EX RR



EX-RR/EX-2/EX-LDT series
INSTRUCTION MANUAL

This manual is applicable to EX-RR/EX-2/EX-LDT with Expansion Ver.2.15.
(Name of Products in explanation is unified with EX-RR.)

Please check the barcode sticker on the package for contents of the product in the package.

Please refer included instruction manual about Grip Unit of EX-LDT.

KO PROPO®

KONDO KAGAKU Co., Ltd. 2021 Ver.2.15

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■ For Safe Operation

Due to the nature of radio controlled models, improper handling may lead to dangerous situations. Therefore please read the following information carefully in order to ensure safe operation. Please also understand that KO Propo is not responsible for any injuries or damage which result from noncompliance of these cautions and notices.

⚠ **Warning!** Improper handling/ usage may lead to a high probability of material damage as well as a possibility of serious personal injury or even death.

⚠ **Notice!** Improper handling/ usage may lead to personal injury or material damage.

●When Installing Components

⚠ **Warning!** Prohibited matters	●Make sure metal parts on the model (car chassis/ship hull) do not come into contact with each other. ※Contact between metal parts may result in noise, which could cause the receiver to malfunction and lead to an uncontrollable model. ●Do not cut or bundle the antenna cable. ※This may lower the receiver's sensitivity and lead to an uncontrollable model. ●Ensure correct polarity when installing transmitter and receiver batteries. ※Incorrect polarity may damage the product.
⚠ **Warning!** Enforcement matters	●Within Japan, this product is limited to usage with models which operate on the ground or in the water. ※Do not use for other non-designated purposes. ●Ensure that all connectors (receiver, servo, switch, etc.) are connected securely. ※If connections become loose due to vibrations, it may lead to an uncontrollable model. ●Securely attach receiver with thick double-sided tape and ensure that it does not make contact with other parts. ※Strong shocks or contact with other parts due to vibrations may lead to an uncontrollable model. ●Check servo operation to ensure the pushrod is not subject to excessive loads. ※Excessive loads may damage the servo or increase battery power consumption. ●Make sure to use the rubber grommet when attaching the servo and that the servo does not contact the R/C equipment tray. ※If vibrations affect the servo, it may lead to damage or an uncontrollable model. ●Use in conjunction with genuine official KO Propo products. ※KO Propo is not responsible for any damages or injuries which result from use of this product in combination with other manufacturer's products.

●Notes for Usage

⚠ **Warning!** Prohibited matters	●Do not use when there is thunder. ※It is possible for lightning to strike the antenna. ●Do not use in the rain or in areas where water has accumulated. ※If water enters the product it may lead to an uncontrollable model. ●Do not use in the following locations: 1. Near R/C circuits (within 3km) 2. Near crowds, on streets, or near actual vehicles or ships. 3. Near high-voltage power lines or communication facilities. ※If signal interference, etc. causes an uncontrollable model, a serious accident may result. ●Do not use when your concentration levels are compromised by tiredness, alcohol, medication, etc. ※Mistakes in judgment may result in serious accidents. ●Do not allow glow engine fuel or engine exhaust to contact the product. ※These may attack the plastic and damage the product.
⚠ **Warning!** Enforcement matters	●Check to ensure that the selected model memory matches the model to be controlled. ※Using an incorrect memory may lead to an uncontrollable model. ●Make sure to stop the engine (disconnect motor cables) before changing transmitter settings.

⚠ **Caution!** Prohibited matters	●Do not touch engine, motor, ESC, etc. immediately after use as they may be hot. ※Doing so may lead to burns.
⚠ **Caution!** Enforcement matters	●When switching on, always turn on the transmitter first, followed by the receiver. Follow the reverse order when switching off. ※If the wrong order is followed, it may lead to an uncontrollable model. ●Dismantling or modifying the RF Module (internalized in the case of the EX-RR) is prohibited and is punishable by law. ※Doing so may lead to accidents such as short circuits and KO Propo Customer Service Department may not accept dismantled/modified products for repair. ●Do not use this product in aircraft, hospitals, or near fire alarms or medical equipment. ※This may lead to malfunctions and result in serious accidents. Also, by law you must cease operation if the product affects other wireless or electrical devices. ●2.4GHz transmitters must be registered with the Japan Radio Control Safety Association. ※The transmitter which you have purchases is already registered. Products which do not have proof of registration are illegal.

●Notes After Usage

⚠ **Warning!** Enforcement matters	●In the case of an R/C car, make sure to remove the battery pack after driving. ※If the car is switched on accidentally, it may lead to a fire or an uncontrollable model. ●Keep transmitters, batteries, and models away from small children. ※Chemical agents and the items themselves may cause personal injury.
⚠ **Caution!** Enforcement matters	●Remove batteries from transmitter if it will not be used for a considerable time. ※If batteries are left in the transmitter, battery leakage may result in damage. ●Do not store transmitter/receiver in the following conditions: 1. Extremely hot (over 40°C) or cold (below 10°C) temperatures. 2. Locations in direct sunlight. 3. Locations with high humidity. 4. Locations subject to vibrations. 5. Locations with lots of dust. ※These conditions may cause the case to deform and damage the product.

●Transmitter Battery Handling and Charging (separately available option)

⚠ **Danger!** Enforcement matters	●Never short-circuit the battery connector. ※This may lead to a fire or explosion. ●Do not dispose batteries in fires. ※This is very dangerous and may lead to an explosion. ●Use KO Propo chargers to charge the battery and use the correct current (under 1A). ※Incorrect current may lead to battery damage, overheating, or leakage. ※Other manufacturer's chargers may not have a automatic cutoff function.
⚠ **Danger!** Enforcement matters	●Do not subject the battery to strong shocks. ※This may damage the battery and cause leakage or a short circuit. ●Do not dismantle or modify the battery. ※This may cause dangerous leakage of battery fluids. ●Keep away from water. Do not charge a wet battery. ※This may cause overheating and damage. ●Do not charge alkaline batteries. ※Alkaline and other single-use batteries cannot be recharged. Doing so may lead to fire and damage. ●Do not use wet hands when plugging in the charger's AC Adapter. ※This may result in electrical shocks.

※If there is battery fluid leakage, avoid contact with eyes as it may result in blindness. If contact with eyes occur, flush with large amounts of water and seek medical attention immediately.
※When disposing batteries, Ni-Cd, Ni-MH, Li-Po, and Li-Fe batteries should be recycled in order to help protect the environment.

■ Getting Started

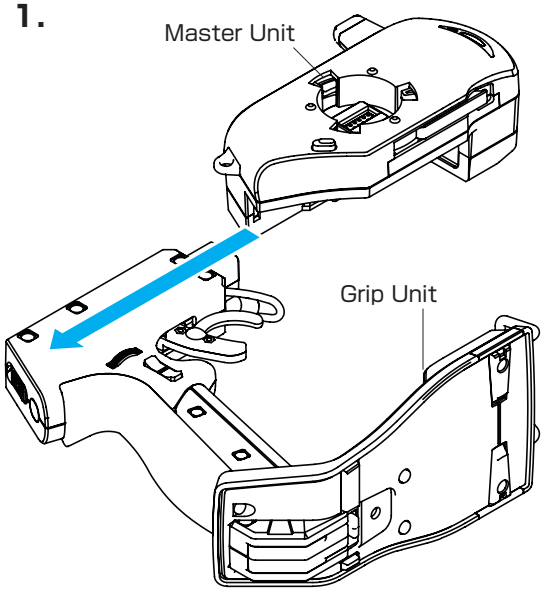
《Legend》 Ⓟ : Point ⚠ : Notice

● Transmitter Assembly

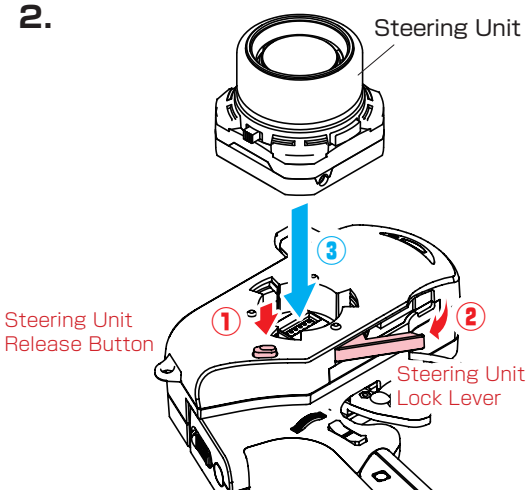
Insert the Grip Unit into the Master Unit, then attach the Steering Unit.

⚠ Remove the connector cover before use.

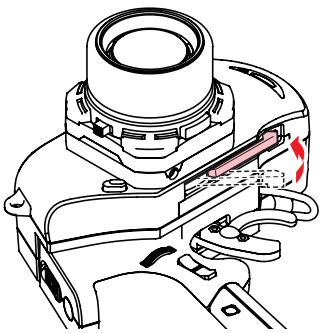
1.



2.



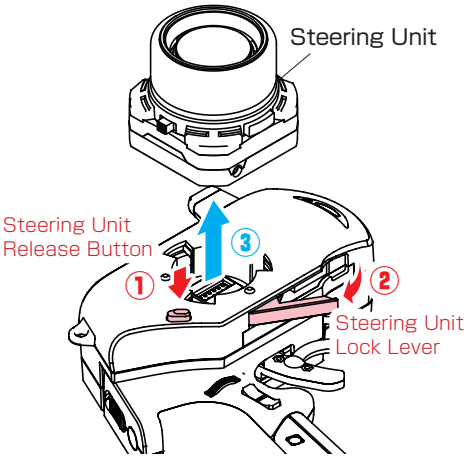
3.



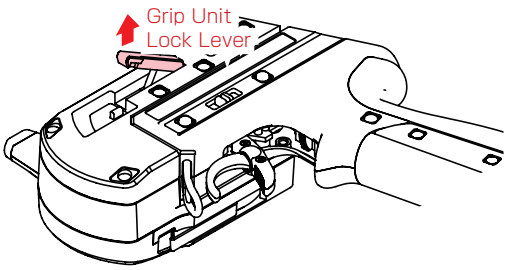
● Transmitter Dismantling

Detach the Steering Unit, then detach the Master Unit.

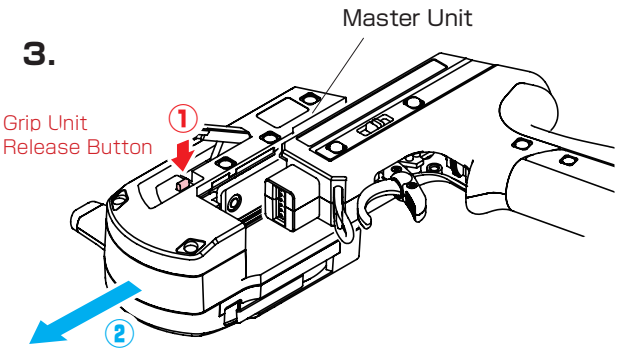
1.



2.



3.



⚠ If storing the transmitter in dismantled form, please remember to attach the connector covers.

⚠ In the explanation drawing, the standard steering wheel unit is used.
The drop extension unit is attached to EX-RR.

⚠ Assembly may differ with the included set contents.

※ Please be sure to do configuration.

⚠ The occasion when a unit is exchanged, in addition, the case where you use for the first time, please do the VR information configuration (p.38).

● Installation of Xpansion unit

Xpansion unit can be mounted facing the front or the side. The factory setting is mounted to the front.

⚠ Be careful to not misuse the M2.6-6BH and TP2.6-8BH screws.

⚠ Remove the connector cover before use.

Ⓟ Xpansion unit can be mounted in two different directions using the monitor base and bracket.

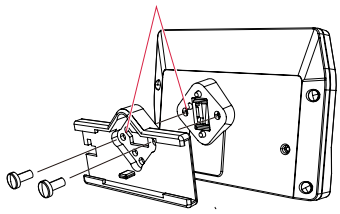
A ▼ : setting to the front

① Attach a monitor base parallel to Xpansion unit. ※ Factory setting.

Attention to the marker.

screw used.

M2.6-6BH
x 2

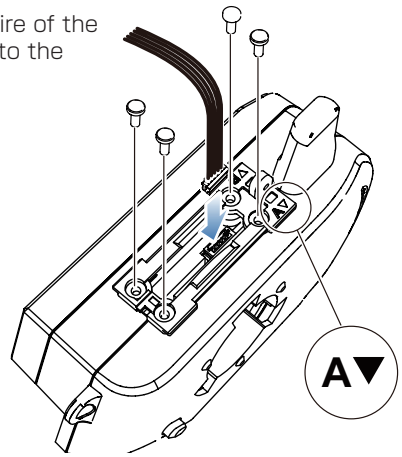


② Attach the monitor bracket to the master unit. ※ [A ▼] mark to the steering side.

Connect the wire of the Xpansion unit to the master unit.

screw used.

2.6-8BH
Self tapping
screws x 4

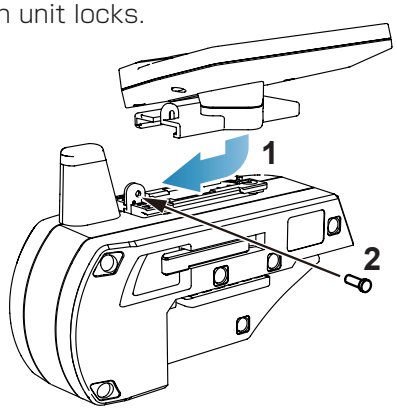


③ Attach expansion unit to a master unit.

1 While matching the edge of the base with the dent of the bracket, slide it until the Xpansion unit locks.

screw used.

M2-6
cap screw
x 1



2 Set M2-6 Cap Screw.

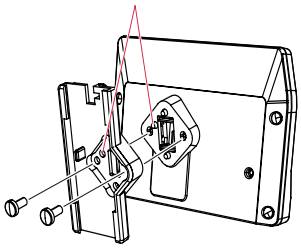
▼ B : when mounting sideways

① Attach the monitor base at a right angle to Xpansion Unit. ※ Different Factory setting.

screw used.

M2.6-6BH
x 2

Attention to the marker.

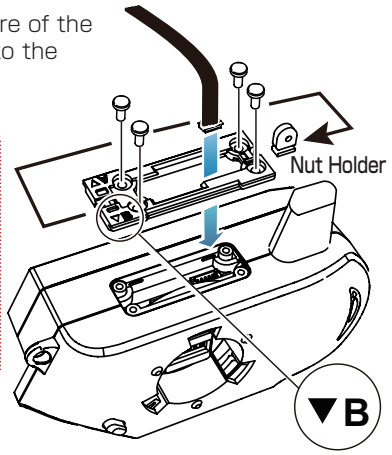


② Attach the monitor bracket to the master unit. ※ Apply [B ▼] mark to the steering side.

Connect the wire of the Xpansion unit to the master unit.

screw used.

2.6-8BH
Self tapping
screws x 4



③ Attach the Xpansion unit to the master unit. ※ Attach the monitor base and bracket as shown in figure A ③ .

How to disassemble the Xpansion unit.

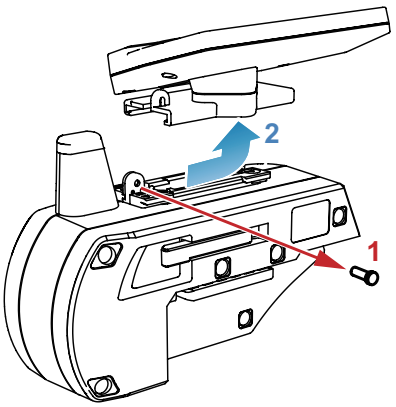
1.Remove M2-6 Cap Screw.

2.Slide the Xpansion like shown in the figure below and take off.

※ The disassembly method is the same as side and front positions.

screw used.

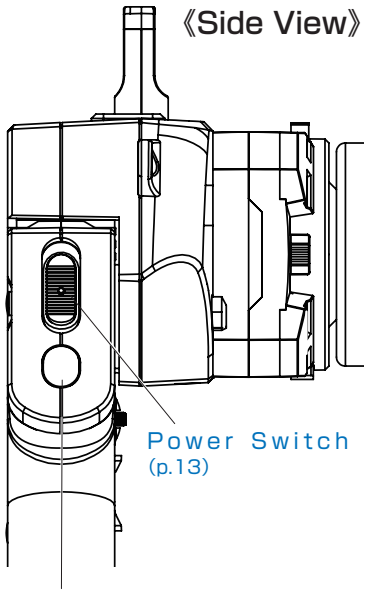
M2-6
cap screw
x 1



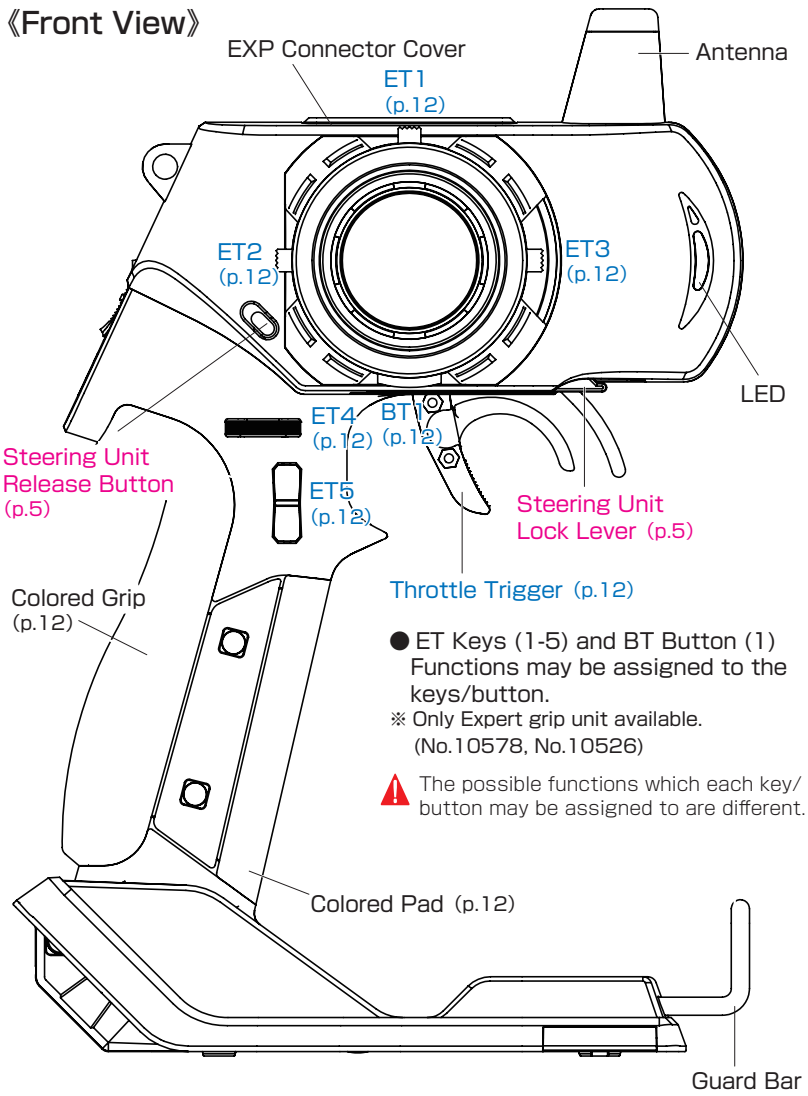
⚠ When assembling or disassembling the Xpansion unit to EX-RR, please switch off the EX-RR.

■ Names of Parts

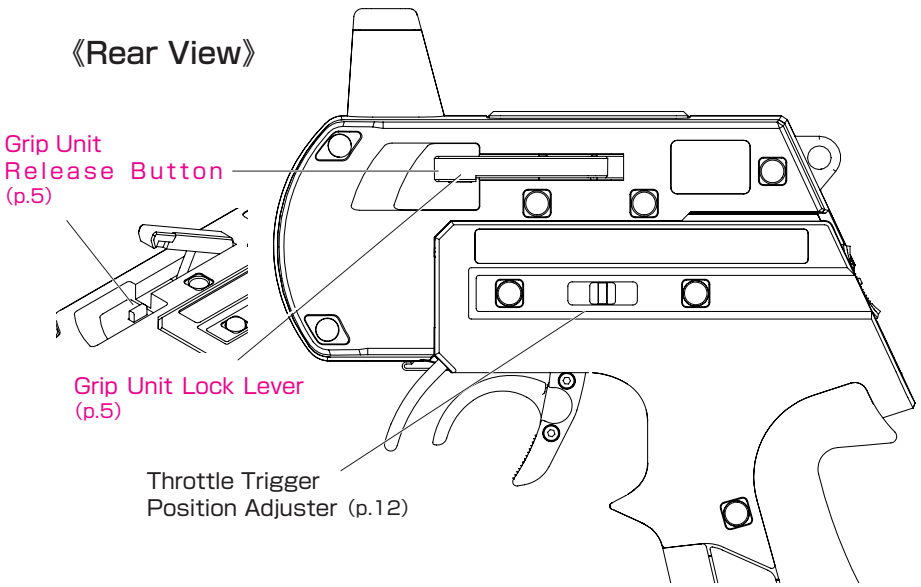
《Side View》



《Front View》



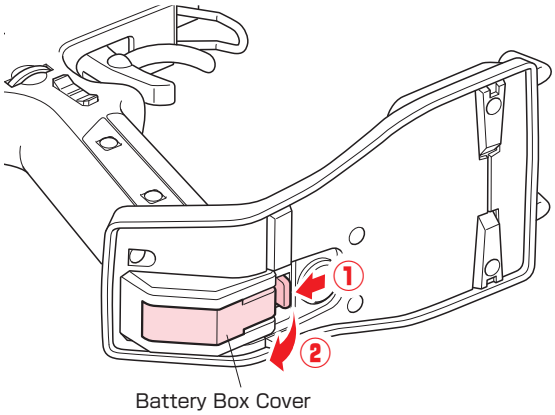
《Rear View》



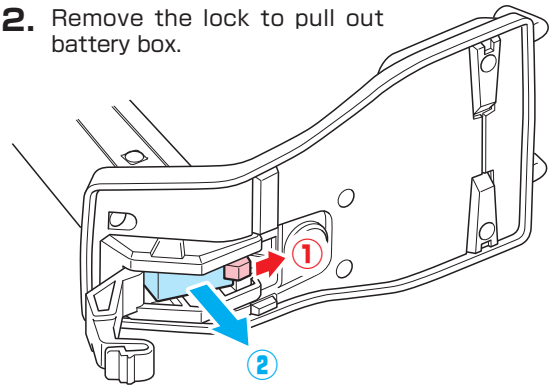
■ Preparations

● Battery Installation

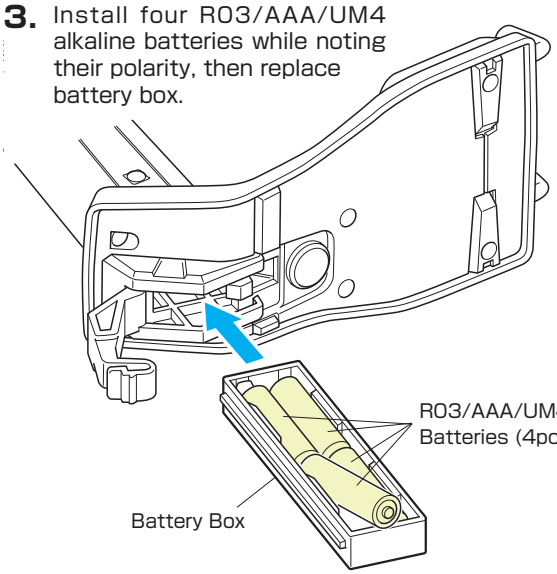
1. Press the tab on the bottom of the transmitter to open battery box cover.



2. Remove the lock to pull out battery box.



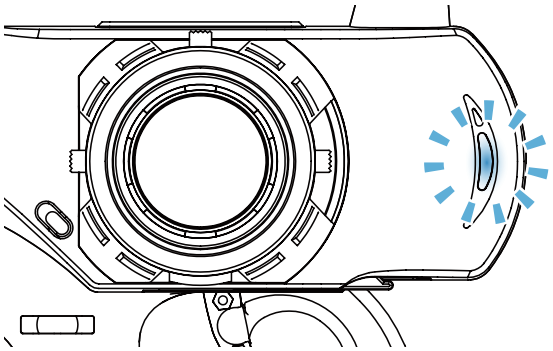
3. Install four R03/AAA/UM4 alkaline batteries while noting their polarity, then replace battery box.



⚠ Use batteries which have adequate remaining capacity. Weak batteries mean lower transmitting power and may result in malfunctions.

● Battery Level Warning

A warning will be displayed with the LED flashing and an alarm will sound when battery voltage is less 4v. When you see this warning, stop your model in a safe area, turn it off and install new transmitter batteries.



⚠ If the Xpansion unit is not assembled or used, do not use the LiFe/LiPo battery.

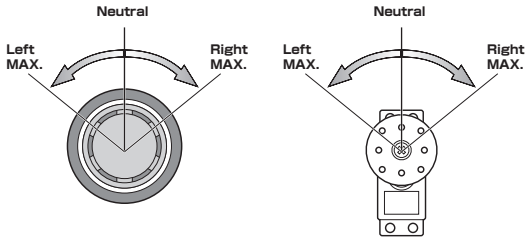
■ Basic operation

● STEERING

※ The following function explanation is the case of factory default settings. When changing KEYSET (key setting); the following opinions change.

■ Steering wheel

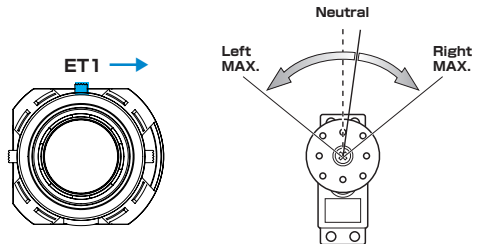
Turn steering in right and left, the servo (steering) connected to 1CH of the receiver works.



■ Steering trim

Adjusts the neutral/center position of the steering angle range. The function to make a fine adjustment so that a car goes straight, operate the ET1 lever in the right and left directions.
● A buzzer sound with a single beep sound when operated to the right and left. ● A buzzer sound "Piro" is made when the center trim is adjusted.
● When exceeding the setting range a "Pi-" sound can be heard. Please look over your installation and linkage of the servo horn.

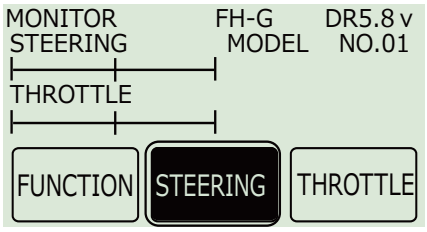
< ex. Right >



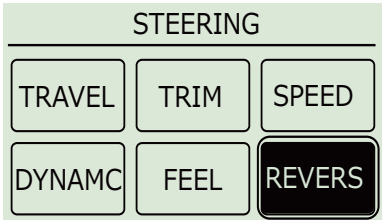
■ Steering reverse

Changing the output directional movement of the servo when it is moving in the opposite direction. (when a steering moves to the left while turning the steering wheel to the right.)

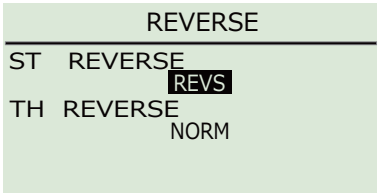
① Select [STEERING] on the initial screen and push ENTER key.



② Select [REVERSE] on the STEERING menu, and push ENTER key.



③ Change setting from NORM to REVS.

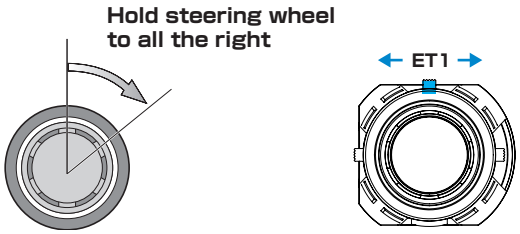


※ Return reverse setting, perform operation to ① ～③ again.

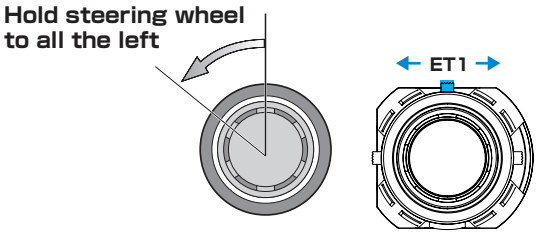
■ Steering Balance

Adjust the left/right steering angles independently. This enables the turning radii to match up during cornering.

● Balance R (Right)
① Hold steering wheel to all the right.
② Push ET1 lever by 1 click, adjust the range of Steering angle.



● Balance L (Left)
① Hold steering wheel to all the Left.
② Push ET1 lever by 1 click, adjust the range of Steering angle.



P To adjust the amount of steering for right and left at one time, change steering travel (p.40) with ET4 dial.

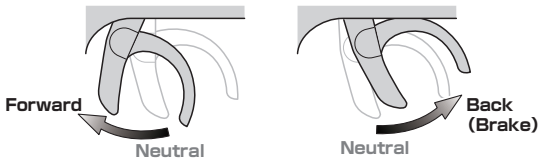
P The above function can be invalidated by turning "OFF" direct balance (P. 40).

● THROTTLE

※ The following function explanation is the case of factory default settings. When changing KEYSET (key setting); the following opinions change.

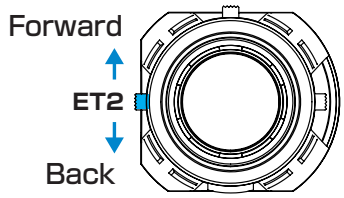
■ Throttle trigger

Operating trigger, the servo (ESC) connected to 2CH of the receiver works forward and reverse function.



■ Throttle trim

Adjusts the neutral/center position of the throttle stroke range.The function to make a fine adjustment, operate ET2 lever in up and down.
● A buzzer sound with a single beep sound when operated up or down. ● A buzzer sound "Piro" is made when the center trim is adjusted. ● When exceeding the setting range a "Pi-" sound can be heard. Please look over your installation and linkage of the servo horn.

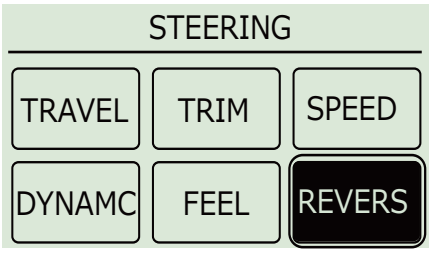


■ Throttle reverse

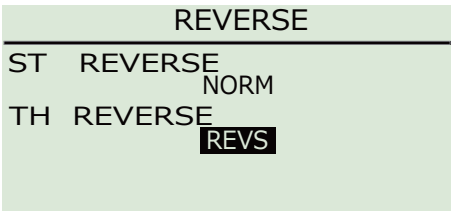
Changing the output directional movement of the servo when it is moving in the opposite direction. (when the brake is moving the forward throttle.)
*This function setting "REVERSE" is accessed in the Steering menu.

① Select Steering menu in the initial screen and push Enter.

② Select [REVERSE] on the STEERING menu, and push ENTER key.



③ Change setting from NORM to REVS.

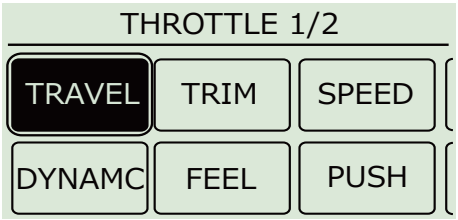


※ Return reverse setting, perform operation to ① ～③ again.

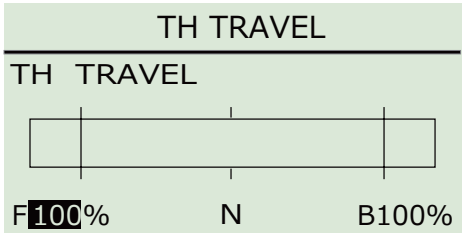
■ Throttle travel

Modify the maximum amount of throttle brake movement and forward acceleration movement.

● Travel F(Forward)
① From initial screen select [THROTTLE] throttle and press the ENTER key.

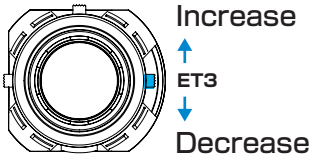


② Select [TRAVEL] on the THROTTLE menu, and push ENTER key.



● Travel B(Brake)
① Select [THROTTLE] throttle and press the ENTER key.
② Select [TRAVEL B] on the THROTTLE menu, and push ENTER key to adjust.

P The setting of [TRAVEL B] can be changed by operating the ET3 lever.



⚠ For GP cars, a strong setting for the brake can damage the servo.

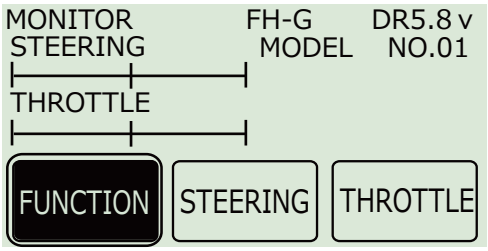
● 3・4CH operation

※ Factory default setting for 3CH is set to 5WAY and the 4CH is set to 2WAY.
※ The function to set the 3CH and 4CH is the same. Please set and adjust these settings according to use.

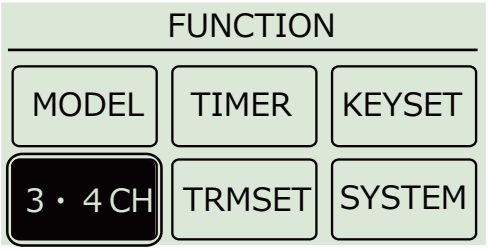
Example

Configuring 3CH to 3WAY and operating with the use of ET5.

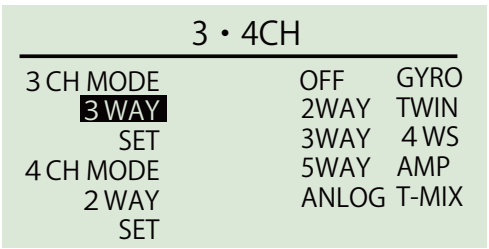
① From the initial screen select FUNCTION and press the ENTER key.



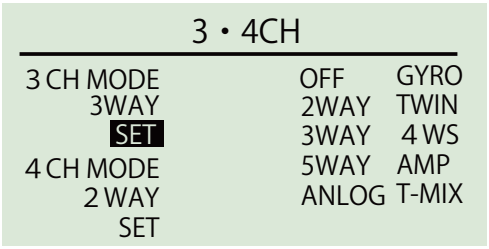
② From the FUNCTION menu, select 3.4CH and press the ENTER key.



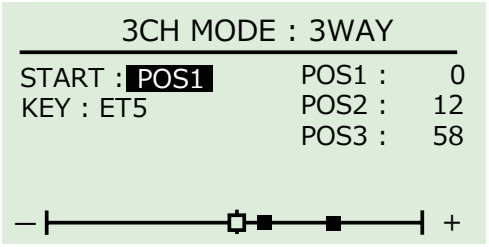
③ In the 3CH MODE, select 3WAY.



④ Select SET and press the ENTER key.



⑤ 3CH MODE: Because 3WAY configuration menu is displayed, each setting can now be modified.



【Configuration Example】

START : POS 2 ⇒ POS1 へ (Default : POS2)
Initial position when activating is set.
KEY : OFF ⇒ ET5 (Default : OFF)
The key that will operate the 3CH is set to ET5.
POS 1 : -100 ⇒ 0 (Default : 100)
Output position of position 1 (closed) is set.
POS 2 : 0 ⇒ 12 (Default : 0)
Output position of position 2 (slightly moving) is set.
POS 3 : 100 ⇒ 58 (Default : 100)
Output position of position 3 (open) is set.

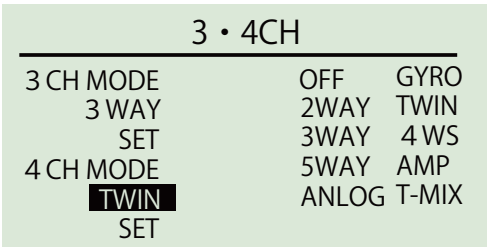
⚠ The above mentioned setting is an example. Please set and adjust according to use.

⚠ For a detailed configuration manner, please access ▶ 3WAY (p.30).

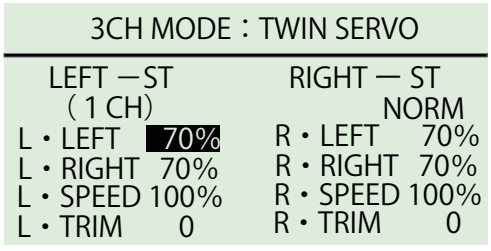
Example

Setting 4CH for twin servos.

① From the initial screen select FUNCTION and press the ENTER key.
② Select the 3・4CH setting from the menu and press the ENTER key.
③ 4CH MODE is set to TWIN.



④ 4CH SE T is selected and press the ENTER key.
⑤ 4CH MODE: Because the TWIN setting menu is displayed, each setting can now be modified.



⚠ For a detailed configuration manner, please refer to ▶ TWIN SERVO (p.32).

● ET Keys (1-5) and BT Button (1)

Functions may be assigned to the keys/button. For key allocation, please refer to KEYSET key configuration (p.29).

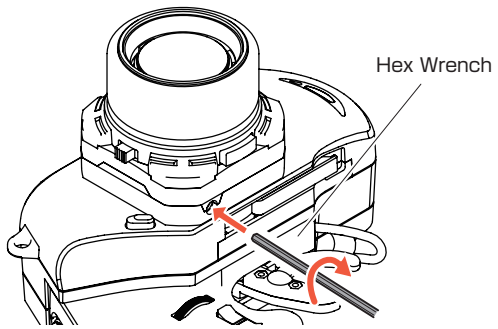
⚠ The possible functions which each key/button may be assigned to are different.

● Steering Wheel Adjustment

Adjust the tension of the steering wheel spring.

《How to Adjust》

Insert a 1.5mm hex wrench referring to the image below. Rotate clockwise to increase tension and counterclockwise to decrease it.



⚠ Excessive counterclockwise rotation will result in the wheel being unable to return to neutral position. In this case, rotate clockwise until the wheel returns to neutral.

● Adjustment of the decrease angle adjuster

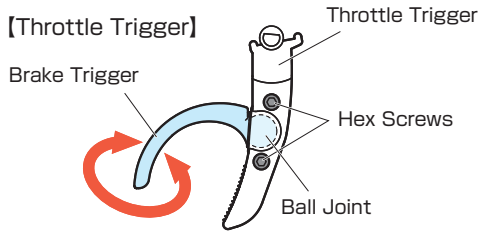
① The steering sponge is removed.
② Using a 2mm hexagonal wrench, insert into the two holes of the steering wheel to adjust the angle you prefer.
③ Perform the VR information configuration (p.38).
④ Replace the steering wheel sponge.

● Throttle Trigger Adjustment

Adjust the position and angle of the brake trigger to your preferences.

《How to Adjust》

① Loosen the hex screws on the throttle trigger with a 1.5mm hex wrench.
② Freely adjust the brake trigger position.
③ Tighten the hex screws to secure.



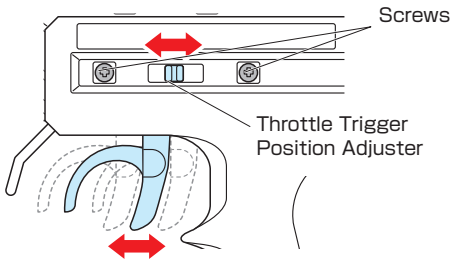
⚠ The trigger may loosen over time due to temperature, usage, strong impacts, etc., we recommend you glue it in place. When there are times that it is still loosens, please inquire to our service department.

● Throttle Trigger Position Adjustment

The position of the throttle trigger may be adjusted to match the user's hands.

《How to Adjust》

① Loosen two screws on the rear side of the transmitter.
② Slide the Throttle Trigger Position Adjuster as desired.
③ Tighten the loosened screws to secure.



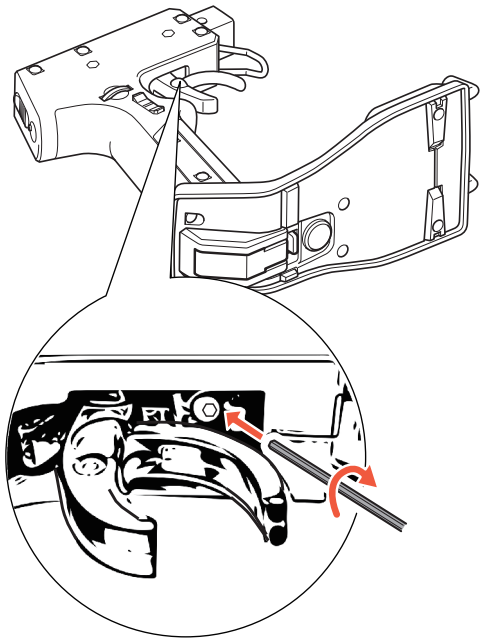
● Adjustment of Trigger Tension

Strength (tension) of the spring for the throttle trigger is adjustable.

※ Only Expert grip unit available. (No.10578, No.10526)

《How to Adjust》

Using a 1.5mm hexagonal wrench (not included) insert into the lower part of the grip section. When turned clockwise (right) the tension becomes stronger, counter-clockwise (left) it becomes less.



⚠ Hold the trigger lightly, insert the hexagonal wrench.

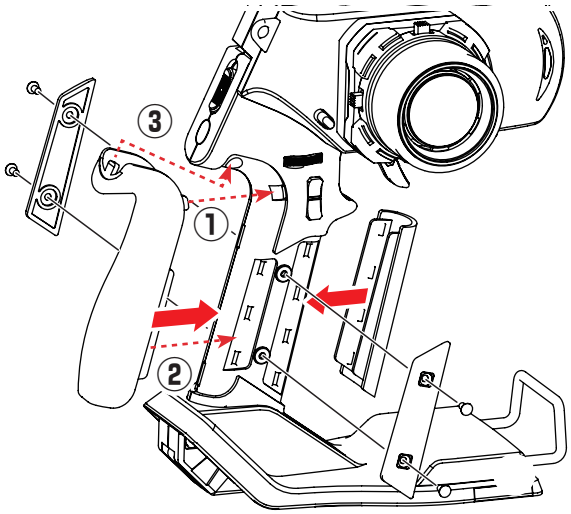
● Colored Grip and Pad Replacement

Colored grip pad (optional) and Large/small grip pad options are available. (Regarding EX-LDT, it is required exclusive goods.)

《How to change》

Remove the two screws on each side of the grip to detach the grip plates, then attach the colored grip and pad.

⚠ **Please insert protrusion of color pad/grip to hole with order of below figure.**



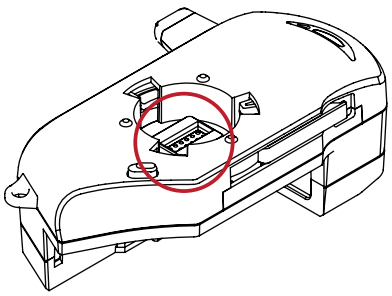
⚠ Make sure the battery box or battery pack is removed before replacing the colored grip and pad.

⚠ The tabs on the colored grip and pad are to be inserted into holes. Note the direction.

⚠ Note direction of the grip plate.

● Unit Connector

This product may be dismantled and therefore each unit features their respective connectors. Dirty or damaged connectors may result in malfunctions, so please handle them carefully.



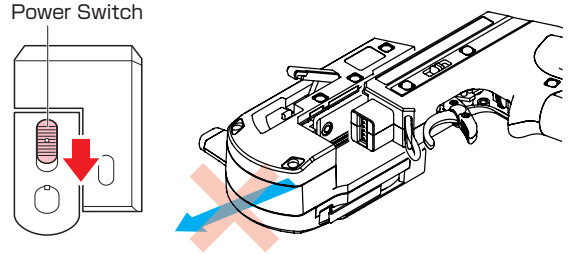
⚠ Do not touch the unit connectors with your fingers. If connectors become corroded due to grime, they may become inoperable. If storing the transmitter in dismantled form. After prolonged use, a black residue may build up on the connectors. Use cotton swabs dipped in cleaning alcohol to remove. KO Propo's Customer Service Department also handles transmitter maintenance.

● Power Switch

This product features a safety lock. The Master Unit and Grip Unit cannot be detached when the Power Switch is in the ON position. Turn off the transmitter before dismantling.

⚠ Disassembly is not possible when the power is switch ON. Forcefully trying to remove the Grip Unit while on will result in damaging the locking mechanism.

Power Switch



● Charger Jack

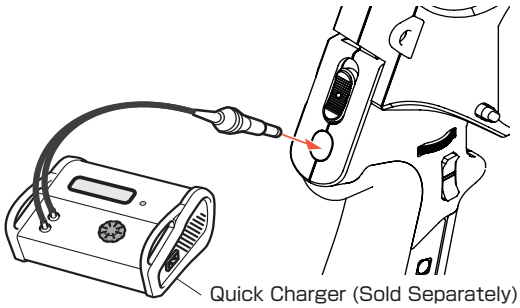
Using the charging jack, you can charge different batteries. When using the Xpansion and an expert grip unit,A battery stand, a rechargeable battery, a battery charger are necessary.

《How to Recharge》

① Confirm that the power switch is in the OFF position. If only using the Grip Unit, make sure that the connector cover is in place.

② Make sure the battery is securely connected. If the connection is loose, the battery may not charge completely. Securely connect the charger plug to the charger jack.

③ Begin charging using a current of less than 1A.



Quick Charger (Sold Separately)

⚠ Make sure the power switch is in the OFF position when charging.

⚠ If only using the Grip Unit, make sure that the connector cover is in place.

⚠ A short circuit may occur if the connector makes contact with metal and lead to a serious accident.

⚠ Use a current of less than 1A to charge.

⚠ Do not connect/disconnect the battery during charging.

⚠ Take note of the charger plug's polarity in order to avoid damage.

⚠ Do not attempt to charge if using alkaline batteries. Doing so may result in battery leakage or cracking which will damage the transmitter.

⚠ [Balancing or Discharging the Battery Pack]
If using a battery pack, please note that it cannot be discharged via the charger jack. Remove the battery pack from the transmitter to discharge it.

⚠ After reading the battery pack manual, please use your battery.discharged via the charger jack. Remove the battery pack from the transmitter to discharge it.

■ Procedures Prior to Operation

1.Switching On

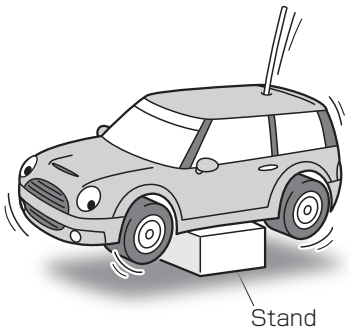
After ensuring that it is safe to do so, **switch on the transmitter followed by the receiver or Mini-Z.**

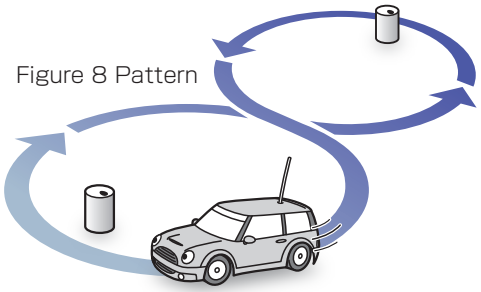
2.Model Confirmation

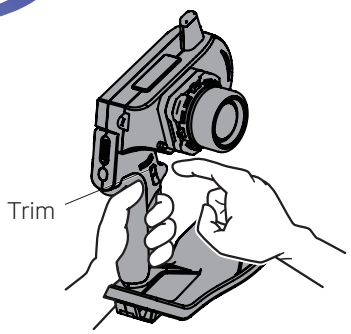
Confirm the model which will be used.

3.Checking Movements

With the model's wheels lifted off the ground, operate transmitter to check for proper movement. While driving, use steering and throttle trims to make fine adjustments. Drive in a figure 8 pattern to check steering balance.







4.Switching Off

After a driving session, **switch off the receiver (or Mini-Z), followed by the transmitter.** Remove the battery pack from the model.

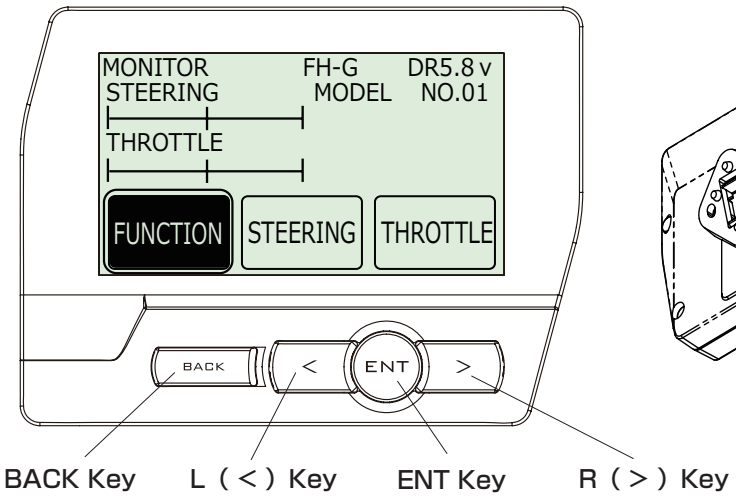
⚠ After switching off, wait at least 5 seconds before switching on again to ensure proper operation.

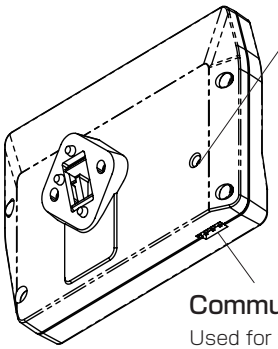
■ Display and Control Method for attaching the Xpansion unit

● Basic Operations to Change Settings

Operation Controlling of the setting adjustments is done via the L(<) key, R(>)key, ENTER(ENT) key, and BACK key.

ENT Key: Selecting item to be modified; Confirming a change after a setting change.
L (<) Key: Used to move cursor between m enu choices and to change a setting value. Lowering a value (for L/R cases: raising toward L); Return to a previous menu item.
R (>) Key: Used to move cursor between menu choices and to change a setting value. Raising value (for L/R cases: raising toward R); Proceed to next menu item.
BACK Key : Returning to previous screen; Canceling change
L(<) key + R(>) key Pressing simultaneously: Resets the value to default setting.





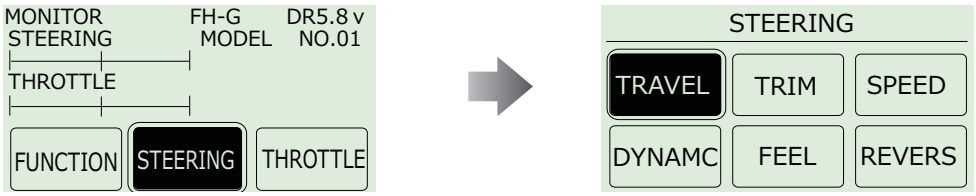
Command Button
Used for firmware upgrading.
Please refer to an update manual for the details.

Communication port
Used for firmware upgrading and ICS communication.
Please refer to an update manual for the details.

【Basic Operation 1: Selecting from a Menu 】

This explanation uses [Steering] as an example.

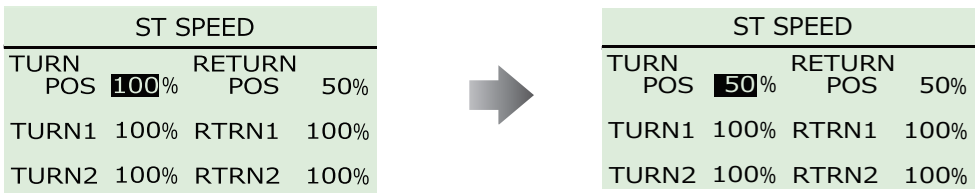
① Use the R(>) key to move the cursor over [Steering].
② Press the ENTER key to change to the Steering Menu screen.



【 Basic Operation 2: Changing a Setting Value 】

This explanation uses [TURN 1] on the Steering Speed screen as an example.

① Use R(>) key to move the cursor over the 100% value next to [ST TURN].
② Press ENTER key to select it for modification.
③ Once selected, the cursor will blink. Now use the L(<)key+R(>)key to change the value.
④ After changing the value, press the ENTER key again to confirm the change.

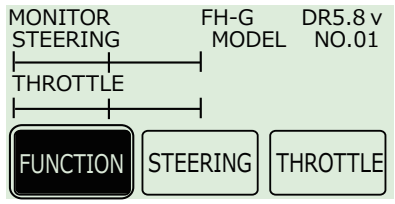


● English and Japanese Menu Setting

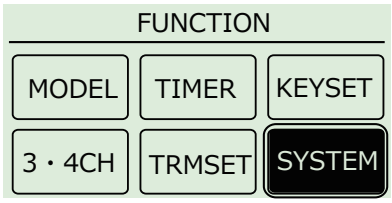
The menu lettering of the transmitter can be changed from English to Japanese by configuring FUNCTION>SYSTEM>CONFIG>LANGUAGE.
※ In this instruction manual, English is used for displaying functions.

Operation 【 How to change to Japanese 】

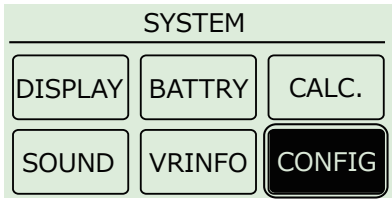
① From the initial screen select FUNCTION and press the ENTER key.



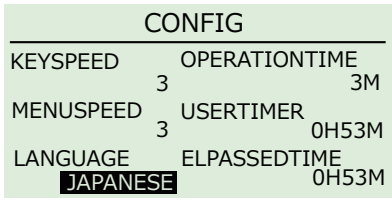
② From the FUNCTION menu, select SYSTEM and press the ENTER key.



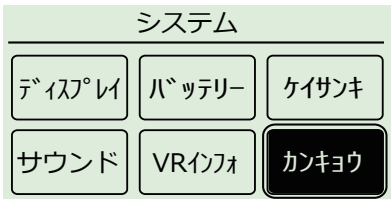
③ From the SYSTEM menu, select CONFIG and press the ENTER key.



④ From the CONFIG menu, select JAPANESE to change the language setting.



⑤ When the BACK key is pressed, the language changes to Japanese.



英語表記	カタカナ表記	
FUNCTION	セッテイ	
MODEL	モデル	
TIMER	タイマー	
KEYSET	キーセッテイ	
3.4CH	3.4CH	
TRMSET	トリムセット	
SYSTEM	システム	
DISPLAY	ディスプレイ	
BATTRY	バッテリー	
CULC.	ケイサンキ	
SOUND	サウンド	
VRINFO	VRインフォ	
CONFIG	カンキョウ	
STEERING	ステアリング	
TRAVEL	トラベル	
TRIM	トリム	
SPEED	スピード	
DYNAMC	ダイナミク（ス）	
FEEL	フィール	注1）
REVERS	リバース	
THROTTLE	スロットル	
TRAVEL	トラベル	
TRIM	トリム	
SPEED	スピード	
DYNAMC	ダイナミク（ス）	
FEEL	フィール	注1）
PUSH	プッシュ	
CYCLE	サイクル	
ATSTRT	ＡＴスタート	
OFFSET	オフセット	
BRK-OR	オーバーR	
BRK-IN	ブレークイン	
H-BRK	ハンドBK	

Note1）Due to letter restrictions, dynamics is displayed as “DYNAMC”.

When these steps are performed again, the language setting will go from Japanese to English.

● Startup Screen and Initial Screen

When the transmitter is switched on, the startup screen will display, followed by the initial screen.
※ Pressing the ENTER key during the startup screen will allow you to proceed to the initial screen.

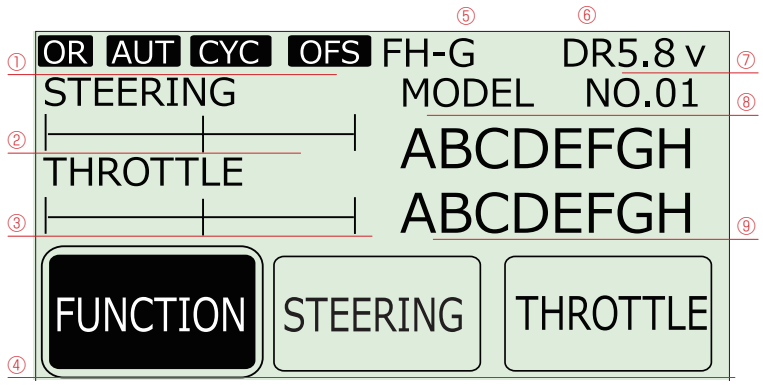
【 Startup Screen 】



① Version Information:

Displays the version of the program that is installed in the Msater Unit's CPU. This product's performance may be upgraded via paid or free upgrades. Check the KO Propo website for information regarding such upgrades .
(http://www.kopropo.co.jp)

【 Initial Screen 】



① Function Monitor: Functions that are active will be lit up.

OR : Steering and Brake travel Override
AUT : Throttle Auto Start
CYC : Cycle (Throttle Acceleration/Throttle ABS)
OFS : Offset (Drag Brake/Idle Up)

② Steering Trim Monitor: Displays the position of the steering trim.

③ Throttle Trim Monitor: Displays the position of the throttle trim.

④ Top menu: Display three kinds of setting items

FUNCTION : Modify settings related to functions.
STEERING : Modify settings related to the steering.
THROTTLE : Modify settings related to the throttle.

⑤ Moduration MODE : Functions that are in Mini-Z or France mode will be lit up.

FH-G : FHSS General Mode
FH-F : FHSS French Mode
MzMHS G : Mini-Z MHS General Mode
MzMHS F : Mini-Z MHS French Mode

⑥ Power Source Type: Displays the type of battery being used.

L P : Li-po
L F : Li-Fe
D R : R03/AAA/UM4 Alkaline Batteries
N I : Ni-MH

(Notice) If you switch battery types, make sure to also change the [Battery Management] setting.

⑦ Voltage: Displays the current power source voltage.

⑧ Model Number: Displays the currently selected model number.

⑨ Model Name: Displays the name of the currently selected model number.

● VR information setting

Adjust the steering and throttle resistance information.

※ Please perform the VR information configuration to calibrate your system.

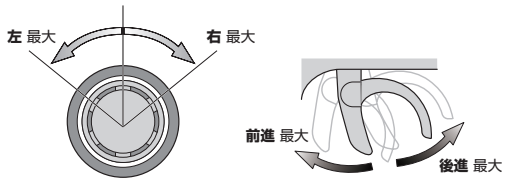
○ When using EX-RR for the first time.
○ When changing a steering unit for a different product or when putting it back together.
○ When changing a grip unit for a different product or when putting it back together.
○ When using and confusion has occurred in the positional information.

1.Select [FUNCTION] on the initial screen and push the ENTER key.
2.Select [SYSTEM] on the function screen and push the ENTER key.
3.Select [VR INFO] on the system screen and push the ENTER key.
4.Move the wheel slowly to the full left and right lock (numbers will change as the steering is moved) and release the wheel back to neutral.
5.Move the trigger slowly to the full throttle and full brake positions (numbers will change as the throttle is moved) and release the trigger back to neutral.
6.Then select YES (press ENTER) to adjust and save the settings.

3.Example before setting

VR INFOMATION			
ST-	LEFT	X X X X	
	NUT	X X X X	
	RIGHT	X X X X	OK?
TH-	HI	X X X X	YES
	NUT	X X X X	
	LOW	X X X X	

4.5.Move slowly to full stroke, then release.



6.Small window [Yes] comes active.

VR INFOMATION			
ST-	LEFT	1760	
	NUT	◇	
	RIGHT	-1752	OK?
TH-	HI	1286	YES
	NUT	◇	
	LOW	- 599	

※ When operating the VR INFORMATION and pressing the BACK key will cancel the operation.

⚠ For a detailed configuration procedure, please refer to "VR Information" (p.38).

● How to change the Modulation mode

EX-RR has two Modulation modes.
※ When attaching the Xpansion unit, this operation is the same.

《Functions》

● General RC models FHSS mode : LED Solid
Operating the general receivers such as KR-211FH/KR-241FH Only receivers using FHSS will work.

⚠ The receiver of other methods (DSSS/27/40MHz) do not work.

● Mini-Z MHS mode : LED Flashing slowly
Operating Kyosho Mini-Z MHS mode. (MR-03 VE PRO)

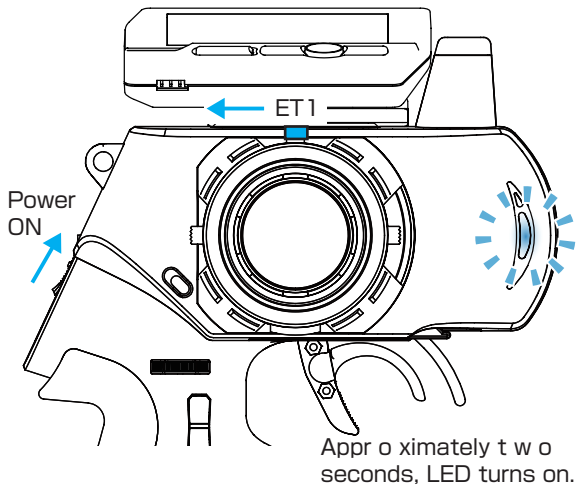
＊ Functions that are in Mini-Z will be lit up at initial screen.

⚠ Only MiniZ using MHS will work. Does not work with ASF, FHS, general RC cars.

① Turn off EX-RR switch.

② Push the ET1 lever to the left and power on.

③ Hold ET1 lever until the buzzer sounds and the LED of EX-RR turns on (approximately two seconds).



⚠ If the pilot LED is blinking fast, this is a warning that the battery voltage is low. Please change to new batteries or for a battery pack which has been charged.

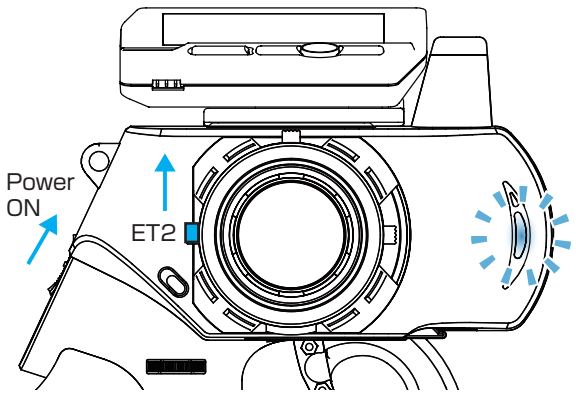
⚠ Model selection changes and modulation mode changes are not linked.

● Pairing (For general receiver)

In order for the receiver to operate, it must store the transmitter's unique ID in its memory in a process called "pairing." Even if a single transmitter is uesd to control multiple receivers, each receiver must go through the pairing process with the transmitter before being used for the first time.
※ Please adjust the modulation mode before pairing. (p.18)
A receiver does not work normally in a different mode.

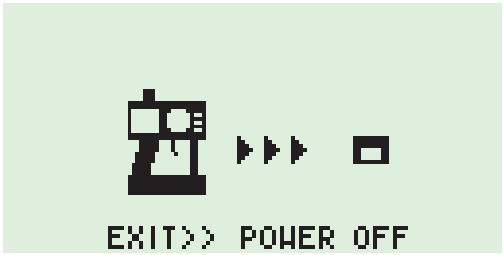
1. Preparing the Transmitter < FHSS/General >

① While pushing the ET2 lever up, power on.
The pilot LED lights up, release ET2 lever.



② Displays the initial screen, then pairing display is shown. (indicating transmitter is transmitting the pairing signal.)

<French mode pairing >
French mode pairing is possible when the ET2 lever is released after LED turns off. Please use this feature if the situation is needed.

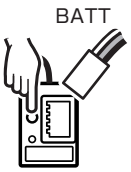


P French mode pairing…

The FHSS communication pattern of the EX-RR and receiver are modified. Please use the French mode when the location of usage requires this mode. When in any other location, please use the general mode.

2. Preparing the Receiver

① Connect the receiver power source while pressing the setup button.



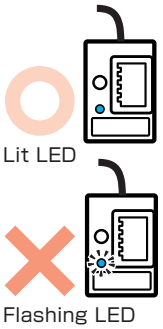
② Check that the receiver's LED has lit up, then release the setup button.

③ Check that the receiver's LED lights up again (indicating pairing completion)



3. Preparations for Operation

① Switch off the receiver.
② Switch off the EX-RR main power, then switch on EX-RR again.
③ Switch on the receiver and check that the receiver LED is lit. If the LED flashes, the receiver is not getting the EX-RR signal and the pairing procedure should be repeated.



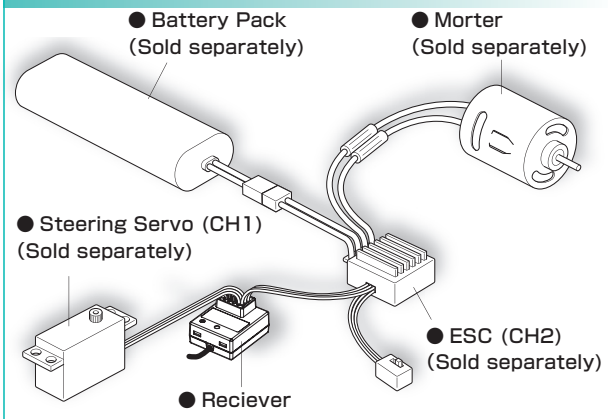
⚠ During this process, your car may become uncontrollable if the ESC has not been adjusted. As a precaution, set your car so that its wheels do not touch the ground.

⚠ Pairing procedures may not go smoothly if there are wireless LAN, microwave ovens, or other users conducting pairing procedures nearby. In this case, move some distance away or wait a while before attempting the pairing procedure again.

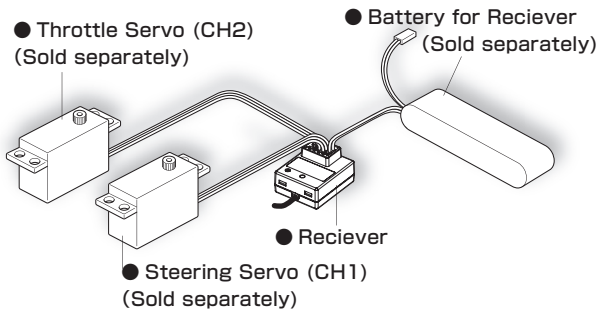
⚠ If the mode is changed (General or France), please conduct pairing procedures with the receiver you are using again.

④ Set the Fail-Safe Function (p.22) .

● For an Electric Car



● For a Glow Engine Car



⚠ This transmitter is only compatible with digital servos. Correct operation is not possible when used with analog servos.

⚠ For items which are not included in this product, please refer to the KO Propo website for a list of compatible products. (http://www.kopropo.co.jp)

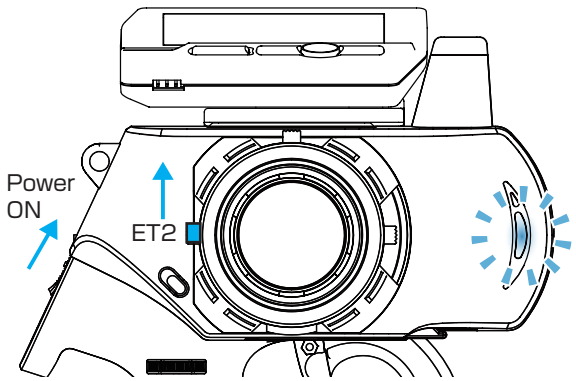
● Pairing (For MiniZ MHS)

In order for the receiver to operate, it must store the transmitter's unique ID in its memory in a process called "pairing". Even if a single transmitter used to control multiple receivers, each receiver must go through the pairing process with the transmitter before being used for the first time.

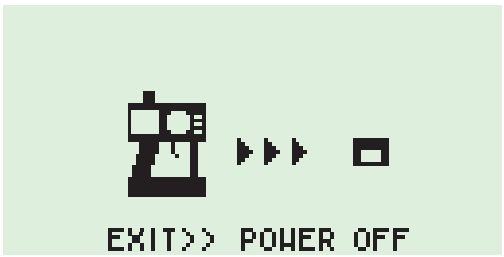
※ Please adjust the modulation mode before pairing. (p.18) A receiver does not work normally in a different mode.

1. Preparing the Transmitter < MHS/General >

① While pushing the ET2 lever up, power on. The pilot LED lights up, release ET2 lever.



② Displays the initial screen, then pairing display is shown. (indicating transmitter is transmitting the pairing signal.)



<French mode pairing >
French mode pairing is possible when the ET2 lever is released after LED turns off. Please use this feature if the situation is needed.

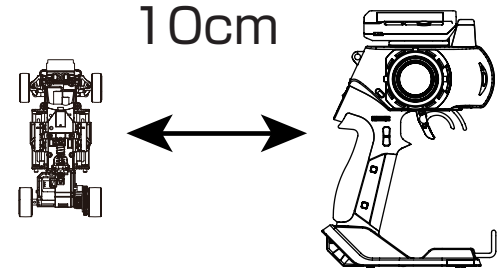
P French mode pairing…

The MHS communication pattern of the EX-RR and receiver are modified. Please use the French mode when the location of usage requires this mode. When in any other location, please use the general mode.

⚠ Pairing procedures may not go smoothly if there are wireless LAN, microwave ovens, or other users conducting pairing procedures nearby. In this case, move some distance away or wait a while before attempting the pairing procedure again.

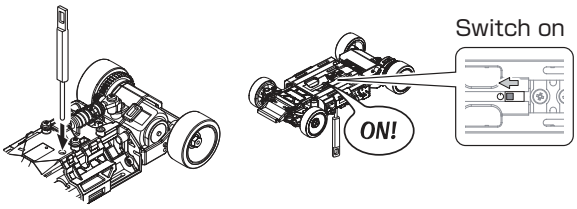
2. Preparing the Mini-Z

① Bring distance of EX-RR and MiniZ close to about 10cm.

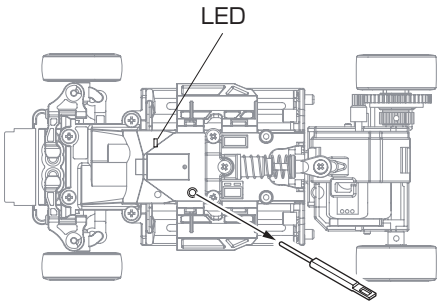


② Switch on MiniZ while pushing the setup button of Mini-Z.

Pushing setup button



③ After the Mini-Z's LED has lit up, release the setup button. Then c heck that the Mini-Z's LED lights up again (indicating pairing completion)



3. Preparation for operation

① Switch off MiniZ.

② Switch off the EX-RR main power, then switch on EX-RR again.

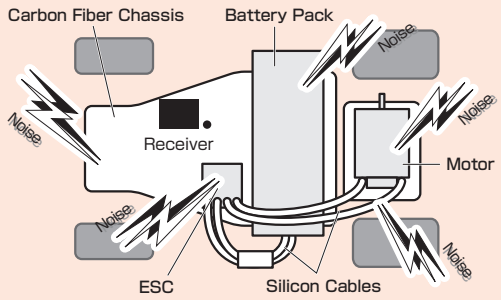
④ Bring distance of EX-RR and MiniZ close to about 30cm. Switch on the Mini-Z and check that the receiver LED is lit. If the LED flashes, the Mini-Z is not getting the EX-RR signal and the pairing procedure should be repeated.

⚠ If the mode is changed (General or French), please conduct pairing procedures with the Mini-Z you are using again.

● Countermeasures Against Noise

Keep antenna cable away from all sources of noise!

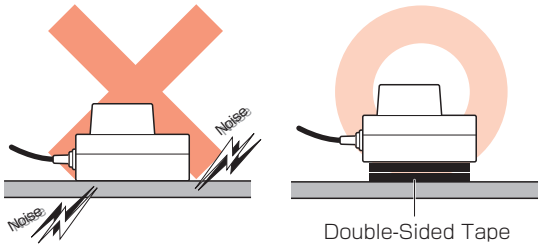
Noise is generated in any area where a large amount of electric current is flowing. Position the receiver and antenna cable as far away from the motor, battery, ESC, and their associated cables as possible. (Metal or carbon fiber chassis components will also conduct electricity and generate noise.)
Since R/C models are controlled via radio signals, taking appropriate measures against noise generated by on-board equipment is of utmost importance. Take adequate measures against noise so that your machine can fully realize your driving potential.



● Receiver Installation on a Carbon Fiber Chassis

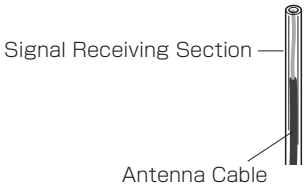
When installing the receiver to the chassis or R/C equipment deck/tray, use two or more pieces of thick double-sided tape to raise the receiver off the chassis surface. By increasing the separation between the receiver and the noise-generating carbon-fiber chassis components, the effects of noise can be decreased.

※Install the receiver so that its LEDs are visible.

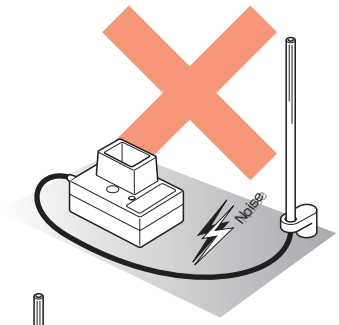


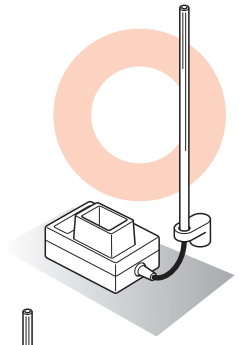
● Antenna Installation

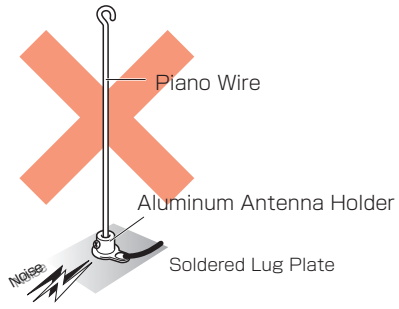
Raise the antenna cable vertically from as high a position as possible. Insert the antenna cable into the antenna pipe so that the tip of the antenna aligns with the end of the pipe. Make the length of cable which runs between the receiver and the pipe as short as possible and position the antenna holder as close to the receiver as possible. Position the antenna cable away from sources of noise such as the chassis and R/C equipment deck/tray. Use an antenna pipe and antenna mount that are made from plastic, since metal parts will conduct noise.

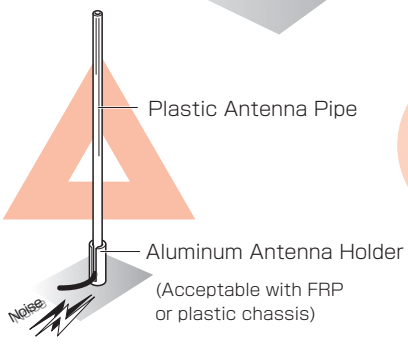


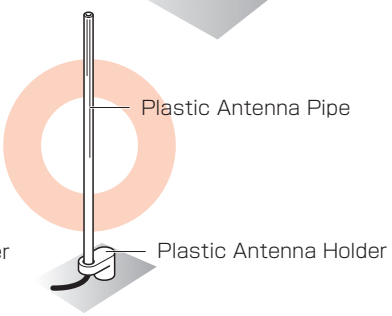
※Do not bend or cut the antenna cable.
(This may break the antenna wire and deteriorate its performance.)







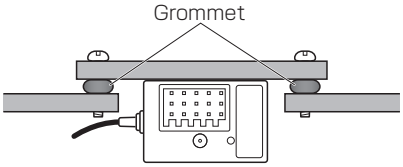




● Installing Onto a Glow Engine Car

Engine vibrations may damage the receiver. Make sure to attach a grommet (receiver holder) to reduce the effects of such vibrations. Do not attach the receiver directly to the chassis or R/C equipment deck/tray with double-sided tape. Also position the receiver so that it does not contact the heat and exhaust of the engine and muffler.

※Install the receiver so that its LEDs are visible.

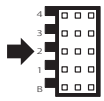


● Fail-Safe Setting

Fail-safe is when the receiver loses the radio signal of the transmitter and the function keeps channel 2 (throttle) in an optional position.
The configuration is usually full brake or neutral.

1

ペアリング後



2 Channel

This function works for only 2nd channel.

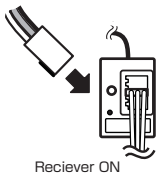
2



Transmitter ON

Turn on the transmitter.

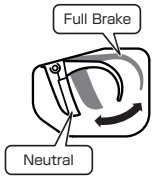
3



Reciever ON

Turn on the receiver and verify operation.

4



Hold the throttle to the position On the transmitter, hold the throttle to the position you would like it to be set to.

Recommended positions are the following :

Full Brake
- GP car
- EP car

(forward / Brake)

Neutral
- EP car

(forward / Back)
(forward / Brake / Back)

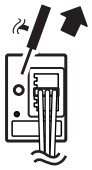
5



Press for 3 seconds

While holding the position, press the setup button on the receiver for 3 seconds.

6



LED light goes off

Hold the setup button on the receiver until the LED light goes off and release the button. Fail-safe setting is complete.

7



Turn off the transmitter. And the device that connected into 2nd Channel will move to the position that you set up.

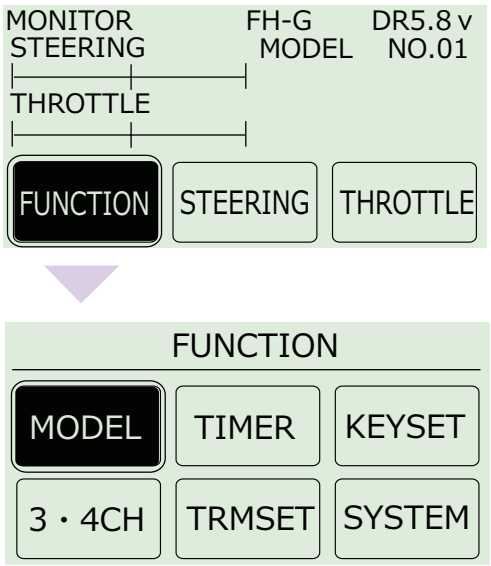
⚠ Please be sure to set the fail-safe.

⚠ If you change the position of the fail-safe operation, please set again. We recommend to set it again even if you modify the car engine brake linkage.

■ TOP MENU

■□□ FUNCTION

This an index which displays the 6 different function menus.



MODEL

Operations such as selecting or copying a model.

TIMER

Operating timer-related functions.

KEY SET

Modify system-related functions such as key assignment.

3・4CH

Modify settings related to 3CH and 4CH.

TRIMSET

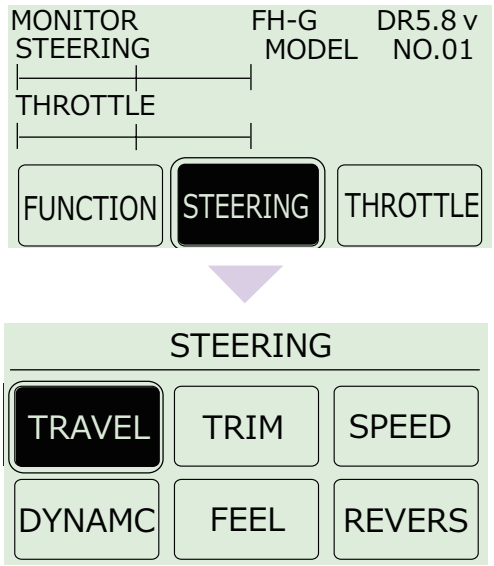
Easy adjust function for steering trim and balance.

SYSTEM

Modify system-related functions such as VR information or calculator.

□■□ STEERING

This an index which displays the 6 different steering menus.



TRAVEL

Modify the overall amount of steering movement.

TRIM

Modify the neutral position of the steering angle.

SPEED

Modify the speed of the steering's movement.

DYNAMIC

Modify the movement speed ratio which corresponds to steering angle and Modify how much the steering initially turns from neutral position.

FEEL

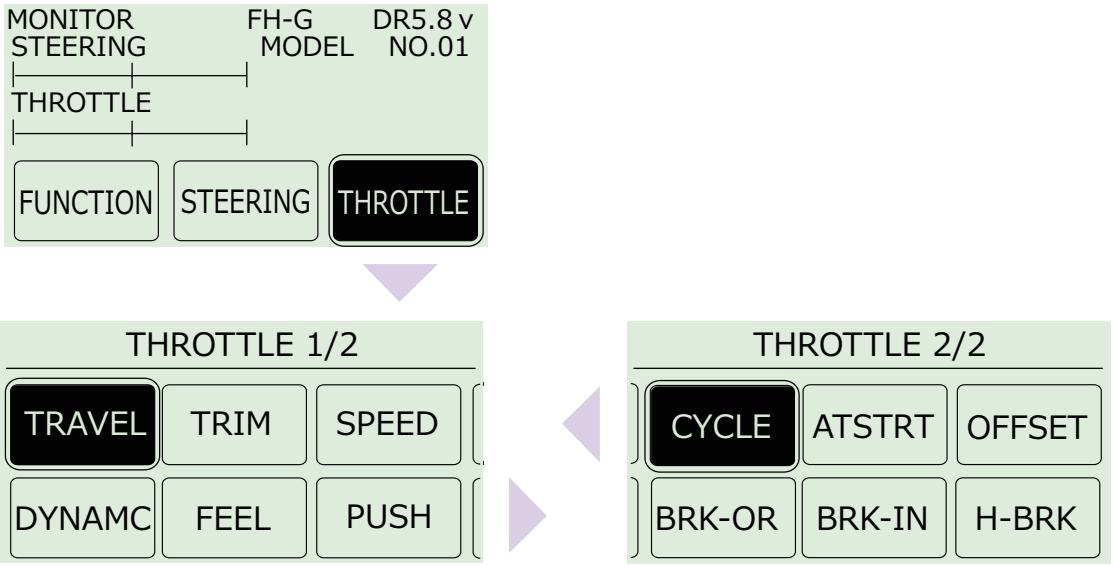
Modify the feeling of the steering's movement.

REVERS

Modify the steering direction.
Modify the throttle direction.

■□□ THROTTLE

This an index which displays the 10 different function menus.(Separeted 2 pages.)



TRAVEL

Modify the maximum throttle movement.

TRIM

Modify the neutral position of the throttle.

SPEED

Modify the speed of the throttle's movement.

DYNAMIC

Modify the movement speed ratio which corresponds to throttle angle and Modify how much the throttle initially moves from the neutral position.

FEEL

Modify the feeling of the throttle movement.

PUSH

Modify the push control.

CYCLE

Modify the amount of brake pumping and acceleration.

ATSTART

Set the amount of automatic startup for the throttle.

OFFSET

Modify the neutral position of the throttle trigger or neutral braking.

BRK-OR

Modify the maximum amount of braking and steering travel assigned to a switch.

BRK-IN

You can set BRK-IN function to use before starting the run.

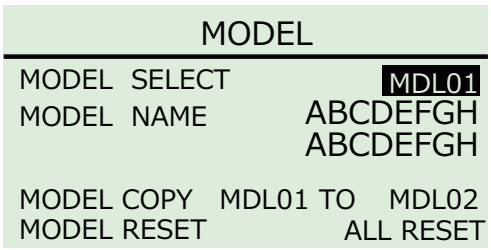
H-BRK

You can set H-BRK function setting.

⚠ Throttle reverse setting is operate from reverse menu in steering.

Model menu

Save various settings as model memories Up to 35 model memories can be named and stored.



▶ MODEL SEL
Switch between different model memories.

▶ MODEL NAME
Names the model memories.

▶ MODEL COPY
Copies model memories.

▶ MODEL RESET
Resets model memories.

▶ ALL RESET
Resets all model memories.

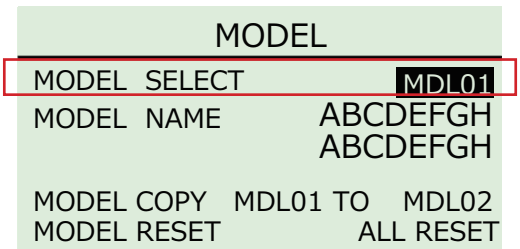
▶ MODEL SELECT

Switch between different model memories.

【Example】

If you have multiple cars, it is convenient to have a separate model memory for each one. Even in the case of only one car, you could save specific settings for different courses as different model memories as well.

Select the model to be used.



【Setting Range】MODEL 01 ～ 35

P All of the various settings are registered under a model memory.

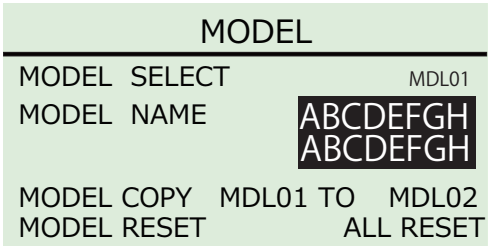
P The settings which will be switched by Model Select are...
1)Steering Setting
2)Throttle Setting
3)3CH Setting
4)4CH Setting
5)Steering and Throttle Response
6)Steering and Throttle Feel
7)Setup Functions (ET1-ET5, BT1 function assignments)
8)Stopwatch Settings

⚠ Switching model memory while driving may cause setting mismatches and lead to an uncontrollable model. Please place the car on a stand or switch it off before switching model memories.

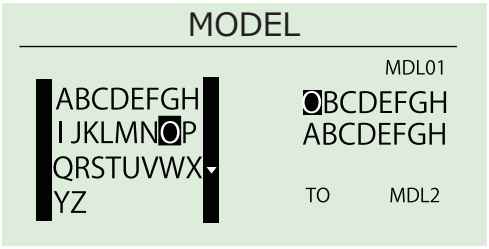
⚠ Model selection changes and modulation mode changes are not linked. Refer to p.24 changing the modulation mode.

▶ MODEL NAME

This function is used to name the model memory that is currently in use. Distinguish each model memory with different names, which may also be edited. The set model name will be displayed on the initial screen and model select screen.

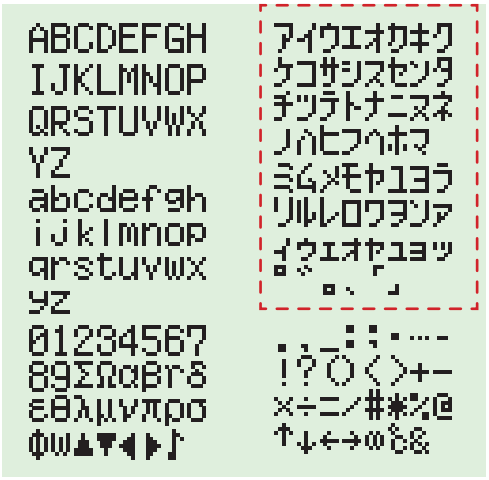


Choose one character at a time from the left side.



【Setting Range】40Setting Range Maximum 16 characters.

《Selectable Characters》



P To delete a character, overwrite the character to be deleted by using the blank space at the end of each page of characters.

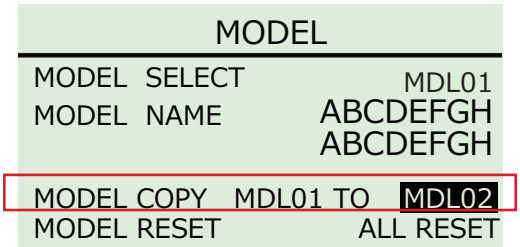
P Characters inside the dotted lines are only available when Japanese language has been selected.

▶ MODEL COPY

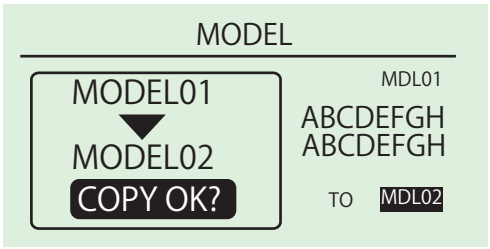
Copies the current model memory to a different model memory.

【Example】
When changing settings on the same car to match driving conditions, it is convenient to copy the original memory before modifying it. This function also allows you to try out new settings while keeping your original one.

Select the model memory to copy to, then hold the ENTER key to copy.



Small window [COPY OK?] appears, then push the ENTER key.



【Setting Range】 MODEL 01 ～ 35

When selecting the model memory to copy to, that model memory's name will be displayed.

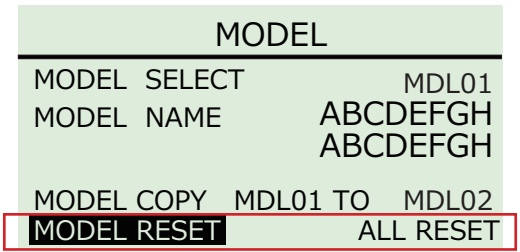
The settings which will be switched by Model Copy are...
1)Steering Setting
2)Throttle Setting
3)3CH Setting
4)4CH Setting
5)Steering and Throttle Response
6)Steering and Throttle Feel
7)Setup Functions (ET1-ET5, BT1 function assignments)
8)Stopwatch Settings

The contents of the model memory that is being copied to will be overwritten. Overwritten data cannot be recovered, so be careful to avoid undesired memory overwrites.

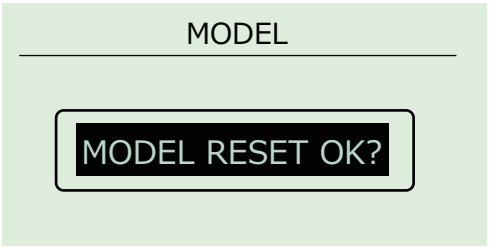
▶ MODEL RESET

Return the current model memory to default factory setting values.

Select [RESET] (hold ENTER key) to reset.



Small window [RESETOK?] displayed, then push the ENTER key.

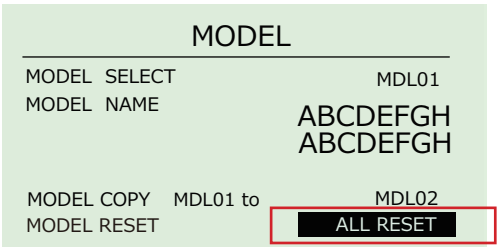


Deleted data cannot be recovered. Be careful to avoid undesired resets.

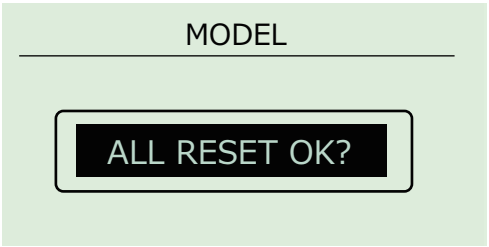
▶ ALL RESET

All model and system data is reset to the factory default.

Select "ALL RESET" and press and hold the ENTER key to initialize all the memories.

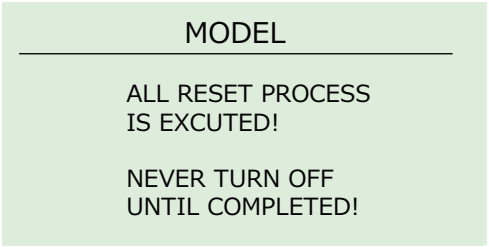


"ARE YOU SURE?" is displayed and pressing the ENTER key will execute the function.
If the BACK key is pressed, "All reset" is cancelled.



"ALL RESET OK?" is displayed on the screen and pressing the ENTER key will execute the function.
If the BACK key is pressed, "All reset" is cancelled.

When the initialization is run, the display shown below is seen. Initialization requires about 20 seconds to be performed, please do not turn off the power.

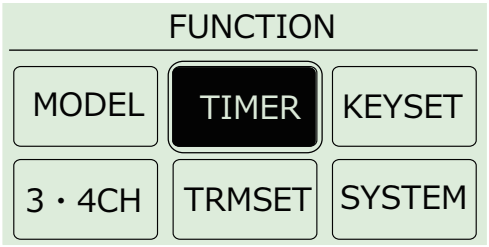


When the initialization has ended, the system will automatically restart. After the restart, the VR information configuration must be performed.

Deleted data cannot be recovered. Be careful to avoid undesired resets.

TIMER menu

Operating Timer-related functions.



《Functions》

▶ TIMER START
Start the timer.

▶ TRGSTART
Prepares the stopwatch for activation via the throttle movement.

▶ LAP HISTORY
Displays the lap times recorded by the stopwatch.

▶ START/STOP KEY
Assigns a key to activate/deactivate the stopwatch.

▶ LAP KEY
Assigns a lap key.

▶ >>> The following page is displayed.

▶ LAP NAVI
Adjusts the lap navigation settings.

▶ ALARM TIME
Alarm will sound after the set amount of time has elapsed.

▶ P.ALARM
Sets a warning buzzer to sound at a set time prior to the alarm.

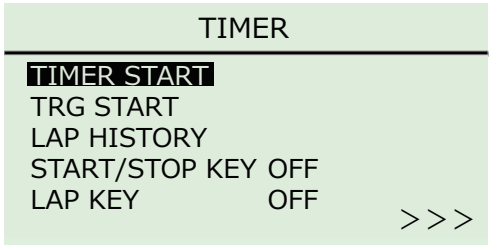
▶ ALARM MODE
Sets an alarm buzzer to the continue sound mode (CONTINUE) or to the sound stop mode(STOP).

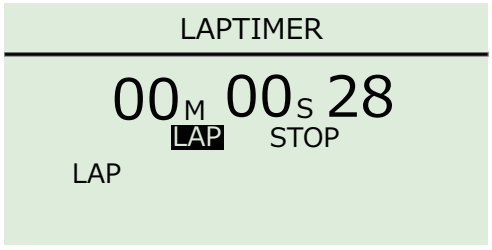
▶ TIMER MODE
The lap timer or down timer can be selected.

▶ <<< The front page is displayed.

▶ TIMER START

When the cursor is highlighting the TIMER START, ENTER key is pressed and held to start the timer.

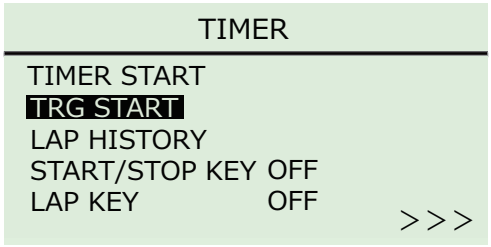




⚠ While the timer is running and the BACK key is pressed, the timer is halted. While the timer is halted, pressing the BACK key again will return you to the TIMER screen.

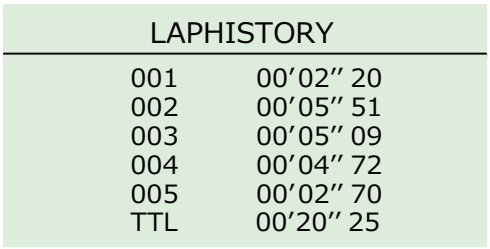
▶ TRGSTART

Move the cursor to [TRGSTART] and hold the ENTER key. TRGSTART will switch to READY for a brief moment, then push assigned [START/STOP] key or move throttle trigger.



▶ LAP HISTORY

Displays the laptime records the stop watch. Scrolldown when the R key is pushed, and scrollup the L key is pushed. When pressing the BACK key, you are returned to the Timerscreen.



P 100 lap times are memorized.

⚠ **Only the last recorded lap times may be checked and previously recorded results will not be saved. (Even if the transmitter is switched off, the last recorded times will remain in the memory.)**

▶ START/STOP KEY

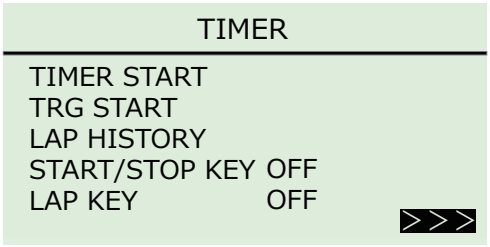
The key which you start and stop the timer is assigned.
【Setting Range】: OFF、ET1 ～ 5、BT1 (Default : OFF)

▶ LAP KEY

The key which will score the lap time is assigned.
【Setting Range】: OFF、ET1 ～ 5、BT1 (Default : OFF)

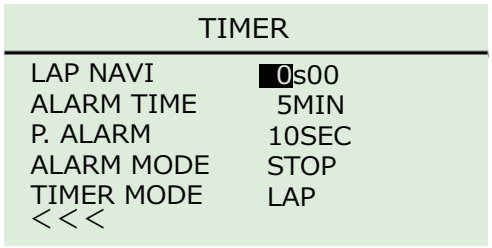
▶>>>

>>> When the ENTER key is is pressed after the mark, the following page is displayed.



TIMER menu

Operating Timer-related functions.



▶ LAP NAVI

Adjusts the lap navigation settings.
※ Convenient for setting a target lap.
【Setting Range】: 0 SEC 00 ~ 99 SEC 99 (Default : 0 SEC 00)

▶ ALARM TIME

Alarm will sound after the set amount of time has elapsed.
※ Convenient for setting the anticipated race completion time.
【Setting Range】: 1 MIN ~ 99 MIN (Default : 5 MIN)

▶ P.ALARM

Sets a warning buzzer to sound at a set time prior to the alarm.
※ Convenient for setting a warning for when a race is about to end.
【Setting Range】: 0 ~ 30 SEC (Default : 10 SEC)

▶ ALARM MODE

Sets an alarm buzzer to the continue sound mode (CONTINUE) or to the sound stop mode(STOP).
※ STOP Buzzer sound stops at about 5 seconds.
※ CONT the Buzzer sound will continue until the START/STOP key is pressed .
【Setting Range】: STOP / CONT (Default : STOP)

▶ TIMER MODE

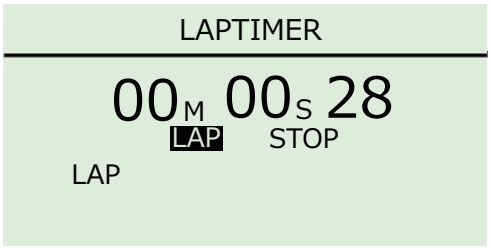
The lap timer or the down time can be selected.
※ Displayed time increases when LAP is selected for the lap timer.
※ Displayed time decreases when DOWN is selected for the lap timer.

【Setting Range】 LAP / DOWN (Default : LAP)

▶ <<<

<<< When the ENTER key is pressed on the mark, the front page is displayed.

About LAP TIMER Display

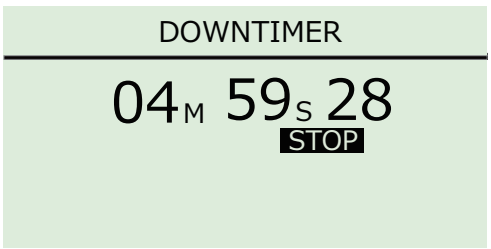


【Operation】

When LAP is highlighted and the ENTER key is pressed, the lap time is stored.
When STOP is highlighted and the the ENTER key is pressed the timer is halted.
The displayed STOP will change to START and if the ENTER key is pressed again the timer will continue.
When the timer is halted and if the BACK key is pressed you will be returned to the TIMER screen.

⚠ While the timer is running and the BACK key is pressed the timer will be halted.
While being halted and the BACK key is pressed again you will be returned to the TIMER screen.

About DOWN TIMER Display



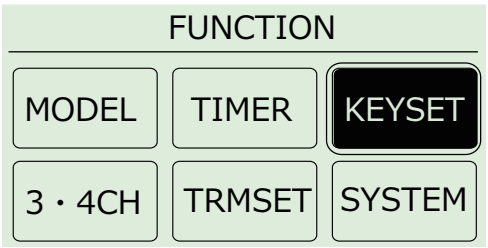
【Operation】

When STOP is highlighted and the the ENTER key is pressed the timer is halted.
The displayed STOP will change to START and if the ENTER key is pressed again the timer will continue.
When the timer is halted and if the BACK key is pressed you will be returned to the TIMER screen.

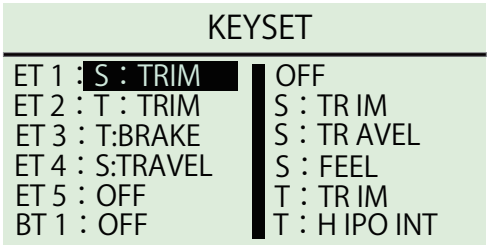
⚠ While the timer is running and the BACK key is pressed the timer will be halted.
While being halted and the BACK key is pressed again you will be returned to the TIMER screen.

KEYSET Key setting

Assign a key (ET1- ET5, BT1) to a function.



If you select a key, the item is displayed to the right.
It is assigned to a key by choosing an item.

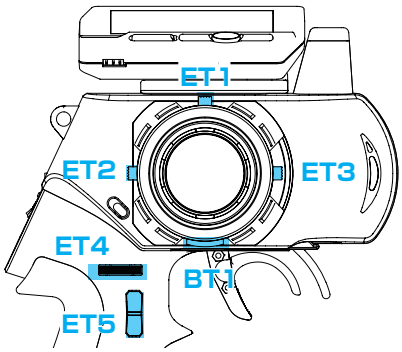


【Setting Range】 ○ : Assignment Possible

Function Setting	ET1～5	BT1
OFF (No Assignment)	○	○
S:TRIM (Steering Trim)	○	x
S:TRAVEL (Steering Travel)	○	x
S:FEEL (Steering Feel)	○	x
T:TRIM (Throttle Trim)	○	x
T:HIPOINT (Throttle High Point)	○	x
T:BRAKE (Throttle Brake)	○	x
T:FEEL F (Throttle Feel F)	○	x
T:FEEL B (Throttle Feel B)	○	x
T:OFFSET (Throttle Offset)	○	○
T:OFSTKY (Throttle Offset Key)	○	x
T:BRAKEOR (Throttle Override)	○	○
T:AUTOST (Throttle Auto-Start)	○	○
TIMER (Timer)	○	○
LAPTIME (Lap Time)	○	○

【Default】

ET1 : S:TRIM
ET2 : T:TRIM
ET3 : T:BRAKE
ET4 : S:TRAVEL
ET5 : OFF
BT1 : OFF

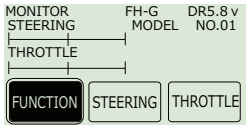


About Direct Display

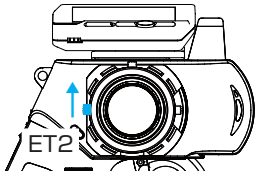
The display screen for a function which is assigned to ET1-5/BT-1 is displayed for 3 seconds when you operated each ET or BT.If there is no operation after the allotted time, the screen returns automatically to the original screen.(Direct Display Function)

【Example of operation】

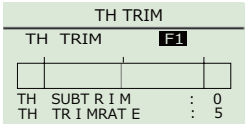
If you operate the ET2 in the upper direction from the initial screen display, the screen will change to TH trim screen display and TH trim value will change to "F1". The screen will go back to the previous display after 3 seconds.



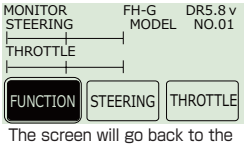
The initial screen display



Operate the ET2 in the upper direction



The TH trim screen display



The screen will go back to the previous display after 3 seconds.

Direct display function will not work while in the MODEL menu or the SYSTEM menu. Please change the menu screen to another by pressing the back key.

【Non-choice item】

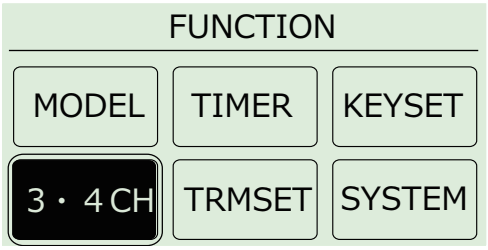
The entry of each function are displayed only when a key is set to each function settings.

3(4) : POS (3・4 CH／Control)
3(4) : SMMODE (3・4 CH／4WS Mixing Mode)
3(4) : SMCENT (3・4 CH／4WS Mixing Center)
3(4) : SMTRVL (3・4 CH／4WS Mixing Travel)
3(4) : AMMODE (3・4 CH／ Amp Mixing Mode)
3(4) : AMTH (3・4 CH／ Amp Mixing Throttle Hold)
3(4) : AMHIPO (3・4 CH／Amp Mixing High Point)
3(4) : AMBRAKE (3・4 CH／Amp Mixing Brake)
3(4) : AMRVS (3・4 CH／Amp Mixing Reverse)
3(4) : TMBRAKE (3・4 CH／ Throttle Mixing Brake)
3(4) : TMCENT (3・4 CH／ Throttle Mixing Center)
3(4) : TMHIPO (3・4 CH／ Throttle Mixing High Point)
3(4) : TMDELAY (3・4 CH／ Throttle Mixing Delay)
3(4) : TMSTEER (3・4 CH／ Throttle Mixing Steering)
3(4) : TMON (3v CH／ Throttle Mixing ON/OFF)
T : PUSH (Throttle Push control)
T : BRK-IN (Throttle Break In)
T : H-BRK (Throttle hand Brake)

※ H-BRK (Hand brake) can not be set to ET-4

3・4CH menu

Settings related to 3CH and 4CH operations.



《Functions》

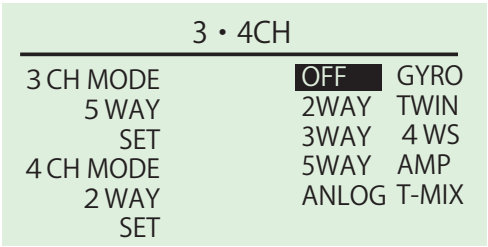
▶ MODE

OFF	GYRO
2WAY	TWIN
3WAY	4WS
5WAY	AMP
ANLOG	T-MIX

▶ SET

Set the usage choice for channels 3 and 4 modes.

The MODE of 3CH or 4CH s selected from the right.
Change the setting of the item chosen with the SET key.



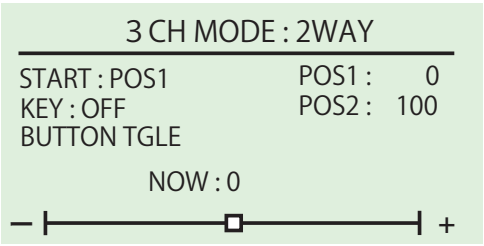
The functions which may be set are the same for both 3CH and 4CH. Set them to match the desired purpose.

【Default】
3CH MODE : 5WAY
4CH MODE : 2WAY

▶ 2WAY MODE

Modify the 2-interval output settings.

【Example】
May be used to activate/deactivate an engine starter unit or a semi-trailer's support legs.



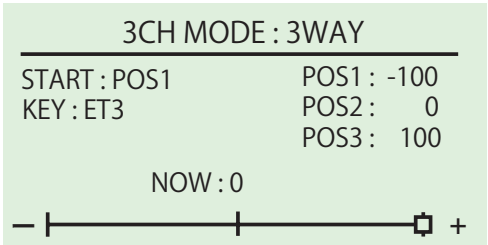
【Setting Range】
START POS1, POS 2(Default:POS 1)
Sets the starting position.
KEY:OFF, ET1 - 5, BT1 (Default:OFF)
Assigns a key to use for switching positions.
BUTTON: PUSH, TGLE (Default: TGLE)
Select PUSH (active while pressed) or TGLE (toggles each time it is pressed).
POS 1:-100 - 100(Default:0)
Sets Position 1's output position.
POS 2:-100 - 100(Default:100)
Sets Position 2's output position.

The current output position is displayed by "NOW" and shown on the bar graph.

▶ 3WAY MODE

Modify the 3-interval output settings.

【Example】
May be used for gear changing operations or when you wish to set a 3-interval control scheme for the servo.



【Setting Range】
START：POS 1、POS 2、POS 3（Default：POS 2）
Initial position is configurated.
KEY：OFF、ET1～5（Default：OFF）
Assigns a key to use for switching positions.
POS 1：-100～100（Default：-100）
Sets Position 1's output position.
POS 2：-100～100（Default：0）
Sets Position 2's output position.
POS 3：-100～100（Default：100）
Sets Position 3's output position.

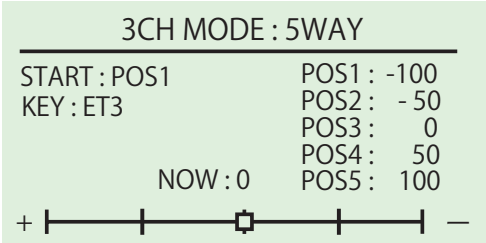
Output position is displayed by "Now:"+value and graphic bar.

3・4CH menu

5WAY MODE

Modify the 5-interval output settings.

【Example】
May be used for gear changing operations or when you wish to set a 5-interval control scheme for the servo.



【Setting Range】

START : POS 1、POS 2、POS 3、POS 4、POS 5
Sets the starting position. (Default : POS 3)

KEY : OFF、ET1 ～ 5 (Default : OFF)
Assigns a key to use for switching positions.

POS 1 : -100 ～ 100 (Default : -100)
Sets Position 1's output position.

POS 2 : -100 ～ 100 (Default : -50)
Sets Position 2's output position.

POS 3 : -100 ～ 100 (Default : 0)
Sets Position 3's output position.

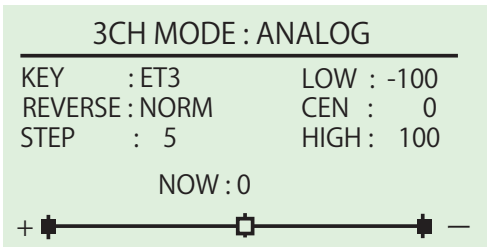
POS 4 : -100 ～ 100 (Default : 50)
Sets Position 4's output position.

POS 5 : -100 ～ 100 (Default : 100)
Sets Position 5's output position.

Output position is displayed by "Now:"+value and graphic bar.

ANALOG MODE

These settings are to enable continuous output for channels 3 or 4.



Output position is displayed by "Now:"+value and graphic bar.

【Setting Range】

KEY : OFF、ET1 ～ 5 (Default : OFF)
Assigns a key to use for switching positions.

REVERSE : NORM、REV (Default : NORM)
Sets operation direction.

STEP : 1 ～ 25 (Default : 5)
Sets the amount of change for the operation.

LOW (Low Position) : -100 ～ 0 (Default : -100)
Sets the lowest value for the operation range.

CEN (Center Position) : LOW ～ HIGH (Default : 0)
Sets the neutral position for the operation range.

HIGH (High Position) : 0 ～ 100 (Default : 100)
Sets the highest value for the operation range.

【How to Use Analog Settings】

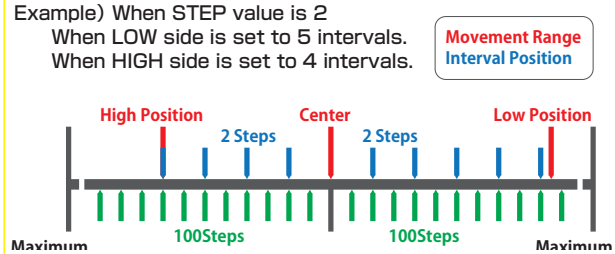
Low Position Side :

Between LOW and CEN are 100 steps within which the intervals can be adjusted.

High Position Side :

Between CEN and HIGH are 100 steps within which the intervals can be adjusted.

Example) When STEP value is 2
When LOW side is set to 5 intervals.
When HIGH side is set to 4 intervals.



Center position is the staring position

Low/High positions cannot be exceeded. Operations which try to do so will stop just before the Low/High positions.

GYRO MODE

This function modifies the setting for using gyro receiver.

【Example】
When using KR-212FHG Gyro receiver, this function allows for an easy setting.

【Setting Range】
This is as same as ANALOG function.

【How to set Gyro mode】
GYRO is configurated to channels 3/4 control modes.
ET3 : 3ch control (Steering gyro gain control)
ET5 : 4ch control (Throttle gyro gain control)
Adjust it to moderate gyro gain while running.

Specification of channel 3 and 4 of the gyro mode memory (storage) is memorized.

The functions which may be set are both 3CH and 4CH.

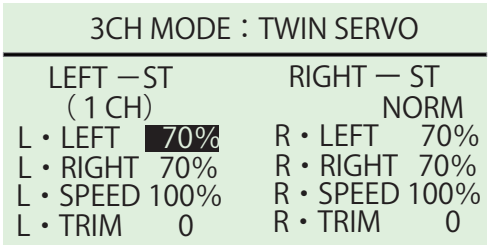
When the 3ch/4ch mode is changed from GYRO mode to another mode or OFF, the 3ch mode will return to the setting for (OFF).

Please prepare the gyro system (ex. KR-212FHG) separately. The gyro effect is not provided only in the main system of transmitter.

TWIN SERVO MODE

This function modifies the setting for using 2 steering servo. Using left steering servo 1ch, and right steering servo 3ch or 4ch.

【Example】
Ackerman control is possible when using for drift cars using twin servos.

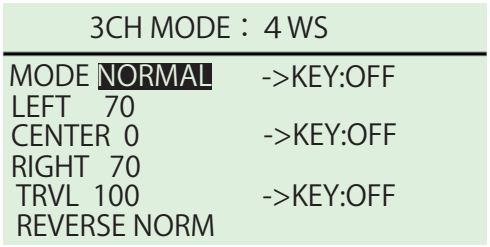


【Setting Range】
LEFT-ST（1CH）
L-LEFT : 30 ～ 100%（Default : 70%）
Sets the highest value for the 1CH servo left operation.
L-RIGHT : 30 ～ 100%（Default : 70%）
Sets the highest value for the 1CH servo right operation.
L-SPEED : 1 ～ 100%（Default : 100%）
Sets the steering speed for the 1CH servo operation.
L-TRIM : -50 ～ 50（Default : 0）
Sets the neutral position for the 1CH servo operation range.

RIGHT-ST
NORM、REVS（Default : NORM）
Sets operation direction of 3CH or 4CH servo.
R-LEFT : 30 ～ 100%（Default : 70%）
Sets the highest value for the 3(4)CH servo left operation.
R-RIGHT : 30 ～ 100%（Default : 70%）
Sets the highest value for the 3(4)CH servo right operation.
R-SPEED : 1 ～ 100%（Default : 100%）
Sets the steering speed for the 3(4)CH servo operation.
R-TRIM : -50 ～ 50（Default : 0）
Sets the neutral position for the 3(4)CH servo operation range.

4WS MODE

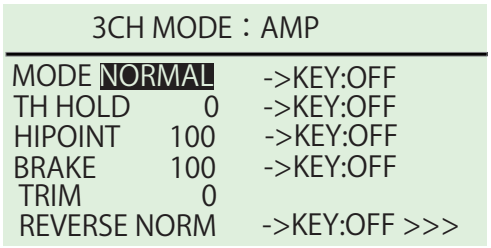
This function is related to an R/C car's 4-wheel steering feature. If 3CH or 4CH is assigned to control the rear axle, it will operate in conjunction with 1CH (steering). The direction of the rear axle steering may also be changed.



【Setting Range】
MODE （Default: NORMAL）
NORMAL : front and rear axles turn in the same direction
REVERSE : front and rear axles turn in opposite directions
F STEER : steer front axle only
R STEER : steer rear axle only
LEFT : 0 ～ 100（Default: 70）
Adjusts the rear axle servo movement range when steering is turned to the left.
CENTER : -50 ～ 50（Default: 0）
Adjust the rear axle servo's neutral position.
RIGHT : 0 ～ 100（Default: 70）
Adjusts the rear axle servo movement range when steering is turned to the right.
TRAVEL : 0 ～ 150（Default: 100）
Adjusts the overall amount of movement of the rear axle servo when the steering is at full lock.
REVERSE : NORM、REVS（Default: NORM）
Sets operation direction of 3CH or 4CH servo.
MODE → KEY : OFF、ET1 ～ 5（Default: OFF）
Assigns ET keys to be used for 4WS Mixing MODE.
CENTER → KEY : OFF、ET1 ～ 5（Default: OFF）
Assigns ET keys to be used for 4WS Mixing CENTER.
TRVEL → KEY : OFF、ET1 ～ 5（Default: OFF）
Assigns ET keys to be used for 4WS Mixing TRAVEL.

▶ AMP Mixing MODE

Used when the front and rear wheels are controlled by separate ESCs and motors. If 3CH or 4CH is set to the front-wheel drive function, it will operate in conjunction with 2CH's throttle operations.



【Setting Range】

MODE (Default: NORMAL)
NORMAL : drives both front and rear wheels
BURN : drives rear wheels only
DIG : drives front wheels only
F HOLD : drives front wheels at a set speed
R HOLD : drives rear wheels at a set speed

TH HOLD : -100 ～ 100 (Default: 0)
This function adjusts the set speed used for (F HOLD) and (R HOLD) selected in Amp Mixing Mode. [F HOLD] adjusts the front wheel drive while [R HOLD] adjusts the rear wheel drive.
※ This setting is activated when F HOLD or R HOLD mode is selected.

【Example】 May be used for rock crawlers, etc.

HIPOINT : 0 ～ 150 (Default: 100)
Adjusts the maximum amount of throttle to be applied to the front wheels. Equivalent to the [Throttle High Point] function.
※ This setting is activated when NORMAL, DIG, or R HOLD mode is selected.

P This makes it easy to adjust the amount of maximum throttle, particularly on a glow engine car.

P If the amp mixing high point is set low and the amp mixing trim is set to a high value toward acceleration, the resulting throttle movement may be extraordinarily small.

⚠ **On glow engine cars, an overly high setting value will increase load on the servo and lead to it being damaged. Check carefully while adjusting.**

⚠ **On electric cars, a setting value that is too small may cause problems with the ESC settings. Make adjustments starting from the default setting (100).**

⚠ **Brake will not operate if the value is set to 0.**

BRAKE : 0 ～ 150 (Default: 100)
Modify the maximum amount of reverse (brake) to be applied to the front wheels. Equivalent to [Throttle Brake] function.
※ This setting is activated when NORMAL, DIG, or R HOLD mode is selected.

⚠ **On glow engine cars, an overly high setting value will increase load on the servo and lead to it being damaged. Check carefully while adjusting.**

⚠ **On electric cars, a setting value that is too small may cause problems with the ESC settings. Make adjustments starting from the default setting (100).**

⚠ **Brake will not operate if the value is set to 0.**

TRIM : -50 ～ 50 (Default: 0)
Adjusts the neutral position of the front wheels.

P The setting position cannot exceed what is set by [High Point] or [Brake].

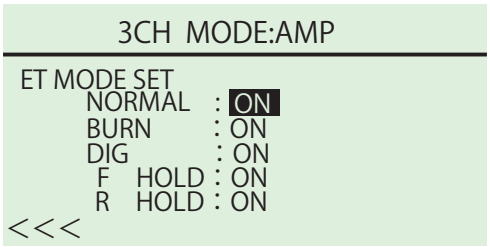
REVERSE : NORM、REVS (Default: NORM)
Changes the movement direction of the front wheels.

P For electric cars, the throttle is set by the ESC so there is no need to set this function. However, some older ESCs will not function properly unless reverse is also set.

MODE → KEY : OFF、ET1 ～ 5 (Default: OFF)
Assigns ET or BT keys to activate the various front wheel drive modes.
TH HOLD → KEY : OFF、ET1 ～ 5 (Default: OFF)
Assigns ET keys to be used for the set speed used for TH HOLD.
HIPOINT → KEY : OFF、ET1 ～ 5 (Default: OFF)
Assigns ET or BT keys to adjust HIPOINT value.
BRAKE → KEY : OFF、ET1 ～ 5 (Default: OFF)
Assigns ET or BT keys to adjust BRAKE value.
REVERSE → KEY : OFF、ET1 ～ 5 (Default: OFF)
Assigns ET or BT keys to changes the movement direction of the front wheels.

【Setting Range】

ET MODE SET
Assigns ET or BT keys to activate the various front wheel drive modes.



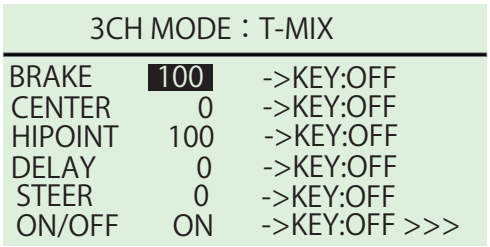
NORMAL : ON、OFF (Default: ON)
BURN : ON、OFF (Default: ON)
DIG : ON、OFF (Default: ON)
F HOLD : ON、OFF (Default: ON)
R HOLD : ON、OFF (Default: ON)

P Assigning these keys may be convenient for rock crawlers or when you need to adjust Amp Mixing settings.

T-MIX Throttle Mixing MODE

Mainly used for 1/5 scale R/C cars where the left/ right front wheels' braking operation is controlled by an independent servo.
If 3CH is assigned to front right wheel brake and 4CH is assigned to front left wheel brake, they will operate in conjunction with 2CH (throttle) and 1CH (steering).

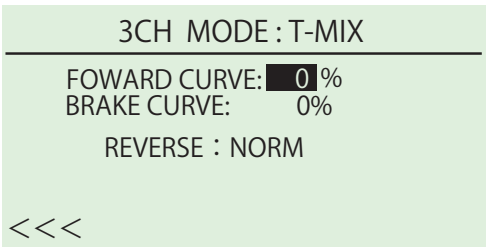
【Example】
Simplifies adjustment of the independent brake channel (servo) on 1/5 scale R/C cars.



【Setting Range】
BRAKE : 0 ～ 150 (Default: 100)
Modify the maximum amount of front brake servo movement.
CENTER : -50 ～ 50 (Default: 0)
Modify the front brake servo's neutral position.
HIPOINT : 0 ～ 150 (Default: 100)
Modify the maximum amount of throttle to be applied to the front brake servo.
※ To avoid operating only the brakes, set value to 0.
DELAY : 0 ～ 100 (Default: 0)
Delays the operation of the front wheel servo brake.
STEER : -100 ～ 100 (Default: 0)
Modify the amount of brake applied by the front wheel brake servo in relation to steering input.
ON/OFF : ON、OFF (Default: ON)
Enables Throttle Mixing to be activated via ET keys.

BRAKE → KEY : OFF、ET1 ～ 5 (Default: OFF)
CENTER → KEY : OFF、ET1 ～ 5 (Default: OFF)
HIPOINT → KEY : OFF、ET1 ～ 5 (Default: OFF)
DELAY → KEY : OFF、ET1 ～ 5 (Default: OFF)
STEER → KEY : OFF、ET1 ～ 5 (Default: OFF)
ON/OFF → KEY : OFF、ET1 ～ 5 (Default: OFF)

These setting must be set for both front right brake (3CH) and front left brake (4CH).



【Setting Range】
FORWARD CURVE : -100% ～ 100% (Default: 0%)
BRAKE CURVE : -100% ～ 100% (Default: 0%)

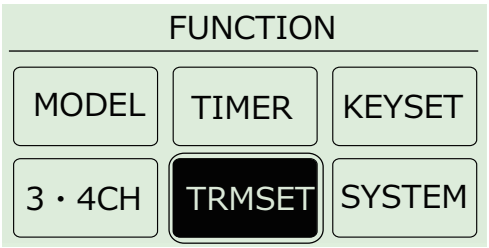
Positive values (+1 to +100) equal high initial response followed by mild response.
Negative values (-1 to -100) equal a mild initial response followed by high response.

REVERSE : NORM、REVE (Default: NORM)
This function reverses the front brake servo's movement direction. It is useful for when servo output movement does not match inputs after the servo has been installed.

Use of Throttle Mixing Steering may increase load on the servo and cause increased wear or damage. Check the servo while adjusting.

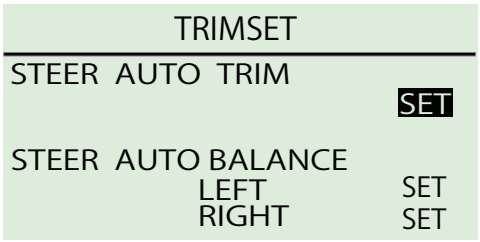
TRIM SET

The convenient function that can set trim and travel while operating steering wheels.



▶ STEER AUTO TRIM

① Move the cursor to "SET" and push the ENT key, "SET" will start blinking.
※ At this time, the steering trim becomes 0 forcibly.
② Hold the steering wheel of the transmitter to the position that you want to make neutral.
Set the steering neutral position by pushing the ENT key while holding the position.



As for this function, only the numerical value of the steering trim changes. Does not influence the numerical value of the steering subtrim.

After pushing "SET", the steering servo moves because the neutral position has changed.
Release the steering handle, the servo moves to the new neutral position.

▶ STEER AUTO BALANCE LEFT

① Move the cursor to "SET" and push the ENT key, "SET" will start blinking.
※ At this time, the steering travel(L) becomes 100 forcibly.
② Hold the steering wheel of the transmitter to the position that you want to make the Left end point. Set the steering travel(L) position when pushing the ENT key while holding the position.

As for this function, only the numerical value of the steering tavel(L) changes. Does not influence the numerical value of the steering travel and travel(R). When the quantity of movement is short, set automatic balance again after increasing steering travel.

After pushing "SET", the steering servo moves because the travel(L) position has changed.
Release the steering handle, the servo moves to the neutral position.

Use of Steering auto balance may increase load on the servo and cause increased wear or damage. Check the servo while adjusting.

When operating the steering wheel to the right in steering auto balance(L), it will not set correctly. Be careful to the direction of operation.

▶ STEER AUTO BALANCE RIGHT

① Move the cursor to "SET" and push the ENT key, "SET" will start blinking.
※ At this time, the steering travel(R) becomes 100 forcibly.
② Hold the steering wheel of the transmitter to the position that you want to make the Right end point. Set the steering travel(R) position when pushing the ENT key while holding the position.

As for this function, only the numerical value of the steering tavel(R) changes. Does not influence the numerical value of the steering travel and travel(L). When the quantity of movement is short, set automatic balance again after increasing steering travel.

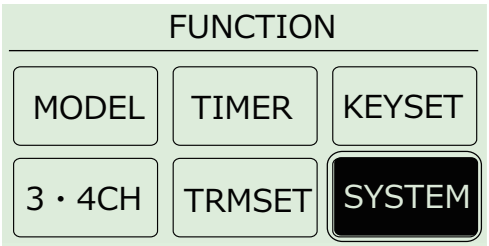
After pushing "SET", the steering servo moves because the travel(R) position has changed.
Release the steering handle, the servo moves to the neutral position.

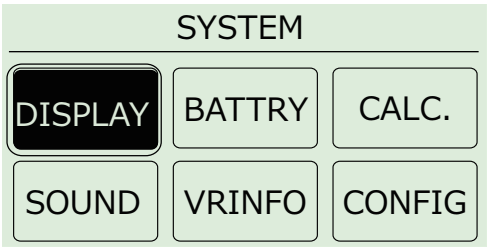
Use of Steering auto balance may increase load on the servo and cause increased wear or damage. Check the servo while adjusting.

When operating the steering wheel to the left in steering auto balance(R), it will not set correctly. Be careful to the direction of operation.

SYSTEM menu

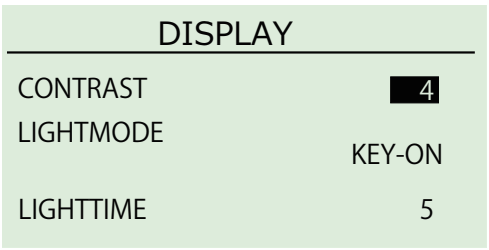
Menu related to various system settings.





▶ DISPLAY menu

Setting about LCD display.



【Setting Range】

CONTRAST : 1 ～ 5 (Default: 4)
Adjusts the contrast of the LCD.
LCD levels become light when the numerical value is reduced.

LCD contrast will characteristically be darker when warm and lighter when cold. Make corresponding contrast adjustments if this is a concern for you.

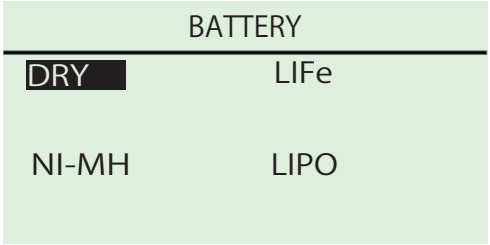
LIGHTMODE : OFF、ON、KEY-ON (Default: KEY-ON)
Sets the light activation mode.

LIGHTTIME : 1 ～ 60 (Default: 5)
Sets the time between a key operation (other than steering or throttle) and the LCD turning off when [LIGHT MODE] is set to [KEY-ON].

When the backlight is set to [KEY-ON], it will only be activated by ET/BT key operation, not by steering or trigger operation.

▶ BATTERY

Select the type of battery used.



【Setting Range】

DRY(Alkaline Batteries),
Primary warning buzzer 4.0V or less
Second warning buzzer, movement stop 3.8V or less

LIFE(Li-Fe Battery)
Primary warning buzzer 6.2V or less
Second warning buzzer, movement stop 6.0V or less

NI-MH(Ni-MH Battery)
Primary warning buzzer 4.0V or less
Second warning buzzer, movement stop 3.8V or less

LIPO(Li-Po Battery)
Primary warning buzzer 7.0V or less
Second warning buzzer, movement stop 6.0V or less

According to the selected power source type, a low voltage warning will be displayed. Transmitter signals will not be cut at this time, but problems with control may be experienced. Stop operation immediately and replace batteries.

When setting a battery type by mistake, the warning message can be canceled by pushing and holding the BACK key to display the initial screen. Please set it to right battery again.

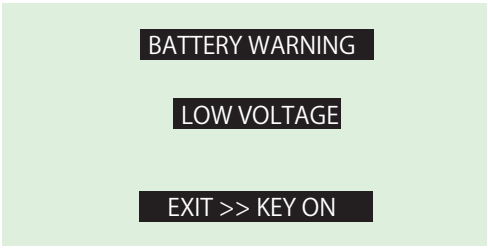
Change Power Management After Switching Battery Type!

If the battery used does not match the Power Management setting, the battery may be ove rdischarged and damaged. This may also result in fire, so make sure you pay special attention.

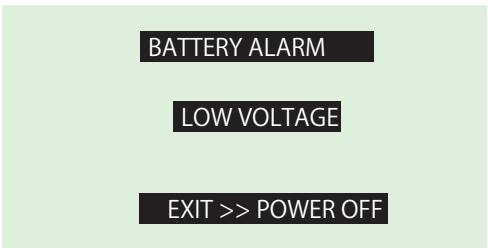
BATTERY WARNING

▶ Battery Level Warning

During driving, this warning will be displayed if the battery voltage is below the required level.
You may still operate the model, but it i s recommended to replace the battery immediately
※ In the case of DRY/Ni-MH setting, the LED (blue) of the main body of EX-2 flashes on and off, too.



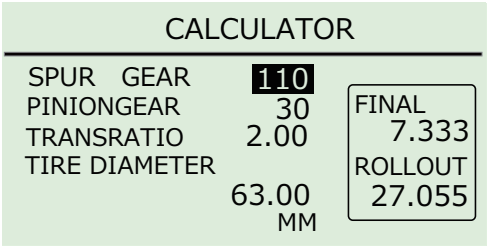
Furthermore, when the power supply voltage decreases, it is displayed and normal operation will not be able to continue. Switch it off immediately, and replace the batteries immediately.



When setting a battery type by mistake, the warning message can be canceled by pushing and holding the BACK key to display the initial screen. Please set it to right battery again.

▶ CALCULATOR

Calculate the gear ratio.

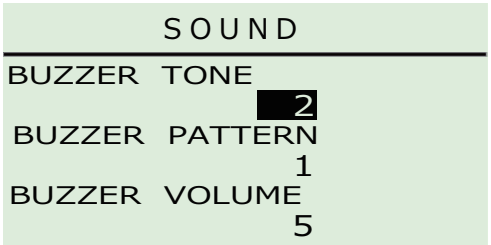


【Setting Range】
SPUR GEAR : 1 ～ 999（Default: 110）
PINIONGEAR : 1 ～ 999（Default: 30）
TRANSRATIO : 1.00 ～ 99.99（初期値 : 2.00）
TIRE DIAMETER タイヤ径 :0.00 ～ 200.99（Default: 63.00）

【How to use】
When the spur, pinion and transmission ratio are inputted, the gear ratio is automatically calculated and shown in the picture right side of the displays.

▶ SOUND

Adjusts the sound level of the transmitter buzzer.

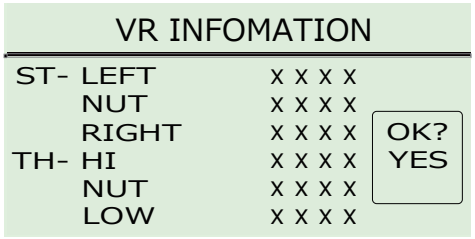


【Setting Range】
BUZZER TONE : 1 ～ 7（Default: 2）
BUZZER PATTERN : 1 ～ 7（Default: 1）
BUZZER VOLUME : 0 ～ 5（Default: 5）

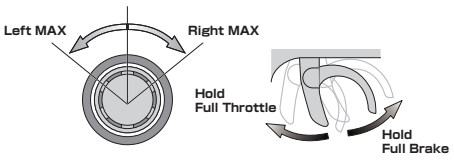
▶ VR INFORMATION

Adjust the potentiometer of the steering and throttle.
※ Please set it by all means.
○ When using EX-RR for the first time.
○ When changing a steering unit for a different product or when putting it back together.
○ When changing a grip unit for a different product or when putting it back together.
○ When changing a grip unit for a different product or when putting it back together.

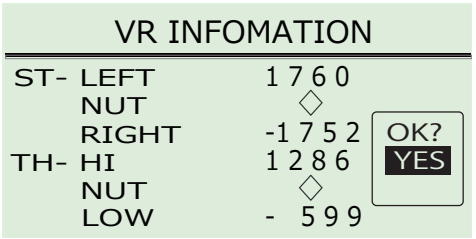
1, Select [FUNCTION] on the initial screen and push the ENTER key.
2, Select [SYSTEM] on the function screen and push the ENTER key.
3.Select [VR INFO] on the system screen and push the ENTER key.



4.Move the wheel slowly to the full left and right lock (numbers will change as the steering is moved) and release the wheel back to neutral.

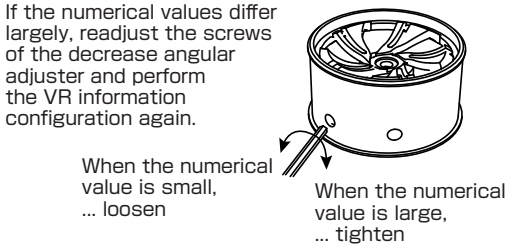


5, Move the trigger slowly to the full throttle and full brake positions (numbers will change as the throttle is moved) and release the trigger back to neutral.
6, Select the "YES" on the right side of the display screen.



※ When operating the VR INFORMATION and pressing the BACK key will cancel the operation.

If you modify the decrease angular adjuster for the wheel, please configure it so that the ST-LEFT and RIGHT values do not have a large difference.

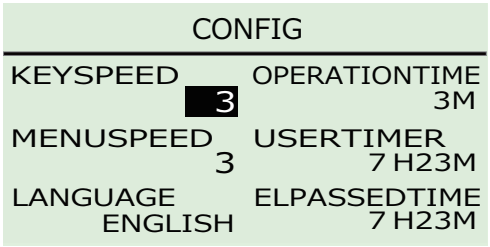


Do not operate steering wheel and throttle trigger while pressing ENTER, as this may change the data values and affect subsequent operations. If this function is not adjusted properly, improper operation may result.

VR Information timing may vary depending on usage. If problems persist even after using VR Infomation, contact KO Propo Customer Service Department to arrange repairs. (We recommend that you contact KO Propo Customer Service Department if you are not sure what the problem is.)

▶ CONFIG

The Xpansion unit operating environment is configured.



《Function》

▶ KEYSPEED

The interval of how quickly the values change when L・R buttons are held down.

【Setting Range】

KEYSPEED : OFF ～ 5 (Default: 3)

▶ MENUSPEED

The interval of how quickly the navigation in the menu change when LR buttons are held down.

【Setting Range】

MENUSPEED : OFF ～ 5 (Default: 3)

OFF:Key Repeat Disabled.
The larger value will shorten the delay time.

The ET/BT keys speed is fixed and can not be independently changed.

▶ LANGUAGE

Language of the menu display is changed.

【Setting Rande】

LANGUAGE : ENGLISH / JAPANESE
(Default: ENGLISH)

Changing of the language is performed in the CONFIG screen from the SYSTEM screen. Pressing the BACK key to navigate to the menus.

▶ OPERATIONTIME

When there is no input to the transmitter in over three minutes, the EX-RR alarm will sound. The alarm is canceled when operating steering wheel, throttle trigger, ET, BT key, ENT key, L R key, BACK key.

【Setting Range】

OPERATIONTIME: OFF ～ 3Min (Default: 3)

▶ USERTIMER

Total time the transmitter has been ON.

Highlighting the USERTIMER and pressing the ENTER key will reset the timer.

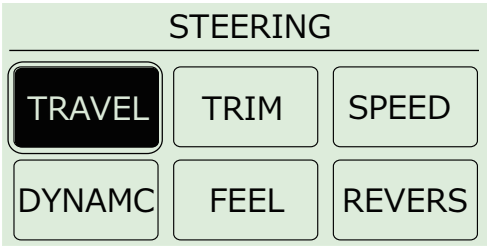
▶ ELPASSEDTIME

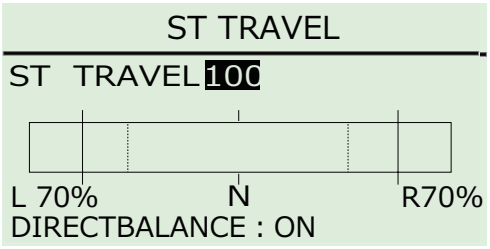
Total time the transmitter has been ON.

The ELPASSEDTIME timer can not be reset.

TRAVEL menu

Modify the overall amount of steering movement.





▶ ST TRAVEL
Modify the overall amount of steering movement.

▶ L (BALANCE)
Modify the left steering angle end point.

▶ R (BALANCE)
Modify the right steering angle end point.

▶ DIRECT BALANCE
Change the validity / invalidity of the Direct balance function.

▶ ST TRAVEL Steering Travel

Adjust the overall amount of steering servo movement when the steering wheel is at full lock.

【Setting Range】
ST TRAVEL : 0 ～ 150 (Default: 100)

Since the Balance setting value is a ratio of the Travel setting value, if the latter is modified the actual movement value and the displayed graphic will also change.(the Travel value will not change).

Steering will not operate if the Travel value is set to 0.

▶ ST BALANCE L R Steering Balance L R

Adjust the left/right steering angles independently. This enables the turning radii to match up during cornering.

【Setting Range】
ST BALANCE L : 30 ～ 100 (Default: 70)
ST BALANCE R : 30 ～ 100 (Default: 70)

The set percentage is a ratio of the value set by the Steering Travel.

Steering balance can be adjusted by using the steering wheel and ET key!
ET key that is assigned to steering trim is pressed while the steering is turned over halfway in either direction, the balance of the direction of the turn can be adjusted.

If the trim is set to a large value, a large left/right value discrepancy may result. If adjusting steering balance for the first time, follow the procedures below.
① Set trim value to 0.
② Adjust sub trim so that the car drives in a straight line when steering is in neutral position.
③ Use steering travel to match the overall steering angle range.
④ Use steering balance to match the left/right turning radii.
⑤ If the car does not drive straight at this point, use trim to correct.

▶ DIRECT BALANCE

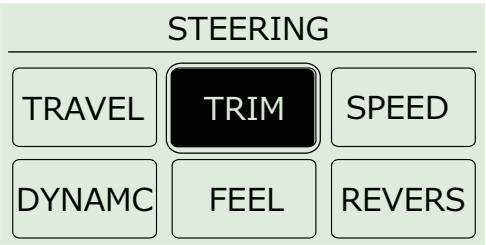
ET key that is assigned to steering trim is pressed while the steering is turned to full lock in either direction, the balance of the direction of the turn can be adjusted respectively.(Steering Trim: initial setting is ET1)

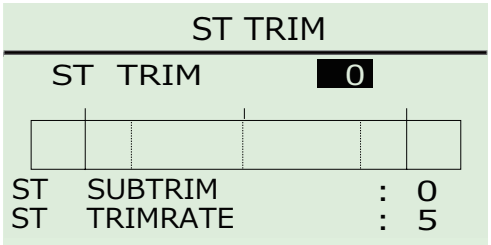
【Setting Range】
DIRECT BALANCE : ON ～ OFF
(Initial setting: ON)

You can disable this function by set to "OFF" in the direct balance.

TRIM menu

Adjusts the neutral/center position of the steering angle range.





▶ ST TRIM　Steering Trim

Modify the neutral position of the steering angle.

▶ ST SUBTRIM Steering Subtrim

Modify the overall steering angle range.

▶ ST TRIMRATE Steering trim rate

Modify the amount of movement which corresponds to one click of the Trim button.

▶ ST TRIM

Adjusts the neutral/center position of the steering angle range.

【Setting Range】
ST TRIM : L50 ～ 0 ～ R50 (Default: 0)

Setting adjustments prior to driving should be carried out with the sub trim, not the trim.

The setting range cannot exceed what is set by [Steering Travel] or [Steering Balance].

▶ ST SUBTRIM

Adjust the position of the overall steering angle range. Use this to match the neutral position when installing the steering servo.
※ Also refer to Trim and Sub Trim Operation.(p.42)

【Setting Range】
ST SUBTRIM : L80 ～ 0 ～ R80 (Default: 0)

【Example】
The servo horn position can be adjusted by the linkages, etc. when the servo is installed onto the model, but in case this does not set the neutral position, this function can be used to set it from the transmitter.

If the sub trim value becomes large, adjust the servo horn position or linkages so that the value becomes closer to 0. If the sub trim value is too large, dead zones could result and the servo may not operate at the extremities of its movement range.

▶ ST TRIMRATE

Adjusts the amount of movement associated with one click of the trim button.

【Setting Range】
ST TRIM RATE : 1 ～ 10 (Default: 5)

Although the amount of movement of one interval can be adjusted, the lower the number the smaller the amount of movement.

The overall number of intervals does not change, so a change in trim rate will result in a change in the range in which the trim can be used to make corrections.

If the trim rate is changed when the trim is already set, the trim may be thrown off. If the trim setting is 0 then this does not apply.)

Lower trim rates enable fine adjustments, but the effects may not be apparent depending on the servo used. If there is a lot of slop in the linkage or servo saver, fine trim adjustments could cause the user to constantly worry about the trim settings. In that case, please reexamine the linkages, etc.

● Trim and Sub Trim Operation

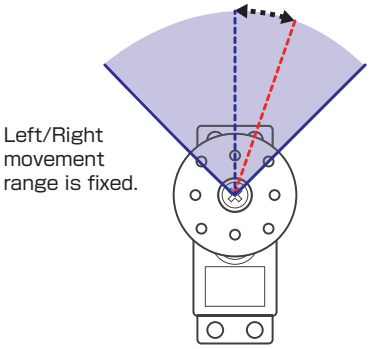
The sub trim is a convenient feature but it could also complicate the setting process if used incorrectly. Use the sub trim in the correct manner while also referring to the sub trim operation instructions on p.41 and p.47.

《Purpose of the Sub Trim》

When a servo is to be mounted onto a model, it is usually connected to the receiver temporarily to enable the transmitter to check its neutral position before it is installed. However, upon running the model it is often the case that it does not run in a straight line and the steering servo's neutral position has to be readjust. This adjustment function is known as the "trim", but trim adjustment is not only done at the beginning, but it also must be done during model operation to account for factors such as tire wear and chassis warp. However, using the normal trim to make these intermediary adjustments could cause other problems. In the case of the steering trim, it could lead to different turning radii for the left and right wheels. For throttle trims on glow engine cars, the point of maximum braking, the full open position of the carburetor, etc. would be shifted. For this reason, the normal trims are designed as "center trims" that only adjust the neutral position, while a new function called sub trim is used in connjuction to enable the most optimal settings.

● Trim (Center Trim)

Adjusting neutral position only.



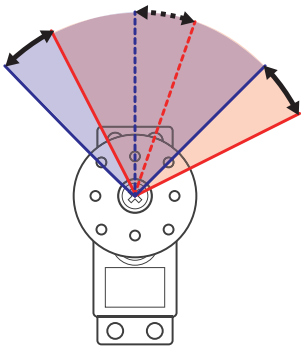
Initially, steering trim and throttle trim are assigned to ET1 and ET2 respectively.

《Purpose of the Trim》

The effect of the sub trim is illustrated in the image on the right. Adjusting the sub trim also moves the left/right angle range. In contrast, the center trim moves the neutral position without changing the angle range position. However, trying to compensate the neutral position while making large sub trim adjustments may throw off the model's left/right balance.

● Sub Trim

Left/Right angle range and neutral position can be both be adjusted.



Only at the time of expansion setting, t he sub trim is accessed via the steering menu, but the steering trim can be assigned to one of the ET keys in SETUP.

《Actual Setting Sequence》

① When installing R/C equipment, the servo's neutral position is set first, then final adjustments would be made with the sub trim after installation. However, if the sub trim setting value is high, adjust the neutral position again.

② Test run to confirm neutral position. Adjustments during this time should also be made with the sub trim. After neutral position is fixed, adjust steering balance (p.20) so that the left and right wheels have the same turning radius and use steering travel (p.19) to adjust overall steering angle.

③ During the course of practice or racing, use the center trim to correct slight changes to the neutral position. If the setting value becomes high, correct in conjunction with the sub trim so that the center trim value is zero.

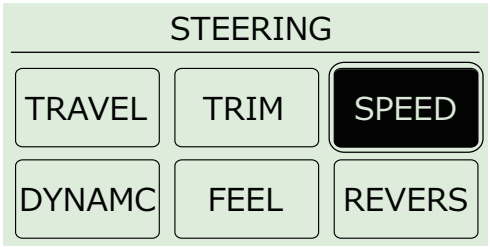
Use the sub trim to adjust settings prior to driving instead of the centre trim.

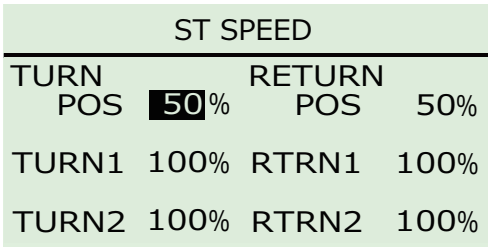
Install R/C equipment when the sub trim setting value becomes low.

If the neutral position becomes slightly off during driving, use center trim to correct.

ST SPEED menu

Modify the speed of the steering servo movement.





▶ TURN POS　Steering Turn Position

The range of movement of the steering wheel for TURN1 and TURN2 speed settings can be set.

▶ TURN 1　Steering Turn Speed 1

The speed from neutral to TURN POS range of the steering wheel movement is set.

▶ TURN 2　Steering Turn Speed 2

The speed from TURN POS to end point range of the steering wheel movement is set.

▶ RETURN POS　Steering Return Position

The range of movement of the steering wheel for returning to neutral for RTRN1 and RTRN2 speed settings can be set.

▶ RTRN 1　Steering Return Speed 1

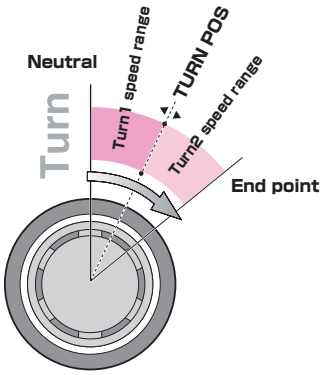
The speed of the return from RETURN POS to neutral of the steering is set.

▶ RTRN 2　Steering Retuen Speed 2

The speed of the return from end point range to RETURN POS of the steering is set.

▶ ST TURN Steering Turn Speed

This is the function which restricts the maximum speed of the steering servo. You configure the direction (TURN) of the steering movement.



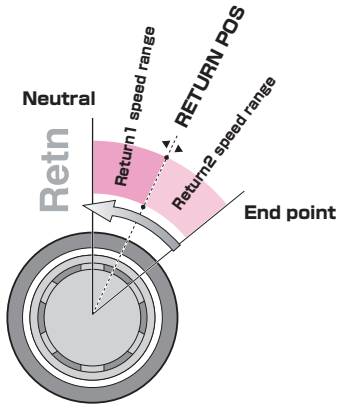
【Setting range】
TURN POS : 1 ～ 100%（Default: 50%）
TURN 1 : 1 ～ 100%（Default: 100%）
TURN 2 : 1 ～ 100%（Default: 100%）

【Example】
When the behavior of the car steering is hard to handle, reducing the operational speed can allow the operation of steering to become easier.

- Take into account such factors as the servo used, car, driving surface, etc. when adjusting all settings. Conduct test drives to find the best setting values.
- Effective speed values are dependent on the speed characteristics of your selected servo.
- When setting POS=100%, TURN2 cannot be set because POS is now the entire movement range.

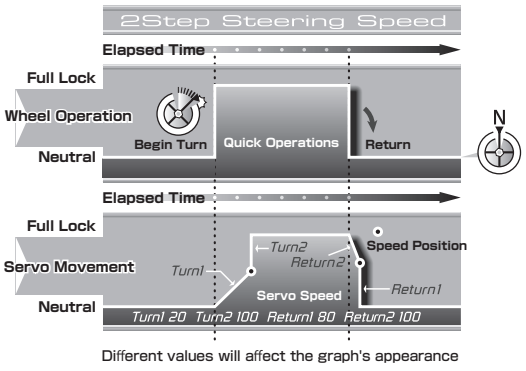
▶ ST RETURN Steering Return Speed

This is the function which restricts the maximum speed of the steering servo return back to neutral. You configure the direction (RETURN) of the steering movement.



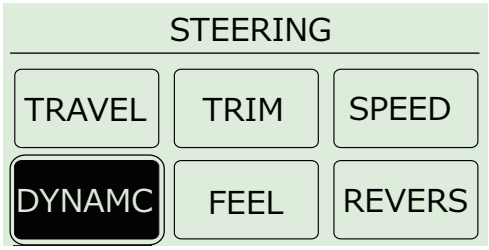
【Setting Range】
ST RETURN SPEED : 1 ～ 100%（Default: 100%）

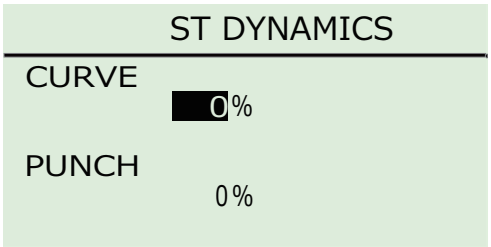
- Take into account such factors as the servo used, car, driving surface, etc. when adjusting all settings. Conduct test drives to find the best setting values.
- Effective speed values are dependent on the speed characteristics of your selected servo.
- When setting POS=100%, TURN2 cannot be set because POS is now the entire movement range.



DYNAMC Steering Dynamics

Settings related to steering control.





▶ CURVE　Steering Curve

Modify the movement speed ratio which corresponds to steering angle.

▶ PUNCH　Steering Punch

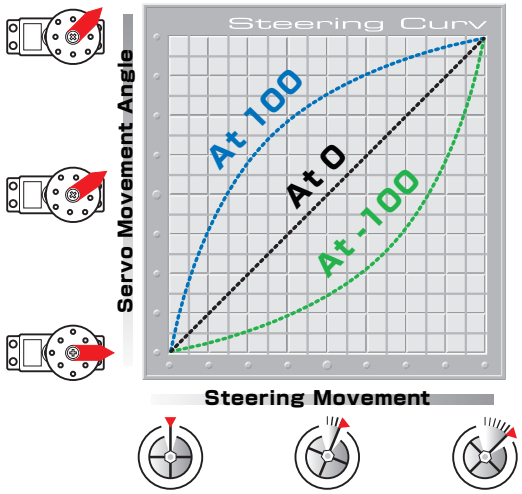
Modify how much the steering initially turns from neutral position.

▶ CURVE Steering Curve

This function adjusts the ratio of the steering angle to servo movement speed (Curve Characteristics). Choose between (+) Quick Curve and (-) Mild Curve.

【Setting Range】
ST CURVE : -100 ～ 0 ～ 100%　(Default: 0%)

【Example】
Modify the movement speed ratio which corresponds to steering angle.



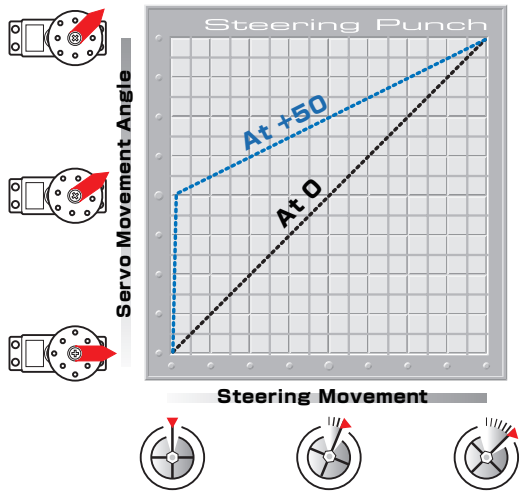
- As the graph shows, servo movement speed can be changed according to wheel movement angle.Positive values (+1 to +100) equal high initial response followed by mild response. Negative values (-1 to -100) equal a mild initial response followed by high response.
- When using this in conjunction with other functions such as [Steering Speed], adjust one at a time to confirm their effects to produce an effective overall setting.
- To adjust only the steering's initial response, use the [Steering Punch] function.

▶ PUNCH Steering Punch

This function quickens the steering's initial response and can be used to instill a strong turning movement when the steering initially moves from neutral.

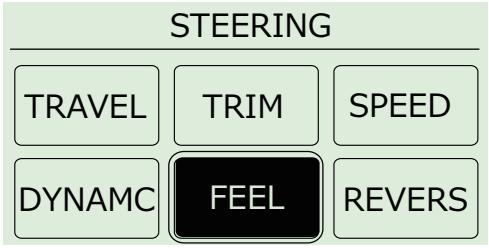
【Setting Range】
ST PUNCH : 0 ～ 50%　(Default: 0%)

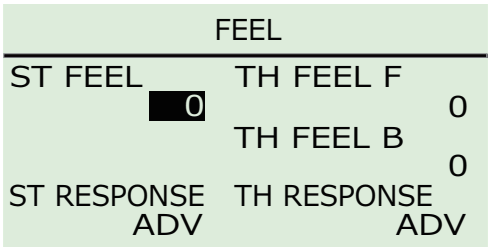
- The larger the value, the stronger the amount of turning movement.
- This could be effective if steering linkages have a lot of slop, but please note that it does not improve straightline performance.
- When using this in conjunction with other functions such as [Steering Speed], adjust one at a time to confirm their effects to produce an effective overall setting.



FEEL Steering Feel menu

FEEL function provides changing the moving peformance of steering servo.





- **ST FEEL Steering Feeling**
  Adjust steering feeling.
- **TH FEEL F Throttle Feel F**
  Refer to "Throttle Feel F" (p.50)
- **TH FEEL B Throttle Feel B**
  Refer to "Throttle Feel B" (p.50)
- **ST RESPONSE Steering Response**
  Response speed of the steering is adjusted.
- **TH RESPONSE Throttle Response**
  Refer to "Throttle Response" (p.50)

ST FEEL Steering Feel

FEEL function provides changing the cornering peformance feeling.

【Setting Range】
ST FEEL : -50 ～ 0 ～ 50% (Default: 0%)

Take into account such factors as the servo used, car, driving surface, etc. when adjusting Steering feel settings.
Conduct test drives to find the best setting values.

ST RESPONSE Steering Response

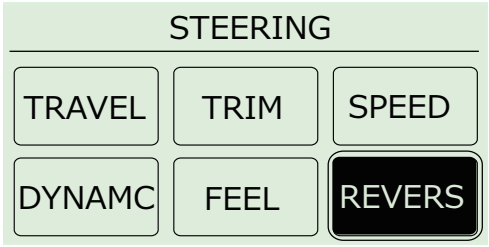
You can use this for adjusting the cornering speed of response.

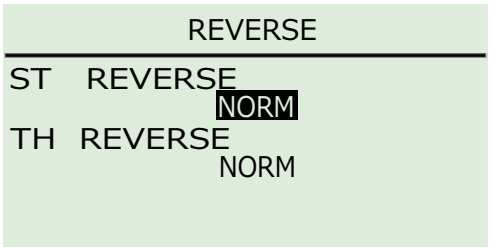
【Setting Range】
ST RESPONSE: NORM / HIGH / ADV (Default: ADV)

Function to adjust feeling.
NORM : Smooth response.
HIGH : Intermediate response.
ADV : Quick response.
During a run you can find a good setting.

REVERSE Steering Reverse

Modify the steering direction.





ST REVERSE Steering Reverse

【Setting Range】
ST REVERSE :NORM、REVS (Default: NORM)

Steering direction varies from car to car and should be checked when the R/C equipment has been installed.

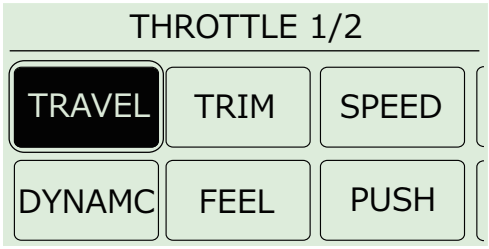
TH REVERSE Throttle Reverse

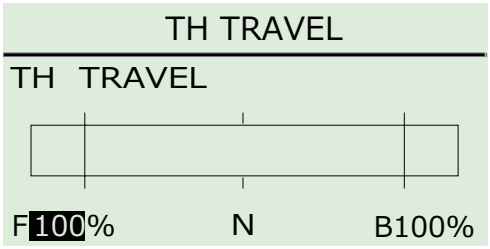
【Setting Range】
TH REVERSE :NORM、REVS (Default: NORM)

Throttle direction varies from car to car and should be checked when the R/C equipment has been installed.

TRAVEL Throttle Travel

Settings related to throttle control.





▶ TH TRAVEL F Throttle Travel F
Modify the maximum amount of throttle movement (towards forward acceleration).

▶ TH TRAVEL B Throttle Travel B
Modify the maximum amount of throttle brake movement.

▶ TH TRAVEL F Throttle Travel F

Adjust the maximum amount of throttle forward acceleration movement.

【Setting Range】
TH TRAVEL F : 0～150 (Defaul: 100)

The key setting displays [T:HIPOINT].

On glow engine cars, an overly high setting value will increase load on the servo and lead to it being damaged. Check carefully while adjusting.

On electric cars, a setting value that is too small may cause problems with the ESC settings. Make adjustments starting from the default setting (100).

If the throttle travel F is set low and the trim is set to a high value toward acceleration, the resulting throttle movement may be extraordinarily small.

Throttle will not operate if the High Point value is set to 0.

▶ TH TRAVEL B Throttle Travel B

Adjust the maximum amount of brake movement.

【Setting Range】
TH TRAVEL B : 0～150 (Default: 100)

The key setting displays [T:BRAKE].

On glow engine cars, an overly high setting value will increase load on the servo and lead to it being damaged. Check carefully while adjusting.

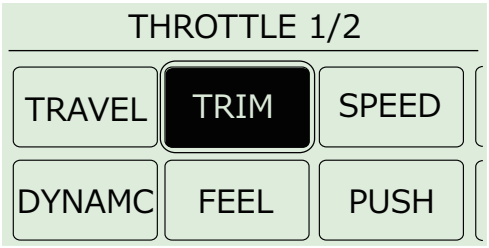
On electric cars, a setting value that is too small may cause problems with the ESC settings. Make adjustments starting from the default setting (100).

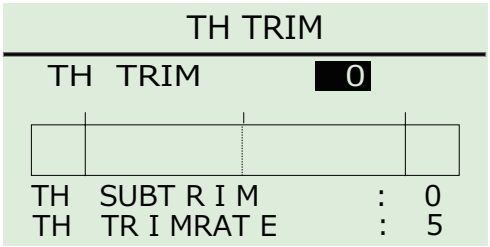
If the throttle travel B is set low and the trim is set to a high value braking, the resulting throttle movement may be extraordinarily small.

Throttle will not operate if the High Point value is set to 0.

TRIM Throttle Trim

Settings related to throttle control.





▶ TH TRIM Throttle Trim

Modify the neutral position of the throttle.

▶ TH SUBTRIM Throttle Subtrim

Modify the overall throttle movement range.

▶ TH TRIMRATE Throttle Trimrate

Modify the amount of movement which corresponds to one click of the throttle trim button.

▶ TH TRIM Throttle Trim

Adjusts the neutral/center position of the throttle range.

【Setting Range】
TH TRIM : F50 ～ 0 ～ B50 (Defaul: 0)

Setting adjustments prior to driving should be carried out with the sub trim, not the trim.

The setting range cannot exceed what is set by [Throttle Travel F] or [Throttle Travel B].

▶ TH SUBTRIM Throttle Subtrim

Adjust the position of the overall throttle movement range. Use this function when the neutral position cannot be centered with only linkage adjustment.Also refer to Trim and Sub Trim Operation. (p.42)

【Setting Range】
TH SUBTRIM : F80 ～ 0 ～ B80 (Default: 0)

【Example】
The servo horn horn position can be adjusted by the linkages, etc. when the servo is installed onto the model, but in case the neutral position cannot be centered, this function can be used to set it from the transmitter.

If the sub trim value becomes large, adjust the servo horn position or linkages so that the value becomes closer to 0. If the sub trim value is too large, dead zones could result and the servo may not operate at the extremities of its movement range.

TH TRIMRATE Throttle Trimrate

Adjusts the amount of movement associated with one click of the throttle trim button.

【Setting Range】
TH TRIM RATE : 1 ～ 10 (Default: 5)

Although the amount of movement of one interval can be adjusted, the lower the number the smaller the amount of movement.

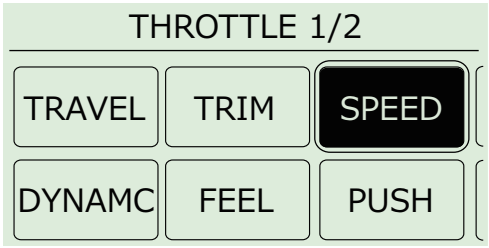
The overall number of intervals does not change, so a change in trim rate will result in a change in the range in which the trim can be used to make corrections.

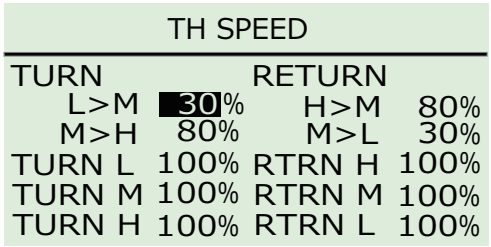
If the trim rate is changed when the trim is already set, the trim may be thrown off. If the trim setting is 0 then this does not apply.)

Lower trim rates enable fine adjustments, but the effects may not be apparent depending on the servo used. If there is a lot of slop in the linkage or servo saver, fine trim adjustments could cause the user to constantly worry about the trim settings. In that case, please reexamine the linkages, etc.

TH SPEED Throttle Speed

Settings related to throttle control.





▶ TURN L>M
The range of movement of the throttle for L and M speed settings can be set.

▶ TURN M>H
The range of movement of the throttle for M and H speed settings can be set.

▶ TURN L
Speed from neutral ~ TURN L of the throttle can be slowed down.

▶ TURN M
Speed from TURN L ~ TURN M of the throttle can be slowed down.

▶ TURN H
Speed from TURN M ~ TURN H of the throttle can be slowed down.

▶ RETURN H>M
Speed of the return of the throttle from H ~ M can be slowed down in this range.

▶ RETURN M>L
Speed of the return of the throttle from M ~ L can be slowed down in this range.

▶ RTRN H
The return speed of the range for H ~M can be set.

▶ RTRN M
The return speed of the range for M ~L can be set.

▶ RTRN L
The return speed of the range for L ~neutral can be set.

▶ TH TURN Throttle Turn Speed

This function delays the conversion of the throttle control signal to make the car easier to control.

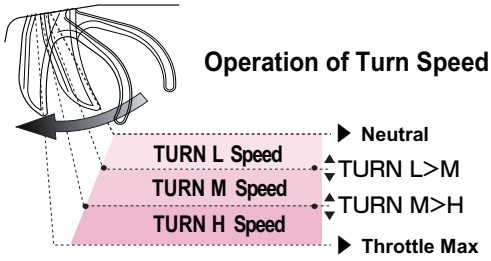
【Setting Range】
TURN L>M : 1 ～ 100% (Default: 30%)
TURN M>H : 1 ～ 100% (Default: 80%)
TURN L : 1 ～ 100% (Default: 100%)
TURN M : 1 ～ 100% (Default: 100%)
TURN H : 1 ～ 100% (Default: 100%)

【Example】
If the car spins or otherwise does not drive straight when the throttle is applied suddenly, limiting the throttle speed can be effective.

P Effective speed values are dependent on the speed characteristics of your selected servo.

P When the setting is set to have TURN L>M and TURN M>H to the same value, TURN M is displayed as OFF and is not available to set. In this case only TURN L and TURN H settings becomes effective.

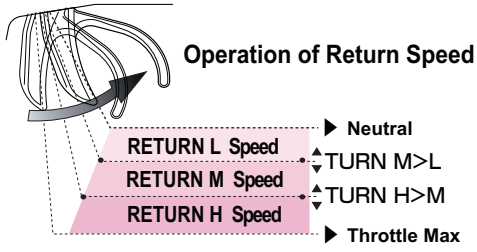
P When TURN L>M = 100% configuration is set, TURN M and TURN H are displayed as OFF and are not available to be set. In this case only TURN L will be used for the setting since it is the largest value.



TH RETURN Throttle Return Speed

This function delays the conversion of the throttle control signal to make the car easier to control.
※ Throttle return speed is effective in the range of the throttle going from the high point to neutral.

【Setting Range】
RETURN H>M : 1 ～ 100% (Default: 80%)
RETURN M>L : 1 ～ 100% (Default: 30%)
RETURN H : 1 ～ 100% (Default: 100%)
RETURN M : 1 ～ 100% (Default: 100%)
RETURN L : 1 ～ 100% (Default: 100%)



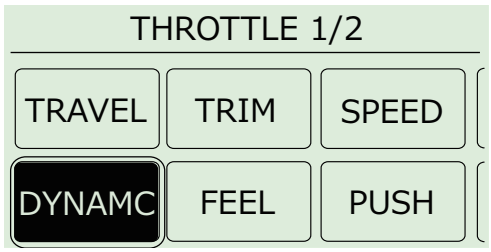
【Example】
If the car spins or otherwise does not drive straight when the throttle is applied suddenly, limiting the throttle speed can be effective.

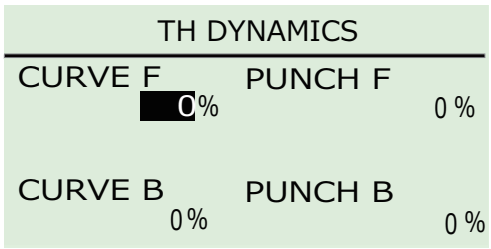
P Effective speed values are dependent on the speed characteristics of your selected servo.

P Return speed is null in the operating range of the brake. TH FEEL B (P.50) is used t o ad just the brake feeling.

DYNAMC Throttle Dynamics

Settings related to throttle control.





▶ CURVE F Throttle Curve Forward

Modify the movement speed ratio which corresponds to how much throttle is applied.

▶ CURVE B Throttle Curve Brake

Modify the movement speed ratio which corresponds to how much throttle brake is applied.

▶ PUNCH F Throttle punch Forward

Modify how much the throttle initially accelerates from neutral position.

▶ PUNCH B Throttle punch Brake

Modify how much the brake initially accelerates from neutral position.

▶ CURVE Throttle Curve

This function sets the signal conversion rate to a curve to enable quicker or milder response. Likewise, braking can also be set to a braking curve.

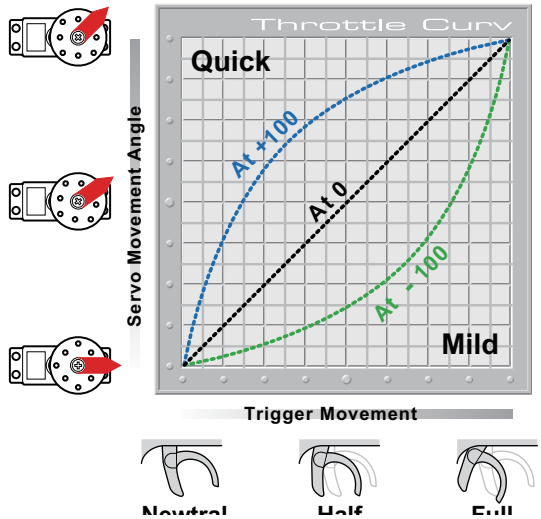
【Setting Range】
TH CURVE F : -100 ～ 0 ～ 100% (Default: 0%)
TH CURVE B : -100 ～ 0 ～ 100% (Default: 0%)

P When [Throttle Punch] is activated, the characteristics of the throttle curve value is also added to the Throttle Punch value.

P Positive values (+1 to +100) equal high initial response followed by mild response.
Negative values (-1 to -100) equal a mild initial response followed by high response.

P When using this in conjunction with other functions, adjust one at a time to confirm their effects to produce an effective overall setting.

P This function adjusts only the curve. Use the [Throttle Punch] function if you wish to adjust the initial response.



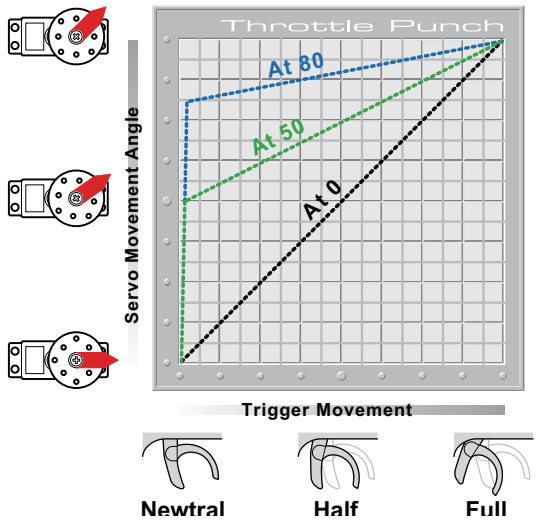
▶ PUNCH Throttle Punch

This function quickens the throttle's initial response and can be used to instill a sense of power when the throttle initially moves from neutral.

【Setting Range】
TH PUNCH F : 0 ～ 50% (Default: 0%)
TH PUNCH B : 0 ～ 50% (Default: 0%)

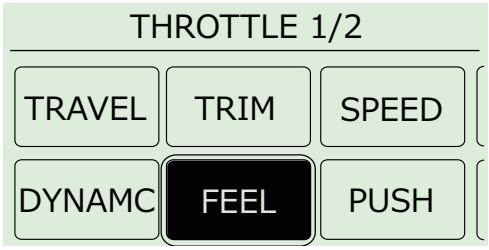
P The larger the value, the larger the amount of throttle movement. However, depending on other settings, the throttle operation may become jagged.

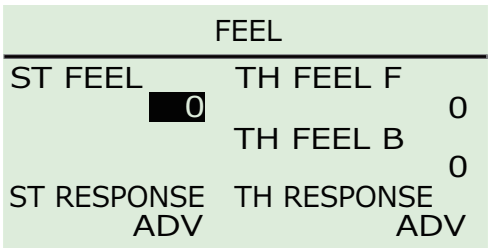
P If using this in conjunction with other functions such as [Throttle ABS], confirm the operation before using.



FEEL Throttle Feel

FEEL function provides changing the throttle feeling.





▶ ST FEEL Steering Feeling

Refer to "Steering Feel " (p.45)

▶ TH FEEL F Thrpottle Feel F

Adjust forward throttle feeling.

▶ TH FEEL B Throttle Feel B

Adjust brake feeling.

▶ ST RESPONSE Steering Response

Refer to "Steering Feel " (p.45)

▶ TH RESPONSE Throttle Response

Response speed of the throttle is adjusted.

▶ TH FEEL Throttle Feel

FEEL function provides changing the throttle feeling.

【Setting Range】
TH FEEL F : -50 ～ 0 ～ 50% (Default: 0%)
TH FEEL B : -50 ～ 0 ～ 50% (Default: 0%)

P Take into account such factors as the servo used, car, driving surface, etc. when adjusting throttle feel settings.

▶ TH RESPONSE Throttle Response

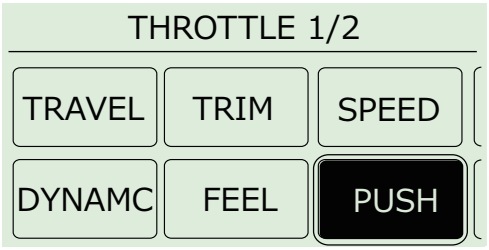
You can use this for adjusting the cornering speed of response.

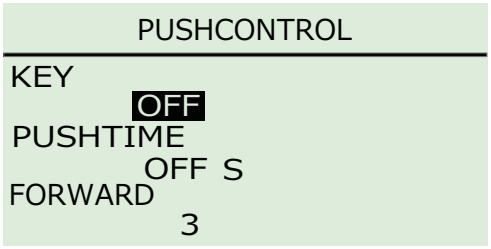
【Setting Range】
TH RESPONSE: NORM / HIGH / ADV (Default:: ADV)

P Function to adjust feeling.
NORM : Smooth response.
HIGH : Intermediate response.
ADV : Quick response.
During a run you can find a good setting.

PUSH

As the throttle is returning to neutral, you can set to add a little forward throttle to allow the car to roll forward more.





▶ KEY

Key assignment to turn on and off the push control.

▶ PUSHTIME

Once the throttle has returned to neutral, the duration of the forward throttle input is set.

▶ FORWARD

Once the throttle has returned to neutral, the amount of the forward throttle input is set.

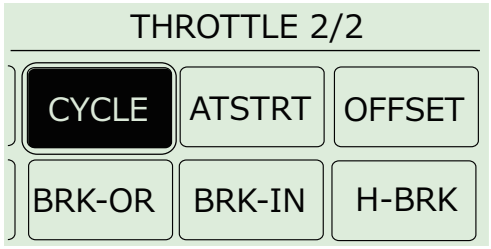
【Setting Range】
KEY : OFF、ET1 ～ 5、BT1 (Default: OFF)
PUSHTIME : OFF、0.1 ～ 3.0 S(秒) (Default: OFF)
FORWARD : 1 ～ 30 (Default: 3)

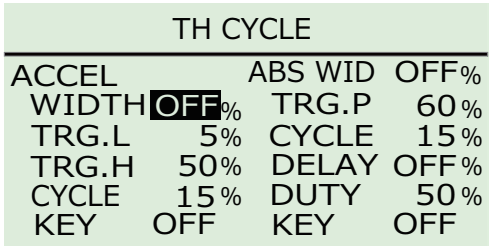
【Example】
This is useful when a strong magnet motor in an electric car causes the car to slow down. This will help reduce the applied brake feeling.

P The amount of forward travel which is set with FORWARD is the same operating quantity as the quantity which you would advance the TH trim. While running, you will find a good setting.

CYCLE menu

Add a change to the operation of throttle brakes.





▶ ACCEL　アクセル

Modify the amount of acceleration burst of the throttle.

▶ ABS

Modify the amount of brake pumping.

▶ ACCEL

Just like professional drivers who are capable of precise throttle inputs, this function enables fine throttle adjustments to allow quicker cornering.

【Setting Range】

WIDTH : OFF ～ 100%　(Default: OFF)
TRG.L : 1 ～ 99　(Default: 5)
TRG.H : 5 ～ 100　(Default: 50)
CYCLE : 1 ～ 30　(Default: 15)
KEY : OFF、ET1 ～5、BT1 (Default: OFF)

【Example】

By setting the throttle to feather automatically, the car could be made to grip and corner faster on lowgrip surfaces.

[CYC] Display on the Function Monitor!
If [WIDTH] is not set to OFF, [CYC] will be displayed on the initial screen's function monitor. If the key assigned to CYCLE is pressed while at the initial screen, [CYC] will disappear from the function monitor.

Setting [WIDTH] to 0 will deactivate Acceleration.

From inside the range of [TRG.L] to [TRG.H] is the operating range.

If [CYCLE] is set at a large value, the servo's operation frequency will increase.

Configuring a [KEY] for this operation allows the ACCEL to be turned on and off.

Take into account such factors as the servo used, car, driving surface, etc. when adjusting all settings. Conduct test drives to find the best setting values.

▶ ABS

To prevent tires from locking up during sudden braking, brake pumping will be applied.

【Setting Range】

ABS WID : OFF ～ 100%　(Default: OFF)
TRG.P : 5 ～ 100%　(Default: 60%)
CYCLE : 1 ～ 30%　(Default: 15)
DELAY : OFF ～ 100%　(Default: OFF)
DUTY : 10 ～ 90%　(Default: 50%)
KEY : OFF、ET1~5、BT1　(Default: OFF)

【Exammple】

This function is effective when your car's wheels lock up under braking and disturbs the car's balance. It will help enable smooth cornering performance.

[CYC] Display on the Function Monitor!
If [WIDTH] is not set to OFF, [CYC] will be displayed on the initial screen's function monitor. If the key assigned to CYCLE is pressed while at the initial screen, [CYC] will disappear from the function monitor.

Setti ng [WIDTH] to 0 will deactivate ABS.

[TRG.P] setting operates pumping of the brakes at full brakes.

If [CYCLE] is set at a large value, the servo's operation frequency will increase.

[DELAY] allows for a delay in the start of the pumping of the brakes to be set.

[DUTY] setting allows for the ratio of the brake to be ON/OFF.

[KEY] setting allows the assignment of the function to a key to turn on and off.

Take into account such factors as the servo used, car, driving surface, etc. when adjusting all settings. Conduct test drives to find the best setting values.

For electric cars, it may be easier to understand if the throttle channel is connected temporarily to the servo to check ABS operation instead of to the ESC.

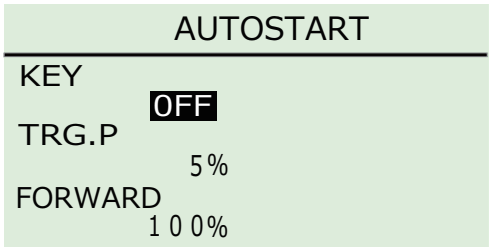
When "ACCEL" and "ABS" either one or both become effective, "CYC" is displayed at the same position of the initial screen.

Setting a large [CYCLE] or [WIDTH] value may increase the servo's power consumption and also shorten its lifespan.

ATSTRT Throttle Auto-Start

This function sets the throttle output to a fixed level at startup, regardless of how much the throttle trigger is pulled.





【Setting Range】
KEY : OFF、ET1～5、BT1 (Default: OFF)
TRG.P : 5～100% (Default: 5%)
FORWARD : 0～100% (Default: 100%)

【Example】
Launching from the starting line.

① Assain KEY (ET1-5/BT1).
② Operate an assigned key and validate [autostart]
③ Operate the throttle trigger and the launching starts when throttle trigger reaches [TRG.P].

The function will not operate until the throttle trigger reaches the set position.

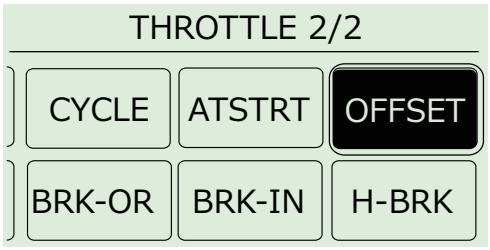
When the throttle is released, the function is deactivated and the throttle returns to normal operation.

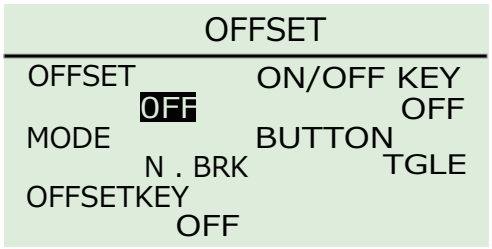
[AUT] Display on the Function Monitor!
If the key assigned to Auto-Start is pressed, [AUT] will be displayed on the initial screen's function monitor. If this key is pressed while at the initial screen, [AUT] will disappear from the function monitor.

Normally, full throttle is set for launching from the starting line. However, tire and surface conditions may mean full throttle will not be effective. Conduct tests and make adjustments.

OFFSET Throttle OFFSET

Used to offset the throttle's neutral position.





▶ **OFFSET**

Sets the amount of neutral offset.

▶ **MODE**

Choice N.BRK (neutral brakes) or I.UP (idol up.)

* "Neutral Brake" means "Drag Brake" .

▶ **OFFSETKEY**

Assigns a key to be used to change the amount of neutral offset.

▶ **KEY**

Assigns a key to be used to activate/deactivate the OFFSET Function.

▶ **BUTTON**

Sets the method of activation.

TGLE : If a key is assigned to Idle Up, press once to activate and press again to deactivate.

PUSH : It is only activated when the key is pushed and held. The operations is deactivated when Key is released.

【Setting Range】

OFFSET (Neutral brake) : -100 ～ OFF
(Default: OFF)
OFFSET (Idle up) : -100 ～ OFF ～ 100
(Default: OFF)
MODE : N.BRK、I.UP
(Default: N.BRK)
OFFSETKEY : OFF、ET1 ～ 5
(Default: OFF)
KEY : OFF、ET1 ～ 5、BT1
(Default: OFF)
BUTTON : TGLE、PUSH
(Default: TGLE)

【Example(Neutral brake)】

This function enables a light brake application at the moment when the throttle position changes from acceleration to deceleration.

【Example(Idle up)】

Raising the idling has the effect of improving a glow engine car's launch performance. It is also useful for canceling the neutral brake of a motor with strong cogging and preventing engine stalls when glow engine cars enter the pit for refueling.

[OFS] Display on the Function Monitor!

If the key assigned to OFFSET is pressed, [OFS] will be displayed on the initial screen's function monitor. If this key is pressed while at the initial screen, [OFS] will disappear from the function monitor.

Throttle can be operated even when Idle Up is activated. The throttle travel F/B point does not change during this time.

Cannot use the function of "N.BRK" and "I.UP" both at the same time.

When the EX-RR is turned off in the state of the OFFSET effect and transmitter is switched back on again, the function of OFFSET becomes invalid due to the safety precautions. Please activate effect again in KEY which you assigned it to.

When setting value of the Neutral brake to a very large value, there may become some mistakes by an ESC that has a reverse funtion and may operate in the reverse mode.

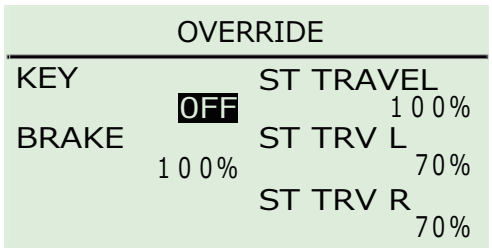
When setting value of the Neutral brake to a very large value, there may become some mistakes by an ESC that has a reverse funtion and may cannot operate in the reverse mode.

When setting value of the Idle up to a very large value, there may become some mistakes by an ESC that has a reverse funtion and may cannot operate in the reverse mode.

OVERRIDE

Arrange another maximum brake setting and steering travel setting, which can be activated/deactivated by the ET lever or BT button.





▶ KEY

Assigns a key to be used to activate/deactivate the override.

▶ BRAKE

Sets the brake override's brake setting.

▶ ST TRAVEL
▶ ST TRV L
▶ ST TRV R

Adjust the steering angle according to the driving conditions to make the car easier to control.

【Setting Range】

KEY : OFF、ET1～5、BT1 (Default: OFF)
BRAKE : 0～150 (Default: 100)
ST TRAVEL : 0～150 (Default: 100)

【Example(throttle brake override)】

If a change in driving conditions is foreseen, the throttle brake setting can be changed during driving.

【Example(Steering travel override)】

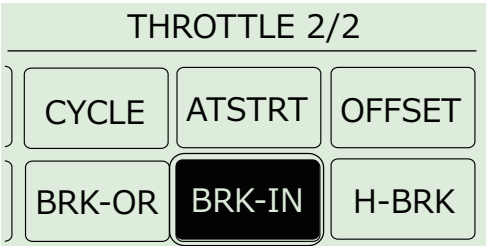
Convenient for changing the steering angle on straights to give the car better straight-line stability.

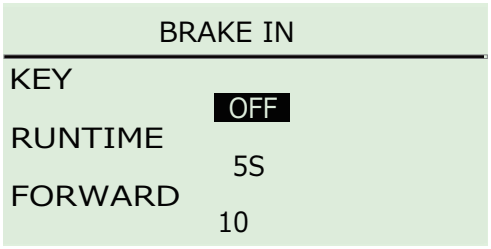
When you only want to change the brake override set point, the numerical value of the steering travel override becomes effective at the same time.
Please input the same numerical value for the steering travel and the steering travel override when you do not want to change a value of the steering travel.

When you only want to change the Steering travel override set point, the numerical value of the brake override becomes effective at the same time.
Please input the same numerical value throttle travel B and the brake override when you do not want to change a value of the brake travel.

BREAK-IN

Fix the throttle operation for the set time.





▶ KEY

Set the key to operate start / stop break-in function.

▶ RUNTIME

Sets the break-in function operation time.

▶ FORWARD

Set the operation amount of the break-in function.

【Setting Range】

KEY : OFF、ET1～5、BT1 (Default: OFF)
RUNTIME : 1～240 (Default: 5)
FORWARD : 0～50 (Default: 10)

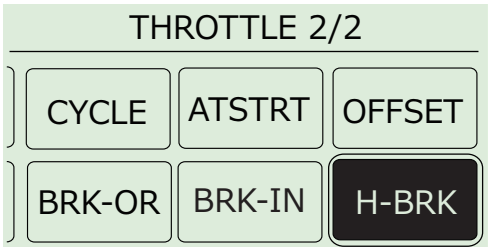
It is a convenient function for agitating the oil of the gear differential and rings of a ball differential before starting to run. Please adjust the set amount of RUNTIME and FORWARD according to your preference.

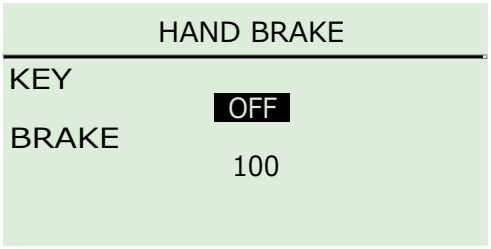
When the break-in function is activated, the buzzer will continue to ring.

You can forcibly stop by pressing the KEY set while the break-in function is in operation.

HANDBRAKE

Set the throttle to the brake and apply the brake only while pressing the control button.





▶ KEY

Set the key to switch the hand brake function on / off.

▶ BRAKE

Set the hand brake operation amount.

【Setting Range】

KEY : OFF、ET1 ～ 5、BT1 (Default: OFF)
* Excluding ET 4

BRAKE : 0 ～ 150 (Default: 100)

The hand brake function performs braking only while pressing the operation key. It is also possible to operate the handbrake while grasping the throttle trigger.

Creating opportunities for drift cars, spinning tires of rally cars and is also effective for an extremely understeer for grip cars.

Hand brake operation can not be set to ET 4.

Throttle reverse setting is operate from reverse menu in steering.

■ Repair Policy

All KOPROPO systems will have a serial number for each region that it is sold in.
This will be used to know where the system was purchased. So if you need any service the Tx will have to be sent back to the region from where it was originally purchased. All repair service must be sent to the region where it was originally purchased. KO Japan will only accept international repairs from the regional distributor.

www.kopropo.co.jp

■ FCC statement

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.
Modifications not expressly approved by this company could void the user's authority to operate the equipment.
interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment andreceiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

- list of external antennas (antenna type, max gain, necessary cable length, connector type, ···)
- statement of professional installation
- notification that the amplifier can be used only in a system which it has obtained authorization

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this transmitter must not be collocated or operating in conjunction with any other antenna or transmitter within a host device,
except in accordance with FCC multi-transmitter product procedures.

■ Specifications

EX-RR/EX-LDT series

■ Transmitter: KT-416FH
Control Type: Steering wheel + Throttle trigger
Number of Channels: 4
Power Source: R03/AAA/UM4 battery x4
Current: Below 150mA
Modulation Type: FHSS
Transmission Frequency Range : 2404-2476MHz
EX-RR
Dimensions:240.5×163.0×107.2mm Weight: 536g
EX-LDT
Dimensions:256.0×170.5×127.5mm Weight: 551g
(including protrusions) (not including batteries)

■ Receiver: KR-415FHD/KR-418FFH
Receiver Modulation Type: FHSS
Number of Channels: 4
Receiver Frequency Range: 2.4GHz
Operating Voltage: 4.8V – 7.4V
Neutral Pulse : 1.5 mSec at NORMAL MODE
: 0.375 mSec at HCS MODE
KR-415FHD
Dimensions: 23.0×30.0×12.8mm Weight: 8g
KR-418FFH
Dimensions: 28.0×18.3×18.5mm Weight: 7.5g

※When using the HCS mode, the corresponding receiver (ex, KR-415FHD) are required. Refer to instruction manual of corresponding receiver.

EX-2 series

■ Transmitter: KT-415FH
Control Type: Steering wheel + Throttle trigger
Number of Channels: 4
Power Source: R03/AAA/UM4 battery x4
Current: Below 150mA
Modulation Type: FHSS
Transmission Frequency Range:
HSS mode ; 2404-2476MHz
MHS mode ; 2404-2460MHz
Dimensions:240.5×163.0×107.2mm
(including protrusions)
Weight: 510g (not including batteries) ※No.80561 Standard Edition

■Receiver: KR-241FH
Receiver Modulation Type: FHSS
Number of Channels: 4
Receiver Frequency Range: 2.4GHz
Operating Voltage: 4.8V – 7.4V
Neutral Balance: 1.5 mSec
Dimensions: 29.3×24.4×16.0mm
Weight: 7.8g

※Note:Receiver will be changed by Product Model.


EX
KO PROPO®