Safe Handling of Radio and Precautions

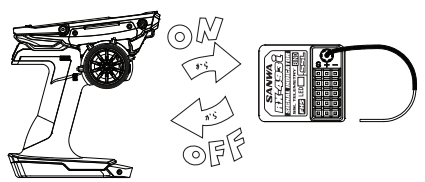
In order to use the purchased radio properly and safely, please read this manual thoroughly and make sure to follow precautions. Improper use of the product or negligence of following safety precautions can cause inconvenience to others or harm to the user.

■ **For safety, please make sure to follow each of the precautions below.**

⚠ Warning Precautions for Installation and Operation

● When turning ON the power switch of radio, please turn on in the order of ① Transmitter → ② Receiver. When turning the power switch OFF, please do so in the order of ① Receiver → ② Transmitter.

☆ If you reverse the order of the switches, it would cause sudden high rotation of the engine and the motor, which is extremely dangerous.

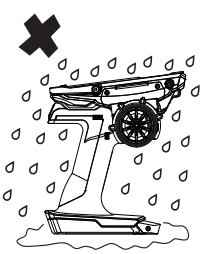


● Please use noise reduction measures on the body of your car.

☆ If metals rub against each other, electrical noise (noise) will be generated and since it will cause abnormal performance, please check that the screw and nut are not loose.

☆ Gasoline engines, motors can also cause noise. Please use a noise reduction measure such as resistive plug with resistor or noise killer condenser.

● Please make sure to run a performance check of the radio (a signal reception test) before the operation. Do not operate it if it is moving abnormally or does not move. Even if the test result on the desk is normal, since the radio wave arrival distance while operating varies depending on the installation method of the receiver, how the antenna is set, the direction of the antenna of the transmitter and geography, please be careful when operating for the first time.



● Never operate on rainy days.

☆ The interior of the transmitter is built with minute delicate electronic parts. If water runs on the surface of the case and enters inside, it can cause abnormal performance or immobility and it can be dangerous.

☆ If the receiver or servo sinks in the water, immediately collect it and dry the interior. When the interior is dry, please submit it to the Sanwa Service for inspection even if it performs normally.

● The receiver is a precise instrument. Please do not cause a strong impact or vibration.

☆ Use a thick sponge to prevent vibrations.

● Install the receiver away from the speed controller, motor and the battery.

● When installing the receiver on a metallic chassis or a carbon chassis, use three layers of double adhesive tape pieces to prevent the receiver from touching the chassis.

● When there is a radio disturbance, change the installation location of the receiver or change from a vertical placement to a horizontal placement or vice versa.

● Do not place a motor cord or a battery cord close to the receiver since it can cause abnormal performance.

● Keep the antenna of the receiver out as much as possible. In addition, keep it straight and stretched. Do not cut the extra length of the line or bend it.

☆ It is dangerous when the antenna is short circuited since the operating range becomes short.

☆ Never cut the antenna.

● Do not place the antenna close to a motor cord or a battery cord.

● Using a conductive piano wire on a metallic chassis or carbon chassis can cause abnormal performance from electrical noise. Do not place a piano wire close to the chassis.

English

⚠ Caution Careful When Driving

When operating RC car etc., be sure to observe the following and be careful not to disturb other people:

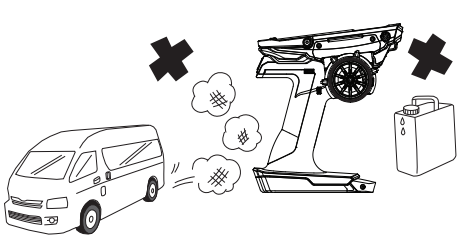
- Maintain the car body (chassis) perfectly and check the safety.
- Do not ever run RC car in crowds and roads.
- Always disconnect the power battery connector after running and remove the power battery from the car body.
- In the case of simultaneous running, be sure to determine the controller and follow the instructions.
- Be careful not to disturb the running of other people.
- Be sure to join the RC insurance. Inquire at the radio control pilot registration agency for application for radio control insurance.
- Be sure to add "muffler" (silencer) to the engine that has a silencing effect.
- Avoid starting the engine early in the morning.
- Be sure to clean the running place and then return.

⚠ Caution About Usage

- Do not put to use other than the purpose of model.
- Since this product is manufactured for models based on the Radio Law in each country, it cannot be used in countries other than your original place of purchase.

⚠ Caution Daily Care

- When the exhaust of the engine or fuel is on the radio, wipe it with a soft, dry cloth. When it gets dirty, please wipe it with a tightly squeezed clean soft cloth impregnated with water or neutral detergent. Thinner, benzene, alcohol, motor cleaner, brake cleaner, etc. may cause surface finish to deteriorate or degenerate, so please do not use.

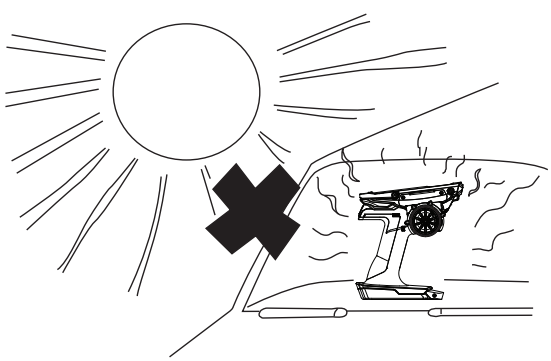


⚠ Caution About Handling Transmitter

- Please do not hit, drop or cause strong shocks. In addition, if you touch the transmitter, receiver, servo, FET speed controller, etc. with hands applied with tire traction agent, it will cause breakdown or case deformation.

⚠ Caution About Storage

- Do not store in following places.
  - ☆ Extremely hot place or extremely cold place.
  - ☆ A place that is exposed to direct sunlight for a long time. Especially if you leave it in a place where direct sunlight hits like in a closed car window, the interior temperature becomes 80 ℃ or more depending on the season, so please be careful as it may cause deformation or breakdown.
  - ☆ A place with high humidity, poor ventilation.
  - ☆ A place with considerable vibrations.
  - ☆Places with high dust places subjected to steam or hot air.
  - ☆A place that gets exhaust gas from an engine or a place near the fuel tank.



English

Meaning of the Marks

⚠ **Warning** Things you are expected to do to prevent accidents and injuries.

⚠ **Caution** Things that you should follow in order to prevent break down.

Safe Handling of Radio and Precautions

⚠ Warning Note Precautions for Safe Use

- 2.4GHz frequency band is not only used for radio control. This frequency band is shared with ISM (Industrial, Scientific and Medical) band. In urban areas, it can be affected by microwave oven, wireless LAN, digital cordless telephone, audio equipment, Bluetooth of game machine or cell phones, and short-range communication such as VICS. Moreover, be careful about being affected by amateur radio and premises radio station for moving body identification, since this frequency band is used for them as well. When harmful radio wave interference is provided to existing radio station, immediately stop the transmission of radio frequency and take measures to avoid the interference.
- For RC circuit, minimise the use of equipment that can affect 2.4GHz system and make sure to check the safety beforehand. Moreover, follow the instructions given by the facility manager.
- When it is to be operated behind the building or steel lower, blocking the direction of radio wave transmission can cause reduction of manoeuvring response or manoeuvring ability. Therefore, always operate within the range that you can visually check.
- Do not attach any metal parts like clip etc. to the built-in part of transmitter antenna.
- If the built-in part of transmitter antenna is extremely close to a servo or speed controller other than the receiver, it can cause malfunction. However, it is an influence of a strong high frequency output and it is not abnormal.
- The receiver is a precise instrument. Do not subject it to strong impact or vibrations. Use the thick sponge to prevent vibrations.
- Keep the antenna wire of the receiver out as much as possible, keep it straight, and stretched. Do not cut or bend the extra length of the antenna line.
- Do not place the antenna wire of the receiver close to noise source like motor code or battery code.
- When installing the receiver on a metallic chassis or a carbon chassis, use by layering with double-sided tape to keep the receiver away from the chassis as much as possible.

English

INDEX

English

Structure and Standard of Set

Structure of Set

	PC, primary components
〈A〉Transmitter	M17S
〈B〉Receiver	RX-493i
〈C〉Servo	—
〈D〉Accessories	Strap hook x 1 Large steering wheel x 1 Spring [Super soft (SS) / soft (S) / medium (M) / hard (H)] x 1 each Steering swing spacer [R/L/ x 1 each Trigger angle spacer x 2 Brake trigger [+1 / +2] x 1 each Grip pad [Small (S) / large (L)] x 1 each Li -Po battery for transmitter (LP1 — 2500) x 1 BIND plug x 1 Dust cover for receiver x 1 Antenna Pipe x 1 Screen Protector x 1 User manual (Quick Reference) x 1

●Check contents of the set before use.

Standard of Set

〈A〉Transmitter

Model	M17S
Output display	Digital / analogue display (power supply voltage display)
Modulation system	2.4 GHz spectrum spread system
Power supply	Li-Po1 cell (corresponding voltage DC 4.2V)
Weight	510g

※ Check input voltage. The transmitter gets severely damaged if a voltage above permitted voltage is input.

〈B〉Receiver

Model	RX-493i
Modulation system	2.4 GHz spectrum spread system
Dimensions	26.0x23.2x14.0mm
Power supply	DC3.7~7.4V
Weight	6.2g

English

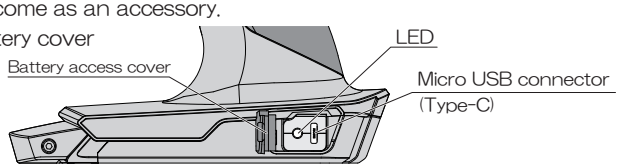
Before Using

About Power Supply

● Carefully read the following charging method and points of caution for correct and safe use.
● Always charge before using.
Li-Po battery has many merits such as it has higher capacity than the conventional chargeable batteries, is lightweight and has low natural discharge. However, it deteriorates quickly if handled incorrectly and may produce smoke and catch fire. Always observe the following points of caution and use safely.
1. Do not ever short plus and minus terminals. (There is fear of smoking, catching fire if shorted.)
2. Do not charge by connecting the charger to the Z connector that connects to the transmitter main body.
3. Do not ever dismantle battery or reconstruct connector.
4. Do not use if battery main body or insulation of cable is damaged.
5. When removing the battery from the transmitter main body, always pull by holding the connector.
6. Discontinue use and immediately charge when the battery voltage lowers below 3.3 V.
7. This product has an in-built charging circuit with charging current of 800 mAh. In case of charging, use USB AC adapter having output above 5V 1000 mAh.
8. At the time of charging, always switch OFF the power supply of transmitter.
9. Do not store in a place receives direct sunlight for a long period. The temperature goes above 80° C. It may cause to be deformation or failure.
10. In case of storing for a long period, take out from the transmitter and store. Store in a dark place by keeping in a safety bag. Charge the battery about 50 % once in 3 months.
11. Do not store with battery and USB AC adapter in a connected state.
12. If used in the over-discharged state (below 3.3 V), battery rapidly deteriorates and expands. Discontinue use of the swollen battery immediately.
13. Dispose of the deteriorated battery as per local rules.
※ While inserting into the transmitter, take care wire of the battery does not get caught in the battery cover.
※ Overcharged battery not only gets damaged but also may cause burning, fire, injury, blindness due to abnormal heating, tearing, leakage etc.
※ Do not use the deformed or swollen battery.
※ Do not throw in such a manner that causes a strong impact.

About Charging of Transmitter Battery

1) Connect USB AC adapter to outlet plug of AC100V.
※ Compatible micro USB connector is [Type-C (USB A to USB C cable)].
※ The battery (LP1-2500) is not compatible with USB PD (USB POWER DELIVERY). The battery cannot be charged by USB PD.
2) At the time of charging transmitter battery, open the connector cover of the transmitter and connect the micro USB connector to the battery.
3) Check that battery LED light that can be seen from battery port is turned on.
4) Charging completes when battery LED light changes to green. After complete charging, remove micro USB connector from the battery.
※ After complete charging, remove USB AC adapter from AC 100V outlet plug.
※ Do not store with the charger connected to the battery.
※ If not using for a long period, charge the battery 50 % once in 3 months.
※ Micro USB cable (Type-C) for charging does not come as an accessory.
※ In case of taking off a battery cover, slide the battery cover with fully open a battery access cover.
In case of not fully open the cover, the cover will be broken.

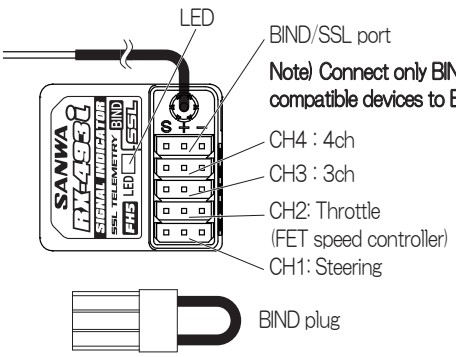


About Micro SD Card

● M17S is compatible with micro SD card. Use Sanwa genuine or card formated to FAT32. Model data or telemetry data can be stored by the use of micro SD card. Firmware update becomes possible by the use of micro SD card when the firmware update of M17S is published.
At the time of inserting the micro SD card, insert with the metal terminal surface on the upper side.
● Upon inserting the micro SD card, a folder named “M17S” is created and a folder named “MODEL” is created in this folder and model data is stored in it.
Upon exporting the log data, a folder named “Log” is created and “csv” data is stored in this folder.

English

About Receiver



State of receiver LED

State of receiving electromagnetic waves	Blue light on
State of not being able to receive electromagnetic waves	——
During BIND (bind) setting	Blue light blinking Blue light speedy blinking
Battery failsafe operation	Blue & red light on
State of not being able to receive electromagnetic waves after battery failsafe operation	Red light on

●About RX-493i

- RX-493i can store 2 IDs. It can be combined with M17S having a matching position or setting such as endurance race etc.
  It can be operated with 2 bound transmitters based on storing IDs specific to 2 transmitters.
  (2transmitters cannot be operated simultaneously.) It is compatible with M17S, M17,MT-5, MT-R.
- Neutral position of the throttle and operating volume may vary depending on each transmitter. The set value of the transmitter may not be the same as per combination of the bound transmitter.
  Adjust using the transmitter that matches with the linkage of the car.
- Connect the compatible device to SSL port in case of changing the setting of SSL compatible device in real time by using CODE AUX of M17S.
- Always do the failsafe setting by the respective transmitter.
- Do the same setting for RF MODE and response mode of 2 M17S to be bound. Binding by 2 transmitters is not done if they do not have the same setting.

※If transmitter having different setting is bound as a 2nd transmitter, ID (identification number) of M17S bound to the1st transmitter gets deleted and overwritten.

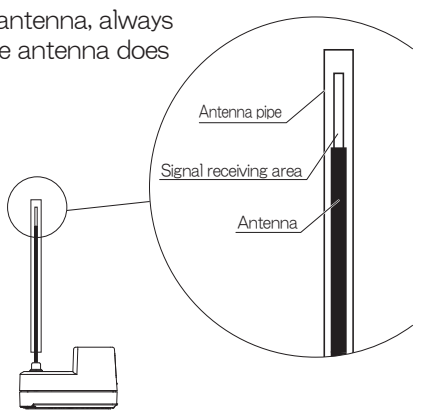
※ ID of the 1st M17S gets deleted if binding of the 3rd transmitter is done.

※ When using first time, the M17S and RX-493i are not binded. Please bind before using.

English

About Handling of Antenna

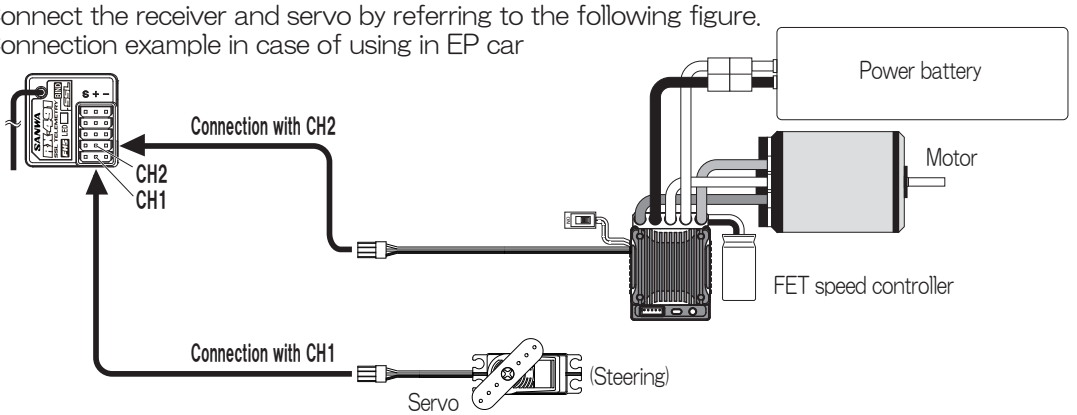
●Reception distance varies depending on the location at which receiver and antenna are loaded.
●As shown in the figure on the right, in order to protect the antenna, always insert the antenna into the antenna pipe such that tip of the antenna does not come out from the external part of the antenna pipe.
●Do not ever bend the antenna as it may break internally.
●Do not unnecessarily pull the antenna. It may cause damage to the internal parts of the receiver.
●At the time of loading onto the RC car, arrange the antenna at the higher possible position.
●Do not cut or tie the antenna as this may cause lowering of the reception sensitivity.
●Erect the antenna of the receiver vertically, away from the motor and FET speed controller (including wiring).



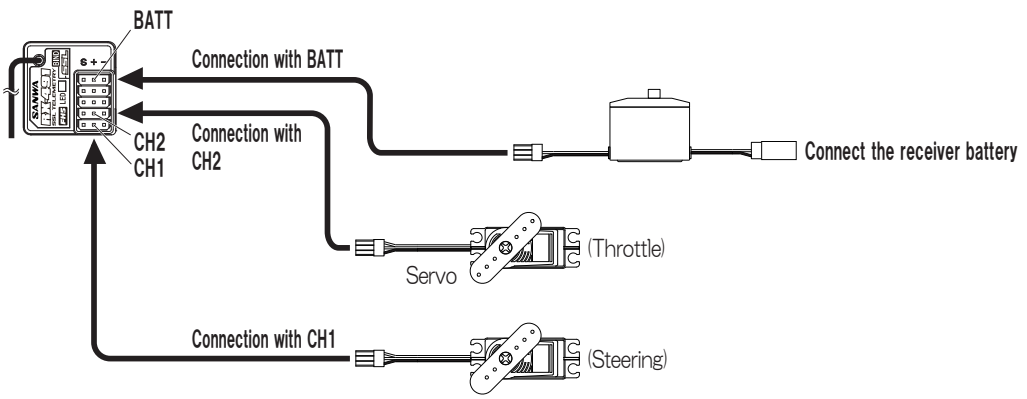
About connection

●Connect the receiver and servo by referring to the following figure.

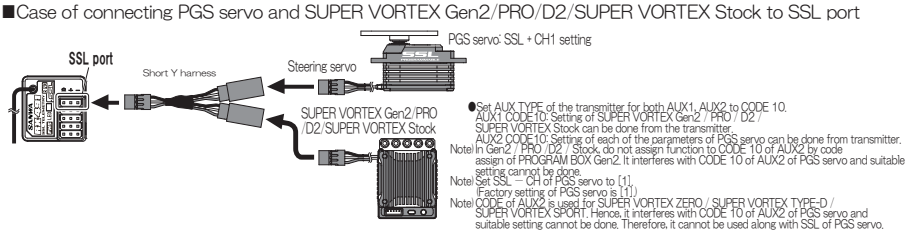
・Connection example in case of using in EP car



・Connection example in case of using in Nitro car



■Case of connecting PGS servo and SUPER VORTEX Gen2/PRO/D2/SUPER VORTEX Stock to SSL port



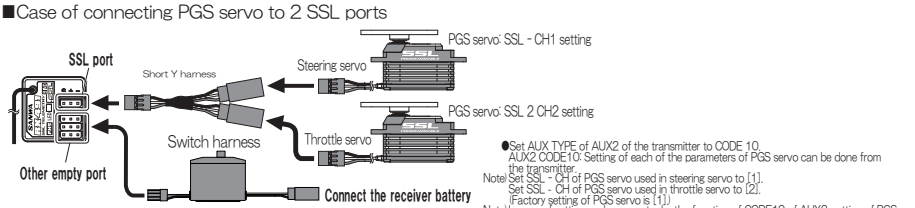
●Set AUX TYPE of the transmitter for both AUX1, AUX2 to CODE 10.
AUX1 CODE10: Setting of SUPER VORTEX Gen2 / PRO / D2 / SUPER VORTEX Stock can be done from the transmitter.
AUX2 CODE10: Setting of each of the parameters of PGS servo can be done from transmitter.

Note! In Gen2 / PRO /D2 / Stock, do not assign function to CODE 10 of AUX2 by code assign of PROGRAM BOX Gen2. It interferes with CODE 10 of AUX2 of PGS servo and suitable setting cannot be done.

Note! Set SSL - CH of PGS servo to [1].
(Factory setting of PGS servo is [1].)

Note! CODE of AUX2 is used for SUPER VORTEX ZERO / SUPER VORTEX TYPE-D / SUPER VORTEX SPORT. Hence, it interferes with CODE 10 of AUX2 of PGS servo and suitable setting cannot be done. Therefore, it cannot be used along with SSL of PGS servo.

■Case of connecting PGS servo to 2 SSL ports



●Set AUX TYPE of AUX2 of the transmitter to CODE 10.
AUX2 CODE10: Setting of each of the parameters of PGS servo can be done from the transmitter.

Note! Set SSL - CH of PGS servo used in steering servo to [1].
Set SSL - CH of PGS servo used in throttle servo to [2].
(Factory setting of PGS servo is [1].)

Note! In case of setting each parameter by the function of CODE10 of AUX2, setting of PGS servo of SSL - port set by CODE1 of AUX2 can be directly changed from the transmitter. PGS servo not specified by CODE1 of AUX2 works on the parameters saved inside.

※Refer to company HP for connection examples other than those given above. http://www.sanwa-denshi.com

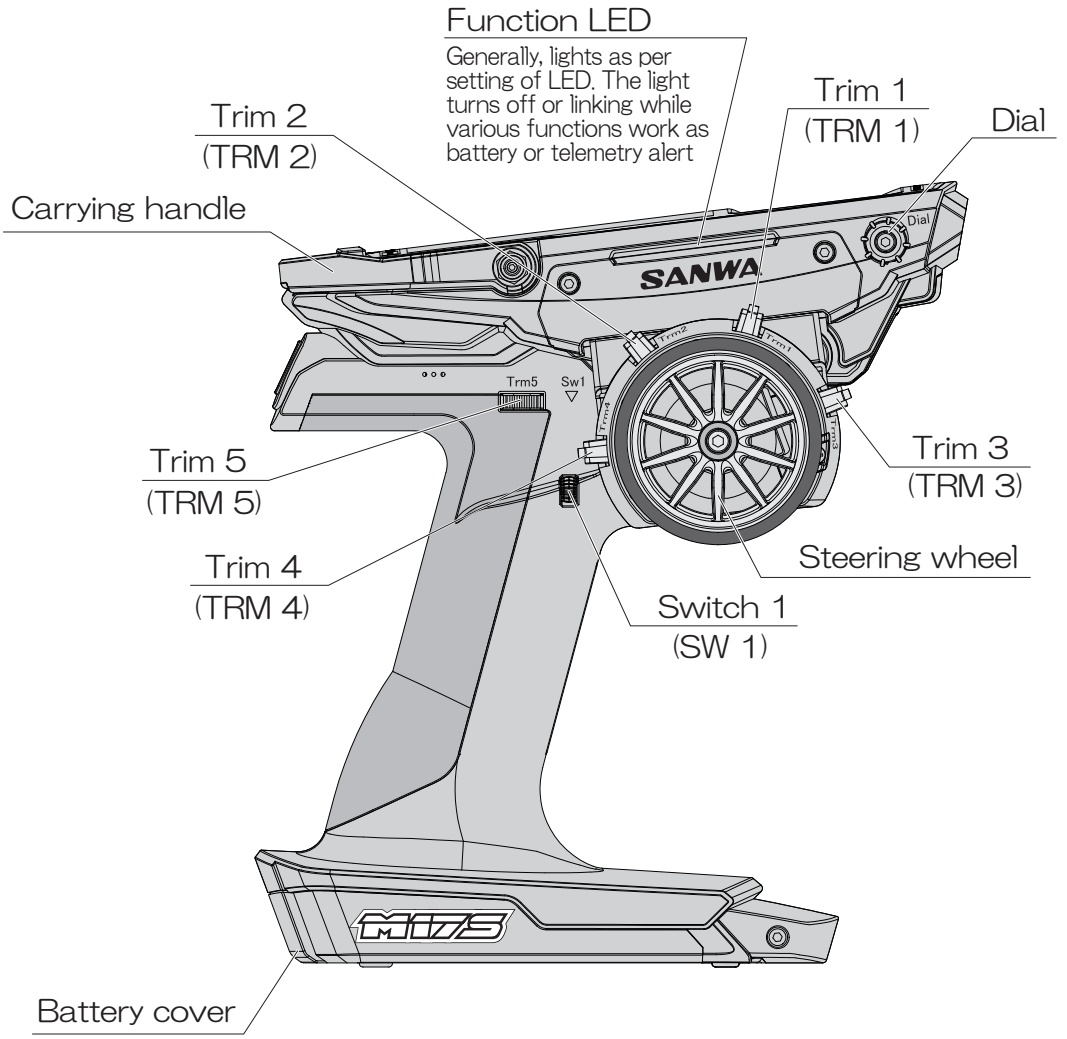
Caution

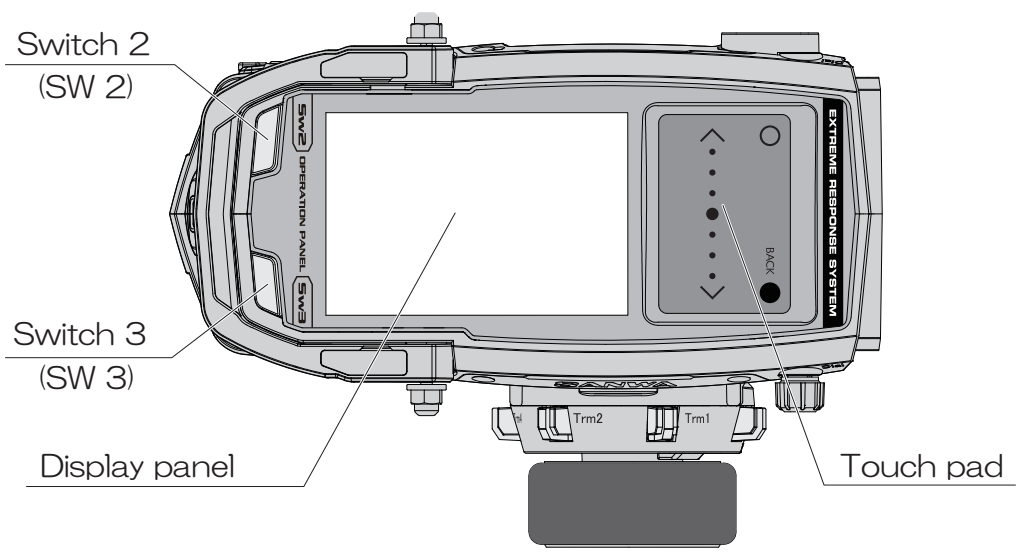
●There is risk of explosion if the connector slips out due to vibrations during running. Firmly connect the connector of receiver, servo and switch.
●Take proper anti-vibrations / waterproof measures since the receiver has poor resistance to vibrations, impact and water. There is risk of explosion if proper measures are not taken.
●Mount the receiver away from carbon chassis and metal chassis.
●If metal parts loaded onto RC car touch each other, noise is generated which affects the reception efficiency adversely and it may cause explosion.
●Always use a noise killer capacitor in the brush motor used for generator RC car.
●Noise is generated which may cause explosion if noise killer capacitor is not attached.
●Use SANWA oficial transmitter parts such as transmitter, receiver, servo, FET speed controller, transmitter battery etc.

※The company does not bear any responsibility for any damage occurred due to use, reconstruction, adjustment or part replacement with parts other than SANWA oficial parts.

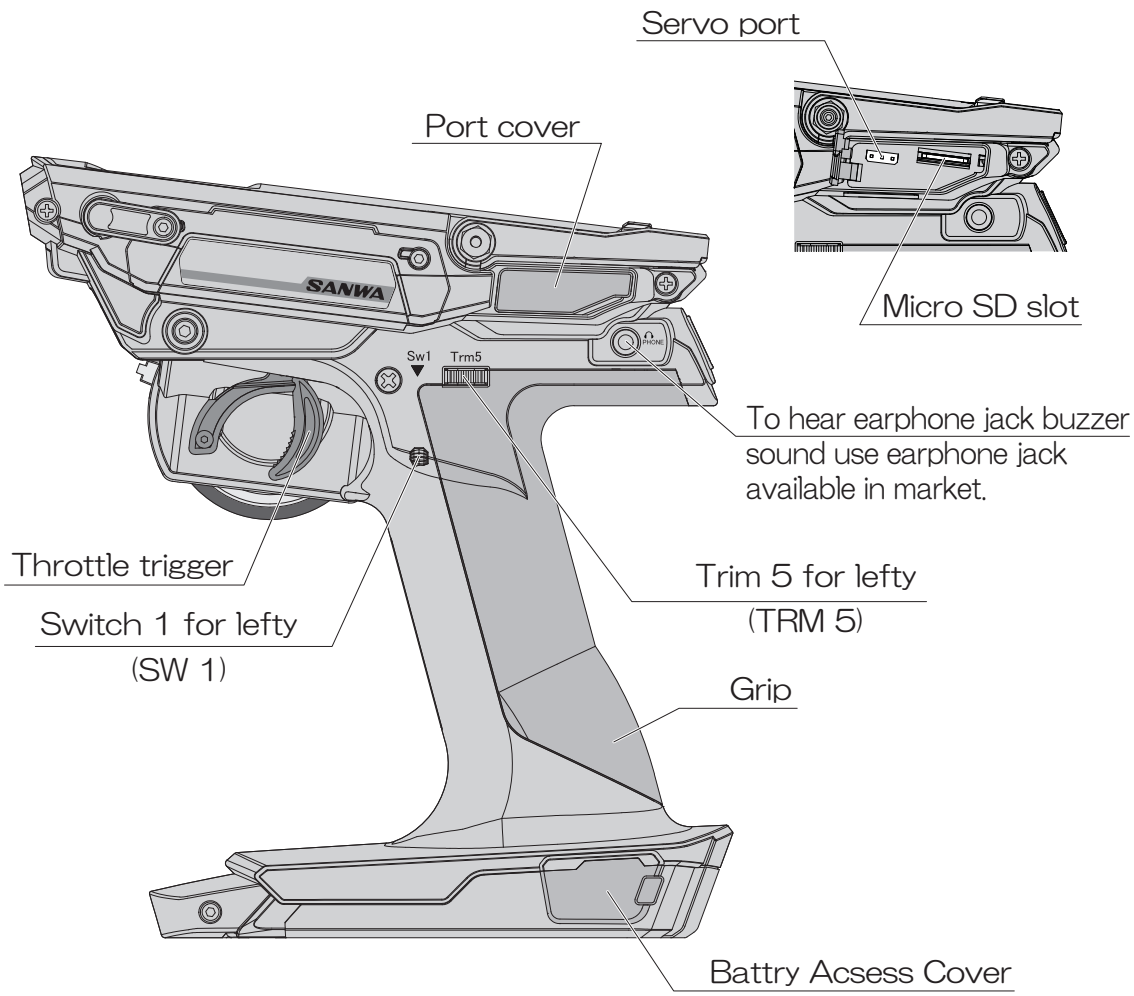
English

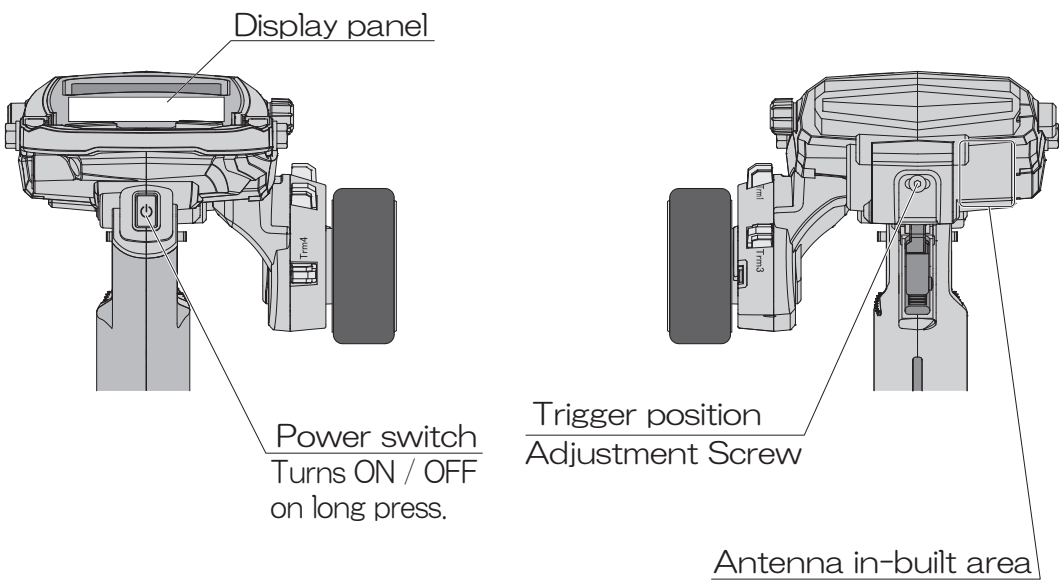
Name of Various Parts of Transmitter





English

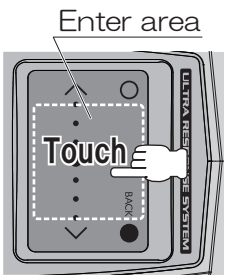
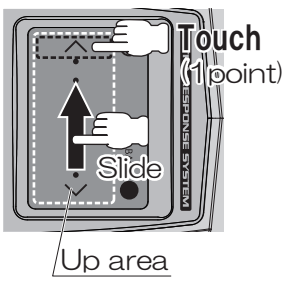
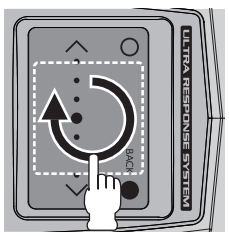
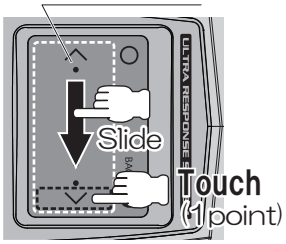
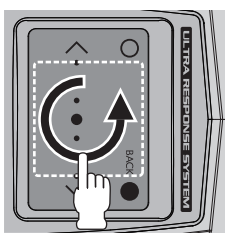
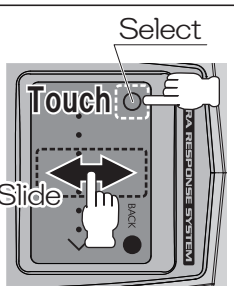
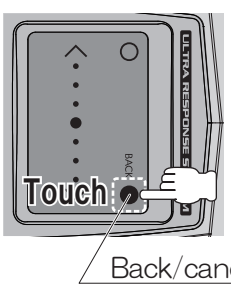

Servo port
Port cover
Micro SD slot
SANWA
Sw1
Trm5
PHONE
To hear earphone jack buzzer sound use earphone jack available in market.
Throttle trigger
Trim 5 for lefty
(TRM 5)
Switch 1 for lefty
(SW 1)
Grip
Battry Acsess Cover


Display panel
Trm4
Trm3
Power switch
Turns ON / OFF
on long press.
Trigger position
Adjustment Screw
Antenna in-built area

English

Operation of TouchPad

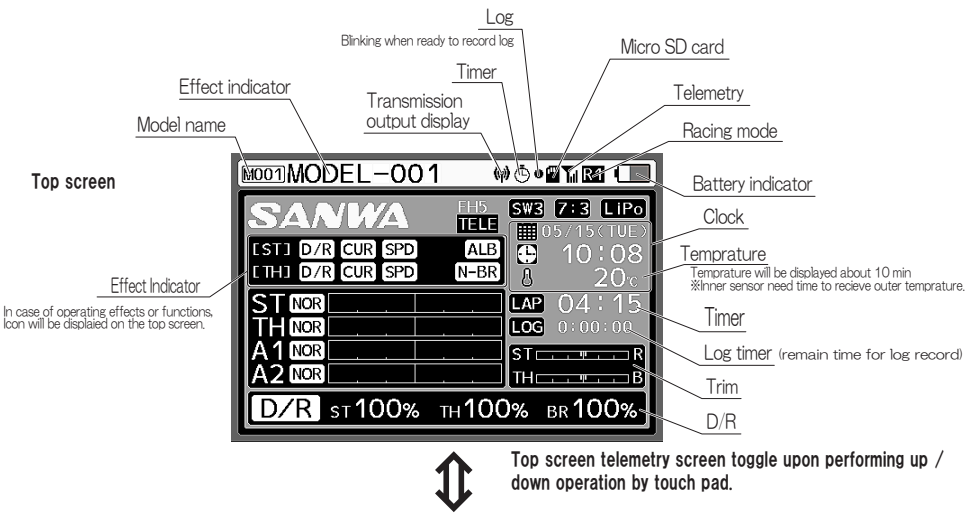
●Setting, calling can be easily done by the gesture operation of touchpad.

Gesture operation	Name	Operation
	Enter	● Perform enter operation by touching such that enter area is lightly tapped by the fingertip. ● Move from the top screen to setting screen. ・ Select function and items to be set. ・ The set value returns to an initial value by long press. ☆ [Trim 4] down operation in DIAL OPERATION MODE
  Wheel gesture (right rotation)	Up	● Perform up operation by sliding up the area by finger. ● The set value increases by 1 point each by touching such that black framed 1-point area is tapped. ○ The set value increases by wheel (right rotation) gesture during changing the set value. ・ Cursor moves to the upward direction. ・ The set value increases. ☆ [DIAL] operation in DIAL OPERATION MODE
 Wheel gesture (left rotation) 	Down	● Perform down operation by sliding down area by finger. ● The set value decreases by 1 point each by touching such that black framed 1-point area is tapped. ○ The set value decreases by wheel (left rotation) gesture during changing the set value. ・ Cursor moves to the downward direction. ・ The set value decreases. ☆ [DIAL] operation in DIAL OPERATION MODE
	Select	● Perform select operation of channel or function by touching such that select area is lightly tapped by the fingertip. ※ The cursor can be moved to left or right by quickly sliding the black framed part to left or right. ・ Select channel or function. ・ The set value increases. ※ Change the operation position of select and back / cancel by setting to left (left-handedness). ☆ [SW2] operation in DIAL OPERATION MODE
	Back/cancel	● Perform back/cancel the operation by touching such that the back / cancel area is lightly tapped by the fingertip. ・ Returns to the previous state. ・ Cancels setting. ※ Change the operation position of select and back / cancel by setting to left (left-handedness). ☆ [Trim 4] up operation in DIAL OPERATION MODE

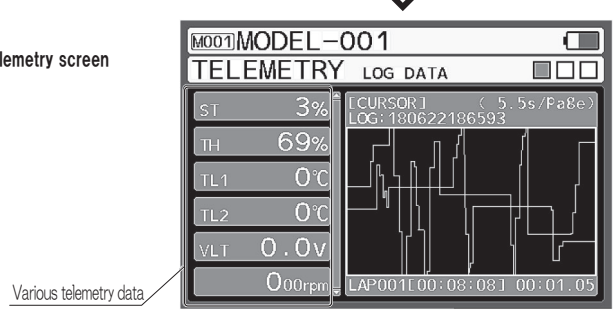
English

Display Panel

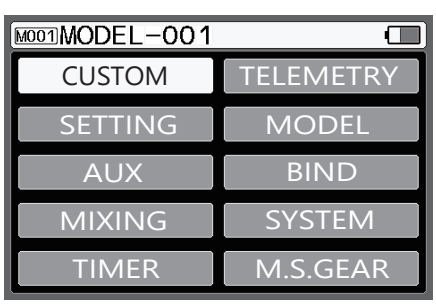
● Each of the functions of M17S can be directly selected by touchpad operation.
● Functions of each channel can be separately set.
● Upon switching the power switch ON, top screen appears after boot screen display (when the setting of the boot is DEMO).
In case of changing various settings, operate touchpad and select menu.



Top screen telemetry screen toggle upon performing up / down operation by touch pad.



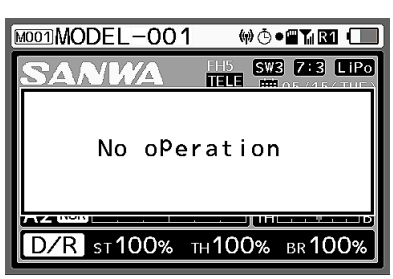
Combined with FH5 receiver with Super Vortex Gen2 PRO, SV-D2 and turned on telemetry function, transmitter can display the data



Menu window
・Select menu.
(Screen example)
※Enter operation from top screen

Power Supply Forget Alarm

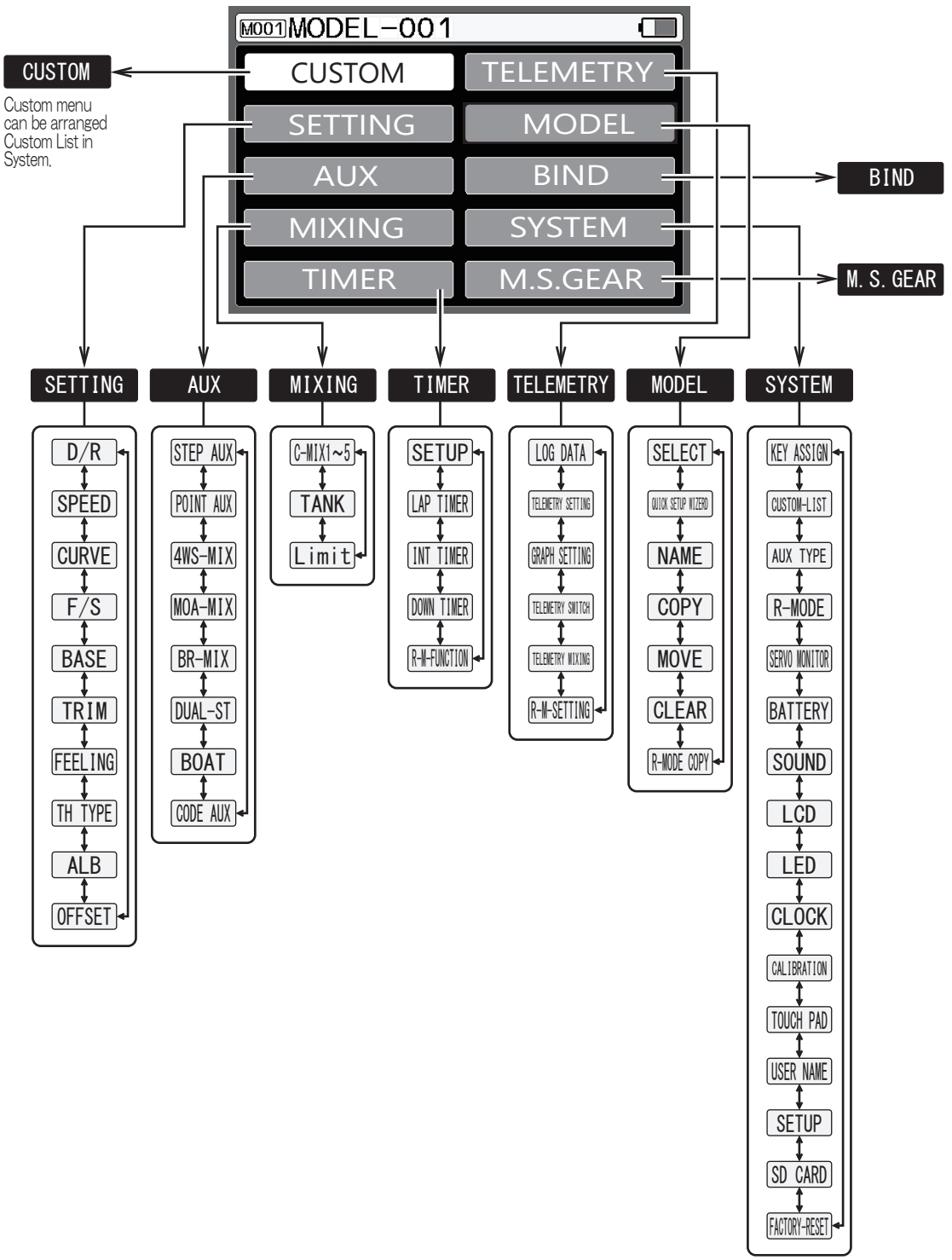
● In M17S, if steering wheel, throttle trigger or various switches are not operated for 10 minutes, “No Operation” is displayed based on warning alarm and turning off of LED light.
Warning is cancelled by operating steering wheel, throttle trigger or various switches. Switch OFF the power switch if not in use.
※ Setting can be changed by SETUP of SYSTEM.



English

Menu Structure

●Setting of functions, calling of model memory can be easily done by using respective keys.
●Menu consists of a menu of setting, AUX, model, timer, telemetry, system and it contains functions relating to respective menus.



English

MODEL SELECT

MODEL

● Stored model data of M 01 ~ M 250 can be easily recalled.

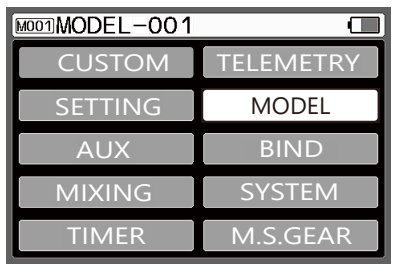
1)Select [MODEL] with the touchpad and confirm with enter.

2)Model select setting (MODEL SELECT)
Select [MODEL SELECT] with the touchpad and confirm with enter.

3)Model Selection
Select the model you want to recall with the touchpad.

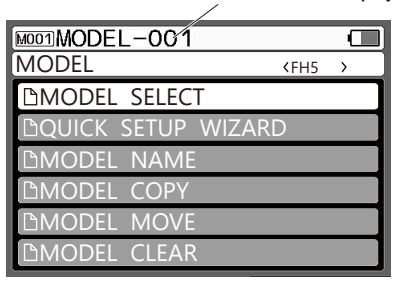
O Setting range M001 ~ M250

4)As the cursor is moved to the model to be recalled and confirmed with the enter operation, a message will be displayed on the screen, so please operate according to the display and perform model selection.



ENTER BACK

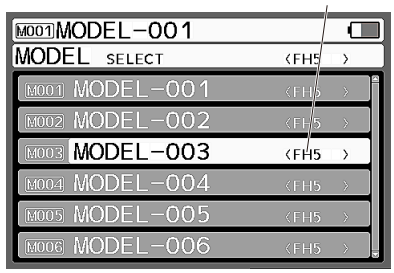
Current model display



①Model screen

ENTER BACK

RF MODE display



②MODEL SELECT Screen

ENTER
Model Select completion

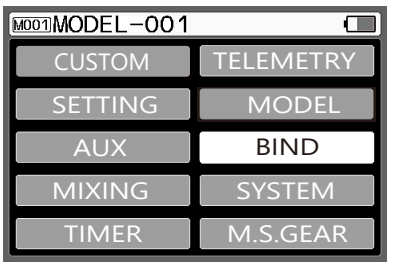
BACK
①To model screen

English

BIND — SYSTEM

● Selects the output method for the receiver, and set the mode and bind the transmitter with receiver for the servo (analog/digital) and the speed controller.

1)Select [BIND] with the touchpad and confirm with enter.

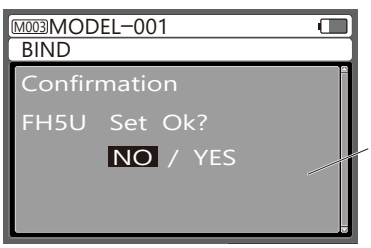


ENTER ⇩ ⇧ BACK

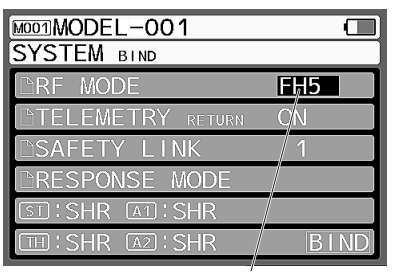
2)RF MODE setting (RF MODE: radio wave output method)
Set the output method with the touch pad.

○ Output Method
- FH5 : RX-49* series
- FH5U : RX-49* series
(RX-493i, RX-492i, RX-47T, RX-493, RX-492, RX-491)

○ Default FH5
*M17S is compatible with FH5 system receiver



Confirmation screen



Output method

3)TELEMETRY RETURN Setting (telemetry return)
[※ Can be set only with FH5]
○ When using a receiver compatible with FH5, set the transmission (return data) of telemetry data from the receiver with the touch pad.
○ Setting range ON/OFF
○ Default ON
※ TELEMETRY RETURN available receiver : RX-49* series
※ If you change the setting of TELEMETRY RETURN, please BIND again.

4)SAFETY LINK Setting
Set the SAFETY LINK with the multi selector.
○ Setting range 1 ~ 50
○ Default 1

※ If you change SAFETY LINK setting after BIND, please BIND again.

Supplement
- ● It is a function to prevent runaway etc. due to model select error. LINK Number can be set for each model.
- ● When model copy (FULL) is done, LINK Number is also copied.
- ● The Default is set to [01]. If you do not change the LINK Number, the BIND receiver will operate on all models.
- ● Safety link is effective only with [FH 5].

Warning
- ● Please bind transmitter with receiver before using.
- ● Please bind transmitter with receiver before using new receiver.
- ● If chaged Bind setting as response mode (SXR/SUR/SSR/SHR/NOR) setting, please rebind after changed. Setting change is completed by rebinding.

English

5) Response Mode Setting

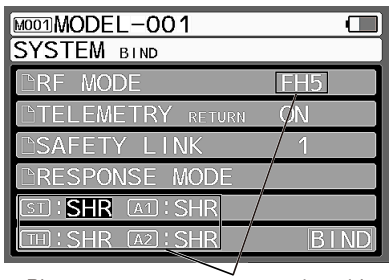
Set the response mode of each channel with the touchpad.

※ Set the response mode of each channel according to the equipment to be used.

・Response mode can be set for each channel.

○ Setting Range NOR (Normal)
SHR (High Response)
SSR (Super Response)
SUR (Ultra Response)
SXR (Extreme Response)

○ Default: SHR



Please set same response setting with first M17 bind setting.

Important

- SXR/SUR/SSR is only compatible with SANWA offical product.
- Please note that the analog servo does not work in SUR/SSR/SHR mode. If the analog servo is used in SUR/SSR/SHR mode by mistake it will not work properly and the servo will be broken so never use the analog servo in SUR/SSR/SHR mode.

For digital servo (ERB, ERS series, Digital ERG series), it operates in NOR/SHR mode.

- The PGS servo operates in all response modes, and the SRG servo operates in SSR/SHR/NOR mode.
- The SUPER VORTEX/SV-PLUS series, HV-12 STOCK SPECIAL, HV-01 operate in SSR/SHR/NOR mode.
- In SUR/SSR/SHR mode, BL-RACER, BL-FORCE, F2000, F2200, F3000, F3300, SBL - 01, 02, 03CL does not operate Ensure to use NOR mode.
- SV-08, HV-10, HV-12, F2500 operate in NOR/SHR mode.

6) BIND SETTING

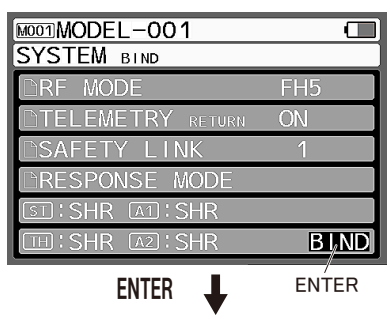
● What is BIND: The M17S transmitter has a unique ID (individual identification) number and that ID number is stored in the receiver. It works only with a set of bound transmitter and receiver.

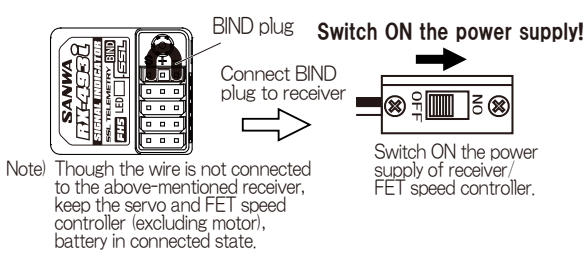
1]After finishing the settings in the BIND menu, set the BIND using the touchpad.

2]Move the cursor to [ENTER] in the BIND menu and with enter operation, the transmitter will be in BIND mode.

3]Connect the BIND plug to the receiver and turn on the power of the receiver.

※PERFORM BIND WORK BY CONNECTING THE POWER SUPPLY TO THE CONNECTOR AVAILABLE AT THE TIME OF BIND. (CONNECT THE SPEED CONTROLLER TO CH2 IN CASE OF EP CAR.)





4]If BIND is performed correctly, LED of the receiver is slowly flashing to be rapidly flashing.

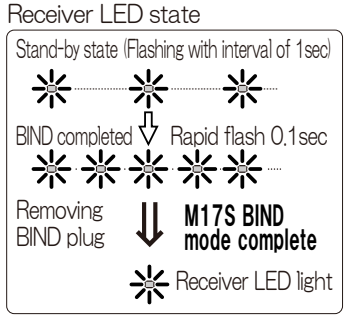
After checking rapidly flashing, please end the BIND operation of the transmitter using enter operation on the touchpad and take off the Bind Plug.

If BIND is performed correctly receiver LED glows.

Once the receiver LED glows confirm that the BIND operation has ended, by operating the servo etc.

※ If BIND operation cannot be performed correctly then redo from operation 2].

Receiver LED state



English

Reverse [REV] — BASE

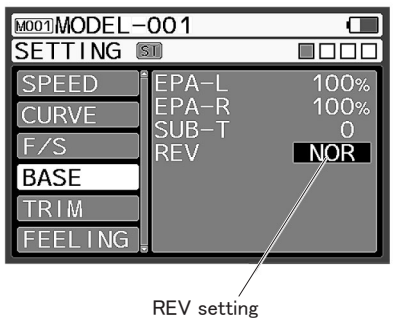
● This is used when the operation and the movement of the servo are reversed for Steering / Throttle / AUX 1 / AUX 2.

1) Select [BASE] with the touch pad and select a channel to set (ST / TH / AUX 1 / AUX 2) by the select operation.

2) If you operate the touchpad by enter operation with the channels to be set, the reverse setting will be changed.

※ When cancelling a selected feature, use the back operation.

○ Setting range NOR/REV
○ Default NOR



Sub Trim [SUB-T] — BASE

● Using the Sub Trim feature, correct the neutral (center) of Steering / Throttle / AUX 1 / AUX 2 so that trim can be used in the center position. When installing a servo on to an RC car, center the servo with Sub Trim first before adjusting End Point Adjustment.

1) Before starting, set each main trim at the center (0) before use.

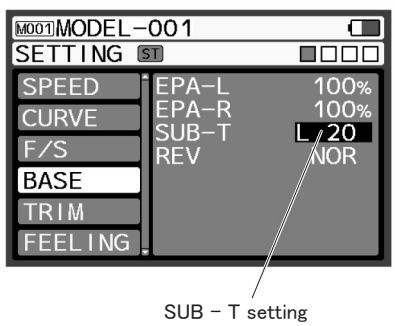
2) Select [SUB - T] with the touchpad and select a channel (ST/TH/AUX1/AUX2) to adjust Sub Trim by the select operation.

3) Determine by Enter operation in the channel to be set.

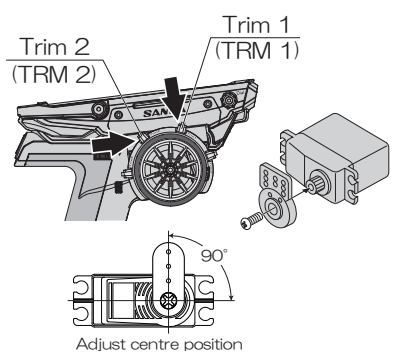
4) Install the servo arm (servo saver arm) at the place nearest to the center position.

※ For installation position of the servo arm, follow the instruction manual of the RC car side.

5) Use the touchpad to adjust the center.



○ Setting Range L150～R150(ST)、
H150～B150(TH)、
H150～L150(AUX1、AUX2)
○ Default 0



⚠ Note

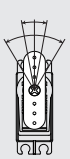
● When installing the servo arm on the servo, fix the servo arm as close to the center as possible and center it with Sub Trim. If Sub Trim and the transmitter main trim are off to one side, it causes dead band (the area where the servo does not move) to the steering wheel and the throttle trigger.

Important

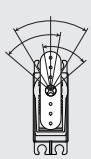
● About Trim and Sub trim

Trim is a feature for adjusting the neutral (center) position of the servo. When your car does not run straight after installing the steering servo onto the car body, Trim adjusts the main trim of the steering. Also, the neutral position of the carburetor in the engine RC car needs neutral adjustment of the throttle servo along with linkage adjustment after installing the servo. Neutral position adjustment is necessary not only after installing the servo but for changes that happen during running such as tire wear and chassis twist. M17S Trim features two types of Trim including Center Trim that adjusts only the neutral position without changing the end of the operating angle and Parallel Trim that moves the end of the operating angle and the neutral position simultaneously. Sub Trim that adjusts the neutral (center) position before fixing the servo arm is the parallel trim and the main trim is Center Trim.

○ Center trim (Main Trim)
Even if you move the neutral position with Trim, the end of the operation angle does not move.



○ Parallel trim (Sub Trim)
When you move the neutral position with Trim, the end of the operation angle also moves. When Sub Trim is adjusted after linkage is completed, readjustment of End Point Adjustment (EPA) will be necessary.



English

End Point Adjustment [EPA] BASE

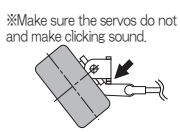
- You can adjust the left and right operating range of the steering servo when operating the steering wheel/throttle trigger and operating range of the high side and brake side of throttle servo, and the servo operating range of AUX1, AUX2 (3ch, 4ch)
- The right and left cornering radius can be different due to the linkage or suspension and difference in tire diameter. In case of this, this feature adjusts the servo operating range at right and left side so that the right and left cornering radius can be the same.

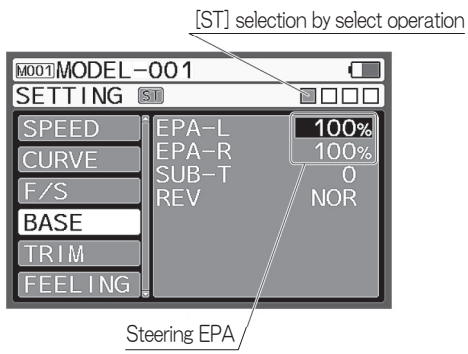
1) Before adjusting the Steering End Point Adjustment (ST-EPA), make a neutral adjustment of the servo.
• Neutral adjustment is to align the center position with Sub Trim by switching ON the power and installing the servo horn in the approximate center position.

2) Select either of [EPA-L/EPA-R] with the touch pad and determine with enter.

3) Select the operating range with the touch pad
※ When the cursor is on either of EPA-L/EPA-R, it is also possible to move the cursor by steering operation.

○ Setting range: L/R 0～150%
○ Default: L/R 100%





Note ● If the linkage is locked for a long period, it can cause the servo breakage.

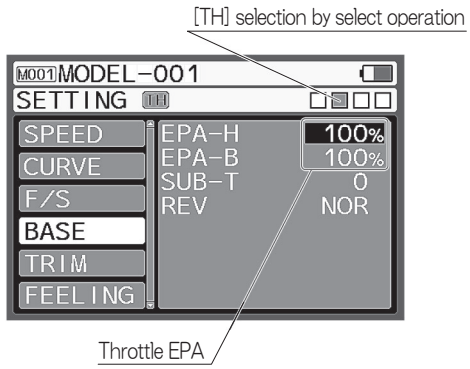
Throttle End Point Adjustment [TH-EPA] BASE

- It adjusts the high point of FET Speed Controller, Brake Point, carburettor of engine cars and the brake operating range.

1) For an engine car, make a neutral adjustment of the servo before adjusting the Throttle End Point Adjustment (TH-EPA).
• Neutral adjustment is to align the center position with Sub Trim by switching ON the power and installing the servo horn in the approximate center position.

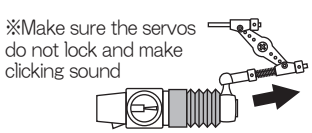
2) Select [TH/Throttle] with the Select button.

3) Select either of [EPA-H/EPA-B] with the touch pad and determine with the Enter



4) Adjust the operating range with the touch pad.
When adjusting FET Speed Controller, normally set both the high side and the brake side to 100% and set neutral, high point and brake point on the FET Speed Controller side (the Setting method is different depending on the FET Speed Controller).
※ When the cursor is on either of EPA-H/EPA-B, it is also possible to move the cursor by trigger operation.

○ Setting range: H/B 0～150%
○ Default: H/B 100%



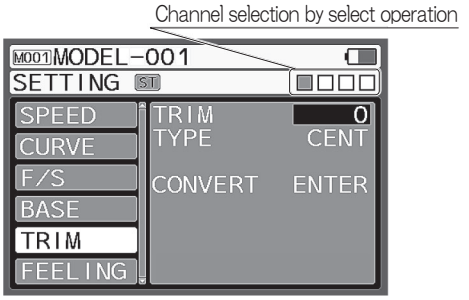
Note ● When EPA setting value is too large on the fully open side of the carburetor and the brake side for throttle linkage, the servo is locked, and it can cause the motor malfunction and runway.

English

TRIM

● Use the trim to correct the neutral (centre) of each channel (ST / TH / AUX 1 / AUX 2).
● In the initial setting, steering is set to trim 1 (TRM 1), and the throttle is set to trim 2 (TRM 2).

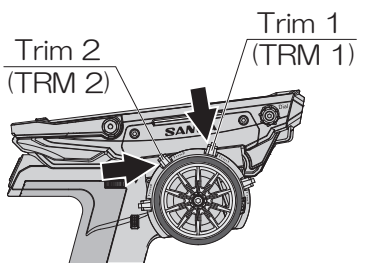
1) Select the channel (ST / TH / AUX 1 / AUX 2) for trim adjustment by SELECT operation.



2) Confirm with the ENTER operation n and adjust with the touchpad.

○ Setting Range ST : L100～R100
TH : H100～B100
AUX1 : H100～L100
AUX2 : H100～L100

○ Initial Value ST : 0
TH : 0
AUX1 : 0
AUX2 : 0



※ During operation, adjust the trim adjustment with TRM1 (ST), TRM2 (TH). The position of the trim lever can be changed with the key assignment trim function.

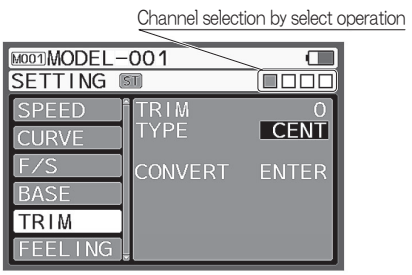
Important

● About TRIM
Trim is the function to adjust the neutral (centre) position of the servo. After installing the steering servo on the car body, adjust it with trim while it is running and do not go straight ahead. Adjustment of neutral position is necessary not only for servo installation but also for dealing with changes during running such as tire wear and tear and twisting of chassis.
● The sub trim adjusts the centre position when adjusting the linkage.

TRIM TYPE

● The trim operation of each channel can be set to centre trim (CENT) and parallel trim (PARA).
● In the initial setting, steering is set to Trim 1 (TRM 1), and the throttle is set to Trim 2 (TRM 2).

1) Select [TRIM] by touchpad and define by enter operation
Select the channel (ST / TH / AUX 1 / AUX) to be set with the SELECT operation.



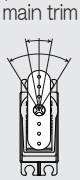
2) Confirm with ENTER operation and adjust with the touch pad.

○ Setting range CENT (centre trim) / PARA (parallel trim)
○ Initial value CENT (centre trim)

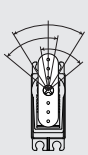
Important

● About centre trim and parallel trim
There are two kinds of trims: one is centre trim, which during trim operation adjusts only the neutral position while keeping the end of the motion angle intact and the other is parallel trim, which move end of motion angle and neutral position together during trim operation. The parallel trim is sub trim that adjusts the neutral (centre) position before confirming the sub horn and the main trim is the selection formula of centre trim and parallel trim. Please set according to the use.

○ Centre Trim
Even if you move the neutral position with trim, the end of the operating angle will not move.



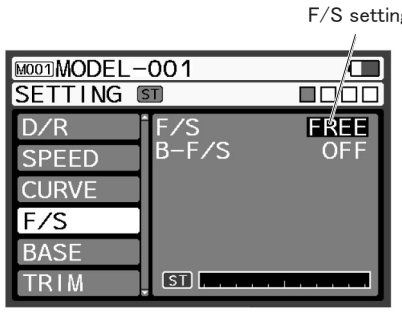
○ Parallel Trim
When you move the neutral position with trim, the end of the operating angle also moves together.
If the sub trim is adjusted after linkage is performed, it is necessary to readjust the end-point adjustment (EPA).



English

Fail Safe [F/S] SETTING

● Fail Safe Operation is a feature to keep the servo in a predetermined position for each channel in the event that the receiver cannot receive a power from the transmitter. A feature to keep the servos in a predetermined position for the servo of the throttle channel (2ch) in the event that the battery voltage on the receiver side of an engine RC car goes below the set voltage is Battery Fail Safe Operation.



● Fail Safe cannot set when setting OFF or HOLD.

* Please do not use when drive Electric RC car.

1)Select [F/S] with the touchpad and select a channel (ST/AUX1/AUX2) to set fail safe with the Select operation.

2) Enter the set channel and operate the touchpad and thereby the failsafe mode setting changes in the order of FREE → FS → HOLD.

○ Setting range FREE/FS(L150% ~ R150%, H150% ~ B150%)/HOLD
○ Default FREE

*Servo direction in Fail Safe setting is depends on REV setting in Base menu (P.40).

※ About each mode

FREE (Free Mode) • • • When the receiver cannot receive the power from the transmitter, the signal output to the servo stops and the servo will be free.

FS (Fail Safe Mode) • • • When the receiver cannot receive the power from the transmitter, the servo will be held in the set position.

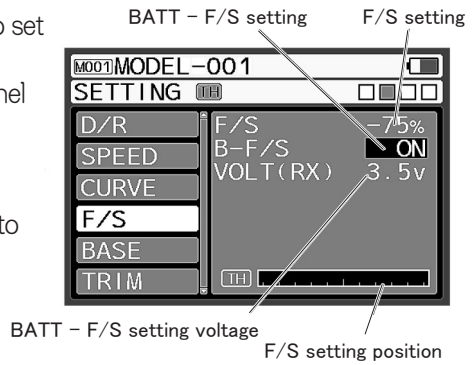
HOLD (Hold Mode) • • • • The last position before the power from the transmitter to the receiver is lost, will be held.

• When the power is received from the transmitter again, each mode of FREE/HOLD/FS is automatically released.

3)Setting the Fail Safe (FS)

Move to the position where the Fail Safe Operation is used. When the position is determined, long press the touchpad to set the position when the Fail Safe Operation works.

※ For safety reason, we recommend setting the throttle channel on the brake side when setting the Fail Safe.



4)Setting the battery Fail Safe Operation

After setting the throttle channel position, move the cursor to [B-F/S] to set the voltage.

○ Setting range • For FH5/FH4 : OFF、3.5v ~ 7.4v

※ The Battery Fail Safe Operation is a feature to activate Fail Safe Operation when the receiver battery voltage rises up to the set voltage on a Nitro car. Do not use the Battery Fail Safe feature on electric RC cars.

5)Checking the Fail Safe Function

Turn off the power of the transmitter while the Fail Safe Operation is set and check if the servo moves to the position where the Fail Safe Operation is set.

Important

● About the Fail Safe Operation
When the Fail Safe feature is on, check the setting of the Fail Safe before operating. Do not change the setting of the Fail Safe during operation.

English

SERVICE AND SUPPORT

This is warranted against manufacture 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 require further help that cannot be solved using The Trouble shooting Guide, or if you have technical questions, please contact SANWA distributor in your region.

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

Factory Service:
Sanwa Electronic Instrument CO., LTD.

1-2-50 Yoshida-Honmachi
Higashiosaka, Osaka, 578-0982 Japan
Telephone: +81-729-62-1277
Fax: +81-729-64-2831
E-mail: rcintl@sanwa-denshi.co.jp

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

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 for this product, and provided at least 20cm separation between the antenna the user's body is maintained. Use of other accessories may not ensure compliance with FCC RF
exposure guidelines.