Sensor : Change slot

This procedure changes the slot number of one registered sensor.

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

T16SZ
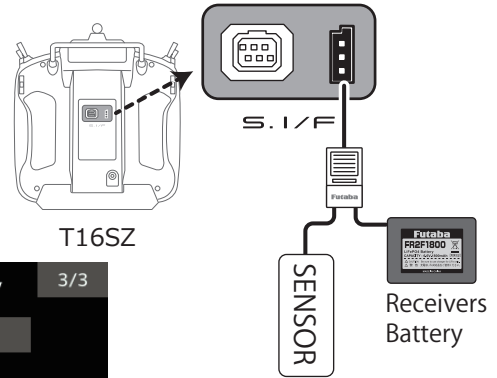
● Call page 3/3 from the [Sensor] menu.

●Return to → Linkage menu
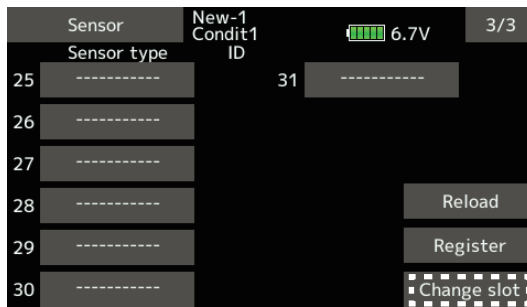
● Tap the [Change slot] button in the Sensor screen to call the setup screen shown below.

*For some transmitters (e.g., T6K), when the start slot of a sensor is changed, the sensor cannot be used.

Sensor slot change

1. Connect the sensor to the T16SZ as shown in the figure above.
2. Tap "Change slot" on page 3/3 of the <Sensor> screen.
3. Tap "Read".
4. A sensor details screen appears.
5. The current start slot is displayed. To change a start slot, a + − button, tap. (Cannot be set to a slot that cannot be allocated like the table of all pages.)
6. Tap to the "Write".

⚠ WARNING

🚫 **Do not disconnect or turn transmitter power OFF while telemetry sensor data is being saved.**

■ Sensor save data will be lost, resulting in malfunction.
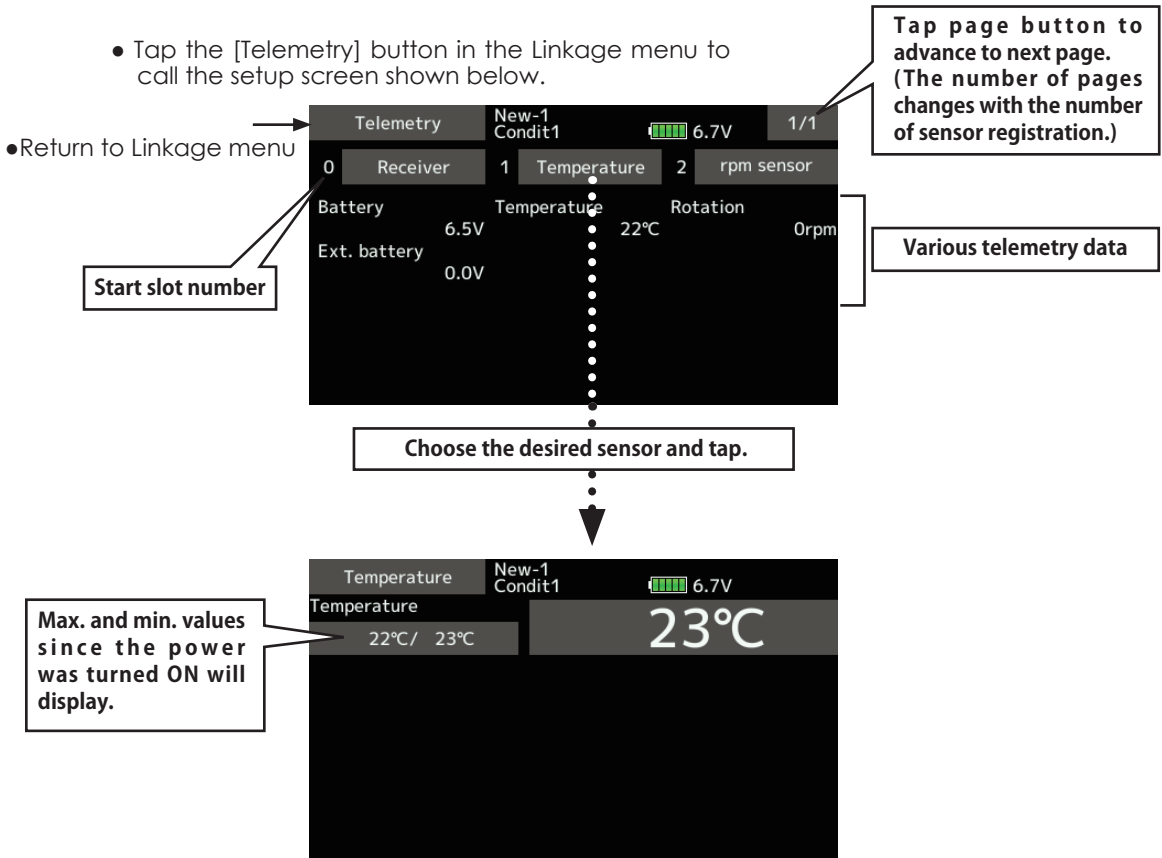
< Linkage menu > **93**

Telemetry

Displaying data from the receiver

This screen displays your choice of data from the receiver.

Also warnings can be activated regarding the data. For example, if the receiver voltage drops, the user can be warned by an alarm (and vibration).

● Tap the [Telemetry] button in the Linkage menu to call the setup screen shown below.

Tap page button to advance to next page. (The number of pages changes with the number of sensor registration.)

● Return to Linkage menu

Telemetry	New-1 Condit1	🔋 6.7V	1/1
0 Receiver	1 Temperature	2 rpm sensor	

Battery   Temperature   Rotation
     6.5V   22℃   0rpm
Ext. battery
     0.0V

Various telemetry data

Start slot number

Choose the desired sensor and tap.

Temperature	New-1 Condit1	🔋 6.7V
Temperature		
22℃/ 23℃	**23℃**	

Max. and min. values since the power was turned ON will display.

Display Sensors

Default display sensors can only be used by connecting the sensors to the receiver. For display of other sensors or to use the same type of sensor in multiple cases, either register them via the "Sensor" option on the Linkage menu or allocate the sensors to empty slots to have them display on the Telemetry screen. Refer to the previous "Sensor" explanation pages for how to do this.

Telemetry: Receiver [Battery]

In this screen, the battery voltage of a receiver is displayed.

If it becomes higher or lower than the setting an alarm and/or vibration will alert you.

*It cannot be used in FASST mode and S-FHSS mode.

*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.

*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Tap the [Receiver] button in the Telemetry screen to call the setup screen shown below.

●Return to Linkage menu

Receiver battery voltage

Receiver	New-1 Condit1	6.7V
Battery		**6.3V**
6.3V/ 6.3V		
Ext. battery		**0.0V**
0.0V/ 0.0V		

Max. and min. values since the power was turned ON will display.

↓ **The "down" arrow will indicate that an alarm will sound when the voltage drops to below the setting.**

Alarm is chosen from Buzzer, Voice, and Inhibit.

Receiver	New-1 Condit1	6.7V
Battery		
Alarm	Vibrator	Limit
↓ Inhibit	Inhibit	4.0V
Speech		
OFF		

A setup of the voltage on which the alarm operates.

The ON/OFF switch of Speech is chosen.

Alarm set

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap to the Limit [4.0V] item.
4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button.
   Initial value: 4.0V
   Adjustment range: 0.0V~100.0V
   *When the screen is tapped for one second, the rate is reset to the initial value.
5. To terminate the input and return to the original state, push the HOME/EXIT button.

"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1

Type 2

Type 3

Telemetry: Receiver [Ext. battery]

Displaying data from the EXT battery voltage port

The EXT-VOLT screen will display the data from the EXT-battery output from the R7008SB receiver. In order to use this function, it is necessary to connect external voltage connector of the R7008SB receiver to a CA-RVIN-700 (FUTM5551) or SBS-01V to the battery you desire to measure the voltage of the EXT-battery.

*CA-RVIN-700 must be installed in the aircraft.

You will be alerted by an alarm or vibration if the voltage set by you is exceeded.

*It cannot be used in FASST mode and S-FHSS mode.

*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.

*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Tap the [Receiver] button in the Telemetry screen to call the setup screen shown below.

●Return to Linkage menu

Max. and min. values since the power was turned ON will display.

Ext. battery voltage

↓ The "down" arrow will indicate that an alarm will sound when the voltage drops to below the setting.

A setup of the voltage on which the alarm operates.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

Alarm set

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap to the Limit [4.0V] item.
4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button.
   Initial value: 4.0V
   Adjustment range: 0.0V~100.0V
   *When the screen is tapped for one second, the rate is reset to the initial value.
5. To terminate the input and return to the original state, push the HOME/EXIT button.

"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1 ────────────────────→

Type 2 ──────→   ──────→

Type 3 ──→ ──→ ──→ ──→

Telemetry : Temperature

Displaying data from the temperature

*A temperature sensor must be installed in the aircraft.

Temperature is a screen which displays/sets up the temperature information from an optional temperature sensor.

The temperature of the model (engine, motor, battery, etc.) which is flying can be displayed.

If it becomes higher or lower than the setting an alarm and/or vibration will alert you.

● Tap the [Temperature] button in the Telemetry screen to call the setup screen shown below.

*It cannot be used in FASST mode and S-FHSS mode.

*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.

*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

●Return to Linkage menu

Temperature

Max. and min. values since the power was turned ON will display.

↑ An upward arrow will show that an alarm will sound when the temperature rises above the set value.

↓ A downward arrow will show that an alarm will sound when the temperature drops below the set value.

A setup of the temperature on which the alarm operates.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

Alert set : Temperature warning

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap to the Limit [℃] item.
4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button.
   Initial value: ↑100℃ ↓0℃
   Adjustment range: -20℃ ~200℃
   (↑Limit ≧ ↓Limit)
   *When the screen is tapped for one second, the rate is reset to the initial value.
5. To terminate the input and return to the original state, push the HOME/EXIT button.

"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1

Type 2

Type 3

Telemetry : RPM Sensor

The RPM Sensor screen is used to set up an optional rpm sensor and display the rotation information it transmits.

The rotation of the model (engine, motor, etc.) which is flying can be shown.

If it becomes higher or lower than the setting an alarm and/or vibration will alert you.

Displaying data from the rpm

*A rpm sensor must be installed in the aircraft.

*It cannot be used in FASST mode and S-FHSS mode.

*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.

*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Tap the [rpm sensor] button in the Telemetry screen to call the setup screen shown below.

● Return to Linkage menu

Max. and min. values since the power was turned ON will display.

rpm sensor | New-1 Condit1 | 6.7V
Rotation
0rpm

0rpm

rpm

↑ An upward arrow will show that an alarm will sound when the rpm rises above the set value.

↓ A downward arrow will show that an alarm will sound when the rpm falls below the set value.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

rpm sensor | New-1 Condit1 | 6.7V
Rotation

Alarm	Vibrator	Limit
↑ Inhibit	Inhibit	2000rpm
↓ Inhibit	Inhibit	0rpm

Speech	Sensor type	Gear ratio
OFF	Magnet	8.00

A setup of the rpm on which the alarm operates.

"Magnet"	SBS-01RM → Gear ratio	1.00~99.00
"Optics"	SBS-01RO → Blade	2~10
"Brushless motor"	SBS-01RB → Pole	2~30

Alarm set : Over（Under）rotations

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap to the Limit [xxx rpm] item .
4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button.
   Initial value: ↑ 2,000rpm ↓ 0rpm
   Adjustment range: 0rpm~150,000rpm
   (↑Limit ≧ ↓Limit)

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

5. To terminate the input and return to the original state, push the HOME/EXIT button.

"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1 ⟶
Type 2 ⟶ ⟶
Type 3 ⟶ ⟶ ⟶ ⟶
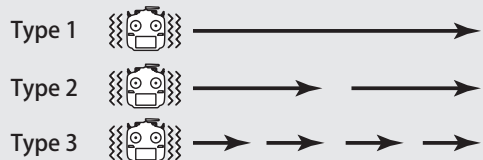
Telemetry : Altitude

Displaying data from the altitude

*An altitude sensor or GPS sensor must be installed in the aircraft.

Altitude is a screen which displays / sets up the altitude information from an optional altitude sensor or GPS sensor. The altitude of the model which is flying can be known. If it becomes higher (low) than preset altitude, you can be told by alarm. Warning by vibration can also be chosen. Data when a power supply is turned on shall be 0 m, and it displays the altitude which changed from there. Even if the altitude of an airfield is high, that shall be 0 m and the altitude difference from an airfield is displayed. This sensor calculates the altitude from atmospheric pressure. Atmospheric pressure will get lower as you go up in altitude. Using this, the sensor will estimate the altitude. Please understand that an exact advanced display cannot be performed if atmospheric pressure changes in a weather situation.

*It cannot be used in FASST mode and S-FHSS mode.
*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.
*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Tap the [Altitude] button in the Telemetry screen to call the setup screen shown below.

●Return to Linkage menu

Max. and min. values since the power was turned ON will display.

Altitude / New-1 Condit1 / 6.7V
Altitude 0.0m/ 0.0m
0.0m
Variometer 0.0m/s 0.0m/s
0.0m/s

Altitude

↑ An upward arrow indicates the alarm will sound when the altitude reaches above your set value.

↓ A downward arrow indicates the alarm will sound when the altitude reaches below your set value.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

A setup of the altitude on which the alarm operates.

Altitude / New-1 Condit1 / 6.7V
Altitude
Alarm / Vibrator / Limit
↑ Inhibit / Inhibit / 200.0m
↓ Inhibit / Inhibit / -50.0m
Speech OFF / Reference Preset / Melody Inhibit ON

The ON/OFF switch of melody is chosen.

● **If this is set to Mode1-4, a rise and dive are told by a different melody.**

Mode1: Little rise/dive → Melody changes : sensitively
●
●
Mode4: Big rise/dive → Melody changes : insensible

First, the set of a reference is required.

1. The model and transmitter to which the altitude sensor was connected are turned on.
2. Tap to the [Preset] of "Reference" item.

*Atmospheric pressure is changed according to the weather also at the same airfield. You should preset before a flight.

"Vibrator" type
If the following types are selected, the transmitter will vibrate during the warning.
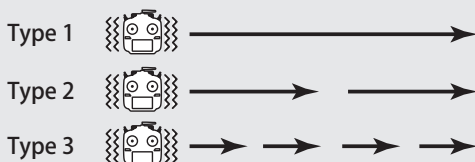
Type 1
Type 2
Type 3

Alarm set : Altitude

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap to the Limit [xxx m] item .
4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button. Initial value: ↑200m ↓-50m Adjustment range -500m~+3,000m (↑Limit ≧ ↓Limit)

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

5. To terminate the input and return to the original state, push the HOME/EXIT button.

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Telemetry : Altitude [Variometer]

Displaying data from the variometer

*An altitude sensor or GPS sensor must be installed in the aircraft.

VARIO is a screen which displays / sets up the variometer information from an optional altitude sensor or GPS sensor.

The variometer of the model which is flying can be known.

If it becomes higher or lower than the setting an alarm and/or vibration will alert you.

To ensure that the pilot is aware as to the model's status, the T16SZ incorporates a different melody for ascent and descent. Additionally, depending upon the rate of climb or descent, the tones vary to indicate whether or not the airplane is climbing or descending at a rapid rate.

*It cannot be used in FASST mode and S-FHSS mode.
*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.
*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Tap the [Variometer] button in the Telemetry screen to call the setup screen shown below.

●Return to Linkage menu

Altitude	New-1 Condit1	6.7V
Altitude		**0.0m**
0.0m/ 0.0m		
Variometer		**0.0m/s**
0.0m/s/ 0.0m/s		

Variometer

Max. and min. values since the power was turned ON will display.

A setup of the variometer on which the alarm operates.

↑ An upward arrow indicates the alarm will sound when the variometer reaches above your set value.

↓ A downward arrow indicates the alarm will sound when the variometer reaches below your set value.

Altitude	New Normal	6.6V
Variometer		
Alarm	Vibrator	Limit
↑ Inhibit	Inhibit	+1.0m/s
↓ Inhibit	Inhibit	-1.0m/s
Speech	Reference	Melody
OFF	Preset	Inhibit ON Set

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

The ON/OFF switch of melody is chosen.

● **If this is set to Mode1-4, a rise and dive are told by a different melody.**

Mode 1 : Little rise/dive → Melody changes : sensitively
●
●
●
Mode 4 : Big rise/dive → Melody changes : insensible

First, the set of a reference is required.

1. The model and transmitter to which the altitude sensor was connected are turned on.
2. Tap to the [Preset] of "Reference" item.

*Atmospheric pressure is changed according to the weather also at the same airfield. You should preset before a flight.

Alert set : variometer

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap to the Limit [m/s] item .
4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button. Initial value: +1m
   Adjustment range-50m/s~+50m/s
   (↑Limit ≧ ↓Limit)

   *When the screen is tapped for one second, the rate is reset to the initial value.
5. To terminate the input and return to the original state, push the HOME/EXIT button.
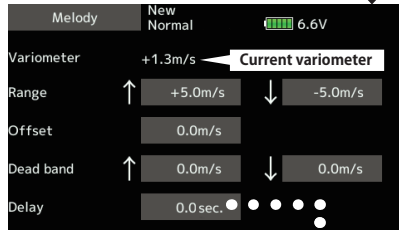
"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1   ——————————→

Type 2   ———→   ———→

Type 3   —→ —→ —→ —→

Vario Melody Setting

Altitude New Normal ▮▮▮▮ 6.6V

Variometer

Alarm	Vibrator	Limit
↑ Inhibit	Inhibit	+1.0m/s
↓ Inhibit	Inhibit	-1.0m/s

Speech Reference ┌ Melody ┐
OFF Preset Inhibit ON Set

Tap the [Set] button

Melody New Normal ▮▮▮▮ 6.6V

Variometer +1.3m/s ◄ **Current variometer**

Range ↑ +5.0m/s ↓ -5.0m/s
Offset 0.0m/s
Dead band ↑ 0.0m/s ↓ 0.0m/s
Delay 0.0 sec.

Next page

*These settings can be set each sensors.

Range

Melody New Normal ▮▮▮▮ 6.6V
Variometer +1.3m/s
Range ↑ +5.0m/s ↓ -5.0m/s
Offset 0.0m/s
Dead band ↑ 0.0m/s ↓ 0m/s
Del 0.0 sec.

When the variometer is greater than this value, Vario melody is not variable.
Setting range： Offset value ～ +50m/s
Initial value： 5.0m/s

When the variometer is less than this value, Vario melody is not variable.
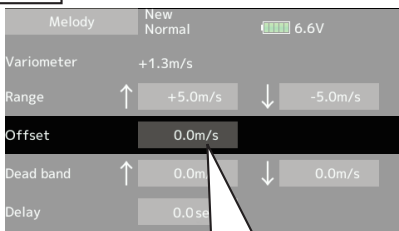**Setting range：** -50m/s ～ Offset value
Initial value： -5.0m/s

Deadband

Melody New Normal ▮▮▮▮ 6.6V
Variometer +1.3m/s
Range ↑ +5.0m/s ↓ -5.0m/s
Offset 0.0m/s
Dead band ↑ 0.0m/s ↓ 0.0m/s
Delay 0.0 sec.

When the variometer is less than this value, Vario melody is not output.
Setting range： 0m/s ～ +50m/s
Initial value： 0.0m/s
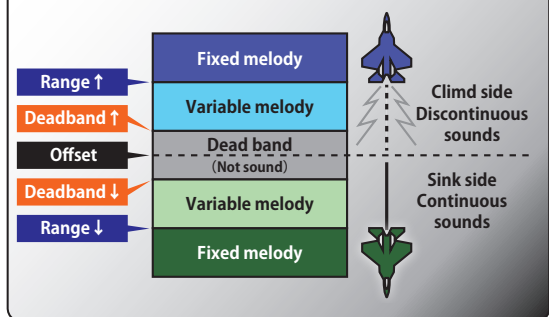
When the variometer is greater than this value, Vario melody is not output.
Setting range： -50m/s ～ 0m/s
Initial value： 0.0m/s

Offset

Melody New Normal ▮▮▮▮ 6.6V
Variometer +1.3m/s
Range ↑ +5.0m/s ↓ -5.0m/s
Offset 0.0m/s
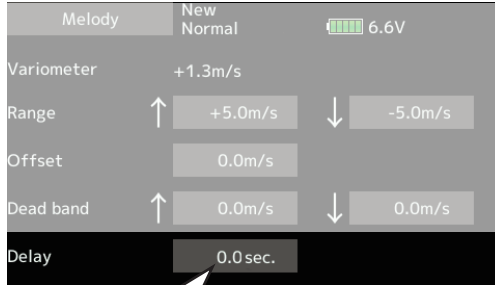Dead band ↑ 0.0m ↓ 0.0m/s
Delay 0.0 sec.

This is the changing point of climb and sink. When the variometer is greater than this value, Vario Melody is climb type. When the variometer is less than this value, Vario Melody is sink type.
Setting range： Range ↑ setting value ～ Range ↓ setting value
Initial value： 0.0m/s

[The relation of Vario Melody settings]

Range ↑	Fixed melody
Deadband ↑	Variable melody
Offset	Dead band (Not sound)
Deadband ↓	Variable melody
Range ↓	Fixed melody

Climb side Discontinuous sounds

Sink side Continuous sounds

Delay

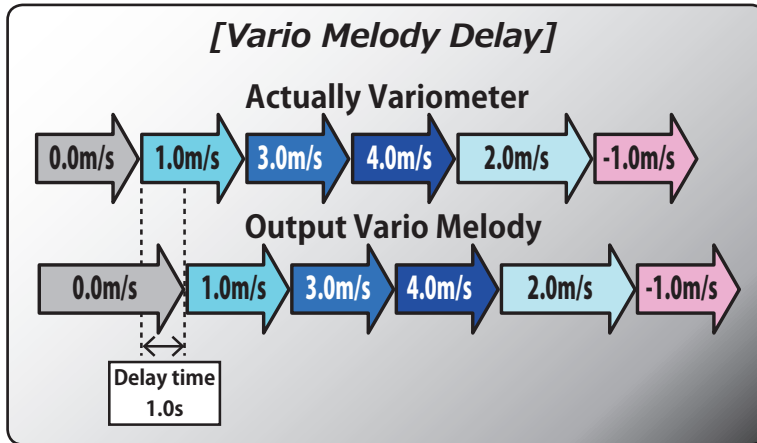| Melody	New Normal		6.6V
Variometer	+1.3m/s		
Range	↑ +5.0m/s	↓	-5.0m/s
Offset	0.0m/s		
Dead band	↑ 0.0m/s	↓	0.0m/s
Delay	0.0 sec.		

The output vario melody does not change during the delay time. In other words, this is a minimum time of Vario melody output.

Setting range : 0.0 s, 0.5 s, 1.0 s, 1.5 s
Initial value : 0.0 s

*This parameter is effective to all variometers.

[Vario Melody Delay]

Actually Variometer

0.0m/s 1.0m/s 3.0m/s 4.0m/s 2.0m/s -1.0m/s

Output Vario Melody

0.0m/s 1.0m/s 3.0m/s 4.0m/s 2.0m/s -1.0m/s

Delay time
1.0s

Telemetry: Voltage [Battery]

In this screen, the battery voltage is displayed. In order to use this function, it is necessary to connect External voltage connector of R7008SB ⇔ SBS-01V ⇔ Battery

SBS-01V measures two batteries. The power battery connected to two lines is displayed on EXT-VOLT. The battery for receivers connected to 3P lines is displayed here.

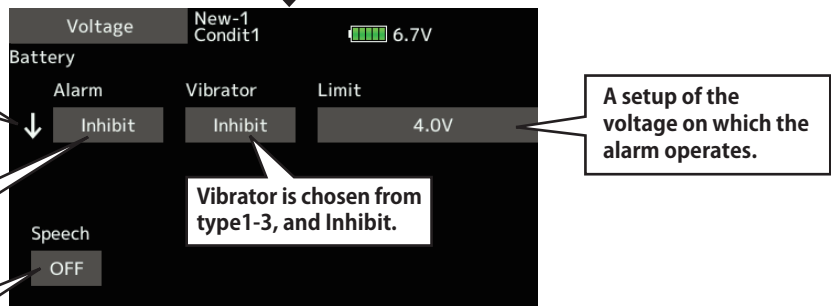● Tap the [Voltage] button in the Telemetry screen to call the setup screen shown below.

Displaying data from the receiver battery voltage
*SBS-01V must be installed in the aircraft.

In this screen, the battery voltage of a receiver is displayed.

If it becomes higher or lower than the setting an alarm and/or vibration will alert you.

*It cannot be used in FASST mode and S-FHSS mode.
*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.
*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

●Return to Linkage menu →

Max. and min. values since the power was turned ON will display.

Voltage	New-1 Condit1	🔋 6.7V
Battery		
6.3V/ 6.3V	**6.3V**	→ **Battery voltage**
Ext. battery		
0.0V/ 0.0V	**0.0V**	

↓ **The "down" arrow will indicate that an alarm will sound when the voltage drops to below the setting.**

Alarm is chosen from Buzzer, Voice, and Inhibit.

Vibrator is chosen from type1-3, and Inhibit.

The ON/OFF switch of Speech is chosen.

Voltage	New-1 Condit1	🔋 6.7V
Battery		
Alarm	Vibrator	Limit
↓ Inhibit	Inhibit	4.0V
Speech		
OFF		

A setup of the voltage on which the alarm operates.

Alarm set

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap to the Limit [4.0V] item .
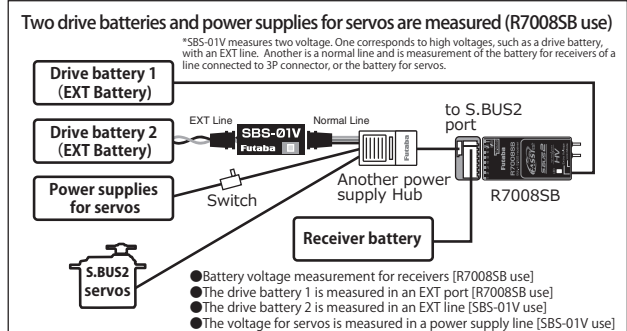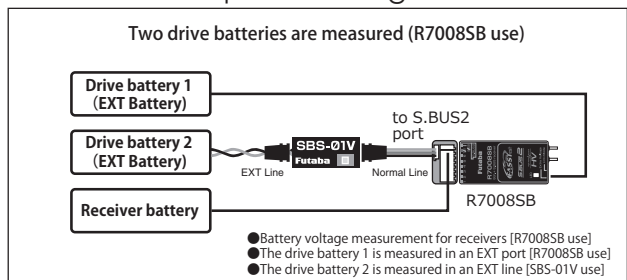4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button.

   Initial value: 4.0V

   Adjustment range: 0.0V~100.0V

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

5. To terminate the input and return to the original state, push the HOME/EXIT button.

   *Refer to the manual of SBS-01V for the details of wiring.

< Two examples of wiring are shown >

Two drive batteries are measured (R7008SB use)

Drive battery 1 (EXT Battery)
Drive battery 2 (EXT Battery)
Receiver battery
SBS-Ø1V Futaba
EXT Line   Normal Line
to S.BUS2 port
R7008SB

●Battery voltage measurement for receivers [R7008SB use]
●The drive battery 1 is measured in an EXT port [R7008SB use]
●The drive battery 2 is measured in an EXT line [SBS-01V use]

Two drive batteries and power supplies for servos are measured (R7008SB use)

*SBS-01V measures two voltage. One corresponds to high voltages, such as a drive battery, with an EXT line. Another is a normal line and is measurement of the battery for receivers of a line connected to 3P connector, or the battery for servos.

Drive battery 1 (EXT Battery)
Drive battery 2 (EXT Battery)
Power supplies for servos
EXT Line   SBS-Ø1V Futaba   Normal Line
Switch
Another power supply Hub
to S.BUS2 port
R7008SB
Receiver battery
S.BUS2 servos

●Battery voltage measurement for receivers [R7008SB use]
●The drive battery 1 is measured in an EXT port [R7008SB use]
●The drive battery 2 is measured in an EXT line [SBS-01V use]
●The voltage for servos is measured in a power supply line [SBS-01V use]

Telemetry: Voltage [Ext. battery]

Displaying data from the EXT battery voltage port

In this screen, the EXT battery voltage is displayed. In order to use this function, it is necessary to connect External voltage connector of R7008SB ⇔ SBS-01V ⇔ Battery

SBS-01V measures two batteries. The power battery connected to two lines is displayed on EXT-VOLT.

*SBS-01V must be installed in the aircraft.
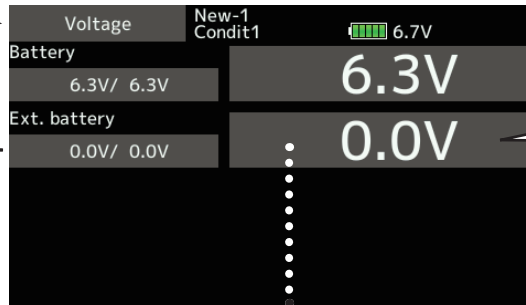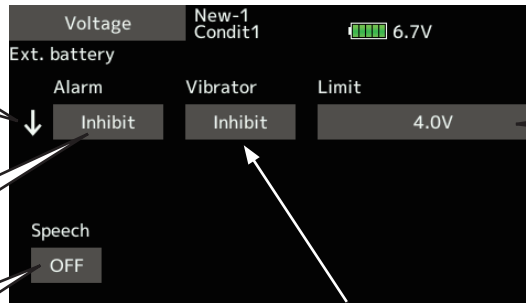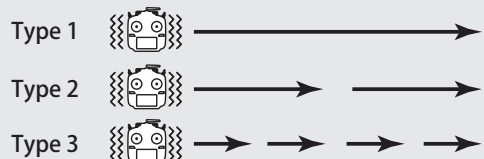
*It cannot be used in FASST mode and S-FHSS mode.

*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.

*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Tap the [Voltage] button in the Telemetry screen to call the setup screen shown below.

●Return to Linkage menu

Max. and min. values since the power was turned ON will display.

Voltage	New-1 Condit1	🔋 6.7V
Battery 6.3V/ 6.3V	**6.3V**	
Ext. battery 0.0V/ 0.0V	**0.0V**	

Ext. battery voltage

↓ The "down" arrow will indicate that an alarm will sound when the voltage drops to below the setting.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

Voltage	New-1 Condit1	🔋 6.7V
Ext. battery		
Alarm	Vibrator	Limit
↓ Inhibit	Inhibit	4.0V
Speech OFF		

A setup of the voltage on which the alarm operates.

Alarm set

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap Limit [4.0V].
4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button.
   Initial value: 4.0V
   Adjustment range: 0.0V~100.0V

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

5. To terminate the input and return to the original state, push the HOME/EXIT button.

"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1

Type 2

Type 3

Telemetry : GPS [Distance]

The Distance screen displays and sets altitude data from an SBS-01/02G GPS Sensor (sold separately), and allows the distance to the airborne aircraft to be read by the transmitter. When the aircraft flies inside or outside the set distance an alarm and vibration alerts the pilot.

Displaying data from the Distance Screen

*A GPS sensor must be installed in the aircraft.

*The GPS sensor is necessary, and is sold separately. Mount and connect the sensor in accordance with the sensor instruction manual.

*It cannot be used in FASST mode and S-FHSS mode.

*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.

*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Tap the [GPS] button in the Telemetry screen to call the setup screen shown below.

●Return to Linkage menu

| GPS | New-1 Condit1 | 6.7V | 1/2 |

Distance
13m — **3m** → Distance

Max. and min. values since the power was turned ON will display.

Speed
6km/h — **0km/h**

Altitude
0.0m/ 0.0m — **0.0m**

Variometer
0m/s 0m/s — **0m/s**

| GPS | New-1 Condit1 | 6.7V |

Distance

	Alarm	Vibrator	Limit
↑	Inhibit	Inhibit	1000m
↓	Inhibit	Inhibit	0m

Speech — OFF
Reference — Preset
Distance mode — Slant

↑ An upward arrow indicates the alarm will sound when the distance reaches above your set value.

↓ A downward arrow indicates the alarm will sound when the distance reaches below your set value.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

Tap to the [Preset] of "Reference" item. Sets the current aircraft position as the starting point.

A setup of the distance on which the alarm operates.

"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1 ⟶
Type 2 ⟶ ⟶
Type 3 → → → →

Altitude calculated as either straight line distance (slant) or surface distance on a map can also be selected.

Slant

Altitude

Surface

Select <Slant> <Surface> to "Distance mode", tap the screen.

First, the set of a reference is required.

1. The model and transmitter to which the GPS sensor was connected are turned on.

2. Tap to the [Preset] of "Reference" item.

*Now, the position of the present model was set to 0 m.

Setting a "too far" alarm distance

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.

2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.

3. Tap Limit [m].

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

   Initial value: 1,000m

   Adjustment range 0m~3,000m

   (↑Limit ≧ ↓Limit)

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

5. To terminate the input and return to the original state, push the HOME/EXIT button.

Setting a "too close" alarm distance

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.

2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.

3. Tap Limit [m].

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

   Initial value: 0m

   Adjustment range 0m~3,000m

   (↑Limit ≧ ↓Limit)

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

5. To terminate the input and return to the original state, push the HOME/EXIT button.

Distance
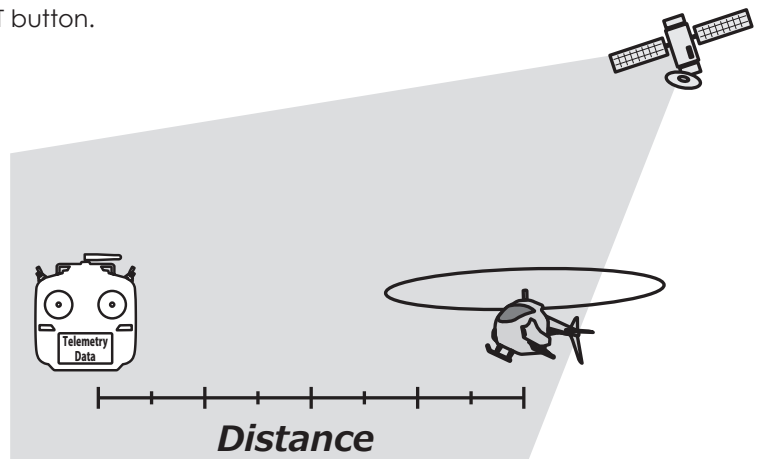
*Positioning time of GPS

  When powered up, the SBS-01/02G begins to acquire GPS satellite data. This process can take several minutes. Please do not move the model during this process. During acquisition, the LED on the SBS-01/02G will blink green; after the satellite's signals have been acquired, the LED will become solid green, and the GPS signal strength display on the transmitter will show three bars.

  Moving the model before the satellites are fully acquired will cause a delay in acquiring the satellite signal.

Telemetry : GPS [Speed]

The speed screen displays and sets the speed data from an SBS-01/02G (GPS sensor) sold separately.

The speed of the aircraft during flight can be displayed. After flight, the maximum speed during flight can be viewed. Because this speed is based on position data from a GPS satellite, the ground speed is displayed instead of air speed. Consequently, with a head wind, the displayed speed decreases and with a tail wind, the displayed speed increases.

Displaying data from the speed

*A GPS sensor must be installed in the aircraft.

*The GPS sensor is necessary, and is sold separately. Mount and connect the sensor in accordance with the sensor instruction manual.

*It cannot be used in FASST mode and S-FHSS mode.

*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.

*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Tap the [GPS] button in the Telemetry screen to call the setup screen shown below.

●Return to Linkage menu

| GPS | New-1 Condit1 | 6.7V | 1/2 |

Max. and min. values since the power was turned ON will display.

Distance — 13m — 3m

Speed — 6km/h — 0km/h **Speed**

Altitude — 0.0m/ 0.0m — 0.0m

Variometer — 0m/s 0m/s — 0m/s

↑ An upward arrow indicates the alarm will sound when the speed reaches above your set value.

↓ A downward arrow indicates the alarm will sound when the speed reaches below your set value.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

| GPS | New-1 Condit1 | 6.7V |

Speed

	Alarm	Vibrator	Limit
↑	Inhibit	Inhibit	200km/h
↓	Inhibit	Inhibit	0km/h

| Speech | Reference | Distance mode |
| OFF | Preset | Slant |
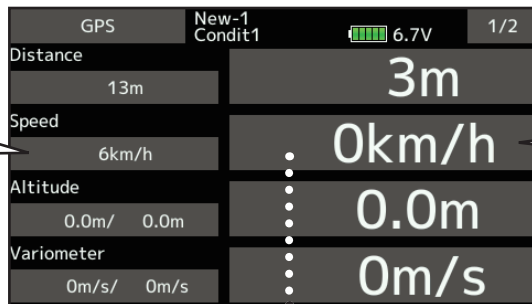
A setup of the speed on which the alarm operates.

Reference and Distance mode work in conjunction with Distance discussed on the previous two pages.

Alarm setting when speed increases

1. Tap Alarm and choose from Buzzer, Voice, and Inhibit.
2. When not operating vibrator, it is "Vibrator" to Inhibit. Type1-3 will be chosen if it is made to operate.
3. Tap Limit [xxx km/h].
4. Adjust the rate by "▼▼" "▼" "▲" "▲▲" button.
   Initial value: ↑200km/h ↓0km/h
   Adjustment range 0km/h~500km/h
   (↑Limit ≧ ↓Limit)

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

5. To terminate the input and return to the original state, push the HOME/EXIT button.

"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1

Type 2

Type 3
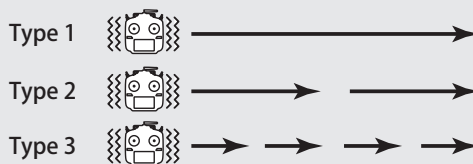
*Speed alarm precaution

Since the GPS speed sensor displays the ground speed, it cannot be used as a stall alarm. For example, an aircraft that stalls at 50km/h will stall if the tailwind is 5km/h or greater even through 55km/h is displayed by ground speed. In addition, with an aircraft that will disintegrate in midflight at 400km/h at an over-speed alarm, when the headwind reaches 30km/h the airplane will disintegrate in midair due to over speeding even at a ground speed of 370km/h.

Telemetry : GPS [Altitude, Variometer, Position]

*A GPS sensor must be installed in the aircraft.

The Altitude, Variometer, Position screen displays and sets the data from an SBS-01/02G (GPS sensor) sold separately.

*The GPS sensor is necessary, and is sold separately. Mount and connect the sensor in accordance with the sensor instruction manual.

*It cannot be used in FASST mode and S-FHSS mode.

*Only receiver voltage and EXT voltage can be used in FASSTest12CH mode.

*The FASSTest18CH /T-FHSS mode can use all the telemetry functions.

● Select [GPS] in the Telemetry screen and access the setup screen shown below.

●Return to Linkage menu

GPS	New-1 Condit1		6.7V	1/2
Distance				
13m		3m		
Speed				
6km/h		0km/h		
Altitude				
0.0m/ 0.0m		0.0m		
Variometer				
0m/s/ 0m/s		0m/s		

Max. and min. values since the power was turned ON will display.

Altitude

Variometer

Refer to the former page for a setup about Altitude and Variometer.

GPS	New-1 Condit1	6.7V	2/2
Position ⊕ ıl			
	N 35° 24.7255		
	E140° 19.5826		

This indicates the receiving accuracy from a GPS Satellite. When three bars are displayed, the GPS is ready for use.

The position of the present model is displayed.

Altitude

Variometer

position

100ft
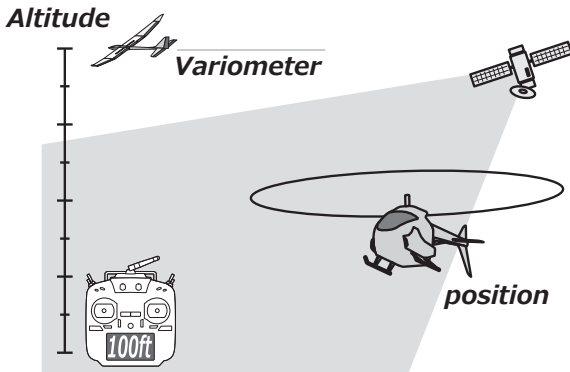
Telemetry : Servo sensor [Current]

The SBS-01S can monitor and display the in-flight current, operating angle, and internal temperature of up to two S.BUS2 servos.

If you forget to connect the servo wiring during fuselage assembly, or the servo was disconnected, an alarm can be activated at the transmitter.

*Servo sensor must be installed in the aircraft.

- Select [Servo sensor] in the Telemetry screen and access the setup screen shown below.

- Return to Linkage menu

Tap here and go to the Servo 2 settings page. (Display and settings content is the same as Servo 1.)

Servo sensor	New-1 Condit1	6.7V	1/2
Current 1		0.0A	
0.0A/ 0.0A			
Temperature 1		10°C	
10°C/ 10°C			
Angle 1		0.0°	
0.0°/ 0.0°			
Connection Alarm 1	Alarm	Vibrator	
Inhibit	Inhibit	Inhibit	

Max. and min. values since the power was turned ON will display.

Tapping this will take you to the settings screen for the current alarm

Tapping this and selecting "Buzzer" will cause the device to sound an alarm when servos are not connected.

Tapping this and selecting "Each type" will cause the device to vibrate when servos are not connected.

When the Alarm or Vibrator options are activated, the servo connection will display.

Connection Alarm 1
Connected

Connection Alarm 1
Not Connected

*This alarm and display is limited to the S.BUS servos connected to the servo sensors.

↑ An upward arrow indicates the alarm will sound when the current reaches above your set value.

↓ A downward arrow indicates the alarm will sound when the current reaches below your set value.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

Servo sensor	New-1 Condit1	6.7V	
Current 1			
	Alarm	Vibrator	Limit
↑	Inhibit	Inhibit	10.0A
↓	Inhibit	Inhibit	0.0A
Speech			
OFF			

A setup of the current on which the alarm operates.

Vibrator is chosen from type1-3, and Inhibit.

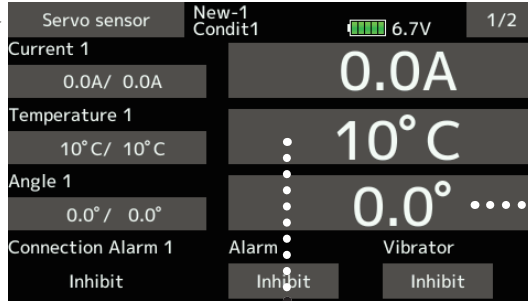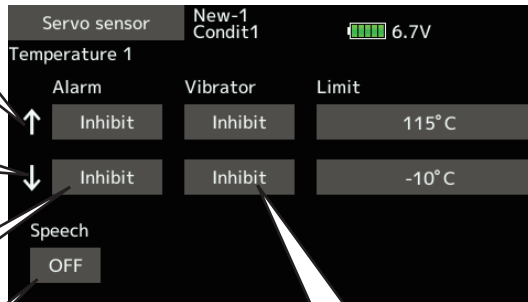**Initial value: ↑ 10.0A ↓ 0.0A Adjustment range 0.0A~10.0A (↑ Limit ≧ ↓ Limit)**

Telemetry : Servo sensor [Temperature] [Angle]

*Servo sensor must be installed in the aircraft.

● Select [Servo sensor] in the Telemetry screen and access the setup screen shown below.

●Return to Linkage menu →

| Servo sensor | New-1 Condit1 | ▊▊▊ 6.7V | 1/2 |

Current 1
0.0A/ 0.0A
0.0A

Temperature 1
10°C/ 10°C
10°C

Angle 1
0.0°/ 0.0°
0.0°

Connection Alarm 1   Alarm   Vibrator
Inhibit   Inhibit   Inhibit

● Temperature

↑ An upward arrow indicates the alarm will sound when the temperature reaches above your set value.

↓ A downward arrow indicates the alarm will sound when the temperature reaches below your set value.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

| Servo sensor | New-1 Condit1 | ▊▊▊ 6.7V |

Temperature 1

Alarm   Vibrator   Limit
↑   Inhibit   Inhibit   115°C
↓   Inhibit   Inhibit   -10°C

Speech
OFF

A setup of the temperature on which the alarm operates.

Vibrator is chosen from type1-3, and Inhibit.

Initial value: ↑ 115°C ↓ -10°C Adjustment range -10°C ~115°C (↑ Limit ≧ ↓ Limit)

● Angle

↑ An upward arrow indicates the alarm will sound when the angle reaches above your set value.

↓ A downward arrow indicates the alarm will sound when the angle reaches below your set value.

Alarm is chosen from Buzzer, Voice, and Inhibit.

The ON/OFF switch of Speech is chosen.

| Servo sensor | New-1 Condit1 | ▊▊▊ 6.7V |

Angle 1

Alarm   Vibrator   Limit
↑   Inhibit   Inhibit   +180.0°
↓   Inhibit   Inhibit   -180.0°

Speech
OFF

A setup of the angle on which the alarm operates.

Vibrator is chosen from type1-3, and Inhibit.

Initial value: ↑ +180.0° ↓ -180.0° Adjustment range -180.0° ~ +180.0° (↑ Limit ≧ ↓ Limit)

Telemetry : Current sensor [Current]

The SBS-01C has the capability of measuring current, voltage and capacity (consumption) from drive battery at the same time.

*Current sensor must be installed in the aircraft.

Drive Battery — **BATT** **ESC** RESET **Futaba SBS-01C** — **Motor**

to Receiver **SBS-01C**
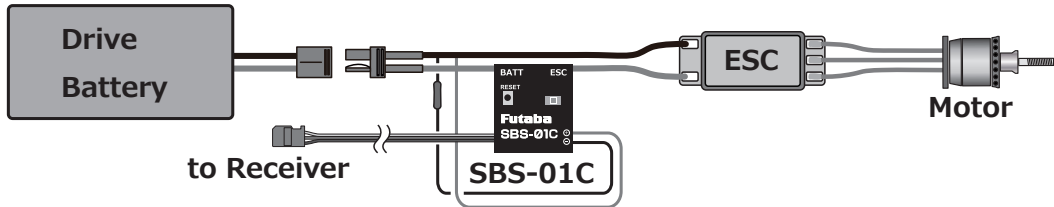
● Select [Current] in the Telemetry screen and access the setup screen shown below.

●Return to Linkage menu

Current	Model1 Condit.1	6.6V
Current		
0/ 0A	····· 0A	
Voltage		
0.0/ 0.0V	0.0V	
Capacity		
0/ 0mAh	0mAh	

Max. and min. values since the power was turned ON will display.

Tapping this will take you to the settings screen for the current alarm

Tapping this will take you to the settings screen for the voltage alarm

Tapping this will take you to the settings screen for the consumption capacity alarm

The consumption capacity is indicated. It isn't the present battery capacity.

◆ Alarm setting

Current	Model1 Condit.1	6.6V

Current

Alarm	Vibrator	Limit
↑ Inhibit	Inhibit	100A
↓ Inhibit	Inhibit	0A

Speech
OFF

↑ An upward arrow indicates the alarm will sound when the current reaches above your set value.

↓ A downward arrow indicates the alarm will sound when the current reaches below your set value.

The ON/OFF switch of Speech is chosen.

Alarm is chosen from Buzzer, Voice, and Inhibit.

A setup of the current on which the alarm operates.

"Vibrator" type
If the following types are selected, the transmitter will vibrate during the warning.

Type 1

Type 2

Type 3

Tele. setting

Speech interval set , data logging of telemetry.

Set the speech interval of telemetry data, and the logging of telemetry data to an SD card at chosen intervals.

Telemetry data can be checked on your PC after a flight.

● Tap the [Tele.setting] button in the Linkage menu to call the setup screen shown below.

●Return to Linkage menu

Tele. setting	New Normal	6.6V
Speech interval		0 sec.
Logging switch		OFF
Logging interval		0 sec.
Alarm repeat		INH
Alarm duration		1 sec.

A setup of the speech interval
Initial value: 0 sec.
Adjustment range 0-30 sec.
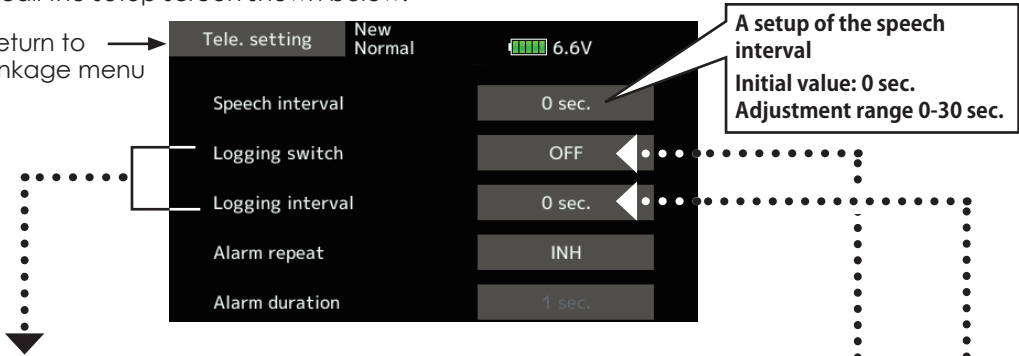
Telemetry data log function

Telemetry data has been adapted to the log function which is recorded at the SD card.

【Setting method】

① Open the linkage menu Tele. setting screen.

② Log recording can be started and stopped by operating a switch. The Logging switch is selected.

③ The log output interval can be set.

* The data to be recorded is updated at the time set by Linkage menu → System Type screen D/L interval. For example, when the log output interval is 1 second and the D/L interval is 2 seconds the same data is overlapped and recorded twice.

【Operation method】

① Insert the SD card into the card slot.

② Set the switch set by Log Start/Stop Switch to ON. A beep sounds and a log file is created and recording of the telemetry data begins.

   Absolutely never remove the SD card while log data is being recorded.

③ Set the switch set by Logging switch to OFF. A beeping sound is generated and recording of the telemetry data stops.

④ Turn off the transmitter power and remove the SD card.

■Log file

A log file is created in the SD card LOG folder. Two files with the same filename, but a different extension are created. (Example: 00001234.FLI, 00001234.FLD)

■Extension FLI: Slot allocation information file

■Extension FLD: Log data file

*When copying or moving a log file, always select both the .FLI file and .FLD file.

Log files can be converted to CSV format by using the telemetry log converter available at the Futaba website.

■Notes

◇ Altimeter altitude data and GPS distance and altitude data output with the point that time logging started as the reference (0m). When the transmitter preset position and the log start position are different, the transmitter display and the log data display will also be different. The altitude and distance from the take-off position can be recorded by starting logging immediately after take-off.

◇ The transmitter gear ratio or number of fins setting is not reflected in the speedometer log data (speed). Multiply the gear ratio or number of fins by the speed data.

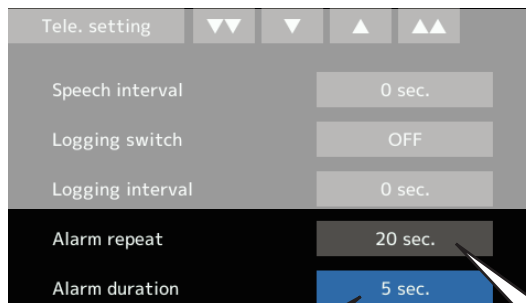◇ When the SD card becomes full, recording stops and does not resume even if logging is restarted.

Telemetry Alarm Duration and Repeat time

The repeat time and duration time for the telemetry alarm (buzzer, vibration and speech) can be set.

● Tap the [Telemetry Setting] button in the Linkage menu to call the setup screen shown below.

Tele. setting	New Normal	IIIII 6.6V
Speech interval		0 sec.
Logging switch		OFF
Logging interval		0 sec.
Alarm repeat		INH
Alarm duration		1 sec.
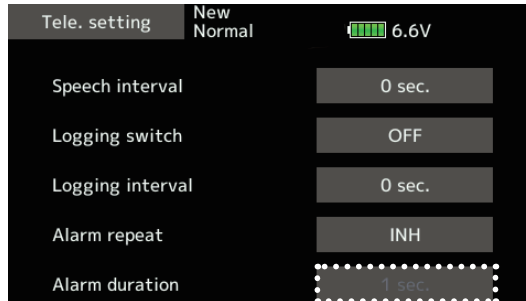
Duration is not displayed when Repeat is **INH**.

Tele. setting	▼▼	▼	▲	▲▲
Speech interval				0 sec.
Logging switch				OFF
Logging interval				0 sec.
Alarm repeat				20 sec.
Alarm duration				5 sec.

Duration
It is an alarm output time.
Setting range：1 s ～ 30 s
Initial value：INH
Duration value has to be less than repeat value.
Duration time is extended when the other alarm event occurs.

Repeat
It is a repeat time of an alarm output.
Setting range：INH, 1 s ～ 240 s
Initial value：INH

[Duration and Repeat time for Telemetry Alarm]
e.g. Repeat time is 8 seconds and Duration time is 5 seconds.

Repeat time 8s

| Alarm output | ON ♪♪ | OFF | ON ♪♪ | OFF | ON ♪♪ | OFF | ●●●● |

Duration time 5s
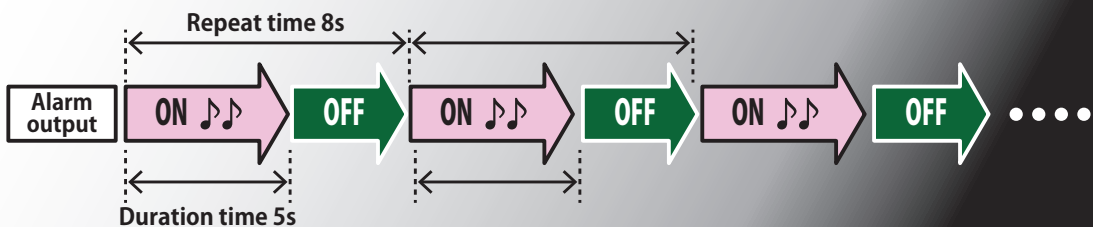
Trainer

T16SZ trainer system makes it possible for the instructor to choose which channels and operation modes can be used in the student's transmitter. The function and rate of each channel can be set. The training method can also be matched to the student's skill level. Two transmitters must be connected by an optional Trainer Cord, and the Instructor's transmitter should be programmed for trainer operation, as described below.

When the Instructor activates the trainer switch, the student has control of the aircraft (if MIX/FUNC/NORM mode is turned on, the Instructor can make corrections while the student has control). When the switch is released the Instructor regains control. This is very useful if the student gets the aircraft into an undesirable situation.

● Setting data are stored to model data.
● Student rate can be adjusted at MIX/FUNC/ NORM mode.
● Activated student channels can be selected by switches.

Note: This trainer system can be used in the following manner:

1. With the T16SZ transmitter and a conventional transmitter, if the channel order is different, it is necessary to match the channel order before using this function.

   You can select the channel of input data from student's transmitter in the "FUNC" or "MIX" mode.

2. When the T16SZ is used as the instructor's transmitter, set the modulation mode of the student's transmitter to PPM.

   If being used as the student, T16SZ can be connected to the instructor's transmitter which requires the student's mode to be PPM. T16SZ always sends PPM mode signal from the trainer jack.

   (In the case of student's transmitters other than 2.4 GHz)

3. Be sure that all channels work correctly in both transmitters before flying.

Corresponding types of transmitters and trainer mode settings:

Types of transmitters		Instructor's transmitter settings		Student's transmitter settings			Trainer Cords
		System Type	Trainer setting	System Type	Trainer setting		
Instructor	Student	Mod. mode	CH mode	Mod. mode	CH mode	Mod. mode	
T16SZ,FX-32 T14SG,T18SZ,T18MZ	T16SZ,FX-32 T14SG,T18SZ,T18MZ	Arbitrary	16CH	Arbitrary	16CH	-	T12FG (FUTM4405) and 9C (FUTM4415) Trainer Cords
T16SZ	T14MZ, FX-40, T12Z, T12FG, FX-30	Arbitrary	12CH	PCM-G3 2.4G	12CH	PPM	
T16SZ	T8FG, FX-20	Arbitrary	12CH	FASST-MLT2	-	-	
			8CH	FASST-MULT			
T16SZ	T10C, T9C, T7C,T6EX, T4EX	Arbitrary	8CH	PPM	-	-	T12FG (FUTM4405)
T16SZ	T10CG,T7C	Arbitrary	8CH	Arbitrary	-	-	T12FG (FUTM4405)
T16SZ	T10J, T8J, T6K, T6J, T6L	Arbitrary	8CH	Arbitrary	-	-	
T14MZ, FX-40, T12Z, T12FG, FX-30	T16SZ	Arbitrary	12CH	Arbitrary	12CH	-	T12FG (FUTM4405) and 9C (FUTM4415) Trainer Cords
T8FG, FX-20	T16SZ	Arbitrary	12CH	Arbitrary	12CH	-	
T10C, T10CG, T10J, T9C, T7C T7C, T8J, T6K T6J	T16SZ	Arbitrary	-	Arbitrary	8CH	-	

● Tap the [Trainer] button in the Linkage menu to call the setup screen shown below.

● Return to Linkage menu

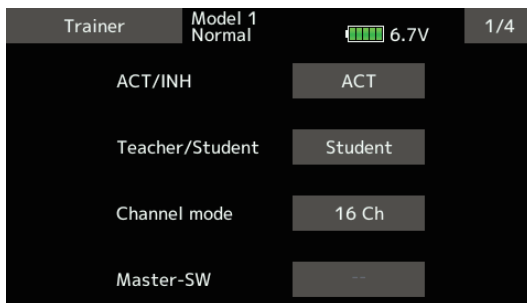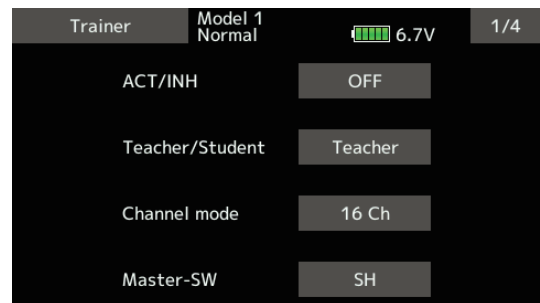| Trainer	Model 1 Normal	🔋 6.7V	1/4
ACT/INH		INH	
Teacher/Student		Student	
Channel mode		8 Ch	
Master-SW		--	
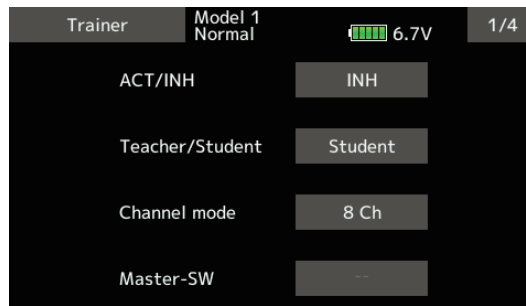
When using at the student side

1. Select the mode.

  *When changing the mode, tap to the item you want to change and change the mode by "▼▼" "▼" "▲" "▲▲" button. The display blinks. Tap the screen to change the mode.

  "Teacher/Student": Select [Student].

  "ACT/INH": Enable operation by changing to [ACT].

  "16/12/8 CH": When the student uses the T16SZ,T14SG,T18SZ,T18MZ, select [16CH]. When the student uses the T14MZ, T12Z, T12FG or FX-40, select [12CH]. Otherwise select [8CH].

Trainer	Model 1 Normal	🔋 6.7V	1/4
ACT/INH		ACT	
Teacher/Student		Student	
Channel mode		16 Ch	
Master-SW		--	

Note: In "student mode", only the teacher side can turn on and off the power to the student's transmitter. Keep the power switch always at off position.

When using at the teacher side

1. Select the mode.

  *When changing the mode, tap to the item you want to change and change the mode by "▼▼" "▼" "▲" "▲▲" button. The display blinks. Tap the screen to change the mode.

  "Teacher/Student": Select [Teacher].

  "ACT/INH": Enable operation by changing to [OFF] or [ON].

  "16/12/8 CHANNEL": When the student uses the T16SZ (including the T18MZ, T14SG) select [16CH]. Otherwise select [12CH]or[8CH].

Trainer	Model 1 Normal	🔋 6.7V	1/4
ACT/INH		OFF	
Teacher/Student		Teacher	
Channel mode		16 Ch	
Master-SW		SH	

2. Select the trainer switch.

  *When setting or changing the switch, tap to the "SWITCH" item, call the switch setup screen and set the desired switch and ON/OFF direction.

  (See "Switch selection method" at the end of this manual for selection method details.)

  *The switch mode can also be selected when setting the ON position on the switch setup screen. When [Normal] is selected, normal ON/OFF operation is performed. When [Alternate] is selected, the trainer function is alternately turned on and off each time the switch is operated. This allows alternate ON/OFF switching even when a momentary switch (SH) is used.

  Note: The trainer function won't be turned on unless the Instructor's transmitter receives signals from the student's transmitter. Be sure to confirm this after connecting your trainer cable.

3. Select the operating mode for each channel.

Ch	Function	Mode	Switch	Rate	Stu.Ch
	Trainer	Model 1 Normal	🔋 6.7V		2/4
1	Aileron	FUNC	--	100	Ch 1
2	Elevator	OFF			
3	Throttle	OFF			
4	Rudder	OFF			
5	Gyro	OFF			
6	Pitch	OFF			

"NORM": The model is controlled by signals from the student transmitter.

"MIX" mode: The model is controlled by signals from the teacher and student transmitters. (Reset the student's model data to the default condition.)

"FUNC" mode (function mode):

The model is controlled by signals from the student transmitter with the teacher AFR setting. (Reset the student's model data to the default condition.)

"OFF": Only the teacher side operates.

*The setting above allows setting of the servo throw relative to the amount of student side operation when [MIX] or [FUNC] was selected.

When changing the rate, use the "▼▼" "▼" "▲" "▲▲" button to Tap the [Rate] item of the channel.

Setting range: -100~+100

Initial value: +100

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

4. Set the switch of each channel.

*When setting the switch at each channel, tap to the "SW" item of the channel you want to change, call the switch setup screen, and select the switch.

"--" : Always ON.

"SA"~"SH": The switch which enables student side operation can be selected. (See "Switch selection method" at the end of this manual for selection method details.)

Ch	Function	Mode	Switch	Rate	Stu.Ch
	Trainer	Model 1 Normal	🔋 6.7V		2/4
1	Aileron	FUNC	--	100	Ch 1
2	Elevator	OFF			
3	Throttle	OFF			
4	Rudder	OFF			
5	Gyro	OFF			
6	Pitch	OFF			

Trainer student channel setting function

In training mode, the instructor's transmitter can pick up the student's signal on both the "Function" and "Mix" channels. That makes it easy for the two transmitters to connect even if the student and instructor have set up their transmitters differently.

*When the instructor's transmitter mode is set to "NORM", the signal of the same channel of the student's transmitter is output as is. (The same as before.)

Ch	Function	Mode	Switch	Rate	Stu.Ch
	Trainer	Model 1 Normal	🔋 6.7V		2/4
1	Aileron	FUNC	--	100	Ch 1
2	Elevator	OFF			
3	Throttle	OFF			
4	Rudder	OFF			
5	Gyro	OFF			
6	Pitch	OFF			

Warning setting

The warning display at power ON can be turned ON/OFF for each function. Use by setting functions which may be dangerous if operated at power ON to ON. Initial setting is all ON (Buzzer).

● Tap the [Warning setting] button in the Linkage menu to call the setup screen shown below.

●Return to Linkage menu

Warning setting	Model 1 Normal		6.7V
		Alarm	Vibrator
Condition		Buzzer	Inhibit
Throttle cut		Buzzer	Inhibit
Idle down		Buzzer	Inhibit
Throttle position		Buzzer	Inhibit
Motor		Buzzer	Inhibit
Throttle hold		Buzzer	Inhibit

The settings can be changed individually. When set to [Inhibit], a warning is not displayed at power ON.

"Vibrator" type

If the following types are selected, the transmitter will vibrate during the warning.

Type 1

Type 2

Type 3

⚠ WARNING

🚫 **It is extremely dangerous to unnecessarily inhibit essential warnings.**

■ Careless spinning of propellers or rotors poses a danger of serious injury or death.

User menu setting

Original menu screen making

   T16SZ has a menu for each of the following: System, Linkage, and Model. Also, you can create a personalized User menu that can include all of the menus that you use most often.

*Any change made to data entered from the User menu or from the normal method of use are the same. Changes made in either way are saved into the transmitter memory.

● Tap the [User menu setting] button in the Linkage menu to call the setup screen shown below.

●Return to Linkage menu

User menu setting	Model 1 Normal	🔋 6.7V
---	---	---
---	---	---
---	---	---
---	---	---
---	---	---
---	---	---

Tap here to select your first choice.
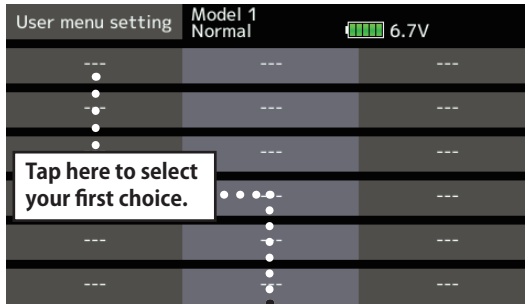
Once pressed, 3 pages of choices will be displayed.

User menu select	Model 1 Normal	🔋 6.7V	1/3
Display	Sound volume	Date and Time
Calibration	Battery	Range check
S.Bus servo	Information	Servo monitor
Model select	Model type	Servo reverse
End point	Servo speed	Sub-trim
Function	Fail safe	System type
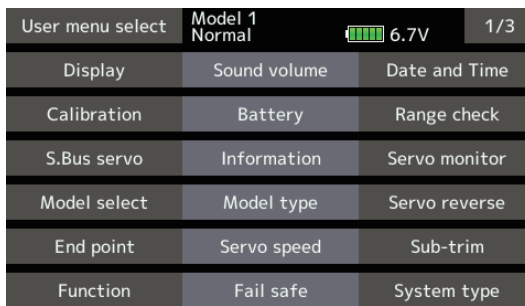
When "---" is chosen, it can be deleted.

Make your selection, press your choice and the first of your "User menu" will be entered.

How to call a User menu

1. From the home screen, press the U.MENU/MON. button.

From the home screen

HOME screen

Press the U.MENU/MON.

User menu	Model1 Condit1	🔋 6.8V
AFR	Prog. mixes	Air brake
---	---	---
---	---	---
---	---	---
---	---	---
---	---	---

Function can be called by a tap
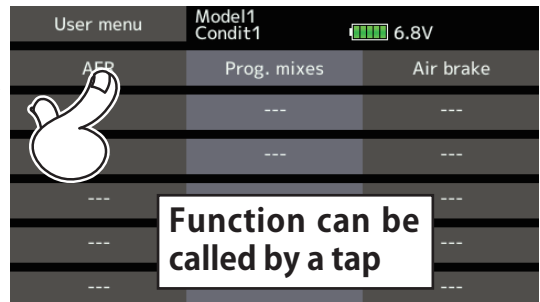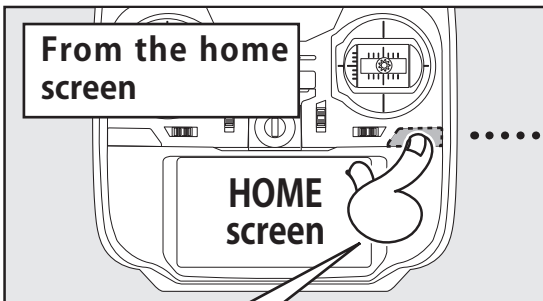
Data reset

Model memory setting data reset. (by item)

This function is designed to allow you to reset selected portions or all of the settings saved in the active model memory. You may individually choose to reset the following sets of data:

Trim (All condition):

Reset the digital trim setting.

*All the conditions, or the condition currently being displayed (the entire group for group setting), can be selected.

*The trim step amount and trim rate are not reset.

Trim (Current and Group condition):

Reset the digital trim setting.

*Current condition, group condition, can be selected.

*The trim step amount and trim rate are not reset.

Model menu setting:

Resets all the functions in the Model menu except condition select.

All model setting:

Resets all Linkage and Model menu functions except for frequency, model select, and model type.

Function Name:

A function name is reset.

Telemetry:

Reset the telemetry setting.

● Select [Data reset] at the linkage menu and call the setup screen shown below.

●Return to Linkage menu

Data reset	Model1 Condit.1	🔋 6.5V
Trim (All condition)		
Trim (Current and Group condition)		
Model menu setting		
All model setting		
Function name		
Telemetry		
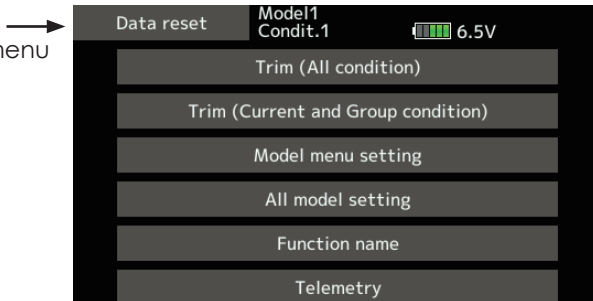
Data resetting method

1. Tap to the item you want to reset and tap the screen.

*A confirmation message appears.

Data reset	Model1 Condit.1	🔋 6.5V
Trim (All condition)		
Trim	❓ Sure ?	tion)
	Yes No	
Function name		
Telemetry		
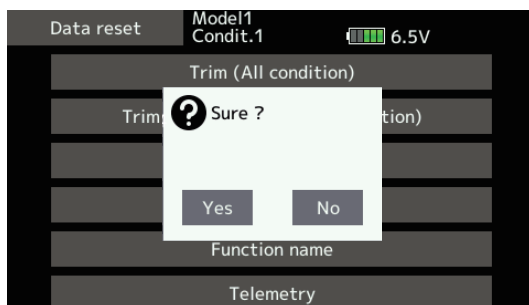
2. Execute reset by tapping the "Yes".

[Trim (All condition)]: Resets only the Trim (all conditions)

[Trim(Current and Group condition)]: Resets only the data of Trim (condition in use and all the conditions set to group mode)

[Model menu setting]: Resets all the functions in the model menu, except the condition selection functions.

[All model setting]: Resets all the functions in the linkage menu and model menu except the frequency, model select, and model type functions.

[Function name]: Resets only the function name functions.

[Telemetry]: Resets only the teremetry functions.

⚠ CAUTION

🚫 **Never engage the Data reset function while the engine is starting or the motor drive wiring is connected.**

■ Sudden, abrupt spinning of propellers or rotors is extremely dangerous.

⚠ CAUTION

❗ **Throttle Reverse**

■ Only the throttle channel (CH3) initial setting is REV (reverse). Thoroughly check the Hi and Low directions of the engine or motor used and be careful that they do not suddenly run at full speed. Even after data reset, CH3 is reversed.

This section describes the AFR, program mixing, and other functions common to all model types.

Before setting the model data, use the Model Type function of the Linkage menu to select the model type matched to the fuselage. When another model type is selected thereafter, the AFR, program mixing, and other setting data are reset.

The functions in the Model menu can be set for each flight condition. When you want to use the system by switching the settings for each condition by switch, stick position, etc., use the Condition Select function to add flight conditions. (Up to 8 conditions can be used)

Note: The T16SZ is designed so that the airplane and glider model types are compatible with aircraft of similar type wings.

This section outlines the relationship between the functions common to airplanes and gliders, except some dedicated functions, and model type.

The setting items depend on the number of servos and other differences according to the wing type used, but reread them. The setup screens in the instruction manual are typical examples.
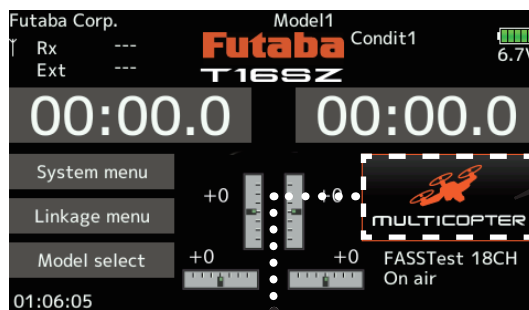
Tap this icon to go to the model menu.

● Select the function name and return to the Home screen.
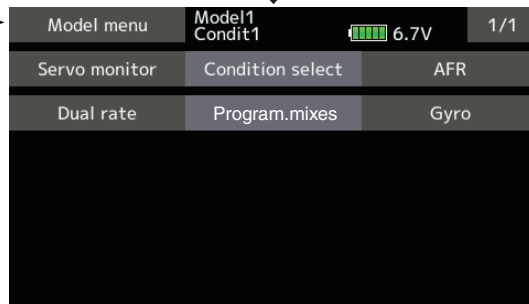
(Model menu screen example)

*The Model menu screen depends on the model type.

Model menu (Common functions) functions table

[Servo monitor]: Displays the servo test and operation position→**Linkage menu referring**

[Condition select]: Flight conditions addition, deletion, copy, condition renaming, and condition delay can be set.

[AFR]: Sets the angle and curve of all the operation functions.

[Dual rate]: D/R curve which can be switched with a switch, etc. can also be added.

[Program. mixes]: Program mixing which can be freely customized. Up to 10 mixes can be used for each condition.

Condition select

Flight condition's addition, deletion, copy, condition renaming, and condition delay can be set. [All model types]

The functions in the Model menu can be used by switching the settings of up to 8 flight conditions by using the Condition select function to add flight conditions. Add conditions, as required.

When you do not want to use the Condition select function, this setting is unnecessary. In this case, use the flight conditions assigned at initial setting.

● Since switching by stick and lever position, in addition to ordinary toggle switch, is possible as the flight condition selector switch, this function can be linked with other operations.

● A Condition Delay function can be set. Unnecessary fuselage motion generated when there are sudden changes in the servo positions and when there are variations in the operating time between channels during condition switching can be suppressed. The delay can be set for each channel.

When setting the delay function at the switching destination condition, the related function changes after a delay corresponding to the set amount.

● When multiple conditions were set, their operation priority can be freely changed.

● The condition name can be changed. The selected condition name is displayed on the screen. When a condition has been added, give it a name which can be easily confirmed.

● Select [Condition select] at the model menu and call the setup screen shown below.

Currently selected condition name

Conditions List

Condition Renaming

1. Select the condition by tapping the condition you want to rename in Conditions List.
2. Tap the [Rename] button.
3. Enter the new name from the keyboard which appears on the screen.
4. When the keyboard [Condition name] key is tapped, the new name is registered.

Condition Addition

1. When the [Add] button is tapped, the Condition Select screen appears.

   *Only the number of buttons corresponding to the conditions which can be added are displayed.

2. Select the desired conditions by tapping the buttons.

   *The selected conditions are added to Conditions List.

3. Tap the [--] button to call the <Switch> screen.
4. Select the switch to be used in condition switching.

   (See "Switch selection method" at the end of this manual for selection method details.)

5. The "Condition1" data for the added conditions is copied.

Currently selected condition name

Conditions List

The ON/OFF switch of condition is chosen.

Condition Copy

1. Tap the [Copy] button. The Copy screen appears.
2. Select the condition by tapping the button of the copy source conditions.
3. Next, select the condition by tapping the copy destination condition.
4. Tap the [Copy] button.
5. When the [Yes] button is tapped, the data is copied. (To abort copying, tap the [No] button.)

Condition Remove

1. Select the condition by tapping the condition you want to reset in Conditions List.
2. Tap the [Remove] button.
3. When the [Yes] button is tapped, the condition is reset. (To abort resetting, tap the [No] button.)

Last condition has the highest priority

● **Group/single mode switching (Gr./Sngl) (For a description of the operation method, see the description at the back of this manual.)**

Priority change

1. Tap the condition whose priority you want to change in Conditions List.
2. Change the priority with the priority [△] or [▽] button. (The last condition has the highest priority.)
*The initial setting condition cannot be moved. It has the lowest priority.

Condition delay setting

1. Switch to the condition you want to set.
2. Tap the Delay button of the channel you want to set.
3. Use the value input buttons to set the delay.
● Initial value: 0
● Adjustment range: 0~27 (maximum delay)

AFR

The angle and curve of each operation function can be set. [All model types]

AFR function is used to adjust the throw and operation curve of the stick, lever, and switch functions for each flight condition.

Rate 100%

Rate 40%

This is normally used after End Point has defined the maximum throw. When mixing is applied from one channel to another channel, both channels can be adjusted at the same time by adjusting the operation rate through the AFR function.
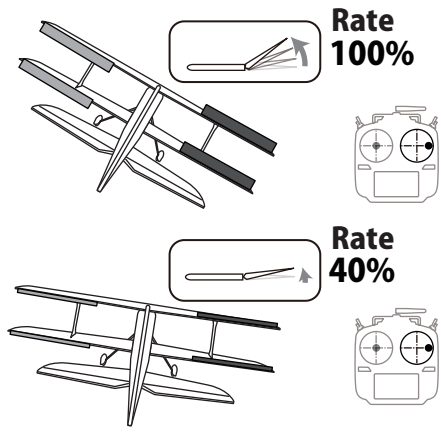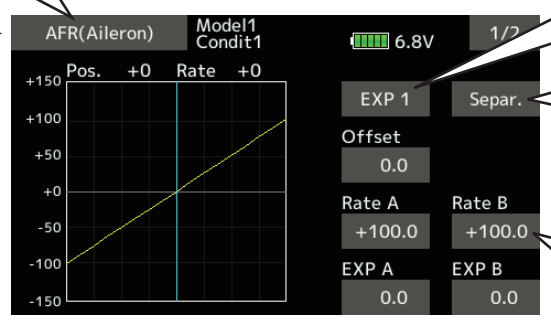
● Operation curve adjustment: Three types of curves (EXP1, EXP2, and Point) can be selected. A maximum 17 points curve can be used for the point curve type. (Initial setting: 9 points) The number of points can also be increased and decreased and curves from complex curves to simple curves can be used.

● Operation speed adjustment: The operation speed of each function when the function is operated (including at flight condition switching) can be adjusted. The function operates smoothly at a constant speed corresponding to the set speed.

When D/R is turned ON, the display will show "D/R----", and the rudder angle (rate) and EXP can be set when D/R is ON.

● Select [AFR] at the model menu and call the setup screen shown below.

●Return to Model menu

| AFR(Aileron) | Model1 Condit1 | 6.8V | 1/2 |

Pos. +0   Rate +0

+150
+100
+50
+0
-50
-100
-150

EXP 1   Separ.

Curve select EXP1, EXP2, Point curve

Curve select Separately ⇔ Combination (Left and right symmetrical curve.)

Offset
0.0

Rate A   Rate B
+100.0   +100.0

EXP A   EXP B
0.0   0.0

Left/right, Up/down, overall adjustment at Rate A and Rate B

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

Function selection

1. When the function select button is tapped, a selection screen appears.
2. Select the function you want to set at the selection screen.
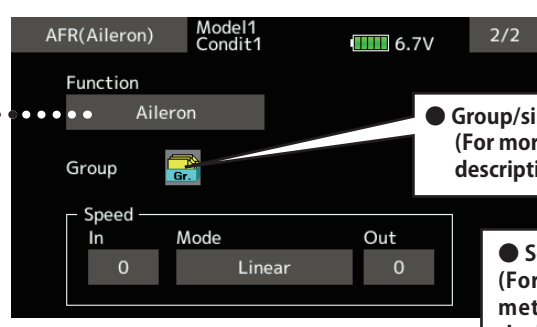
| AFR(Aileron) | Model1 Condit1 | 6.7V | 2/2 |

Function
Aileron

Group
Gr.

● **Group/single mode switch (Gr./Sngl) (For more information, see the description at the back of this manual.)**

Speed
In   Mode   Out
0   Linear   0

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

Dual rate

D/R curves which can be switched by switch, etc. can be added. The curve can be adjusted by the AFR function.

- Up to 6 rates can be added for each condition.
- D/R is set for each condition and is not reflected at other conditions.
- D/R at the top of the D/R list has priority.

100%

40%
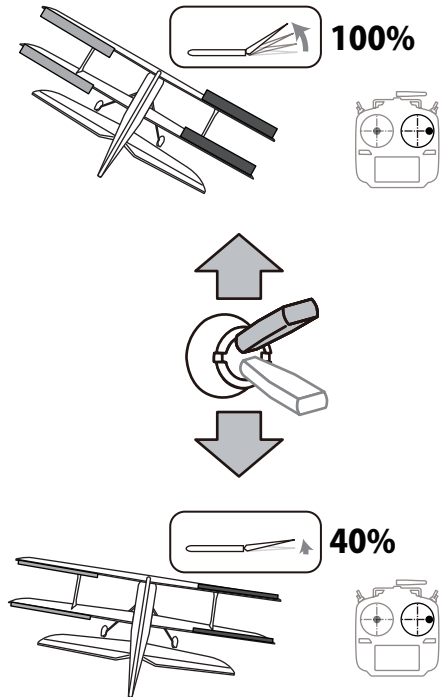
- Select [Dual rate] at the model menu and call the setup screen shown below.

●Return to Model menu

		Status	Function	Switch
1	D/R 1	INH	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	--

Dual rate — Model1 / Condit1 — 6.7V

The ON/OFF switch of dual rate is chosen.

Activate the D/R function by tapping the [INH].

When the function select button is tapped, a selection screen appears. Select the function you want to set at the selection screen.

Rate, EXP settings are on AFR function

● **Setting rudder angle, EXP**
On this D/R screen you can set functions and switchover switches. Rudder angle (rate) and EXP settings are performed on the AFR screen when the D/R switch is ON.

Program. mixes

Program mixing which can be freely customized. Up to 10 mixings can be used for each condition. [All model types]

Programmable mixing may be used to correct undesired tendencies of the aircraft, and it may also be used for unusual control configurations. Mixing means that the motion of a command channel, called the "master," is added to the motion of the mixed channel, called "slave."

You may choose to have the Masters trim added to the Slave channel response, if you desire ("Trim" setting). The mixing curve can be changed so that the undesired tendencies can be corrected effectively by setting the EXP1/EXP2/Point modes.

Offset-type mixing applies a fixed offset or preset to the programmed channel servo operation and may control up to four circuits simultaneously.

The Programmable mixing includes a powerful link function, which allows Programmable mixing to be linked with the special mixing functions, or with other programmable mixing functions. The link function can be set up for Master and Slave channel individually.

● Tap the [Prog. mixes] button in the Model menu to call the setup screen shown below.

●Return to Model menu

● **Group/single mode switch (Gr./Sngl) (For more information, see the description at the back of this manual.)**

After this function is activated, the master and slave function names (or offset mixing) are displayed.

Mixing/Offset mode switch

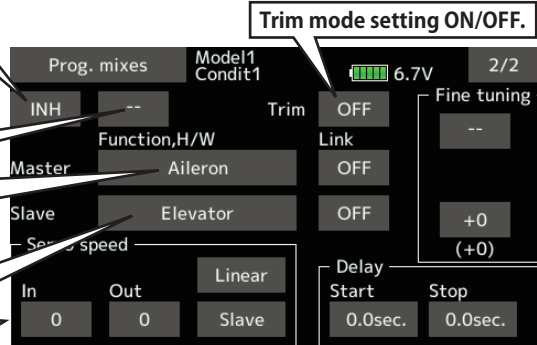● **Operation curve setting (For a description of the setting method, see the description at the back of this manual.)**

Activate the function by tapping the [INH].

The ON/OFF switch of prog. mixes is chosen.

Master function (or Stick, Switch, Dial) is chosen.

Slave function is chosen.

Servo speed setting

Trim mode setting ON/OFF.

Fine tuning trim setting

The on time (start/stop time) can be set up to 4 seconds. It is useful for landing gear control of the jet or scale plane, etc.

< **Model menu (Common Functions)** > **125**

Setting methods

●Group/single mode selection

Activating functions for only the selected conditions:

1. Tap the [Gr] button and switch to the [Sngl] mode.

   *Each time the button is tapped, it toggles between the Gr and Sngl modes.

●Mixing mode selection

Using the offset mode:

1. Tap the Mode button and switch to the Offset mode.

   *Each time the button is tapped, it toggles between the Mixing and Offset modes.

●Mixing setup screen selection

1. Tap the button of the mixing you want to set. The mixing setup screen is displayed. Activate the function.

2. Activate the function by tapping the [INH] button.

   *Each time this button is tapped, it toggles between [INH] and [ON/OFF].

●Mixing ON/OFF switch setting and ON/OFF direction switching

   *An ON/OFF switch is not set even when the function is activated.

1. When you want to turn mixing ON/OFF by switch, tap the [--] button to call the <Switch> screen and then select the switch and its ON direction.

   *For a description of the selection method, see [Switch setting method] at the back of this manual.

●Master channel setting (except offset type mixing)

1. Tap the Master button to call the Function menu and select the master channel.

2. To link this mixing with other mixing, tap the "Link" button.

   *Each time the button is tapped, it toggles between mixing direction + and - and "OFF" (no link).

   *Master channel control can be set to stick, VR, and other simple travels which do not include End point, AFR, D/R, mixing setting, etc. In this case, display the <Function,H/W> screen by tapping the [Stick, Switch, Dial] button and then select master channel side control.

●Slave channel setting

1. Tap the Slave button to call the Function menu and select the slave channel.

2. To link this mixing with other mixing, tap the "Link" button.

   *Each time the button is pressed, it toggles between mixing direction + and - and "OFF" (no link).

●Trim mode ON/OFF setting

1. To turn the trim mode ON/OFF, tap the Trim button on the screen.

   *When mixing includes master side trim, set the Trim button to [ON]. When mixing does not include master side trim, set the Trim button to [OFF].

   *Each time this button is pressed, it toggles between [ON] and [OFF].

   *This is effective when the master channel is set by Function.

●Mixing curve type selection

1. Tap the curve type selection button of the curve type you want to use to display the selection screen. Then, select the curve you want to use.

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

●Fine tuning trim setting

1. When using the curve fine tuning function, tap the [--] button of the Fine Tuning item to call the <Switch> screen and then select the lever, VR, etc. you want to use.

   *For a description of the fine tuning trim setting method, see the description at the back of this manual.

●Servo speed setting

1. When setting the servo speed, tap the speed button. The Servo speed setup screen is displayed.

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

   *Offset mixing changes the speed. Use the Speed In and Speed Out buttons to readjust the speed.

   The mixing switch can set a delay with a different rate at starting and stopping.

   *This function is inactive when a mixing switch is not set.