BR 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.



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 straight-line performance.







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.47)
- ► TH FEEL B Throttle feel B Refer to "Throttle Feel B" (p.47)

ST FEEL Steering Feel

FEEL function provides changing the cornering peformance feeling.

[Setting Range]

ST FEEL : -50 \sim 0 \sim 50% (Default: 0%)

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

REVERSE Steering Reverse

Modify the steering direction.



REVERSE リバース

ST REVERSE ステアリンク^{*} リハ^{*}ース NORM TH REVERSE スロットル リハ^{*}ース NORM

▶ ST REVERSE Steering reverse

[Setting Range]

ST REVERSE :NORM (Normal), REVS (Reverse) (Default : NORM)

TH REVERSE : Refer to "Throttle Reverse" (p.48)

DOD THROTTLE

BB 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 \sim 150 (Defaul: 100)



The key setting displays [T:HIPOINT].

Throttle will not operate if the High Point value is set to 4 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].

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

RR TRIM Throttle Trim

Settings related to throttle control.





- ► TH TRIM Throttle Trim Modify the neutral position of the throttle.
- TH SUBTRIM Throttle Subtrim Shift 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 \sim 0 \sim B50 (Default:0)

- Setting adjustments prior to driving should be carried Ð out with the sub trim, not the trim.
- The setting range cannot exceed what is set by [Throttle Ð Travel F] or [Throttle Travel B].

► TH SUBTRIM Throttle Subtrim

Adjust the position of the overall throttle movement range.

※ Also refer to Trim and Sub Trim Operation. (p.13)

[Setting Range]

TH SUBTRIM : F80 ~ 0 ~ B80 (Default:0)

TH TRIMRATE Throttle Trimrate

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

[Setting Range]

TH TRIM RATE : $1 \sim 10$ (Default:5)

- The amount of movement of one interval can be Ð adjusted, the lower the number the smaller the amount of movement.
- The overall number of intervals does not change, so a Ð 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.)

RE TH SPEED Throttle Speed

Settings related to throttle control.



TH SPEED スピード

TH TURN 100 % ターンスヒ゜ート゛

TH RFTURN 100% リターンスと。ート、

► TH TURN Throttle Turn Speed

Modify the speed of the throttle's movement (towards forward acceleration).

► TH RETURN Throttle Return Speed

Modify the speed of the throttle's return movement.

► TH TURN Throttle Turn Speed

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

[Setting Range]

TH TURN SPEED : $1 \sim 100\%$ (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.

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For each setting, it has changed the optimal numerical value in a variety of factors, such as your car, the road surface. Conduct test drives to find the best setting values

TH RETURN Throttle Return Speed

This function delays the conversion of the throttle control signal to make the car easier to control. * The [TURN] direction is adjusted with [Throttle Turn Speed].

[Setting Range]

TH RETURN SPEED : $1 \sim 100\%$ (Default : 100%)

[Example]

Ð

If the car spins or otherwise does not drive straight when the throttle is lowered suddenly. limiting the throttle speed can be effective.

For each setting, it has changed the optimal numerical value in a variety of factors, such as your car, the road surface. Conduct test drives to find the best setting values.

BR 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 Steering 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 \sim 0 \sim 100% (Default : 0%) TH CURVE B : -100 \sim 0 \sim 100% (Default : 0%)

- When [Throttle Punch] is activated, the characteristics of the throttle curve value is also added to the Throttle Punch value.
- 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, adjust one at a time to confirm their effects to produce an effective overall setting.
- 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 \sim 50% (Default : 0%) TH PUNCH B : 0 \sim 50% (Default : 0%)

- The larger the value, the larger the amount of throttle movement. However, depending on other settings, the throttle operation may become jagged.
- If using this in conjunction with other functions such as [Throttle ABS], confirm the operation before using.



FEEL Throttle feel MENU

FEEL function provides changing the throttle feeling.



FEEL フィール



- ► ST FEEL Steering Feeling Refer to "Steering Feel " (p.42)
- ► TH FEEL F Throttle feel F Adjust forward throttle feeling.
- ► TH FEEL B Throttle feel B Adjust brake feeling.

► TH FEEL Throttle feel

FEEL function provides changing the throttle feeling.

[Setting Range]

TH FEEL F : $-50 \sim 0 \sim 50\%$ (Default : 0%) TH FEEL B : $-50 \sim 0 \sim 50\%$ (Default : 0%)

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

BB OVERRIDE Throttle Override

REVERSE Throttle Reverse

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



OVERRIDE オーバーライト



► KEY Key

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

BRAKE Brake

Sets the brake override's brake setting.

▶ ST TRAVEL Steering Travel

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

[Setting Range]

KEY : OFF, ET1 \sim 5, BT1 (Default : OFF) BRAKE : 0 \sim 150 (Default : 100) ST TRAVEL : 0 \sim 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.

[OR] Display on the Function Monitor!

Operating the key that is assigned by [KEY] will result in [OR] being displayed on the initial screen's function monitor. If that key is pressed while at the initial screen, [OR] will disappear from the function monitor.

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. Modify the throttle direction.



REVERSE リ	バース	ス
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ST REVERSE ステアリンク^{*} リハ^{*}ース NORM TH REVERSE スロットル リハ^{*}ース NORM

▶ TH REVERSE Throttle reverse

[Setting Range]

ST REVERSE : Refer to "Steering Reverse" (p.42)

TH REVERSE : NORM (Normal) , REVS (Reverse) (Default : NORM)

BEB CYCLE Throttle Cycle

Add a change to the operation of throttle brakes.





► ACCEL Throttle Acceleration

Modify the amount of acceleration burst of the throttle.

ABS

Modify the amount of brake pumping.

ACCEL Throttle Acceleration

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 $\sim 100\%$ (Default : OFF) CYCLE: $1 \sim 30$ (Default: 15)

(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.



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

E For each setting, different optimal numerical value in a variety of factors, such as your car, the road surface. 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]

WIDTH : OFF $\sim 100\%$ (Default : OFF) CYCLE : 1 ~ 30 (Default: 15)

[Example]

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.



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



How effectiveness of actual ABS is different in your vehicle performance.

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

BEB 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 : $0 \sim 100\%$ (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 Ð 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

BR OFFSET Throttle OFFSET

Used to offset the throttle's neutral position.



OFFSET オフセット

OFFSET	KEY	
MODE	H BUTTC	
モート N.BRK	、ボタン	TGLE
OFFSETKEY		
オフセットキー OFF	-	

- ▶ OFFSET Throttle OFFSET Sets the amount of neutral offset.
- ► MODE OFFSET MODE Choice N.BRK (neutral brakes) or I.UP (idol up.)
- OFFSETKEY Throttle OFSET KEY
 Assigns a key to be used to change the amount of

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 \sim OFF (Default : OFF) OFFSET (Idle up) : -100 \sim OFF \sim 100 (Default : OFF) MODE : N.BRK, I.UP (Default : N.BRK) OFFSETKEY : OFF, ET1 \sim 5 (Default : OFF) KEY : OFF, ET1 \sim 5, BT1 (Default : OFF) BOTTON : 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.

[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-6 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.
 - If you set a large value of the drag brake, please note that it may be back running in neutral.



If you set a large value of the drag brake, it may not be back traveling.



If you set a large value of the idle-up, it may not be back traveling.

Glossary

This section explains terms which appear in this instruction manual as well as terms which are common in the radio control hobby.

2.4GHz	A radio frequency range which is higher than previous ones such as 27MHz and 40MHz. However, this also means it is also more direct and signal transmission may be difficult if there are interfering objects between the transmitter and receiver.
4WS	A feature which changes the steering angle of all four wheels according to the driving condition to enable greater stability.
27MHz	One of the radio frequency ranges used for the R/C hobby. 12 bands exist for both ground-based and airborne R/C models.
40MHz	One of the radio frequency ranges used for the R/C hobby. 8 bands and 5 bands are assigned for use with ground-based and airborne R/C models respectively.
AC Charger	A battery charger which plugs into the standard 100V wall socket (in Japan). It often requires charging times of several hours or more.
Alarm	A buzzer sound emitted by the transmitter. It may be used as a warning notification, etc.
Amp	See ESC.
Analog Servo	A type of servo which uses analog-type integrated circuits (IC).
Backlight	Since LCDs do not generate their own light and are difficult to see in dark places, this light is placed beneath it to illuminate the display.
Band	Another word for radio frequency. This can be set with frequency crystals and different crystals can dictate the frequencies used in a certain frequency range.
Band ID Tag	An item which indicates to others the frequency that a particular user is using.
Brake Pumping	The repeated action of applying and releasing the brakes.
Center Trim	A trim which only adjusts the position of neutral without disturbing the overall range of travel.
Channel	Refers to the number of servos, etc. which can be controlled by a transmitter or their individual signal numbers.
Connector	An electric circuit contact unit which can be connected/disconnected.
CPU	The core of a computer which performs digital calculations for various uses. Also sometimes called an MPU.
Crystal	A device which sets the frequency used by a transmitter. 27MHz and 40MHz systems require crystals for changing frequencies while DSSS and FHSS 2.4GHz systems do not.
Cursor	A marker on the display which indicates the position in the text which can be controlled at that time.
Cycle	A process which returns to the beginning and repeats itself.
DC Charger	A battery charger which uses a 12V battery or other stable 12V power source.
Dead Zone	An area in which transmitter wheel or trigger movement does not result in servo operation. It could be caused by worn out components and may be resolved using VRADJ.
Delay	When an operation is slow, or has been slowed.
Digital Servo	A type of servo which uses digital-type integrated circuits (IC).
Discharger	A device which forcibly discharges remaining electricity from batteries such as Ni-Cd.
DSSS	Acronym for Direct Sequence Spread Spectrum. It is a type of spread spectrum transmission system which uses the 2.4GHz band.
Duty Cycle	
Duty Cycle	A ratio between two operations.
EEPROM	A ratio between two operations. A type of memory in which stored data is not deleted when the power is turned off. This product features this type of memory.

ET	An acronym for Electric Trim. Button Trim is similarly shortened as BT.
FET Servo	A high-end servo in which the motor features field-effect transistors as opposed to bipolar transistors.
FHSS	Acronym for Frequency-Hopping Spread Spectrum. Like DSSS, it is a type of spread spectrum transmission system.
Frequency Range	A range of radio wave frequencies such as 27MHz, 40MHz, 2.4GHz, etc.
ICS (Interactive Communication System)	This system is unique to KO Propo and enables two-way communication with a PC. By using the Interface Kit (sold separately), the transmitter's internal memory data may be edited on a PC.
Internet	A global communications network which connects smaller networks made up of multiple PCs. This network enables the release of information via websites around the world, communication via E-mail, etc.
LCD	Acronym for Liquid Crystal Display. The screen is used to display letters, numbers, etc.
LED	Acronym for Light Emitting Diode. It is a type of semi-conductor which uses electricity to generate light.
Linkage	A component which connects the servo to another part of the car chassis.
Lithium-Ferrite (Li-Fe) Battery	A type of battery which is quick to charge and is good for repeated recharges. They are also less susceptible to natural discharging and are easy to manage, making them safer compared to other types of lithium batteries.
Lithium-Polymer (Li-Po) Battery	A type of lithium battery which is lightweight and available in various sizes. They are equipped with balance connectors since there is a risk of fire/explosion if they are overcharged.
Megahertz (MHz)	A unit of frequency. 1000 Hertz (Hz) = 1 Kilohertz (kHz), 1000 kHz = 1 MHz.
Memory	A term which refers to a location where information is temporarily stored (on a PC for example). Transmitters feature non-volatile memory where the stored information is not erased when power is turned off (refer to EEPROM).
Mixing	A feature which combines the signals for multiple operations or effects into a more efficient output signal.
Monitor	A function which checks the operation of each channel.
Neutral	The position of the transmitter controls when they are not operated, or the position of the servo horn at that time.
Neutral Brake	A feature where braking is applied when the throttle is returned from forward acceleration to neutral position. Also called "drag brake."
Ni-Cd	A type of battery which can be recharged for repeated use. Other types of rechargeable batteries include Ni-MH and Li-ion.
Ni-MH	Compared to Ni-Cd batteries, Ni-MH batteries have a larger capacity. They are more environmentally-friendly since it does not contain Cadmium, but they are also more susceptible to damage from overdischarging.
Noise	Electrical interference. Since it is a type of frequency, it could cause the receiver to operate in error.
Override	When a high-priority (1CH / 2CH) function setting is switched to a low-priority one.
Pairing	The act of writing a 2.4GHz transmitter's ID into a receiver so that the receiver only chooses to receive that transmitter's signals. This must be done once before a transmitter is used.
PC Interface	An adapter used to connect a transmitter to a PC to enable the adjustment of the former's settings on the latter.
Preset	The act of specifying a setting position in advance.
Propo	Japanese language abbreviation of "proportional." Refers to an R/C transmitter or the transmitter/receiver combination.
Quick Recharger	A charger which could recharge Ni-Cd, Ni-MH, etc. batteries in a short amount of time.
Receiver (RX)	A device which receives radio signals from the transmitter and passes them on to the servo and ESC. Use of the same type of signal as the transmitter is required.

Regulator	A circuit which stabilizes the input voltage to the level of the required voltage.
Reset	Returning the settings to the original preset condition.
Response	The time between a transmitter input and a receiver reaction.
RF Module	A component which generates and transmits radio frequencies. They exist in 27MHz, 40MHz, 2.4GHz (DSSS), and 2.4GHz (FHSS) types, with some transmitters allowing modules to be interchanged.
Servo	A device which translates the transmitter's radio signals into mechanical rotational movement.
Spec List	A list which describes the makeup, performance, etc. of a piece of R/C equipment.
Sub Trim	Adjusts the overall steering angle range. ※Refer to Trim and Sub Trim Usage
Swing	A repeated action between two set points.
Torque	A measure of the force at work in the rotating shafts of motors, servos, etc.
Transmitter (TX)	A device which sends out radio waves to a receiver linked to servos, ESCs, etc. to control an R/C model.
Travel	The angle/amount of servo horn movement.
Trigger	A mechanism on a transmitter which looks like a gun trigger, the operation of which controls the throttle.
Trim	A mechanism which adjusts the neutral position of each channel.
VR	Acronym for Variable Resistor. An electrical component which senses the position of the steering, throttle, etc.
Website	Places on the internet on which information is disseminated. They are accessed via PC software called web browsers. Some websites are also known as homepages.
Wheel	A mechanism on a transmitter which is rotated left and right to control steering.
Width	The range within which the ABS or throttle operates.

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, $\cdots)$
- 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



www.kyosho.com

*KYOSHO CORPORATION hereby declare that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The Declaration of Conformity (DoC) can be downloaded at following URL. www.kyosho.com/eng/support/doc/index.html

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FCC CAUTION

Changes or modifications not expressly by the party responsible for compliance void the user's Authority to operate the equipment.

KYOSHO CORPORATION

ADDRESS : 153 Funako Atsugi, Kanagawa Zip code 243-0034 TEL : 046-229-4115 (user consultation room direct dial phone) 13:00~19:00 M-F except national holidays Saturday and Sunday closed 201507-1 PRINTED IN JAPAN