FASSTest 18CH---16 CH+2 Switch
 FASSTest 12CH---10 CH+2 Switch
 FASST MULTI ---16 CH+2 Switch
 FASST 7CH --- 7 CH
 S-FHSS --- 8 CH
 T-FHSS ---16 CH+2 Switch

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

•Return to →
Linkage menu

Function	New-1 Condit1	6.7V	1/3
Ch Function	Control	Trim	
1 Aileron	J1 Gr.	T1 Gr.	
2 Elevator	J3 Gr.	T3 Gr.	
3 Throttle	J2 Gr.	T2 Gr.	
4 Rudder	J4 Gr.	T4 Gr.	
5 Gear	SG Gr.	-- Gr.	
6 Air brake	RS Gr.	-- Gr.	

Function change

1. Tap the function button of the channel you want to change to call the Function select.

Function select	New-1 Condit1	6.7V	1/2
Aileron	Aileron2	Fuel mix	
Elevator	Aileron2	Gyro	
Throttle	Aileron4	Gyro2	
Rudder	Elevator2	Gyro3	
Gear	Flap2	Throttle2	
Flap	Air brake	Throttle3	

2. Select the function you want to change.

Operation control change

1. Tap the control button of the channel you want to change. A control select screen (stick, knob, trim lever, etc.) is displayed.

Hardware select	New-1 Condit1	6.7V			
	--	J1	SA	SG	T1
		J2	SB	SH	T2
		J3	SC		T3
		J4	SD		T4
		RD	SE	RS	
		LD	SF	LS	

The diagram shows a top-down view of a hardware unit. It features a central panel with various components labeled. At the top, there are labels E, F, LD, RD, H, and G. Below these, there are labels A, B, C, and D. In the center, there are labels J3, J2, J4, T3, T2, T4, and T1. On the left side, there is a label LS, and on the right side, there is a label RS. The unit has a symmetrical design with a central vertical axis. There are also some smaller labels like 'LD' and 'RD' near the top. The unit appears to be a control panel or a diagnostic tool.

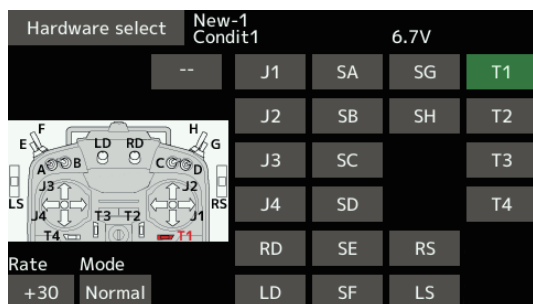
2. Select the control you want to operate.

*The same control can be assigned to multiple channels.



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

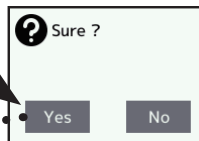
This function reverses the operation signal of the sticks, switches, trimmer levers, and knobs.

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





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	6.7V		1/3
Ch	Function	Condit1 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. This 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.

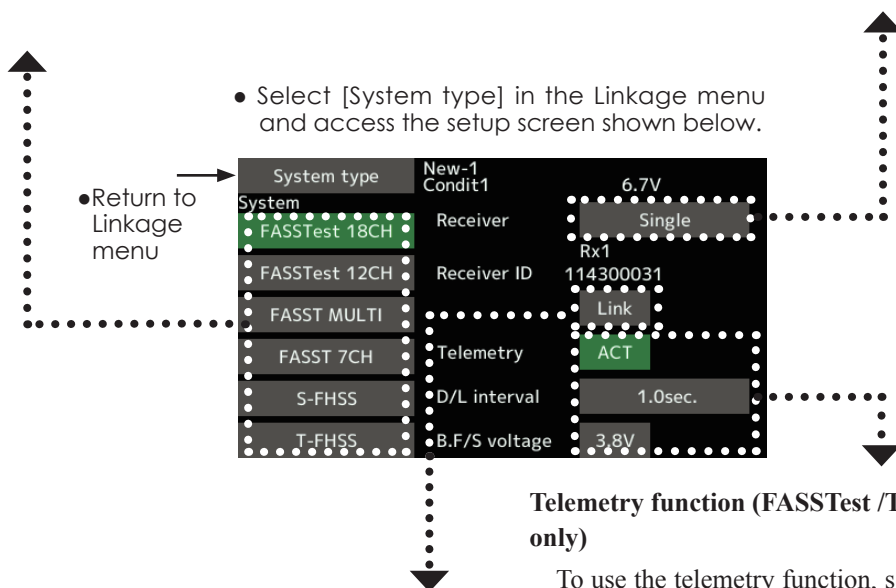
*After any change, remember to test the model and fully check servo direction and motion.

*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.



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

P.41

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.

Telemetry function (FASSTest /T-FHSS mode only)

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

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.

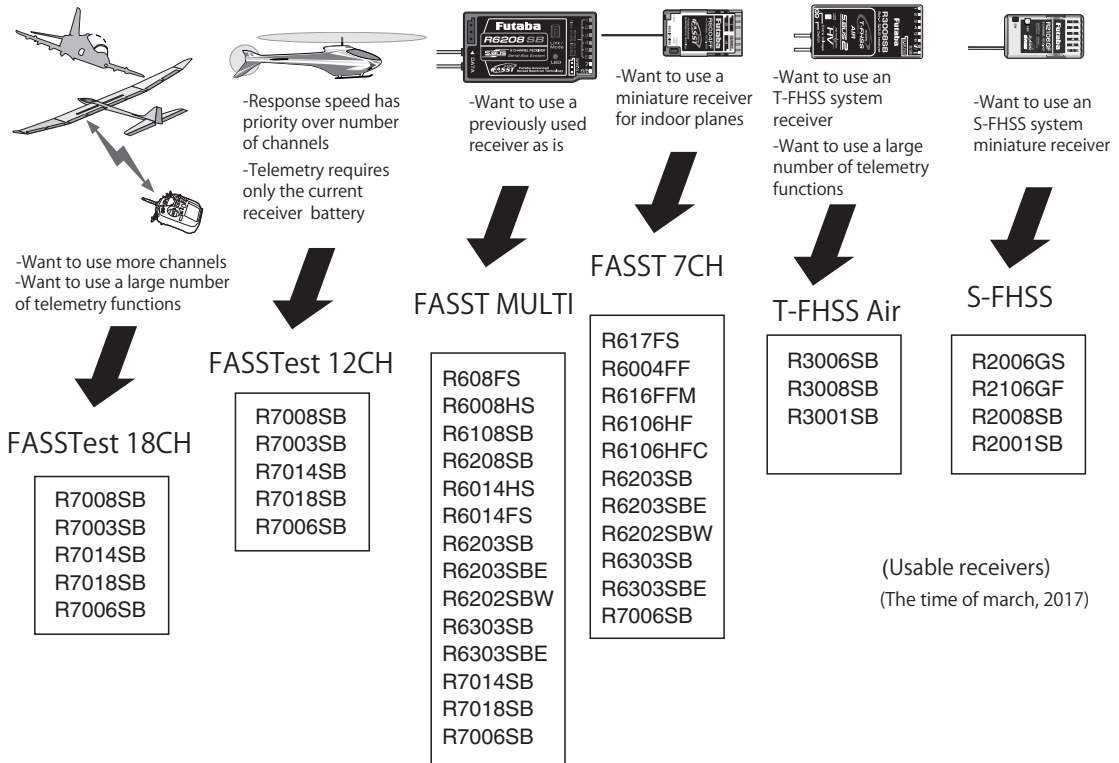
Battery fail-safe voltage setup (FASSTest / T-FHSS mode only)

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 →

T1-T4 setting			New-1 Condit1	6.7V		
	Step	Mode		Step	Mode	
T1	4	Comb.		T4	4	Comb.
T2	4	Comb.				
T3	4	Comb.				

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

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.

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

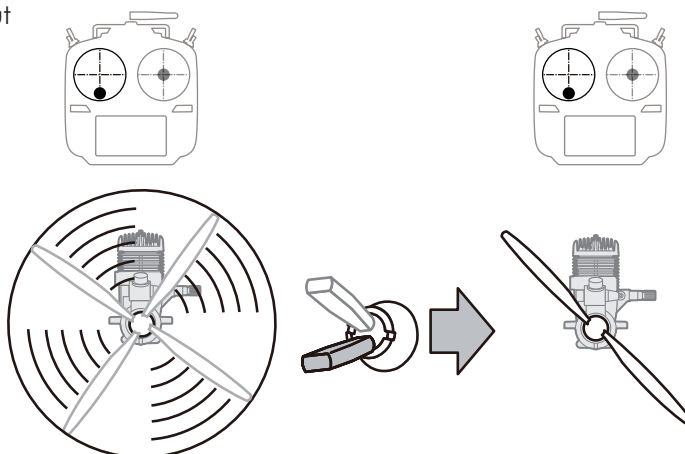
This indicates the throttle stick's current position. Throttle cut will only function when the throttle stick is more than 1/3rd into the slow throttle range.

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.)

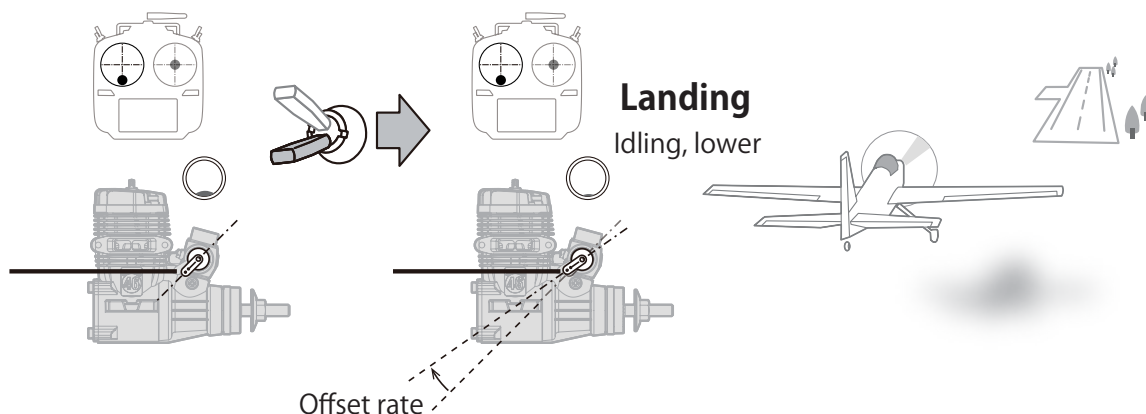
3. Offset rate setting:

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.

Swash ring
New-1 Normal
6.7V

Aileron
0

Elevator
-2

ACT/INH
ACT

Rate
100

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

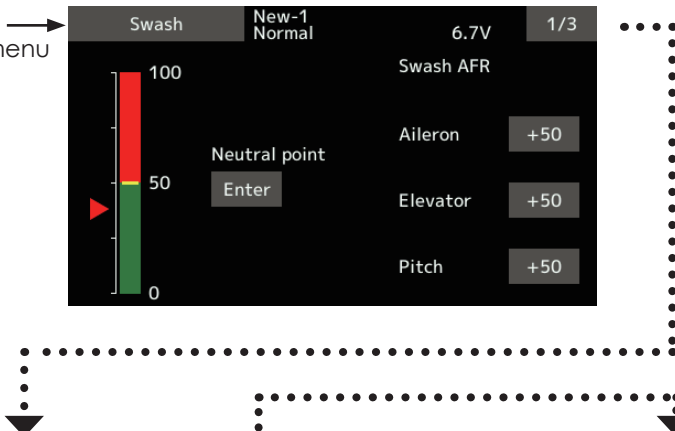
This compensation mixing is used to correct the tendency of the swash-plate for pitch control at low pitch and high pitch.

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	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			
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 --

Tapping this will change INH to ON and activated.

6.7V

100

50

0

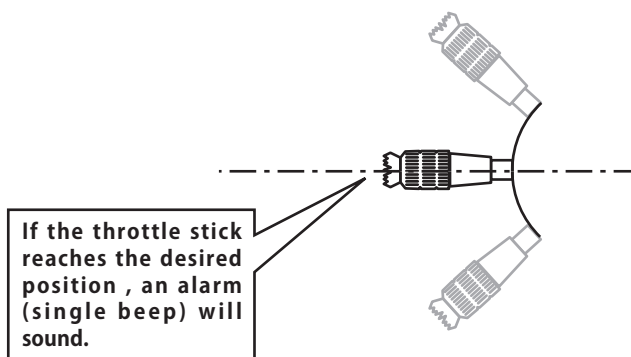
If the throttle stick reaches the yellow line, an alarm will sound.

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

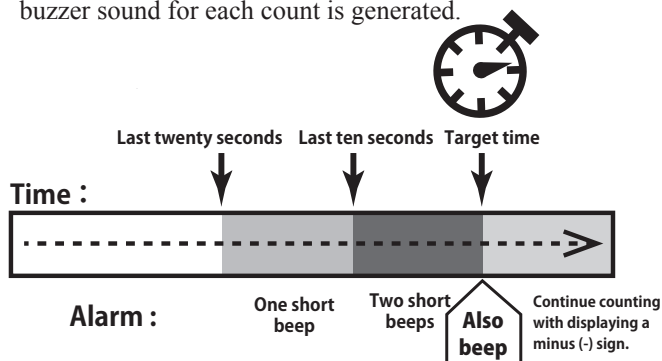
Timer setting

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



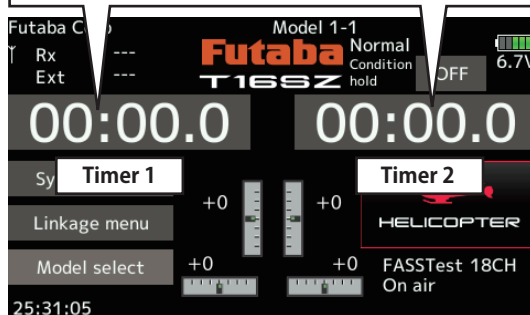
Elapsed: Minute-by-minute alarm starting from 00:00
Remainder: Minute-by-minute alarm counting down from a designated time

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	Rename Reset
AUX2	Auxiliary2	AUX2	
AUX3	Auxiliary3	AUX3	
AUX4	Auxiliary4	AUX4	
AUX5	Auxiliary5	AUX5	
AUX6	Auxiliary6	AUX6	
AUX7	Auxiliary7	AUX7	
AUX8	Auxiliary8	AUX8	

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
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		

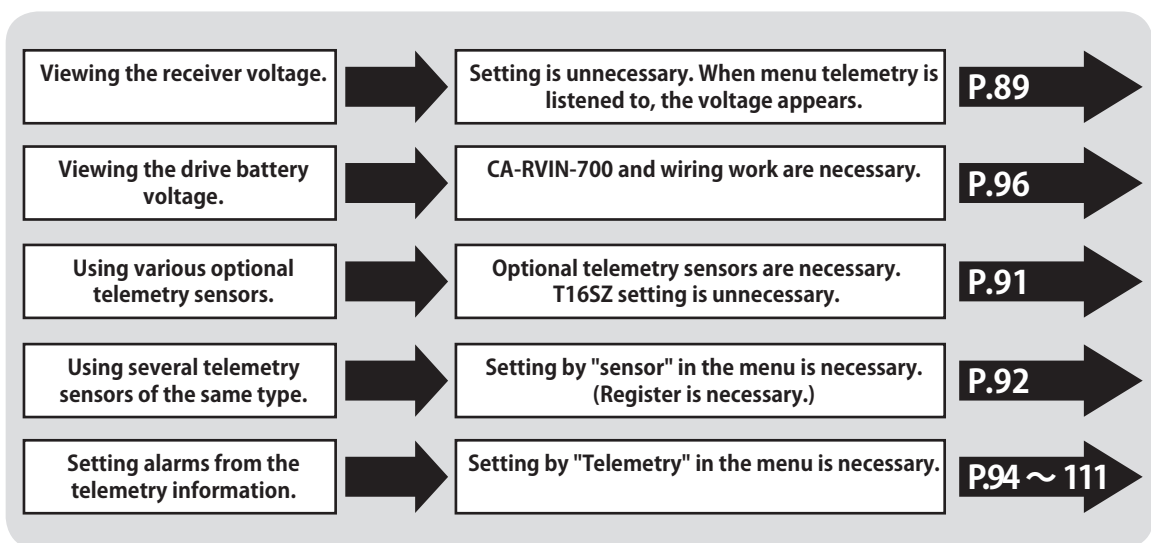
5. When [Reset] is selected and the screen is held down, the function name is set to the initial state function name.



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

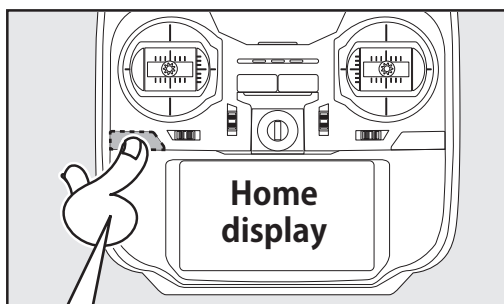
⚠ CAUTION

❗ 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.

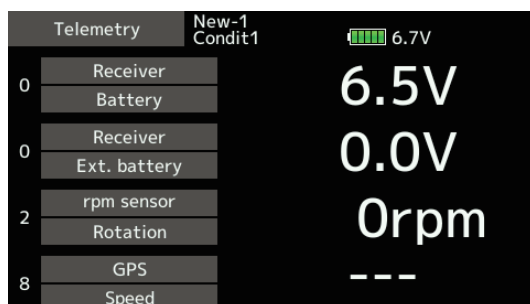
< Home display >



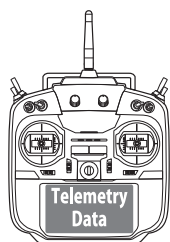
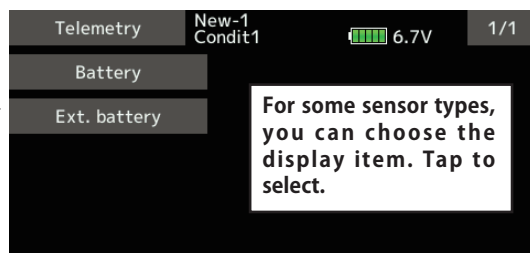
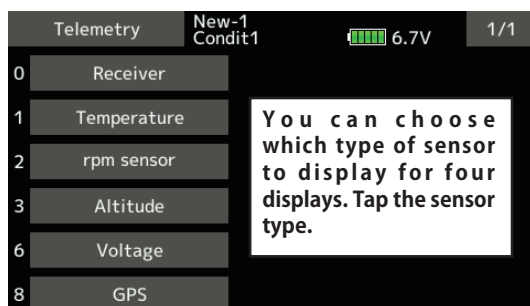
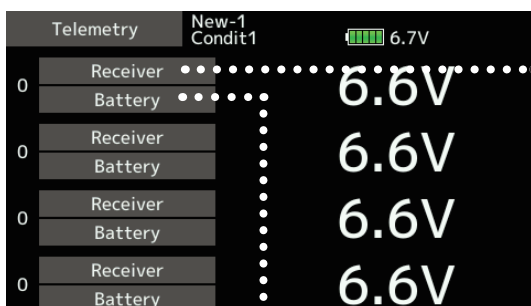


HOME/EXIT is pushed

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

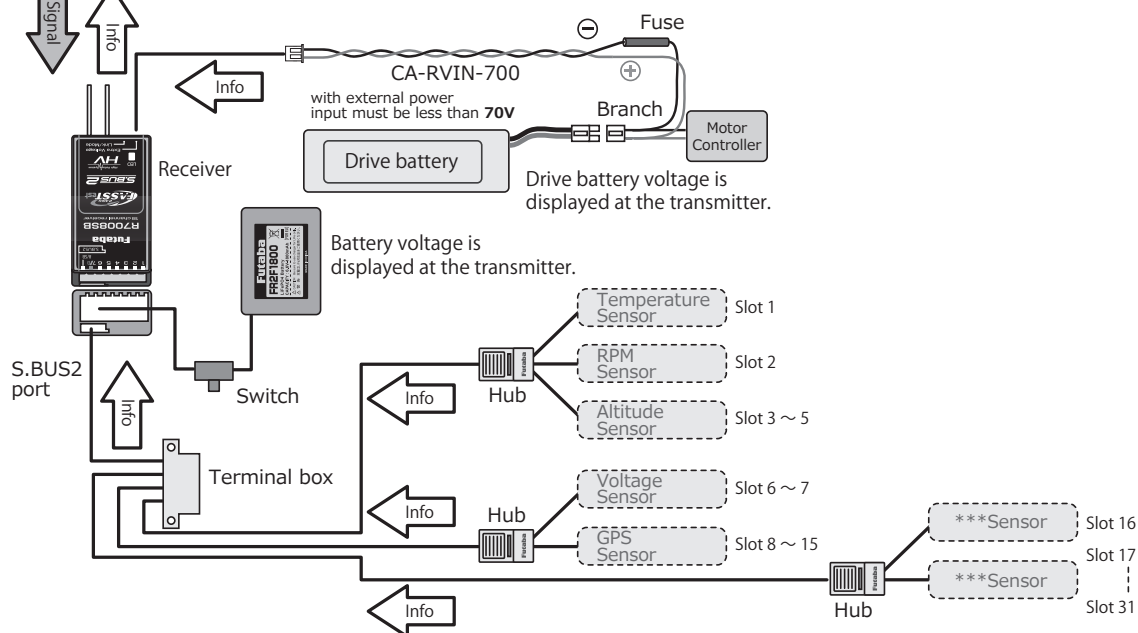


4 of telemetry data is displayed



T16SZ

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.

Sensor	New-1	Condit1	6.7V	1/3
Sensor type	ID		Sensor type	ID
1 Temperature	0	7 Voltage		
2 rpm sensor	0	8 GPS		0
3 Altitude	0	9 GPS		
4 Altitude		10 GPS		
5 Altitude		11 GPS		
6 Voltage	0	12 GPS		

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.

[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	6.7V	2/3
Sensor type	ID		Sensor type	ID
13 GPS		19 -----		
14 GPS		20 -----		
15 GPS		21 -----		
16 -----		22 -----		
17 -----		23 -----		
18 -----		24 -----		

- 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	
TEMP125-F1713	1slots	1-31	Europe
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	



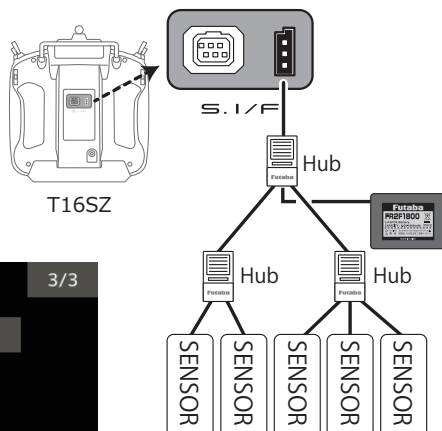
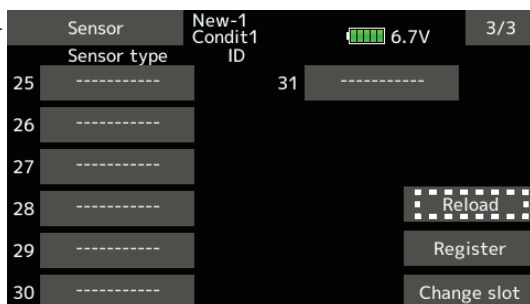
Sensor : Reload

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.

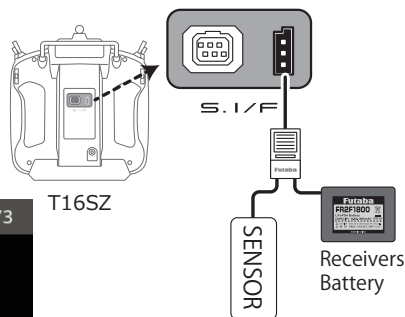
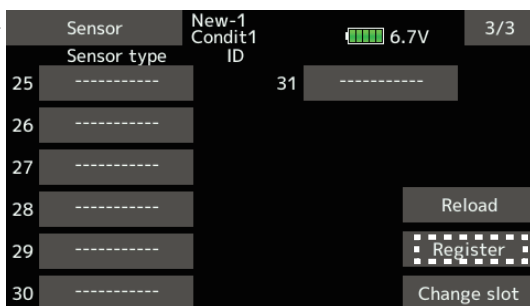
Sensor : Register

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.