Usage of each feature

AUX | AUX

- AUX is a feature to set the performance of AUX1 and AUX2 (3ch/4ch). You can choose from STEP AUX (STEP), POINT AUX (POINT), 4WS (4-Wheel Steering: Coordinate Phase, Opposite Phase), MOA (Motor On Axle), AUX-MIX (AUX Mixing: ST-AUX/TH-AUX) and CODE5/CODE10 (Code Communication).
*Setting of AUX TYPE is done in the System Menu. Make a setting according to the purpose of the use.

AUX MIXING [AUX-MIX] | AUX

- Setting AUX Mixing allows you to mix from the steering to AUX and from the throttle to AUX.
*Set AUX TYPE and MODE for operation to use for [AUX TYPE] of [SYSTEM].
- At factory, the AUX feature is set to Step AUX.

1) Select [AUX] with the multi-selector and define with the Enter operation.

2) Setting Mixing Rate
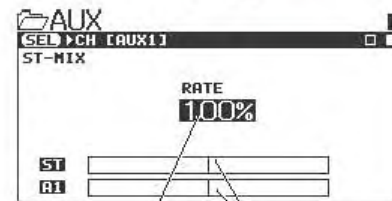   Set the Mixing Rate with the multi-selector.

   oSetting range: 0~100%

   oDefault: 100%

* Set to [AUX MIX] with [AUX TYPE] of [SYSTEM] and set the Mixing performance with [MODE] according to the usage.
* Assign the features of the Mixing Rate to Trim or the switch with Key Assignments, or operate with the multi-selector.

ENTER ⬇ ⬆ BACK

Servo Monitor
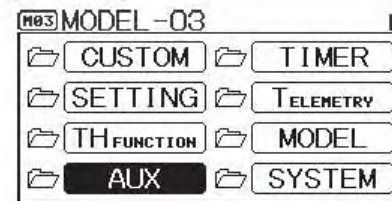
Setting Mixing Rate

CODE AUX | AUX

- Code AUX (CODE AUX) is a feature to perform code communication by assigning a setting value to each code of CODE5 and CODE10 (CODE5/5 code, CODE10/10 code). It is an extension feature to change the setting of speed controller (SUPER VORTEX series and SV-PLUS series) and the Gyro System (SGS-01C/SGS-01D) that are compatible to CODE AUX.
- You can set 2 types of Code AUX1 and CODE AUX2.
*Setting of CODE is done by setting [TYPE] of [SYSTEM] menu. By setting [MODE], the display is changed according to each equipment. When setting [MODE] to [USER], each code display allows the user to set.
*When using an AUX channel as CODE AUX, make sure to set the response mode of A1/A2 that are set for BIND to [SHR] (See P.49, 50).
*When using CODE AUX, do not connect the servo to CH3 and CH4 of the receiver to be used.
*When using, assign the features to Dial or Trim with the Key assignments or operate with the multi-selector.
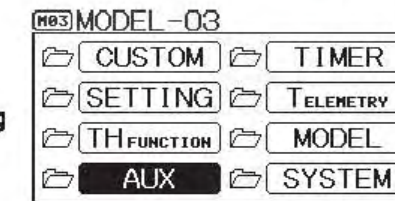
1) Select [AUX] with the multi-selector and define with the Enter operation.

2) Setting Code AUX
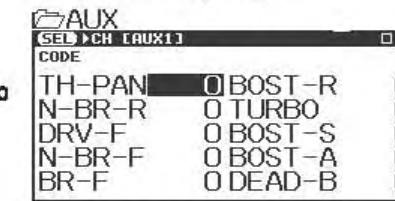   Select [CODE AUX] to change setting and adjust the setting value with the multi-selector.

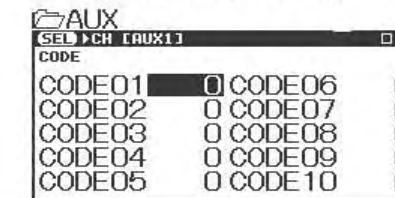   oSetting range: -100~100%

   oDefault: 0%

*When AUX TYPE is set to CODE5/CODE10, the following is displayed according to the setting of CODE AUX in the servo monitor display of the top screen.

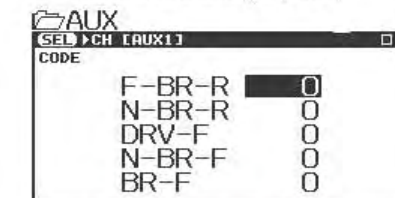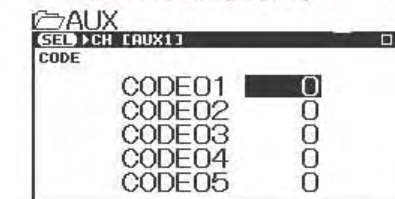ENTER ⬇ ⬆ BACK

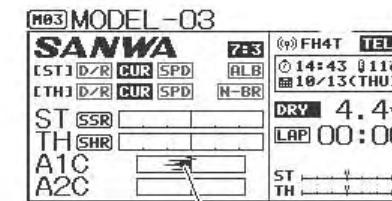When TYPE setting is [CODE10] and MODE setting is [SV-STK]
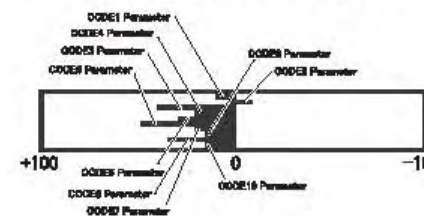

When MODE setting is [USER]

When TYPE setting is [CODE5] and MODE setting is [SVZ]

When MODE setting is [USER]

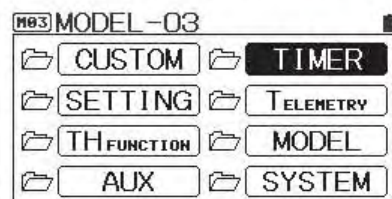AUX TYPE = When setting is CODE AUX, bar display

Usage of each feature

TIMER

- It has three timer features including Lap Timer, Interval Timer and Down Timer.
- When selecting a timer and operate the Select button, you can toggle between the timer screen and the setting screen.
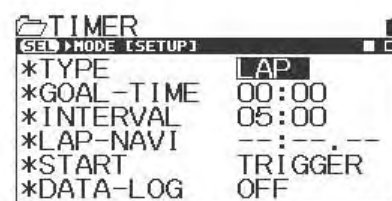* When a timer is activated, X Illumination and Function LED flash.

```
M03 MODEL-03
  CUSTOM      TIMER
  SETTING     TELEMETRY
  THFUNCTION  MODEL
  AUX         SYSTEM
```

ENTER ↓ ⇧ BACK

```
 TIMER
SEL ▶MODE [LAP TIMER]
(L000) 00:00.00
*INTERVAL 05:00
*LAP---    --:--.--
*LAP---    --:--.--
*BEST LAP --:--.--
```
<LAP TIMER Screen>

- You can check the lap time measured on the LAP TIMER screen.
- When Enter is being operated while Lap Timer is activated/not activated, the screen is changed to the Lap Time display. You can check each lap time with the multi-selector.

Select Button ⟺

```
 TIMER
SEL ▶MODE [SETUP]
*TYPE        LAP
*GOAL-TIME   00:00
*INTERVAL    05:00
*LAP-NAVI    --:--.--
*START       TRIGGER
*DATA-LOG    OFF
```
<SETUP Screen>

SETUP   TIMER

- Make all settings of the timers with the Setup Menu.

1) Setting TYPE
Select [TYPE] with the multi-selector to do setting.

○Setting range: LAP/INT/DOWN

○Default: LAP

- LAP: Possible to measure and record each lap up to 999 laps (for all models)
- INT: The timer is activated at the set time.
- DOWN: It can be a guideline for calculating running time and the fuel cost of a GP car.

2) Setting GOAL TIME
By setting a goal time, the Alarm is activated.

○Setting range: 00: 00 ~ 99: 59 (00: 01 unit)

○Default: 5: 00

3) Setting INTERVAL
The Alarm is activated at the set time (It tells you the lap time).

○Setting range: 00: 00 ~ 99: 59 (00: 01 unit)
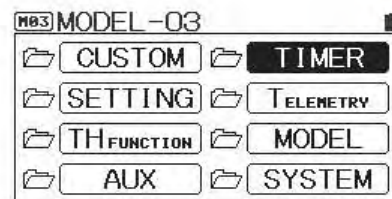
○Default: 01: 00

4) Setting LAP NAVI
It activates the alarm at the set time at the time of running and uses it as a guideline for the goal time.
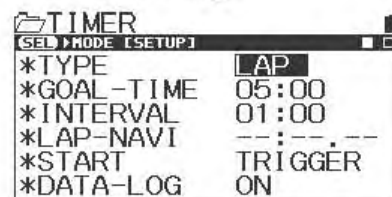
○Setting range: 00:00, 01s~99:59, 99

○Default: --:--, --

```
M03 MODEL-03
  CUSTOM      TIMER
  SETTING     TELEMETRY
  THFUNCTION  MODEL
  AUX         SYSTEM
```

ENTER ↓ ⇧ BACK

```
 TIMER
SEL ▶MODE [LAP TIMER]
(L000) 00:00.00
*INTERVAL 05:00
*LAP---    --:--.--
*LAP---    --:--.--
*BEST LAP --:--.--
```

Select Button ⇓

```
 TIMER
SEL ▶MODE [SETUP]
*TYPE        LAP
*GOAL-TIME   05:00
*INTERVAL    01:00
*LAP-NAVI    --:--.--
*START       TRIGGER
*DATA-LOG    ON
```

*LAP NAVI will not start at 00 : 00. 00.

---

5) Setting START
Set the Timer Start from the Trigger Interlock/Switch/Random.

○Setting range: TRIGGER/SW/RANDOM
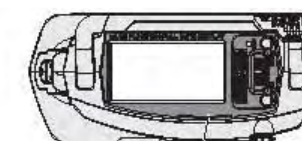
○Default: TRIGGER

6) Setting DATA-LOG
It sets Telemetry Data Log (record) along with the timer.
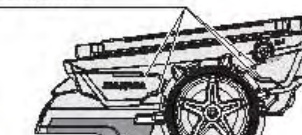
○Setting range: OFF/ON

○Default: OFF

*Log starts along with the timer feature.

Function LED

X Illumination

LED flashes while the timer is activated.

LAP TIMER   TIMER

- You can measure and record each lap up to 999 laps (works for all models).
- Pre Alarm (PRE-ALM) is installed and the alarm goes off before the goal.

1) Select [TIMER] with the multi-selector and determine with the Enter operation.

2) Starting the Timer
As a default, the timer switch is set to SW1. By holding SW1, the timer becomes a standby state for starting and by either pressing SW1 again or operating the throttle trigger, measuring starts.

3) Every time you operate SW1, lap time is measured.
The switch does not work for 3 seconds after operating SW1.

4) Completing measuring
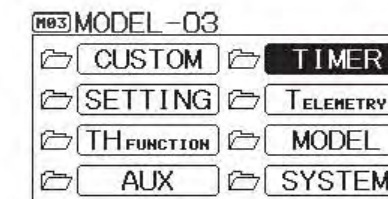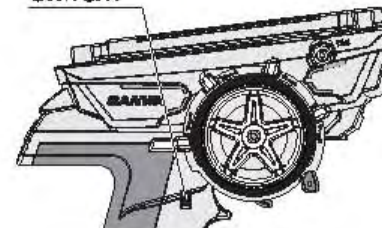By holding SW1, measuring will be completed.

*You can check the measured lap time on the LAP TIMER screen. When Enter is being operated while the lap timer is activated/stopped on the LAP TIMER screen, the screen is changed to the lap time display. You can check each lap time with the multi-selector operation (not possible on the SETUP screen).
*When turning the power switch off while the timer is activated, the timer will be reset.
*When the timer is set to SW1/SW2, the timer will be in the standby mode by holding the switch even on a screen other than the setting screen.

SWITCH1

```
M03 MODEL-03
  CUSTOM      TIMER
  SETTING     TELEMETRY
  THFUNCTION  MODEL
  AUX         SYSTEM
```

ENTER ↓ ⇧ BACK

```
 TIMER
SEL ▶MODE [LAP TIMER]
(L000) 00:00.00
*INTERVAL 05:00
*LAP---    --:--.--
*LAP---    --:--.--
*BEST LAP --:--.--
```

ENTER ↓ ⇧ BACK

```
 TIMER
SEL ▶MODE [LAP TIMER]
LAP-LIST        00:00.00
 TOTAL        --:--.--
 BEST         --:--.--
 AVERAGE      --:--.--
 LAP001       --:--.--
 LAP002       --:--.--
```

Usage of each feature

Interval Timer [INT TIMER]

TIMER

- It activates the alarm at the time set at the beginning of running and uses it as the guideline for the goal time.

1) Select [TIMER] with the multi-selector and determine with the Enter operation.

2) Setting the Type [TYPE]
   Operate the Select button and select [INT] with [TYPE].

3) Setting Interval (INTERVAL)
   Set the Interval Timer with [INTERVAL].

4) Starting Interval Timer
   As a default, the timer switch is set to SW1.
   When holing SW1, the timer will be in the standby mode and measuring will start when you press SW1 again or operate the trigger.

5) Every time you operate SW1, the Interval Timer will be reset

6) Completing measuring
   By holding SW1, measuring will be completed.

*When turning the power switch off while the timer is activated, the timer will be reset.
*When the timer is set to SW1/SW2, the timer will be in the standby mode by holding the switch even on a screen other than the setting screen.
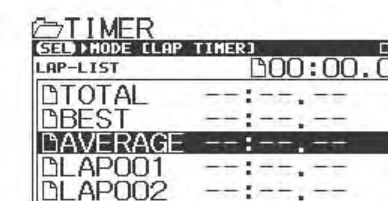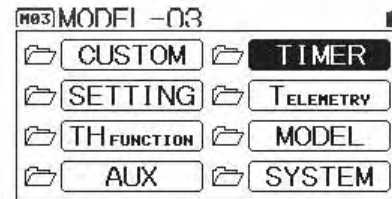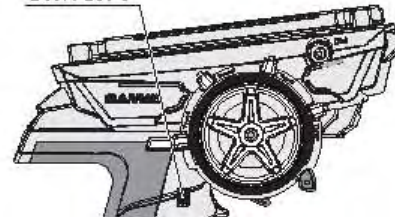
```
M03 MODEL-03
 CUSTOM      TIMER
 SETTING     TELEMETRY
 TH FUNCTION MODEL
 AUX         SYSTEM
```

ENTER ↓ ↑ BACK

```
TIMER
SEL >MODE [SETUP]
*TYPE        INT
*GOAL-TIME   05:00
*INTERVAL    01:00
*LAP-NAVI    --:--.--
*START       TRIGGER
*DATA-LOG    ON
```

SWITCH 1

DOWN TIMER

TIMER

- It can be a guideline for calculating running time of an electric RC car and the fuel cost of an engine RC car.
- You can set for per second up to 99 : 59.
- When the timer switches to the Up Timer after the Down Timer ends, you can check the lap time after the end.

1) Select [TIMER] with the multi-selector and determine with the Enter operation.

2) Setting the Type [TYPE]
   Operate the Select button and select [DOWN] with [TYPE].

* Set the Down Timer with [GOAL-TIME] of SETUP.

3) Starting Down Timer
   As a default, the timer switch is set to SW1.
   When holing SW1, the timer will be in the standby mode and measuring will start when you press SW1 again or operate the throttle trigger.

4) Every time you operate SW1, the Down Timer will be reset.

5) Completing measuring
   By holding SW1, measuring will be completed.

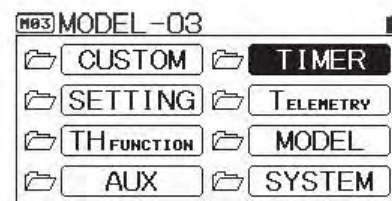*When turning the power switch off while the timer is activated, the timer will be reset.
*When the timer is set to SW1, the timer will be in the standby mode by holding the switch even on a screen other than the setting screen.

```
M03 MODEL-03
 CUSTOM      TIMER
 SETTING     TELEMETRY
 TH FUNCTION MODEL
 AUX         SYSTEM
```
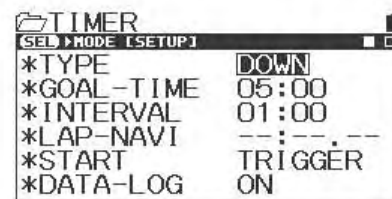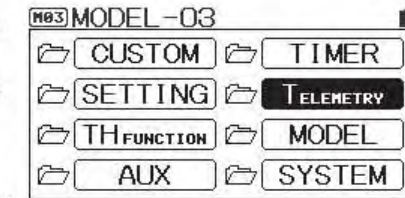
ENTER ↓ ↑ BACK

```
TIMER
SEL >MODE [SETUP]
*TYPE        DOWN
*GOAL-TIME   05:00
*INTERVAL    01:00
*LAP-NAVI    --:--.--
*START       TRIGGER
*DATA-LOG    ON
```
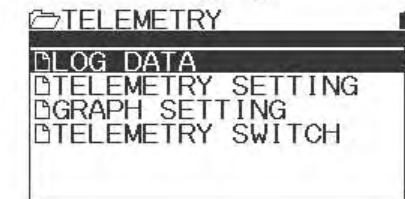
TELEMETRY

- A menu for setting Telemetry-related LOG DATA, TELEMETRY SETTING, GRAPH SETTING and TELEMETRY SWITCH.
- To use the Telemetry feature, you can make it compatible by using a compatible receiver or sensors, SUPER VORTEX series or SV-PLUS series.
- With Telemetry, you can check the data of 2 temperature systems, battery voltage and number of rotations with the transmitter.

• LOG DATA: Menu for controlling log data that is being recorded

• TELEMETRY SETTING: Various settings of Telemetry features

• GRAPH SETTING: Setting for graph display

• TELEMETRY SWITCH: Various settings of the switch to activate based on the Telemetry data.

```
M03 MODEL-03
 CUSTOM      TIMER
 SETTING     TELEMETRY
 TH FUNCTION MODEL
 AUX         SYSTEM
```

ENTER ↓ ↑ BACK

```
TELEMETRY
LOG DATA
TELEMETRY SETTING
GRAPH SETTING
TELEMETRY SWITCH
```
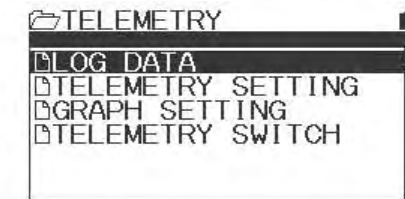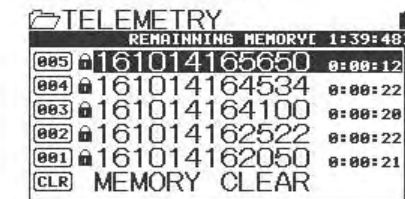
LOG DATA

TELEMETRY

- A feature to control the log data for creating a graph, saving onto an Micro SD card and deleting log data by reading the recorded log data.

1) Select [LOGGER] with the multi-selector and determine with the Enter operation.

2) Select [LOG DATA] and determine with the Enter operation.

3) Select the saved log data with the multi-selector.
   When Enter is being operated the menu is displayed.
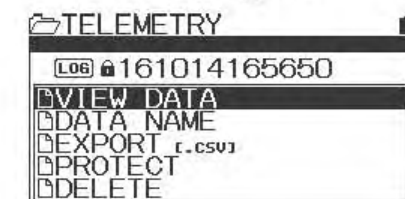   Select the menu and determine with the Enter operation.

• VIEW DATA: Reads the recorded log data and creates a graph.
• DATA NAME: Edits the file names of the log data.
• EXPORT [.CSV]: Convers (the data?) to CVS format and saves onto a micro SD card.
• PROJECT: Protects and saves the log data.
• DELETE: Deletes the log data.

```
TELEMETRY
LOG DATA
TELEMETRY SETTING
GRAPH SETTING
TELEMETRY SWITCH
```

ENTER ↓ ↑ BACK

```
TELEMETRY
REMAINING MEMORY 1:39:48
005 161014165650  0:00:12
004 161014164534  0:00:22
003 161014164100  0:00:20
002 161014162522  0:00:22
001 161014162050  0:00:21
CLR  MEMORY CLEAR
```

ENTER ↓ ↑ BACK

```
TELEMETRY
LOG 161014165650
VIEW DATA
DATA NAME
EXPORT [.CSV]
PROTECT
DELETE
```
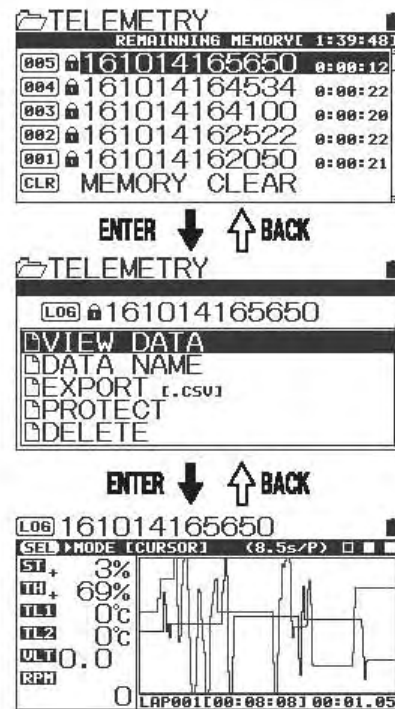
Usage of each feature

VIEW DATA | TELEMETRY
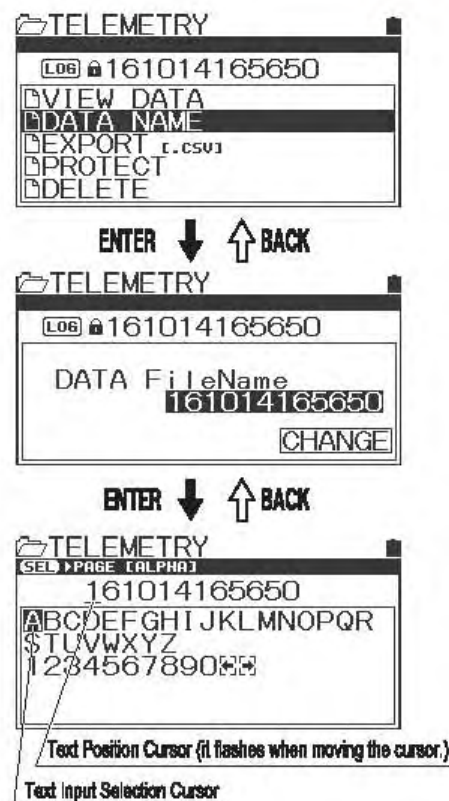
- A menu to read the recorded log data and creates a graph.
1) Select [LOG DATA] with the multi-selector and determine with the Enter operation.

2) Select LOG DATA to create a graph and determine with the Enter operation.

3) By selecting the log data, a menu will be displayed.
By selecting [VIEW DATA], the log data is displayed as a graph.

4) Setting the Display Size
When Enter is being operated while a graph is displayed, it sets the size of the graph to display.

○Setting range: 1/1 (8.5s/PAGE):1 page/8.5 seconds
1/2 (17s/PAGE): 1 page/17 seconds
1/4(34s/PAGE): 1 page/34 seconds
1/8 (68s/PAGE): 1 page/68 seconds

○Default: 1/1(8.5s/PAGE)

5) Methods to move a page
When operating the Select button while a graph is displayed, you can set the method to move the displayed page.

○Setting range: Cursor/Page/Lap

○Default : Cursor

*When Enter is being operated on the screen, which a graph is displayed on, it moves to the lap list.

```
📁TELEMETRY
  REMAINING MEMORY[ 1:39:48]
005 🔒161014165650  0:00:12
004 🔒161014164534  0:00:22
003 🔒161014164100  0:00:20
002 🔒161014162522  0:00:22
001 🔒161014162050  0:00:21
CLR  MEMORY  CLEAR
```

ENTER ↓ ⬆BACK

```
📁TELEMETRY
  LOG 🔒161014165650
 � VIEW DATA
 � DATA NAME
 � EXPORT [.CSV]
 � PROTECT
 � DELETE
```

ENTER ↓ ⬆BACK

```
LOG 161014165650
SEL ▶MODE [CURSOR]  (8.5s/P) □ ■
ST   3%
TH  69%
TL1  0℃
TL2  0℃
VLT 0.0
RPM    0  LAP001[00:00:08] 00:01.05
```

DATA NAME | TELEMETRY

- A feature to change the file names of the selected log data.

- Only alphabets and numbers can be used for file names.

1) Select [LOG DATA] with the multi-selector and determine with the Enter operation.

2) Select LOG DATA to change the file name and determine with the Enter operation.

3) Setting the Data Name
With the multi-selector, move the cursor "___" to the position where texts are entered. Once the position is set, determine the cursor position with the Enter operation.

*Once the cursor position is set, it moves to the selection of text input.

4) Determining Texts to enter
Select texts to enter with the multi-selector.
Once you have determined which texts to enter, input with the Enter operation.

○Setting range: A~Z, a~z, 0~9, Symbols

*When changing texts that have been entered or moving the cursor of text input, press the back button and cancel the action.
*To switch between alphabets and numbers, use the Select button.
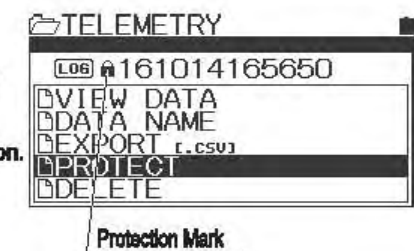
```
📁TELEMETRY
  LOG 🔒161014165650
 � VIEW DATA
 � DATA NAME
 � EXPORT [.CSV]
 � PROTECT
 � DELETE
```

ENTER ↓ ⬆BACK

```
📁TELEMETRY
  LOG 🔒161014165650

  DATA FileName
       161014165650
              CHANGE
```

ENTER ↓ ⬆BACK

```
📁TELEMETRY
SEL ▶PAGE [ALPHA]
       161014165650
ABCDEFGHIJKLMNOPQR
$TUVWXYZ
1234567890⬚⬚
```

Text Position Cursor (it flashes when moving the cursor.)

Text Input Selection Cursor

EXPORT[.CSV] | TELEMETRY

- A feature to convert the selected log data to a graph with PC (Personal Computer) software such as a spreadsheet software.
- Please note that data converted by the Export feature cannot be converted to a graph with the transmitter.
- When using the Export feature, a micro SD card is necessary.

1) Select [LOG DATA] with the multi-selector and determine with the Enter operation.

2) Select LOG DATA to export and determine with the Enter operation.
*With the Enter operation, it moves to CSV file name (Changing File Name).

3) Setting CSV File Name
When changing the format, you can change the File Name also.
Text input is the same as the data name. Refer to the data name input.

4) Conversion to CSV File Format
Move the cursor to [SAVE] and convert with the Enter operation.

*You can cancel the conversion operation during converting data with the back operation.
*Move the data to the PC via a micro SD card after converting the data and display a graph.
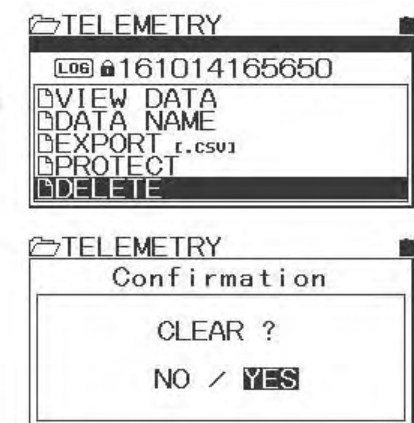
```
📁TELEMETRY
  LOG 🔒161014165650
 � VIEW DATA
 � DATA NAME
 ▣ EXPORT [.CSV]
 � PROTECT
 � DELETE
```

ENTER ↓ ⬆BACK

```
📁TELEMETRY
  LOG 🔒161014165650

  CSV FileName
       161014165650
              SAVE
```

ENTER ↓

```
📁TELEMETRY



  COMPLETE
```

PROTECT | TELEMETRY

- A feature to protect the log data from accidental deletion.

1) Select [LOG DATA] with the multi-selector and determine with the Enter operation.

2) Select LOG DATA to protect and determine with the Enter operation.

* With every Enter operation, it toggles Effective/Non-effective of protection.

```
📁TELEMETRY
  LOG 🔒161014165650
 � VIEW DATA
 � DATA NAME
 � EXPORT [.CSV]
 ▣ PROTECT
 � DELETE
```

Protection Mark

DELETE | TELEMETRY

- A feature to delete the log data.
- Protected data cannot be deleted.

1) Select [LOG DATA] with the multi-selector and determine with the Enter operation.

2) Select log data to delete and determine with the Enter operation.
The confirmation screen will be displayed. Operate the following screen display.

```
📁TELEMETRY
  LOG 🔒161014165650
 � VIEW DATA
 � DATA NAME
 � EXPORT [.CSV]
 ▣ PROTECT
 ▣ DELETE
```

```
📁TELEMETRY
   Confirmation

   CLEAR ?

   NO  /  YES
```

Usage of each feature

LOGGER

TELEMETRY SETTING | TELEMETRY

●Set each feature of Telemetry. Select the feature to set with the select button.

•TLM1/TLM2: Setting the Telemetry Data of Temperature/Speed
[NAME] Up to 3 characters of data names of TLM1/TLM2 are changeable.
[UNIT] Setting the Temperature and changing the Speed display.
(C/ F/KM [Speed unit is changeable])
[MAX] Setting the graph's maximum value when displaying the data as a graph.
[ALERT] Activates the alarm at the set temperature.
(*It cannot set for displaying the speed.)
[MIN] Setting the graph's minimum value when displaying the data as a graph.

•RPM: Setting the Speed figured from the number of rotation data
[UNIT] Switching the number of rotation and the speed display
(RPM, km/h, mph)
[MAX SCALE] Setting the graph's minimum value when displaying the data as a graph.

•RATIO: When setting RATIO RPM sensor in the subtracted position, you can display the number of rotations of the motor and e ngine after calculating backward by setting RATIO.

　　　oSetting range: 00.001～64.999

　　　oDefault:　　01.000

•10COUNT DIST: When setting to [10 Count Distance] Speed display, the RPM sensor measures the moving distance that has been detected 10 times, calculate the speed and displays it by setting the value.

　　　oSetting range: 1cm～255cm

　　　oDefault:　　30cm

•VOLT: Alarm is activated at the set voltage corresponding to the Telemetry Data and LED flashes.
[MAX VOLT] Setting the maximum temperature

　　　oSetting range: 3.0V～9.0V

　　　oDefault:　　9.0V

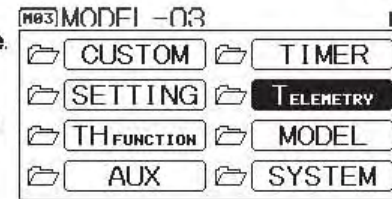[ALERT VOLT] Setting the Alarm Activation Voltage

　　　oSetting range: 3.0V～9.0V

　　　oDefault:　　3.8V
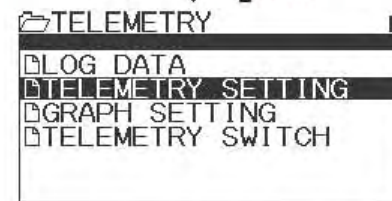
1) Select [LOGGER] with the multi-selector and determine with the Enter operation.

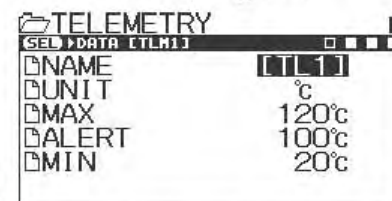2) Select [TELEMETRY SETTING] with the multi-selector and determine with the Enter operation.

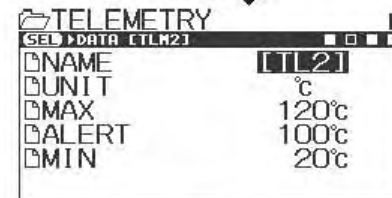3) Select the features to set with the Select button and adjust various settings with the multi-selector.

M03 MODEL-03

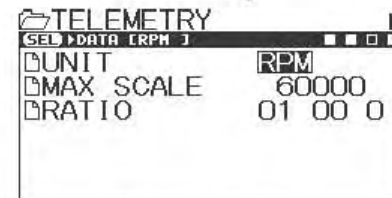| ⌂ CUSTOM | ⌂ TIMER |
⌂ SETTING	⌂ TELEMETRY
⌂ TH FUNCTION	⌂ MODEL
⌂ AUX	⌂ SYSTEM

ENTER ↓　↑ BACK

⌂TELEMETRY
▢LOG DATA
▢TELEMETRY SETTING
▢GRAPH SETTING
▢TELEMETRY SWITCH

ENTER ↓　↑ BACK

⌂TELEMETRY
SEL ▶DATA [TLM1]
▢NAME　　　[TL1]
▢UNIT　　　　℃
▢MAX　　　120℃
▢ALERT　　100℃
▢MIN　　　20℃

SELECT BUTTON ⇩

⌂TELEMETRY
SEL ▶DATA [TLM2]
▢NAME　　　[TL2]
▢UNIT　　　　℃
▢MAX　　　120℃
▢ALERT　　100℃
▢MIN　　　20℃

SELECT BUTTON ⇩

⌂TELEMETRY
SEL ▶DATA [RPM]
▢UNIT　　　RPM
▢MAX SCALE　60000
▢RATIO　　01 00 0

SELECT BUTTON ⇩

⌂TELEMETRY
SEL ▶DATA [VOLT]
▢MAX VOLT　9.0v
▢ALERT VOLT　3.8v
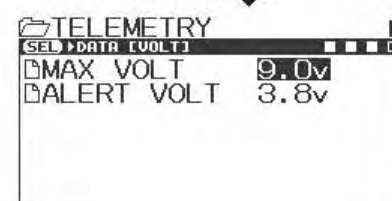
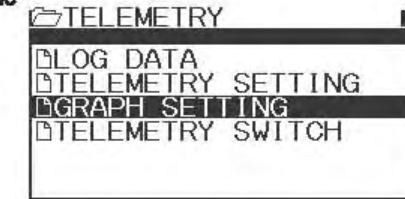## GRAPH SETTING | TELEMETRY

●A feature to select 3 items to be displayed in a graph when displaying Telemetry data as a graph.
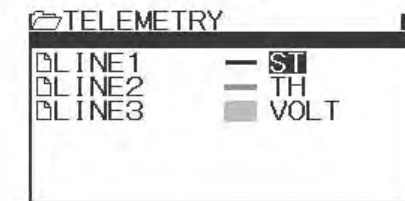1) Select [TELEMETRY] with the multi-selector and determine with the Enter operation.

2) Setting GRAPH SETTING
Select [GRAPH SETTING] with the multi-selector and determine with the Enter operation.

　oSetting range: TL1/TL2/RPM/VOLT/ST/TH
　　TLM1/2: Telemetry Data
　　RPM: RMP: Rotation Number Data
　　VOLT: Receiver Input Voltage

　oDefault: LINE1: ST (Steering Data)
　　　　　LINE2: TH (Throttle Data)
　　　　　LINE3: VOLT (Receiver Input Voltage)

*In a graph, LINE1 is displayed in black, LINE2 in dark grey and LINE3 in light grey.
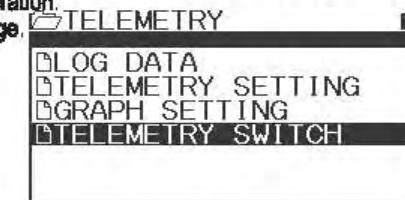
⌂TELEMETRY
▢LOG DATA
▢TELEMETRY SETTING
▢GRAPH SETTING
▢TELEMETRY SWITCH

ENTER ↓　↑ BACK

⌂TELEMETRY
▢LINE1　　— ST
▢LINE2　　— TH
▢LINE3　　▢ VOLT

TELEMETRY SWITCH | TELEMETRY

●A feature that allows you to activate the switch with the Telemetry data based on the change of the same data.
• TRIGGER: Selects the data that will be the source of the switch operation.
• BORDER: A setting for operation standards of temperature or voltage.
• FUNCTION: Assigns functions.

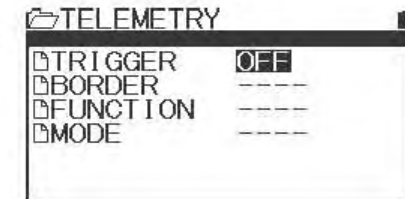1) Select [TELEMETRY] with the multi-selector and determine with the Enter operation.

2) Setting TELEMETRY SWITCH
Select [TELEMETRY SWITCH] with the multi-selector and determine with the Enter operation.

　oSetting range: TRIGGER: OFF/TL1/TL2/VOLT
　　　　BORDER: When setting temperature, 0 ~ 150C°
　　　　　　When setting voltage, 3.0 ~ 9.0V
　　　　FUNCTION: TIMER ON/OFF
　　　　　　　RACING MODE
　　　　　　　TH RATE
　　　　MODE: TOGGLE/ONE SHOT

　oDefault:　TRIGGER: OFF
　　　　　BORDER: ———(OFF)
　　　　　FUNCTION: ———(OFF)
　　　　　MODE: ———(OFF)

⌂TELEMETRY
▢LOG DATA
▢TELEMETRY SETTING
▢GRAPH SETTING
▢TELEMETRY SWITCH

ENTER ↓　↑ BACK

⌂TELEMETRY
▢TRIGGER　OFF
▢BORDER　————
▢FUNCTION　————
▢MODE　————

Usage of each feature

Model Menu | MODEL

● You can set the features about Model Select, Model Name, Model Copy and Model Clear.
● Installed with high capacity EEPROM and it can memorize data for 20 models of M01 ~ M20.

MODEL SELECT
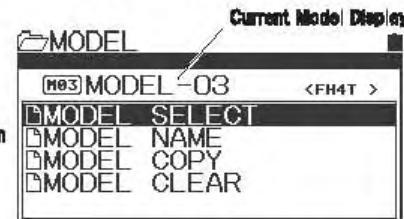
● You can call model data of memorized M01 ~ M20 easily.

1) Select [MODEL] with the multi-selector and determine with the Enter operation.

2) Setting Model Select (MODEL SELECT)
   Select [MODEL SELECT] with the multi-selector and determine with the Enter operation.

3) Selecting Model
   Select Model to call with the multi-selector.

   ○ Setting range: M01~M20

4) When moving the cursor to the model to call and Enter is being operated, a message is displayed on the screen. Follow the display to operate and select a model.
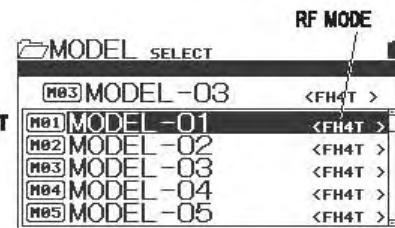

Current Model Display

① Model Screen

RF MODE
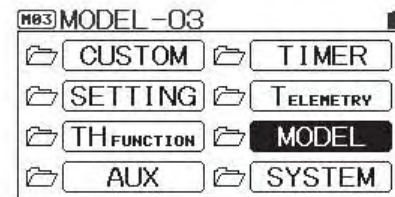
② MODEL SELECT Screen

ENTER ↓   ↓ BACK

Completing Model Selection   ① To the Model Screen

Supplement
● MT-44 has a feature of Direct Model Select. When turning the power switch of the transmitter on while pressing the Back button, it starts from the MODEL SELECT screen so that you can easily call a model to use. (P. 16)
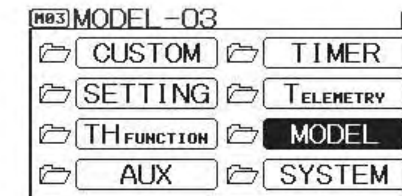

MODEL NAME

● You can register a model name with up to 12 characters of alphabets, numbers, EU Font and symbols for each model.

1) Select [MODEL] with the multi-selector and determine with the Enter operation.

2) Setting Model Name [MODEL NAME]
   Select [MODEL NAME] with the multi-selector and determine with the Enter operation.

3) Setting Model Name
   Move the cursor "_____" with the multi-selector to the position to input texts. Once the position is determined, press the Enter key to determine the cursor position.

4) Select texts to enter with the multi-selector.
   Once the texts to enter are determined, enter with the Enter key. Switching of alphabets/lower case/symbols/EU Font is done by operating the select button.
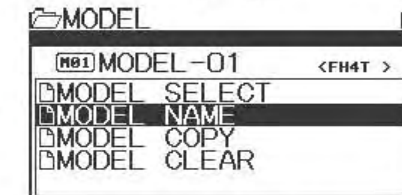   *When changing texts are already entered or when moving the cursor of the text input position, press the Back button to cancel the action.

   ○ Setting range: A~Z, a~z, 0~9, Symbols, Space
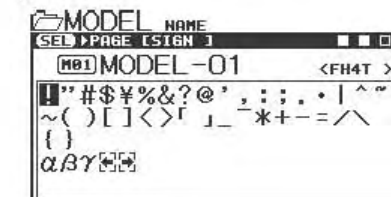
5) Repeat 3) and 4), and enter texts.

Text Input Selection Cursor

Text Position Cursor (it flashes when moving the cursor)

Alphabet lower cases

Symbols

Usage of each feature

Model Menu

MODEL

- You can set the features about Model Select, Model Name, Model Copy and Model Clear.
- Installed with high capacity EEPROM and it can memorize data for 20 models of M01 ~ M20.

[MODEL COPY]

- You can copy a selected model data to another model.

1) Select [MODEL] with the multi-selector and determine with the Enter operation.

2) Setting Model Copy [MODEL COPY]
   Select [MODEL COPY] with the multi-selector and determine with the Enter operation.

3) Selection of a Copy Destination Model
   Select a Copy Destination Model with the multi-selector.

*You can also select the copy source Model.
*For the copy source Model and the Copy destination Model, you can also select a micro SD card. When selecting a micro SD card as a copy source, and when there is no model data, you cannot copy.

4) When Enter is being operated a message is displayed on the screen. Follow the display to operate and complete Model Copy.
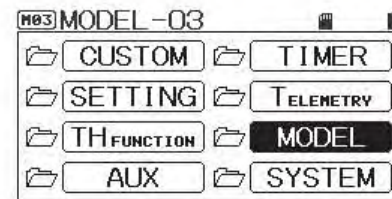
- About the Mode of Model Copy
  - FULL
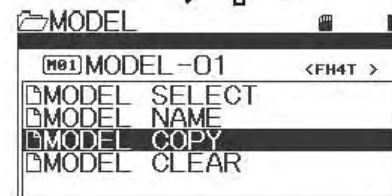   All settings in the Model Data will be copied.

  - SYSTEM
    Select the contents of SYSTEM of Model Data.

  - MODEL
    Setting within Model Data, TH Function
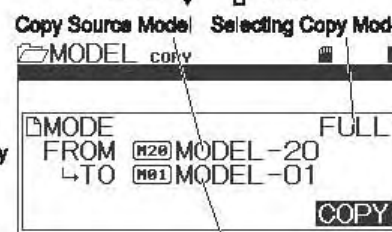   Copying only the setting value of AUX
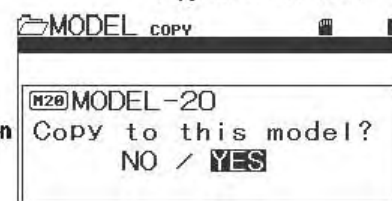
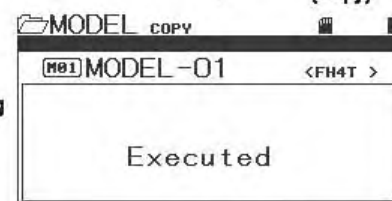Select a mode of Model Copy for your usage.

ENTER / BACK

ENTER / BACK

Copy Source Model   Selecting Copy Mode

① Selecting Copy Destination

Copy Destination Model

② Copy Confirmation Screen

ENTER
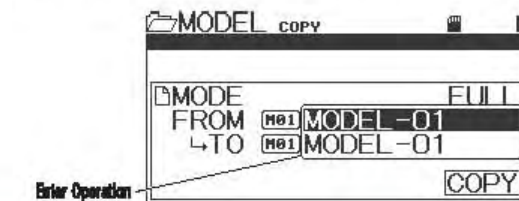- NO → Back to 1
- YES→ Move to 3 (Copy)

③ Copying

Back to 1 after copying

- About copying from a micro SD card
  When performing Model Copy, the main body memory and a micro SD card can select designation of the copy source and the copy destination. When selecting a Model on the copy destination selection screen, you can select with the Select button operation.

1) When a model is selected, designation of the copy source and the copy destination other than the main body memory can also be selected. It is switched by the operation of the select button.

  - MEMORY (Main Body Memory): 20 memory
  - SD CARD (Micro SD Card): 250 memory
  - SD EXP. (Micro SD EXP.): 20 memory

*SD EXP. copies data like the template data.
Download the template data from our HP to use.

Enter Operation

MEMORY

SD CARD

SD EXP.
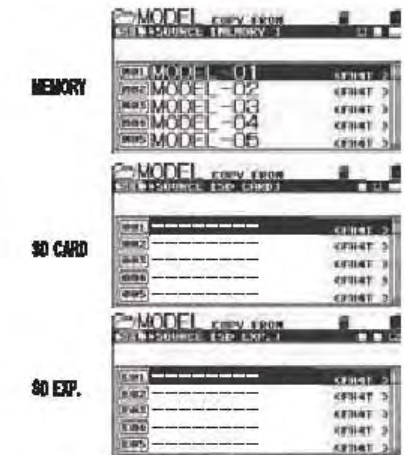
[MODEL CLEAR]

- A feature to clear (Initialize) the setting data of Models.

1) Select [MODEL] with the multi-selector and determine with the Enter operation.

2) Setting Model Clear [MODEL CLEAR]
   Select [MODEL CLEAR] with the multi-selector and determine with the Enter operation.

3) Select Model Data to perform Model Clear.
   You can also select the main body memory and Model Data in the micro SD card by operating the Select button.

4) When Enter is being operated, a message is displayed on the screen. Follow the display to operate and complete Model Clear.
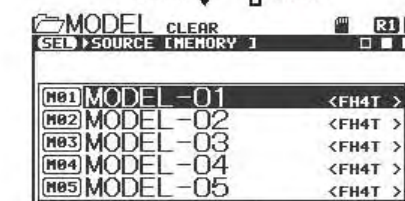
- About the Model Clear Mode
  - FULL
    All settings in the Model Data will be cleared.

  - SYSTEM
    Select in the contents of SYSTEM of Model Data and clearing

  - MODEL
    Setting within Model Data, TH Function
    Clearing only the setting value of AUX
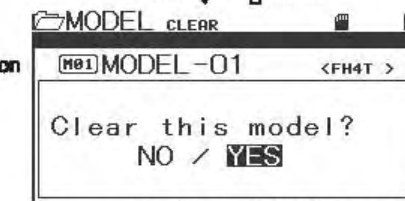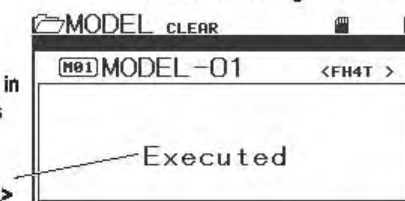
Select for your usage.
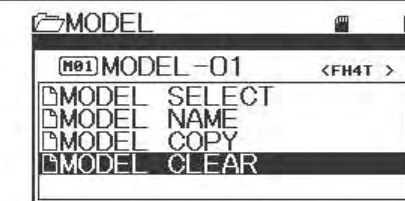
ENTER / BACK

ENTER / BACK

① Confirmation Screen

- NO → Return to MODEL screen
- YES→ Start Clearing   Go to 2

② Clearing in progress

After Rotation Reduction is displayed Return to <MODEL> screen

Usage of each feature

System Menu — SYSTEM

●A feature for setting system of the transmitter, such as Bind (BIND), Key Assignments (KEY ASSIGN), BUZZER (Buzzer), Battery (BATTERY), LCD and CALIBRATION (Calibration).
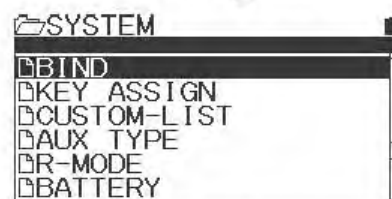
[BIND]

●Select the output system that suits the receiver, set a mode for the servo (analog/digital) and the speed controller to be used and bind the transmitter with the receiver.

1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.
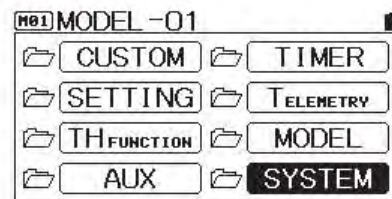
2) Select [BIND] with the multi-selector and determine with the Enter operation.

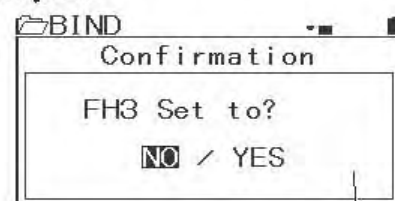3) Setting RF MODE (RE MODE: Signal output system)
   Set the output system with the multi-selector.

   ○ Output System
   • FH4T
     RX-482, RX-481, RX-472, RX-471, RX-47T
     RX-462, RX-461, Mode for SV-PLUS series

   • FH3
   RX-451R, RX-451, RX-381, Mode for RX-380

   ○ Output System

```
[M01] MODEL -01
 [▷ CUSTOM ]  [▷ TIMER ]
 [▷ SETTING ] [▷ TELEMETRY ]
 [▷ TH FUNCTION ] [▷ MODEL ]
 [▷ AUX ]  [▷ SYSTEM ]
```
ENTER ↓ ↑ BACK

```
▷SYSTEM
 ▫BIND
 ▫KEY ASSIGN
 ▫CUSTOM-LIST
 ▫AUX TYPE
 ▫R-MODE
 ▫BATTERY
```
ENTER ↓ ↑ BACK

```
▷BIND
      Confirmation

      FH3 Set to?

      NO / YES
```
Confirmation Screen

*When changing the output system, a message is displayed on the screen. Follow the display to operate.

4) Setting TELEMETRY
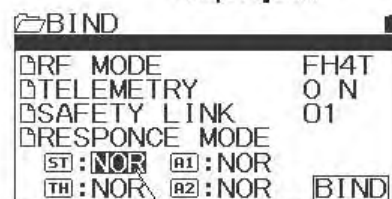   Set TELEMETRY with the multi-selector.
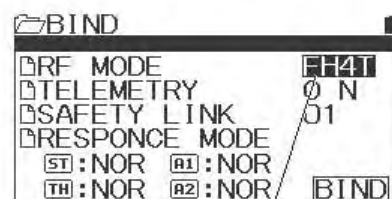
   Setting range: ON/OFF

   ○Default : ON

*Telemetry Compatible Equipment
   •RX-482, RX-472, RX-47T, RX-462, RX-461, SV-PLUS series
*Re-BIND is not necessary even if setting is changed.

5) Setting SAFETY LINK
   Set SAFETY LINK (Safety Link) with the multi-selector.

   ○ Setting range: 01 ~ 50

   ○ Default : 01

*When changing the setting of SAFETY LINK after BINDING, BIND again.
Output System

```
▷BIND
 ▫RF MODE          FH4T
 ▫TELEMETRY        ON
 ▫SAFETY LINK      01
 ▫RESPONCE MODE
   [ST]:NOR  [A1]:NOR
   [TH]:NOR  [A2]:NOR   [BIND]
```
Output System

```
▷BIND
 ▫RF MODE          FH4T
 ▫TELEMETRY        ON
 ▫SAFETY LINK      01
 ▫RESPONCE MODE
   [ST]:NOR  [A1]:NOR
   [TH]:NOR  [A2]:NOR   [BIND]
```
Response Mode

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5) Setting Channel Mode
   Set the response mode for each channel with Up key/Down key.
   • You can the set the response mode for each channel.

   ○Setting range: NOR (Normal)
                    SHR (High Response)
                    SSR (Super Response)

   ○Default :   NOR
*The response mode of SSR is displayed only when FH4T is set.

Important

●Note that, in SHR/SSR mode, an analog servo will not work. If you mistakenly use an analog servo in SHR/SSR mode, it will not operate normally and the servo will be broken. Do not use an analog servo in SHR/SSR mode. For digital servo (SRG, ERB ERS series, Digital ERG series), it can work for either mode of NOR/SHR.
●SSR mode works only for SRG servo, SUPER VORTEX/SV-PLUS series, HV-12 STOCK SPECIAL and HV-01.
●SSR mode cannot be used in MT-44 even if RX-451R is used to BIND on the SHR display. It will act as it is shown in the display.
●In SHR/SSR mode, BL/RACER, BL/FORCE, F2000, F2200, F3000, F3300, SBL-01, 02 and 03CL do not work.
●SV-08, HV-10, HV-12 and F2500 work in NOR/SHR mode.

6) Setting BIND (Bind)
●What is BIND: Each of MT-S transmitters has its own unique ID (solid identification) number. BIND is to let the receiver memorize the ID number. Operation will be possible only between the transmitter and the receiver that completed Binding.

1] When setting in the BIND menu is done, set BIND with the multi-selector.
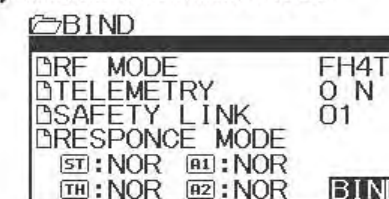
2] Move the cursor to [ENTER] in the BIND menu and operate Enter. The transmitter now is ready for BIND operation.
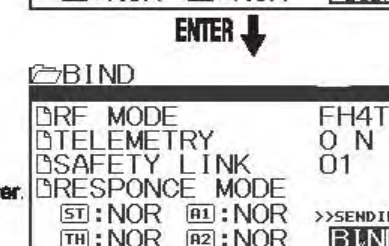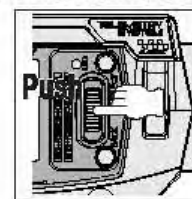
Push

3] Turn the power switch on while holding the BIND button of the receiver.

PUSH !
Holding BIND button of receiver,

Turn Power Switch ON !
Turn on the power switch of reciever/FET ESC.

NOTE) The above picture don't have wiring. However, before binding, please connect servo, FET ESC (without motor), battery.

4] When BINDING is done properly, the LED of the receiver starts flashing slowly at first then it flashes in high speed and the LED goes off. When the LED of the receiver goes off, operate the Enter key of the transmitter to complete BINDING of the transmitter. When BINDING is done properly, the LED of the receiver is lit. When the LED of the receiver is lit, activate the servo to check if BINDING is completed.
*When BINDING cannot be done properly, restart from step 2).

```
▷BIND
 ▫RF MODE          FH4T
 ▫TELEMETRY        ON
 ▫SAFETY LINK      01
 ▫RESPONCE MODE
   [ST]:NOR  [A1]:NOR
   [TH]:NOR  [A2]:NOR   [BIND]
```
ENTER ↓

```
▷BIND
 ▫RF MODE          FH4T
 ▫TELEMETRY        ON
 ▫SAFETY LINK      01
 ▫RESPONCE MODE
   [ST]:NOR  [A1]:NOR
   [TH]:NOR  [A2]:NOR   [BIND]
                       >>SENDING
```
Flashing

Status of the Receiver LED

(Flashing with approximately 0.5-second interval)
☀ —— ☀ —— ☀
⇩
(High-speed flashing)
☀ ☀ ☀ ☀
■ (Light goes off)
⇩ ENTER
☀ BINDING Complete (Light on)

Push

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Usage of each feature

SYSTEM MENU — SYSTEM

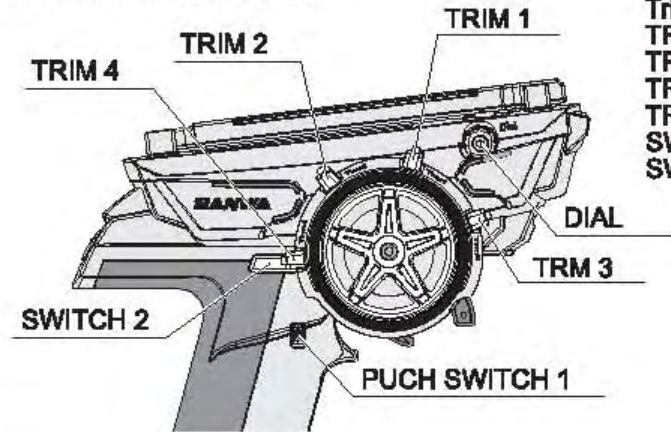● A feature for setting system of the transmitter, such as BIND, KEY ASSIGN, BUZZER, BATTERY, LCD and VR ADJUST (Volume adjustment).

Positions of the Switch and Trim

TRIM 1
TRIM 2
TRIM 4
DIAL
TRM 3
SWITCH 2
PUCH SWITCH 1

Features assgined to the Switch and Trim at the factory
TR1 : Steering Trim(TRM-ST)
TR2 : Throttle Trim(TRM-TH)
TR3 : Dual Rate ST(D/R-ST)
TR4 : Dual Rate BR(D/R-BR)
SW1 : Timer (TIMER)
SW2 : CUSTOM

KEY ASSIGN SWITCH [KEY ASSIGN SW]

● You can assign features to the switches (SW1, SW2, SW3) of the transmitter and toggle ON/OFF of the features during operation.

1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.

2) Select [KEY ASSIGN] with the multi-selector and determine with the Enter operation.

3) Setting the Switch (SW1/SW2)
Operate the Enter with [SW] and set the feature to assign to the switch with Up key/Down key.

○ Setting range:

SWITCH	An assignable feature
SW1 SW2	OFF、ASIST-ST、D/R-ST、D/R-TH、D/R-BR、CUR-ST、CUR-TH、SPD-ST、SPD-TH、ALB、OFFSET、AUX1、AUX2、TIMER、TE-CLR、LOGGER、R-MODE

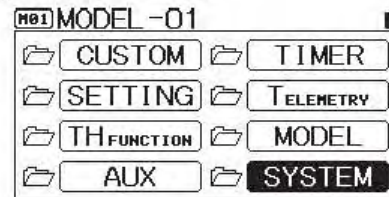○ Default : SW1: TIMER   SW2: OFF
*BY Setting [ASSIST-ST] onto SW1/SW2, you can turn ON/OFF the feature of D/R, SPEED and CURVE that can be set onto the steering.
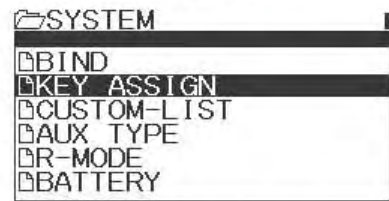
4) Setting Mode
It sets the switch performance but there are cases that youcannot set depending on the feature to assign.
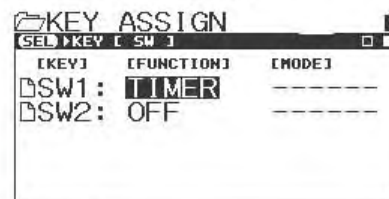
○ Setting range:
TOGGLE (Switching between ON/OFF when pressed every time)
PUSH (ON only during being pressed)

```
M01 MODEL -01
CUSTOM      TIMER
SETTING     TELEMETRY
THFUNCTION  MODEL
AUX         SYSTEM
```
ENTER ↓   ⬆ BACK

```
SYSTEM
BIND
KEY ASSIGN
CUSTOM-LIST
AUX TYPE
R-MODE
BATTERY
```
ENTER ↓   ⬆ BACK

```
KEY ASSIGN
SEL KEY [ SW ]
[KEY]    [FUNCTION]   [MODE]
SW1 :    TIMER        ------
SW2 :    OFF          ------
```

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KEY ASSIGN TRIM

● You can change the setting value of each feature with Trim1 - Trim4.
● You can also change the setting of the variation change in one time of Trim operation with the STEP setting and the direction of the action with the REV setting.

1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.
2) Select [KEY ASSIGN] with the multi-selector, switch to [TRIM] with the Select button, select an item to set and determine with the Enter operation.
3) Setting Trim (TRM1/TRM2/TRM3/TRM4)
Select [TRIM] to change the setting and set a feature to assign with the multi-selector.

○ Setting range:

TRIM	An assignable feature
TRIM1 TRIM2 TRIM3 TRIM4	OFF、TRIM-ST、TRM-TH、TRIM-A1、TRIM-A2、D/R-ST、D/R-TH、D/R-BR、CU-R-ST、CU-R-TH、CU-R-BR、SP-ST-F、SP-ST-R、SP-TH-F、SP-TH-R、ALB-PO、ALB-ST、ALB-LG、ALB-CY、OFFSET、AUX1、AUX1(CODE1〜10)、AUX2、AUX2(CODE1〜10)

○ Default   TR1 : TRM-ST
TR2 : TRM-TH
TR3 : D/R-ST
TR4 : D/R-BR

4) Setting Step (STEP)
Set the variation of the movement by one-time Trim operation.
Select [STEP] with the multi-selector, determine with the Enter operation and set the variation.

○ Setting Range: 1〜100
○ Default: 5

5) Setting the Direction of Action
Set the direction of action when operating Trim.
Select [REV] with the multi-selector, determine with the Enter operation and set the direction of action.

○ Setting Rage: NOR/REV
○ Default: NOR
○ Default: TRIM-1 : Steering Trim(TRM-ST)
TRIM-2 : Throttle Trim(TRM-TH)
TRIM-3 : Steeering Dual Rate(D/R-ST)
TRIM-4 : Brake Dual Rate(D/R-BR)

```
KEY ASSIGN
SEL KEY [TRIM]
[KEY]    [FUNCTION]   [STEP] [REV]
TR1  : TRM-ST      5   NOR
TR2  : TRM-TH      5   NOR
TR3  : D/R-ST      1   NOR
TR4  : D/R-BR      1   NOR
DIAL : OFF         --- ---
```

52

Usage of each feature
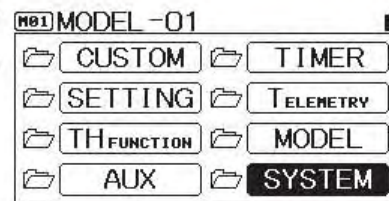
SYSTEM MENU | SYSTEM

CUSTOM LIST

- By setting an often-used menu onto the custom list, you can build your favorite menu.
  You can create a custom list for each model memory and you can create a 4-page list.
- A menu set with the custom list will be usable in custom.

1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.

2) Select [CUSTOM-LIST] with the multi-selector and determine with the Enter operation.

3) Setting Custom List
   Using the multi-selector, set the channel/feature/item..
   You can assign 6 features per page and set for 4 pages.

Channel Selection
Function Selection
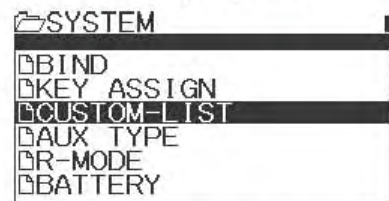Item Selection
Page Selection (Select Button)
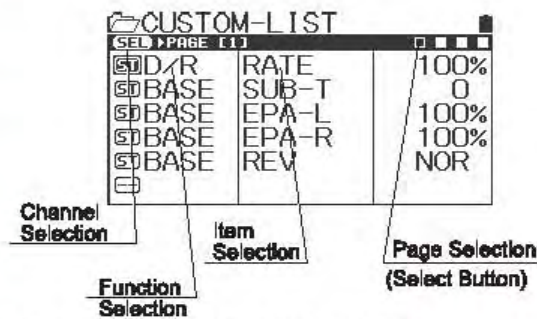
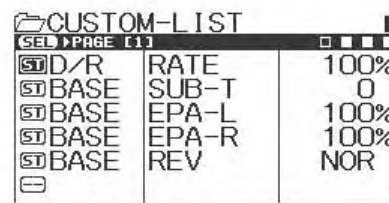*Custom List is previously set for the type.
 Customize the Custom List as you wish.

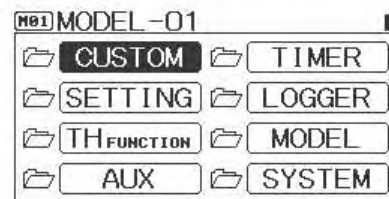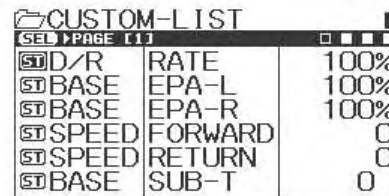*Depending on the feature/item, there are things you cannot set.

```
M01 MODEL -01
  CUSTOM    TIMER
  SETTING   TELEMETRY
  TH FUNCTION  MODEL
  AUX       SYSTEM
```

ENTER ↓ ⇧ BACK

```
SYSTEM
  BIND
  KEY ASSIGN
  CUSTOM-LIST
  AUX TYPE
  R-MODE
  BATTERY
```

ENTER ↓ ⇧ BACK

```
CUSTOM-LIST
SEL ▶PAGE [1]
ST D/R    RATE    100%
ST BASE   SUB-T   0
ST BASE   EPA-L   100%
ST BASE   EPA-R   100%
ST BASE   REV     NOR
```

CUSTOM-LIST SETTING ⇓

```
CUSTOM-LIST
SEL ▶PAGE [1]
ST D/R    RATE     100%
ST BASE   EPA-L    100%
ST BASE   EPA-R    100%
ST SPEED  FORWARD  0
ST SPEED  RETURN   0
ST BASE   SUB-T    0
```

```
M01 MODEL -01
  CUSTOM    TIMER
  SETTING   LOGGER
  TH FUNCTION  MODEL
  AUX       SYSTEM
```

ENTER ↓ ⇧ BACK

```
CUSTOM
SEL ▶PAGE [1]
ST D/R    RATE     100%
ST BASE   EPA-L    100%
          EPA-R    100%
ST SPEED  FORWARD  0
          RETURN   0
ST BASE   SUB-T    0
```
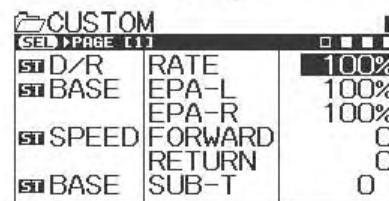
AUX TYPE

- A feature to set the performance of AUX1 and AUX2 (3ch and 4ch).

1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.

2) Select [AUX TYPE] with the multi-selector and determine with the Enter operation.
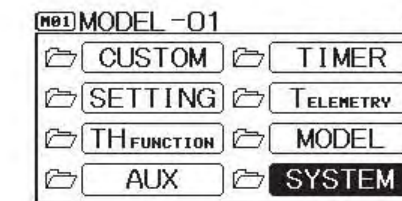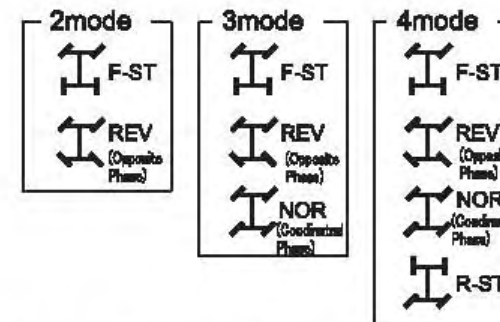
3) Set AUX TYPE with the multi-selector.
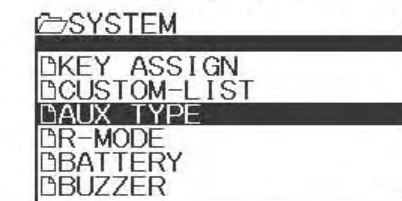
○ Setting Items:

TYPE	MODE
STEP	1/2/5/10/20/25/50/100
POINT	2/3/4/5/6
4WS	2mode/3mode/4mode
MOA	1/2/5/10/20/25/50/100
AUX MIX	ST-mix/TH-mix
CODE5	USER/SVZ/SVD
CODE10	USER/SV-STK

○ Default : AUX1: STEP MODE: 5
              AUX2: STEP MODE: 5

*Action image of 4WS Mode setting

2mode
F-ST
REV (Opposite Phase)

3mode
F-ST
REV (Opposite Phase)
NOR (Coordinated Phase)

4mode
F-ST
REV (Opposite Phase)
NOR (Coordinated Phase)
R-ST

```
M01 MODEL -01
  CUSTOM    TIMER
  SETTING   TELEMETRY
  TH FUNCTION  MODEL
  AUX       SYSTEM
```

ENTER ↓ ⇧ BACK

```
SYSTEM
  KEY ASSIGN
  CUSTOM-LIST
  AUX TYPE
  R-MODE
  BATTERY
  BUZZER
```

ENTER ↓ ⇧ BACK

```
AUX TYPE
[CH]     [TYPE]    [MODE]
AUX1 : STEP        5
AUX2 : STEP        5
```

Switching Type | MODE Setting

*For ST-mix, mixing is in effect from Steering onto AUX; for TH-mix, from Throttle onto AUX.
*When setting AUX TYPE to CODE, change of setting of the compatible equipment can be done from the transmitter.
 Compatible equipment includes speed controllers like SUPER VORTEX ZERO and SV PLUS ZERO, and SGS-01C/ SGS-01D.
*When AUX TYPE is set to CODE, do not connect any equipment that are not compatible to AUX1 and AUX2 (3ch and 4ch) of the receiver. If you connect equipment that is not compatible, the connected equipment will be failed.
*For POINT AUX, see P. 33, for CODE AUX, see P.36.
*CODE10 is a compatible feature to SUPER VORTEX Gen2/STOCK.
*When setting MODE to USER with CODE5/CODE10, you can freely register names of each item.

Usage of each feature

System Menu — SYSTEM

RACING MODE [R-MODE]

●A feature to adjust the running characteristics of your RC car by switching the Racing Mode so that the features compatible to the Racing Mode can respond to your RC car and road conditions.

●It allows you to set two setting values of R1 and R2 individually for features that are compatible to the Racing Mode for each Model Memory, and to change by the switches that are assigned during operation.

●As a default, ON/OFF of R-MODE is not assigned to the switch.

1)Select [SYSTEM] with the multi-selector and determine with the Enter operation.

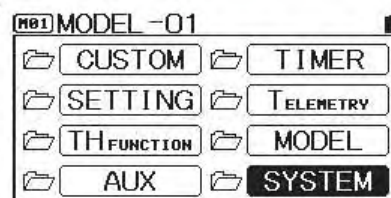2)Select [R-MODE] with the multi-selector and determine with the Enter operation.

3)Set the features that corresponds to the action of the Racing Mode with the multi-selector.
Channel selection is done by the Select button.

○Setting range:
R-MODE: OFF/2
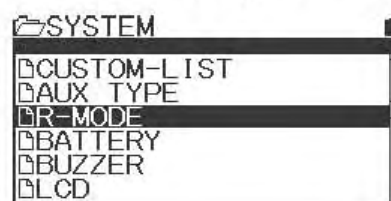Compatible equipment: Each Feature ON/OFF

○Default :
R-MODE: INH
Compatible equipment: Each Feature OFF

○Compatible Equipment
• ST/TH: D/R, SPEED, CURVE, TRIM
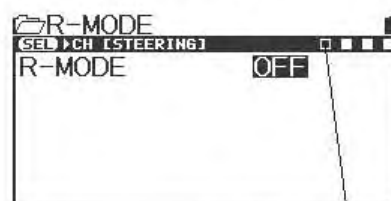• AUX: D/R, SPEED, CURVE, TRIM, AUX

4) By setting the feature of R-MODE onto the switch and operating during running, you can switch to the Racing Mode.
The Assignments feature allows you to add changes to the Trim lever and the switch (P. 51, 52).
*Set according to a setting change of SUPER VORTEX, tire wear, change of the road condition.
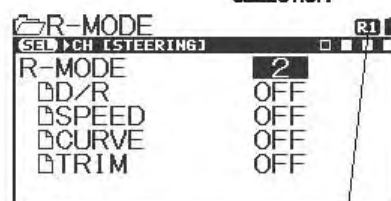
```
M01  MODEL -01
  🗀 CUSTOM    🗀 TIMER
  🗀 SETTING   🗀 TELEMETRY
  🗀 TH FUNCTION 🗀 MODEL
  🗀 AUX       🗀 SYSTEM
```

ENTER ⬇ ⬆ BACK

```
🗀SYSTEM
 ▫CUSTOM-LIST
 ▫AUX  TYPE
 ▫R-MODE
 ▫BATTERY
 ▫BUZZER
 ▫LCD
```

ENTER ⬇ ⬆ BACK

```
🗀R-MODE
SEL ▸CH [STEERING]
R-MODE              OFF
```
CHANNEL
SELECTION

```
🗀R-MODE              R1
SEL ▸CH [STEERING]
R-MODE              2
 ▫D/R               OFF
 ▫SPEED             OFF
 ▫CURVE             OFF
 ▫TRIM              OFF
```
RACING MODE
DISPLAY

BATTERY

●You can change the voltage setting of the battery alarm of the transmitter.
●By selecting Type [DRYx3 (Batteries)/Ni-MHx3 (Nickel Hydride)/Li-Pox1 (Lithium Polymer), CUSTOM], you can set the alarm easily.
*When selecting CUSTOM with the Type, you can set ALERT VOLT that sets voltage to make Alarm go off and LIMIT VOLT of the lower voltage.
●TH SLOW (Throttle Slow) is a feature to limit (50%) the operating quantity of the throttle's high side when the battery voltage of the transmitter becomes LIMIT VOLT (Fail-Safe feature).
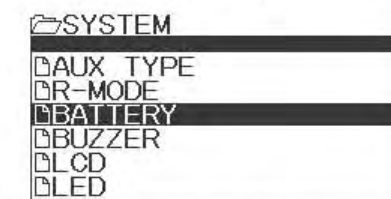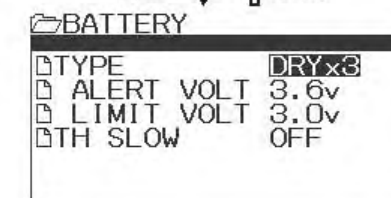
1)Select [SYSTEM] with the multi-selector and determine with the Enter operation.
2)Select [BATTERY] with the multi-selector and determine with the Enter operation.
3)Setting TYPE
Set TYPE for the battery to be used with the multi-selector.
○Setting range: DRYx3 (Batteries)
                    Ni-MHx3 (Nickel Hydride)
                    Li-Pox1 (Lithium Polymer)
                    CUSTOM: ALERT VOLT 3.0 ~ 5.0v
   LIMIT VOLT: 2.7 ~ 5.0v

○Default:DRYx3 (Batteries)

```
🗀SYSTEM
 ▫AUX  TYPE
 ▫R-MODE
 ▫BATTERY
 ▫BUZZER
 ▫LCD
 ▫LED
```

ENTER ⬇ ⬆ BACK

```
🗀BATTERY
 ▫TYPE              DRYx3
 ▫ ALERT  VOLT  3.6v
 ▫ LIMIT  VOLT  3.0v
 ▫TH SLOW          OFF
```

BUZZER

●You can set operating sounds of key operation, Trim and Switch and the buzzer scales.
●For key operation only, you can set the first and last half of the operation sound.
●You can set 5 steps of the volume and 7 types of scales.

1)Select [SYSTEM] with the multi-selector and determine with the Enter operation.
2)Select [BUZZER] with the multi-selector and determine with the Enter operation.
3)Setting Tone and Volume
You can switch between Tone (scales) and Volume (Sound Volume) with Select button operation.
Select an item to change setting to adjust.
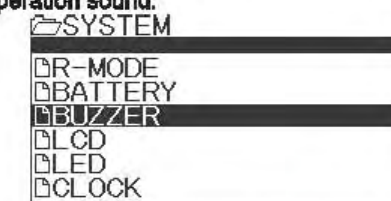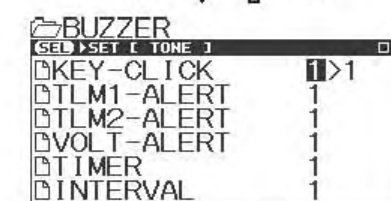
○ Setting Items: KEY-CLICK
                 TLM1-ALERT
                 TLM2-ALERT
                 VOLT-ALERT
                 TIMER
                 INTERVAL
                 LAP-NAVI
*You can set the first and last half of the operation sound for KEY CLICK tone (scales).

○Setting range: TONE 1~ 7
                 VOLUME OFF ~ 5

○Default : VOLUME 4
          TONE 1 (KEY CLICK 1 ->1)

```
🗀SYSTEM
 ▫R-MODE
 ▫BATTERY
 ▫BUZZER
 ▫LCD
 ▫LED
 ▫CLOCK
```

ENTER ⬇ ⬆ BACK

```
🗀BUZZER
SEL ▸SET [ TONE ]
 ▫KEY-CLICK         1>1
 ▫TLM1-ALERT        1
 ▫TLM2-ALERT        1
 ▫VOLT-ALERT        1
 ▫TIMER             1
 ▫INTERVAL          1
```

ENTER ⬇ ⬆ BACK

```
🗀BUZZER
SEL ▸SET [VOLUME]
 ▫KEY-CLICK         4
 ▫TLM1-ALERT        4
 ▫TLM2-ALERT        4
 ▫VOLT-ALERT        4
 ▫TIMER             4
 ▫INTERVAL          4
```
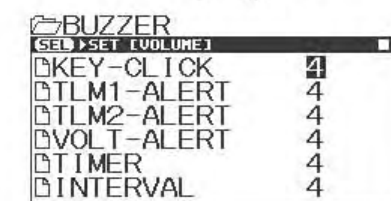
Usage of each feature

SYSTEM MENU | SYSTEM

LCD

- You can set LCD (Liquid Crystal) contrast (intensity), brightness and lighting mode (lighting time) of Back Light.
1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.
2) Select [LCD] with the multi-selector and determine with the Enter operation.
3) Set LCD (Liquid Crystal) contrast (intensity), brightness and lighting mode (lighting time) of Back Light.
* In some contrast, you may not see screen display.

o Setting Items: CONTRAST (Intensity of Liquid Crystal)
          BRIGHT (Brightness of Liquid Crystal)
          LIGHTS-MODE (Backlight Lighting Mode)
          LIGHT-TIME (Backlight Lighting Time)

o Setting range: CONTRAST : 0~30
          BRIGHT : 0~10
          LIGHT-MODE : OFF/KEY-ON/ALWAYS
          LIGHT-TIME : 1~30sec

o Default :
    CONTRAST : 10
    BRIGHT : 5
    LIGHT-MODE : KEY-ON
    LIGHT-TIME : 10sec

```
⌂SYSTEM
 ▯BATTERY
 ▯BUZZER
 ▯LCD
 ▯LED
 ▯CLOCK
 ▯SETUP

ENTER ⬇   ⬆ BACK

⌂LCD
 ▯CONTRAST     10
 ▯BRIGHT        5
 ▯LIGHT-MODE   OFF
 ▯LIGHT-TIME   10sec
```

LED

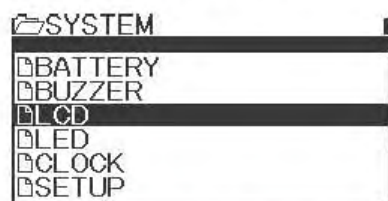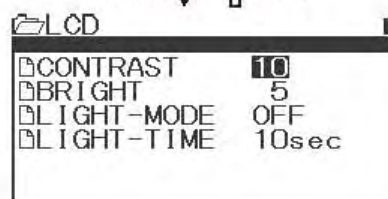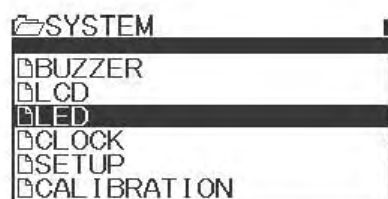- A feature to adjust the operating mode and brightness of the function LED installed on the transmitter body.

1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.
2) Select [LED] with the multi-selector and determine with the Enter operation.
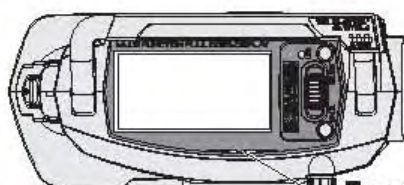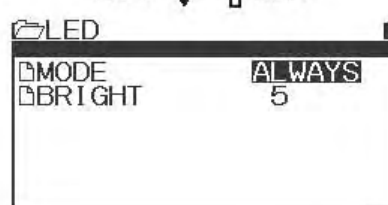3) Set the operating mode and brightness of the Function LED.

o Setting Items MODE (Operating Mode)
               BRIGHT (Brightness of LED)
o Setting Range MODE : ALWAYS/WAVE/OFF
               BRIGHT : 0~5
               *BRIGHT is only for setting ALWAYS
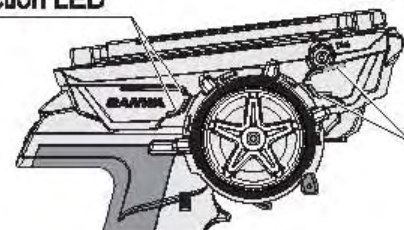o Default   MODE : WAVE
               BRIGHT : 5

```
⌂SYSTEM
 ▯BUZZER
 ▯LCD
 ▯LED
 ▯CLOCK
 ▯SETUP
 ▯CALIBRATION

ENTER ⬇   ⬆ BACK

⌂LED
 ▯MODE     ALWAYS
 ▯BRIGHT    5
```


Function LED

Function LED

Function LED

Function LED

CLOCK

- A menu to control the calendar and the clock display on the top screen and the time used.
- There are resettable [ON TIME1] that is a guideline for replacing and recharging the batteries and [ON TIME2] that is a guideline for overhaul of the main body unit.

1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.
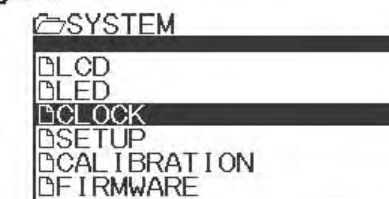
2) Select [CLOCK] with the multi-selector and determine with the Enter operation.
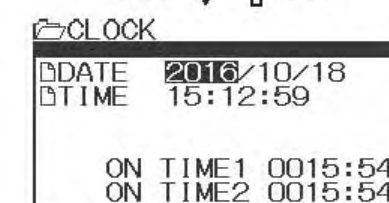
3) Set the CLOCK feature with the multi-selector. Because setting the clock is necessary for managing log data, make sure to set the calendar and the clock.

```
⌂SYSTEM
 ▯LCD
 ▯LED
 ▯CLOCK
 ▯SETUP
 ▯CALIBRATION
 ▯FIRMWARE

ENTER ⬇   ⬆ BACK

⌂CLOCK
 ▯DATE   2016/10/18
 ▯TIME   15:12:59

        ON TIME1  0015:54
        ON TIME2  0015:54
```

SETUP

- Select a language for the screen display during setting up and set up the unit of the temperature display for Telemetry data and the opening logo display when the power switch is turned on.
1) Select [SYSTEM] with the multi-selector and determine with the Enter operation.
2) Select [SETUP] with the multi-selector and determine with the Enter operation.

3) Select items to set with the multi-selector and adjust.
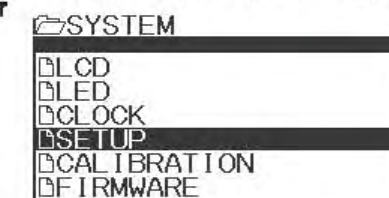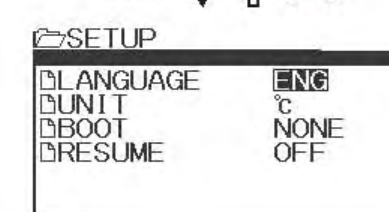
o Setting Items
  LANGUAGE (Display Language) : ENG/JPN
  UNIT (Unit of the temperature for Telemetry) : C/ F
  BOOT (Opening logo when the power switch is turned on)
      : DEMO/NONE
  RESUME (Resume) : OFF/ON

o Default
  LANGUAGE : ENG
  UNIT : C°
  BOOT : DEMO
  RESUME : OFF

```
⌂SYSTEM
 ▯LCD
 ▯LED
 ▯CLOCK
 ▯SETUP
 ▯CALIBRATION
 ▯FIRMWARE

ENTER ⬇   ⬆ BACK

⌂SETUP
 ▯LANGUAGE    ENG
 ▯UNIT        ℃
 ▯BOOT        NONE
 ▯RESUME      OFF
```

*When Resume is set to ON, it memorizes the menu at the time when power is turned off.

Usage of each feature

SYSTEM MENU | SYSTEM

CALIBRATION

●Due to wearing and tearing of the internal mechanical elements over the usage time, the neutral position and the operation angle might become off.
In such case, you can correct the neutral positions of the steering and the throttle and the operation angle.

1)Select [SYSTEM] with the multi-selector and determine with the Enter operation.
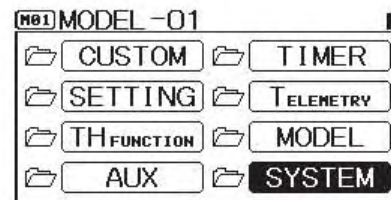2)Select [CALIBRATION] with the multi-selector and determine with the Enter operation.
3)Select a channel to calibrate with the multi-selector and determine with the Enter operation.
4)When selecting [STEERING], operate the Enter with the steering wheel in neutral, then operate the steering wheel fully to left and right.
5)When entering the range, [OK] is displayed. Operate following the display.
6)When calibration is done, [Executed] is displayed.
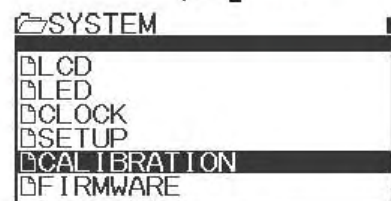7)If the throttle side also needs calibration, refer to the steering to set.

*Unless necessary, do not set up calibration. If the setting is not done properly, it may not operate normally.

⚠ **Supplement**

●If the operation does not return to normal after calibration, contact Sanwa Service.

[M01]MODEL −01

```
CUSTOM    TIMER
SETTING   TELEMETRY
THFUNCTION  MODEL
AUX       SYSTEM
```

ENTER ↓ ↑BACK

SYSTEM
```
LCD
LED
CLOCK
SETUP
CALIBRATION
FIRMWARE
```

ENTER ↓ ↑BACK

CALIBRATION
```
STEERING
THROTTLE
```

ENTER ↓

CALIBRATION
```
ST SETTING    USER
     NEUT    [----]
```

CALIBRATION
```
ST SETTING    USER
     NEUT   [R169]OK
     LEFT   [ 170]OK
     RIGHT  [-169]OK

Adjust ok?  NO / YES
```
Select Yes, if it is OK.
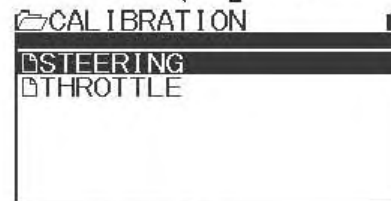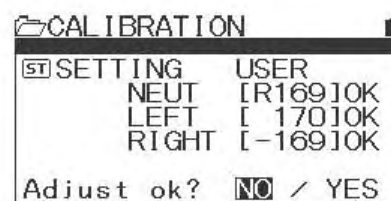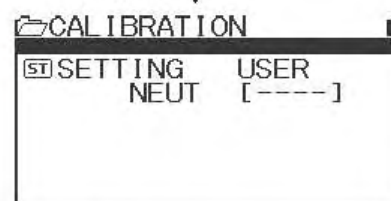
YES Selected. ↓
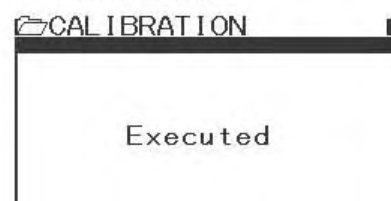
CALIBRATION
```

     Executed

```
Calibration complete

FIRMWARE

●You can check the firmware version installed on the main body unit and the language file, and run updating.

1)Select [SYSTEM] with the multi-selector and determine with the Enter operation.

2)Select [FIRMWARE] with the multi-selector and determine with the Enter operation.

3)When updating the firmware and the language file, download the data file onto the micro SD card to proceed.

SYSTEM
```
LCD
LED
CLOCK
SETUP
CALIBRATION
FIRMWARE
```

ENTER ↓ ↑BACK

FIRMWARE
```
VERSION     0.00.03
LANGUAGE    JPN


FIRMWARE    [UPDATE]
LANG.FILE   [UPDATE]
```
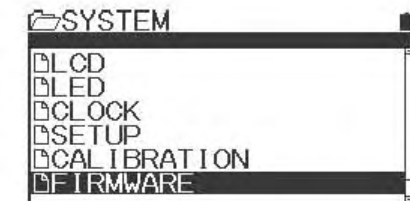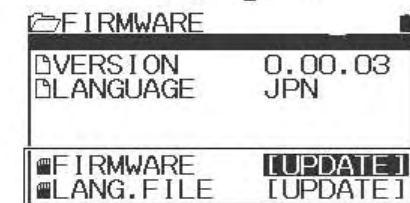
Unless you insert a micro SD card, it will not be displayed.

Key Assignments Feature List

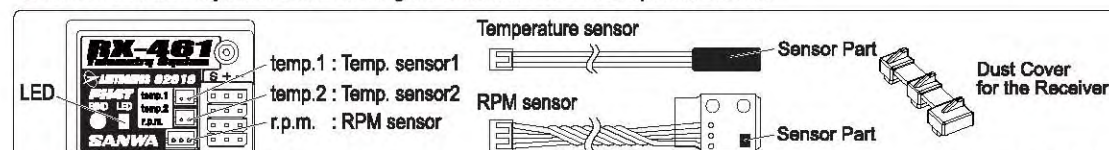| Screen Display	Names of the Features	Trim	SW1	SW2
OFF	——— (no assigned feature)	O	O	O
ASIST-ST	Steering Drive Assistance	—	O	O
TRIM-ST	Steering Trim	O	—	—
TRIM-TH	Throttle Trim	O	—	—
TRIM-A1	AUX1 Trim	O	—	—
TRIM-A2	AUX2 Trim	O	—	—
D/R-ST	Steering Dual Rates	O	O	O
D/R-TH	Throttle Dual Rates	O	O	O
D/R-BR	Brake Dual Rates	O	O	O
CUR-ST	Steering Curve	—	O	O
CUR-TH	Throttle Curve	—	O	O
CU-R-ST	Steering Curve Rate	O	—	—
CU-R-TH	Throttle Curve Rate	O	—	—
CU-R-BR	Brake Curve Rate	O	—	—
SPD-ST	Steering Speed	—	O	O
SPD-TH	Throttle Speed	—	O	O
SP-ST-F	Steering Speed Forward	O	—	—
SP-ST-R	Steering Speed Return	O	—	—
SP-TH-F	Throttle Speed Forward	O	—	—
SP-TH-R	Throttle Speed Return	O	—	—
ALB	Anti-Lock Brake	—	O	O
ALB-PO	Anti-Lock Brake Point	O	—	—
ALB-ST	Anti-Lock Brake Stroke	O	—	—
ALB-LG	Anti-Lock Brake Lag	O	—	—
ALB-CY	Anti-Lock Brake Cycle	O	—	—
OFFSET	Offset	O	O	O
AUX1	AUX1	O	O	O
AUX1[CD1]	AUX1 [Cord 1]	O	O	O
AUX1[CD2]	AUX1 [Cord 2]	O	O	O
AUX1[CD3]	AUX1 [Cord 3]	O	O	O
AUX1[CD4]	AUX1 [Cord 4]	O	O	O
AUX1[CD5]	AUX1 [Cord 5]	O	O	O
AUX1[CD6]	AUX1 [Cord 6]	O	O	O
AUX1[CD7]	AUX1 [Cord 7]	O	O	O
AUX1[CD8]	AUX1 [Cord 8]	O	O	O
AUX1[CD9]	AUX1 [Cord 9]	O	O	O
AUX1[CD10]	AUX1 [Cord 10]	O	O	O
AUX2	AUX2	O	O	O
AUX2[CD1]	AUX2 [Cord 1]	O	O	O
AUX2[CD2]	AUX2 [Cord 2]	O	O	O
AUX2[CD3]	AUX2 [Cord 3]	O	O	O
AUX2[CD4]	AUX2 [Cord 4]	O	O	O
AUX2[CD5]	AUX2 [Cord 5]	O	O	O
AUX2[CD6]	AUX2 [Cord 6]	O	O	O
AUX2[CD7]	AUX2 [Cord 7]	O	O	O
AUX2[CD8]	AUX2 [Cord 8]	O	O	O
AUX2[CD9]	AUX2 [Cord 9]	O	O	O
AUX2[CD10]	AUX2 [Cord 10]	O	O	O
TIMER	Timer	—	O	—
TE-CLR	Telemetry MAX Clear	—	O	O

Settable…「O」 Not Settable…「—」

About installing the sensor

About installing the sensor and a compatible receiver (RX-461/RX-462)

● When installing the RPM sensor, attach the enclosed reflective decals to the point to measure number of rotations (e.g.: a pinion gear or spur gear), cut out the sensor attachment stay from a polycarbonate board or aluminum angles and fix the RPM sensor so that the infrared sensor of the RPM sensor is able to detect. When the RPM sensor is detecting properly, the LED of the receiver lights in green (or goes off).
*The recommended distance between the infrared sensor and the reflective decals (detecting part) is 1mm.

● Regarding how to use the enclosed reflective decals for the RPM sensor, cut out white or black reflective decals (about 2mm diameter) and attach them onto the point to measure the number of rotations so that RPM sensor is able to detect. Depending the color of the reflective decals, the receiver LED responds differently when the sensor detects. When the reflective decals pass in front of the infrared sensor, a green LED light is on for white decals and a green LED light goes off for black decals.
*When checking the performance of the RPM sensor, turn on only the power Switch off the receiver side.
If the power switch of the transmitter side is on at the same time, the blue LED will be on when indicating signal is being received. You cannot check the green light is on/off when the sensor is detecting.

● The enclosed RPM sensor uses an infrared system, thus it is affected by the sunlight. When the sensor cannot detect properly, try to protect the infrared sensor from the sunlight.

● When installing the RPM sensor to a car with a different driving system layout, refer to the following.

RPM Sensor / Infrared Sensor

[When detecting with the Spur Gear]
Reflective Decals (Sensor Part) / Infrared Sensor (Back) / Installation Stay

[When detecting with the Pinion Gear]
Infrared Sensor (Back) / Reflective Decals (Sensor Part) / Installation Stay

[Distance between the Infrared Sensor and Reflective Decals (Sensor Part)]
Approx 1mm / Installation Stay
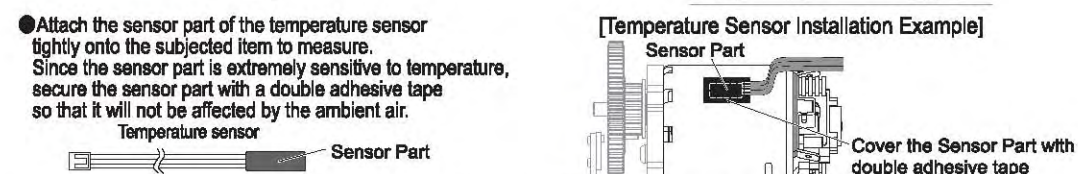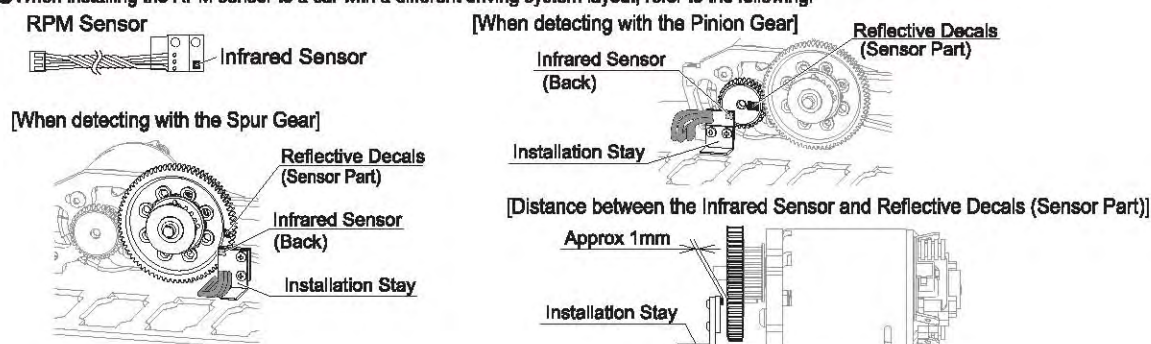
● Attach the sensor part of the temperature sensor tightly onto the subjected item to measure.
Since the sensor part is extremely sensitive to temperature, secure the sensor part with a double adhesive tape so that it will not be affected by the ambient air.
Temperature sensor / Sensor Part

[Temperature Sensor Installation Example]
Sensor Part / Cover the Sensor Part with double adhesive tape

● Make sure the cords of the RPM sensor, the temperature sensor and the sensor part are secured so that they will not touch or will not be pulled into the rotating pars or moving parts of the car.
● Make sure not to hurt yourself when mounting the RPM sensor and the temperature sensor.

LED / RX-461 / temp.1 : Temp. sensor1 / temp.2 : Temp. sensor2 / r.p.m. : RPM sensor / Temperature sensor / Sensor Part / Dust Cover for the Receiver / RPM sensor / Sensor Part

● When connecting a sensor to the receiver, replace the connector cover of the receiver top and connect the temperature sensor and RPM sensor.
● For a connector that does not connect a sensor, cut the dust cover for the receiver to use.
● Attach the sensor part of the temperature sensor tightly to a subject to measure the temperature.
Since the sensor part is extremely sensitive to temperature, secure the sensor part so that it will not be affected by the ambient air.
● When installing the RPM sensor, attach the reflective decals onto the point to measure the number of rotations and fix the RPM sensor so that the sensor part of the RPM sensor is able to detect. When the RPM sensor is detecting properly, the LED of the receiver lights in green (or goes off).
*The recommended distance between the RPM sensor and the detecting part is 1mm.
● When the point to measure the number of rotations is black, cut the white reflective decals; when the point to measure is white, cut the black reflective decals to attach so that the RPM sensor is able to detect them.
Depending on the reflective decals used, the receiver LED lights in green or it goes off when the sensor detects.
● The RPM sensor uses an infrared system, thus it is sensitive to the sunlight. When the sensor cannot detect properly, try to protect the infrared sensor from the sunlight.
● Make sure the cords of the temperature sensor, the RPM sensor and the sensor part are secured so that they will not touch or will not be pulled into the rotating pars or moving parts of the car.
● Make sure not to hurt yourself when mounting the RPM sensor and the temperature sensor.

⚠ NOTE
● If the connector is disconnected due to a vibration during operation, it can cause runaway.
Connect the connector of the receiver, servos and switches securely.
● Because the receiver is susceptible to vibration, impact and water, make sure to take measures for vibration-proof and waterproof. Negligence of taking these measures can cause runaway.
● When installing the receiver, keep the receiver away from a carbon chassis and metallic chassis.
● If metal parts installed on an RC car touch each other, it can cause noise that affects reception performance and it can cause runaway.
● Make sure to install a noise killer condenser on the brush motor for electric RC cars. Without a noise killer condenser, it can cause noise and runaway.
● For R/C System parts such as the transmitter, receiver, servos, FET Speed Controller and transmitter battery, use genuine SANWA products.
*When combining products other than genuine SANWA products, modifying, adjusting or exchanging parts is done at a place other than SANWA, we do not take responsibility.

Index

When this happens•••

Symptom	Cause	Measure
There is no power.	Batteries are consumed.	Replace with new batteries or recharged batteries.
	Batteries are placed improperly.	Reinstall the batteries as the polarity is indicated.
Power is cut off occasionally.	Bad connection of connectors.	Bring to Sanwa Service
Insufficient length	Batteries are consumed.	Replace with new batteries or recharged batteries. If the problem cannot be solved, please contact Sanwa Service
Alarm will not stop.	Battery voltage of the transmitter is decreasing.	Replace with new batteries or recharged batteries.
There is no click sound when pressing the key.	Volume of the BUZZER feature is OFF (0).	Check BUZZER feature (P.56).
The servo speed is slow.	SPEED feature is set to minus.	Check SPEED feature (P.20).
	Battery voltage of the receiver is decreasing.	Replace with new batteries or recharged batteries.
	Linkage of the car body side is heavy.	Check if the Linkage of the car body side moves lightly.
Rudder angles of left and right are different even when they are aligned.	Trim neutral is not aligned.	Align Trim and reset EPA. (P.29, 30)
When operating, the servos will not work on both ends.	Rudder angle settings of D/R and EPA are too large.	Set either value to below 100%. (P. 19, 27, 28)
The servo will not move when operating Trim.	One side of the Trim movement range is full.	Reset the servo horn and the Trim center. (P. 29. 30)

SERVICE AND SUPPORT

This is warranted against manufacturer defects in materials and workmanship, at the original data of purchase. This warranty does not cover components worn by use or damage caused by improper voltage, tempering, modification, misuse, abuse, improper writing, reverse polarity, moisture or using outside its intended scope of use.

Terms of this warranty can vary by region. Please read the warranty card included with your radio control system for specific warranty information.

If you have any questions or concerns, we're here to help. If you encounter a problem with your radio control system, first chek the Troubleshooting Guide on Page 64.

If you require further help that cannot be solved using The Troubleshooting Guide, or if you have technical questions, please contact SANWA service center in your region.

For a complete list of distributors in your rgion, please visit www.sanwa-denshi.com/rc/distributors.html.

For Service In North America:	Factory Service:
Serpent America	Sanwa Electronic Instrument CO., LTD.
5121 NW 79 Ave. Unit 03,	1-2-50 Yoshida-Honmachi
Doral, Florida 33166 USA	Higashiosaka, Osaka, 578-0982 Japan
Telephone: (305)-677-3253	Telephone: 81-729-62-1277
Fax: (305)-675-0415	Fax: 81-729-64-2831
Email: info@serpentamerica.com	Email: rcintl@sanwa-denshi.co.jp

Product features and specifications can vary by region. Not all products are legal for use in all regions.

⚠ Please note that products purchased outside of North America cannot be serviced under warranty by Serpent America. In some cases, we can make repairs for products purchased outside of North America, however, applicable repair costs and shipping charges will be applicable. For warranty claims outside North America, please contact the service center in your region.

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the operating instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and the receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced technician for help.

This device complies with Part 15 of the FCC Rules
        Operation is subject to the following two conditions:
1) This device may not cause harmful interference, and....
2) This device must accept any interference received, including interference that may cause undesired operation.
⚠ Changes or modifications made to this equipment not expressly approved by SANWA may void the FCC authorization to operate this equipment.

RF Exposure Statement:
This transmitter has been tested and meets the FCC RF exposure guidelines when used with the SANWA accessories supplied or designated

                Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.L'exploitation est autorisee aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:
(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.