Main menu(2)

It is the menu displayed when "Enter" is pushed from the initial screen.

# Enter Key Solution Enter Key Solution Enter Key E

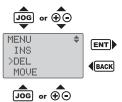
® Back Key

#### MAIN-MENU

#### Menu deletion

Delete the function from the menu list.

CUSTOM1 and CUSTOM2 can be delete.(It is not possible to delete MASTER)





#### Select list name

Select the added list name.

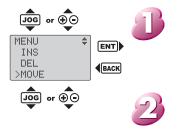
Move the cursor to either of CUSTOM1 or CUSTOM2 with Jogdial or +/- key and push "Enter"



#### Select function name

The cursor moves with Jogdial or the +/- key. Select the function name that needs to be deleted and push "Enter". Even if the deletion ends, it is possible to delete it continuously.

#### MAIN-MENU







⊕⊕ +/- Key ⊕⊙ Reset

MAIN-MENU

MAIN-MENU

MAIN-MENU

## **MAIN MENU (4)**

🖦 Back Key Enter Key **JogDial** •ઉ<u>ં</u>⊙ +/- Key ⊕⊙ Reset

#### It is the menu displayed when "Enter" is pushed from the initial screen.

#### MAIN-MENU OPTION

#### **CONTRAST (LCD Contrast)**

Adjust contrast of LCD display.





Use "Jog dial" key or "+,-" keys. to adjust contrast of LCD display. can adjust contrast at 8 stages.

Adjusting the contrast to a very light setting in a high temperature room may cause characters to become invisible at low temperatures out doors. please be careful.

#### MAIN-MENU OPTION

#### BUZZER Setting about the buzzer sound which a system sounds. Three setting about a buzzer.







Adjust An interval of a buzzer. An interval of normal beep sound changes.



A buzzer sound sounds in various Sheen, but it is setting about that buzzer sound



**CUSTOM TONE** 

Can edit or create the tone.









Jog Dial or +,- keys to adjust the interval of the buzzer.

Push "Enter" key at each item, cursor will change from ( > → \*) **ALARM BUZZER** after change cursor use Jogdial or +,- keys to change the setup.

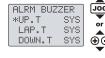






AL











DOWN.T	SYS
ILRM BUZZ	ER
UP.T	SYS
LAP.T	SYS

>DOWN.T	SYS
ALRM BUZZ	ZER
>POWER	SYS
BATTERY	SYS
STARTUP	SYS

ALRM BUZZ	ZER
POWER	SYS
>BATTERY	SYS
STARTUP	SYS

ALRM BUZZ	ZER
POWER	SYS
BATTERY	SYS
>STARTUP	SYS





Power Alarm

**Battery Alarm** 

Startup

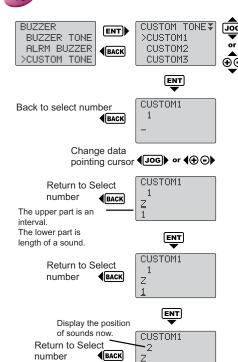
SYS:	System	defau	It tone
CS1:	Custom	Tone	1
CS2:	Custom	Tone	2
CS3:	Custom	Tone	3
CS4:	Custom	Tone	4
		_	_

CS5: Custom Tone 5	CS5: Custom Tone 5	CS6	Custom	Tone	6
CS5: Custom Tone 5	CS5: Custom Tone 5	CS6	Custom	Tone	6

UP.T	UP Timer	
LAP.T	Lap Timer	
DOWN.T	Down Timer	
POWER	Power Alarm	
BATTERY	Battery Alarm	
STARTUP	Startup	

## Custom tone editor





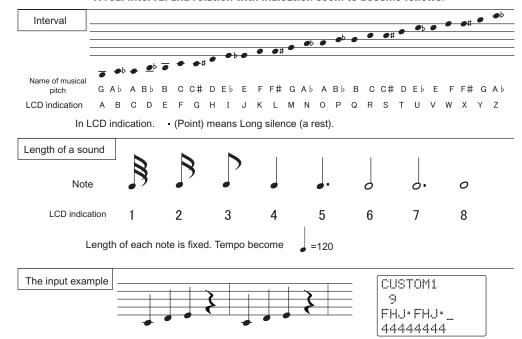
Move the cursor to the custom(1 to 6), using Jog Dial or "+,-" keys.

In this example there is no data yet.

- Use Jog dial or "+,-" keys to choice the sounds. and push Enter key. (A to Z.see down for details)
- Cursor move to the next row to choice the lenght of the sounds. (1 to 8)
- When push Enter key, cursor will move to next line.

\* Push reset key (push + and - keys Together) to clear the data after the cursor.

#### A real interval and relation with indication seem to become follows.





## **MAIN MENU (6)**



This is the menu displayed when "Enter" is pushed from the initial screen.

#### MAIN-MENU OPTION

#### **BACK LIGHT**

Set the lighting method of the backlight. Can choose from "AUTO" and "OFF".

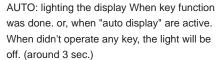








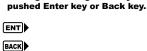




(Factory default is AUTO.)







OFF: Back lights are always off.

Setting of backlight doesn't turn on even "Auto". besides a Function Key, ET lever, BT button.

Setting will change when you

#### **MODEL SELECT**

#### Select model memory

Can save the setting for 9 car



#### [How to open the screen]

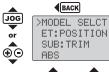


Use Jog dial or "+,-" keys to select MODEL SELECT at function menu. then Push "ENTER" key



In MODEL SELECT Screen. Control Jog dial or +,keys to move the cursor at left side











Push Enter at the MODEL number to select.



Back to function menu with out any changes when push BACK key.

- Can put a name at Model memory (max 10 character)
- \* Memory of unit display at 1 to 9. A to P for Data Pack.
- It is usable to assign each car the each number.
- Even same car, can change the Setting every course.





It is cause of out of control when Changing Model memory while running.

#### Model memory 0(Zero)

Model 0 will display when do this control as follow.



When model memory in data pack was used, and it was switched off, and data pack was pulled, and it was switched on



When remove the DATA PACK while using MODEL MEMORY of DATA PACK Model memory 0 use for avoid Lost the data

#### Model memory 0 use for avoid Lost the data

Do following procedure to back to Ordinarily MODEL MEMORY. don't come back unless this operation is done

- **★**Use Model select function to change to other Model memory (Data in Model memory 0 will lost)
- ★Copy the Setup of MEMORY 0 to other memory by MODEL COPY (page 53)



- Setup at Function menu. that can save at MODEL MEMORY
- ●Can not set per Model memory the setup at main menu (see page 26).

## ET POSITION

#### Confirm Position of ET rever.

Can confirm the function name and value of setup Can not adjust the setup from this function.

#### [How to open the screen]



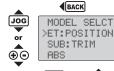
From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.

Select ET POSITION then push ENTER.



At ET POSITION they displaced function name assigned and the value of each setup.







ஹ்ல் Back Key

👜 Enter Key • JogDial

(⊕<u>૦</u>૦) +/- Key

**⊕⊙** Reset

- Push BACK key to return to initial screen.
- When control the ET. The Auto display will activate,

## **AUTO DISPLAY** DIRECT SET

When the lever which a function is assigned to is controlled, contents are displayed automatically.

If a function is assigned to an ET lever, control contents of a controlled lever are displayed automatically.

●Can change the assigned button to other button when use SET UP function (see page 60)

#### [Sample]

AUTO DISPLAY ET1-ST TRIM

ET1: Display Steering Trim.



ET4: Steering Travel.

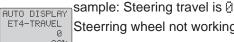
An original screen is returned to in about 3 seconds Push BACK key to returened to original screen.

- ■AUTO DISPLAY didn't function when display the MAIN MENU (see page 26)
- AUTO DISPLAY didn't function when display the SET UP (see page 60)
- ●Can adjust the Steering balance to Push ET that assigned Steering trim then control the steering to right or left. it's call Direct set.

DIRECT SET ST: BALANCE LEFT 70%



When persentage is <sup>0</sup>. the function was not working



Steerring wheel not working In this case.

**Function** 

#### **SUB TRIM**

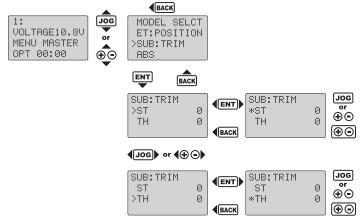
# ● Back Key ● Enter Key ● JogDial ● +/- Key

**⊕⊙** Reset

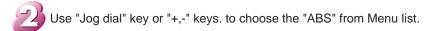
#### Adjust the steering and throttle

can not put to the center point of neutral position of servo, when only using the linkage of car.

#### [How to open the set-up screen.]



From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.

The cursor will change from > to \* . Adjust the value using by Jog dial or +,- keys. \*Push + and - keys together to reset the value to ②.

Push Enter or Back key to done the setup.

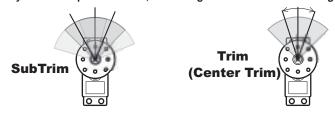
Push Back key to return to Initial screen.

#### What is sub trim

Usually set the neutral of servo when put at car the servo, then adjust linkage. Use Sub trim to fine adjustment

#### Different of trim and sub trim

Sub trim are not only the center point of servo, it is changed also the movement angle.



See page 23 for more details



●When getting bigger the value of sub trim please adjust the linkage and make it smaller the value of sub trim.

## A.B.S (Active Brake controll System) 1

#### Pumping brake will activate, when use brake at throttle.

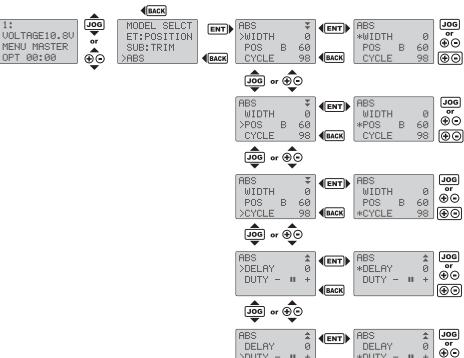
Foil locks it with brakes and is effective when posture of a car collapses. As a result, a corner ring gets possible to be done smoothly.

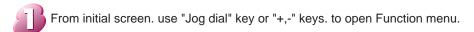
#### (⊕\_o) +/- Key ⊕⊙ Reset

® Back Key

**Enter Key JogDial** 

#### [How to open the set-up screen.]





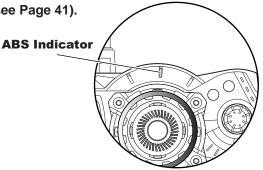
- Use "Jog dial" key or "+,-" keys. to choose the "ABS" from Menu list.
- Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.

>DUTY -

\*DUTY -

BACK

- ABS indicator get blink. when ABS are active.
- Can adjust the 5 parameter in ABS function.
- Full brake are depend on to throttle brake (see Page 41).



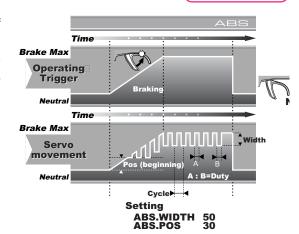
⊕⊕

## A.B.S (Active Brake controll System) 2

# ■ Back Key ■ Enter Key ■ JogDial ■ +/- Key ■ Reset

#### **ABS** width and position

- Set pumping
- ●ABS movement will change at Control volume of throttle trigger and position of width. Base at Position of throttle triger. when width are 100. the servo move back to position to set, The servo didn' move back to point to set when make small the value of width.
- ●The movement of servo getting bigger, when the value at position setup are small.
- BS doesn't function When set 0 to width, and then set position to 100.



#### **ABS Cycle**

Set cycle of pumping action.

When make large the value. the servo move fast and cycle become short.

#### **ABS Delay**

Set delay of ABS Action.

Make strong the brake when put the delay at this function

#### **ABS Duty**

Set ratio of time to brake and time to release the brake with 7 stages.



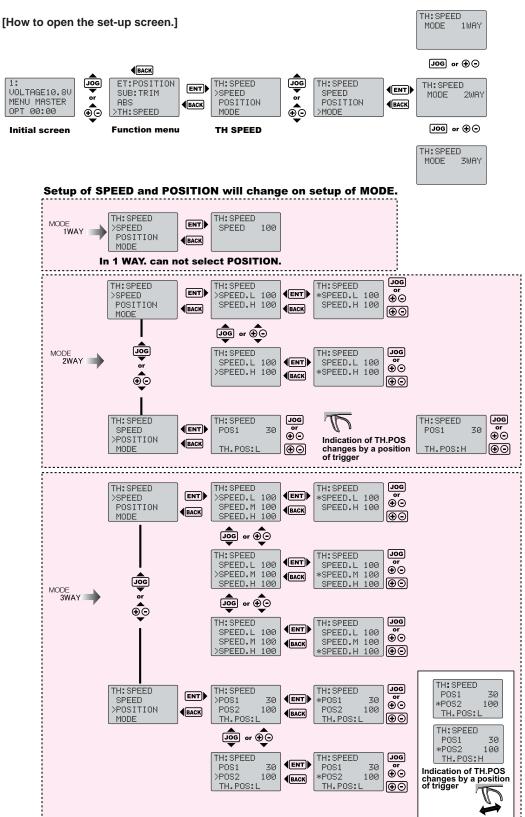
- •It will be easy to understand when servo connected instead of ESC at throttle channel.
- ●ABS function. it is depend at specification of servo.

## TH SPEED (Throttle speed) 1

#### Reaction velocity of a throttle is made late.

It to slow the changes of signal, to make easy to controll the car.





### **TH SPEED (Throttle speed) 2**



#### **Throttle speed**

When control the throttle quickly, the car might be out of control. Use this function to limit the throttle speed.

In this function can set Speed, Position, Mode.

The Speed and Position setup will depend at mode setup.

★This function will effect when pull the trigger. It is not effective for Brake control.

#### **MODE**

Choose from 1 to 3 WAY

1 WAY: Use full area for the throttle trigger control 2 WAY: Divide to 2 areas the throttle trigger control 3 WAY: Divide to 3 areas the throttle trigger control

#### **POSITION**

Set the divition of area

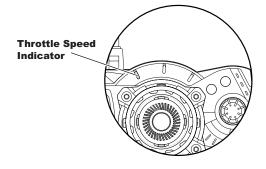
★The value of Position 1 are always same or smaller then position 2.

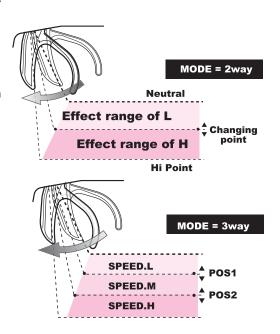
#### SPEED

Set each speed of each area

A setting item changes by setting value

Normally 100 is the Setting value. when make it smaller the value reaction of servo getting smaller too.





- ★ When controll trigger position will appear
- ★ If throttle trigger are active the throttle indicator will blink
- ★ Can set at ET the speed of each aria (see page 60)
- \* The value can set at ET are when set TH:SPEED at 100%
- ★ Can assign ON/OFF function at ET or BT button.
- \* Even the value are not effective the light will be blinking when ON the function.



As same as Engine car, This function are functioning also at The Electric car that using ESC.

## **TH PUNCH (Throttle punch)**

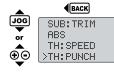
#### To adjust only an initial reaction of throttle.

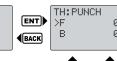
When move the throttle to forward or to brakes. can skip the first field.



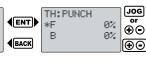
#### [How to open the set-up screen.]







>B



0%

0%

⊕⊕

⊕⊕



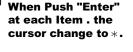
F

\*B

0%

**€**[ENT]

BACK





From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



Use "Jog dial" key or "+,-" keys. to choose the "TH:PUNCH" from Menu list. and then push "Enter" key.

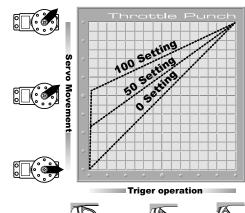


Use Jog Dial or +,- keys to choice F(forward) or B(Brakes). then push "Enter" to cursor change from > to \*. and can adjust the value using Jog dial or +,keys.To reset. When cursor display ¥, push +,- keys toghter.



Push "Enter" key. the cursor return to >. When push Back Key after that the display will return to menu list.

- Setting value of throttle punch is in proportion to initial movement, but when use combination of other setting, the throttle will move like a switches between two points.
- When using combination with ABS function, please check the movement carefully before use.
- ■This function are useful to avoid time-lag of clutch meet at Engine car.
- Can put the initial punch to Forward and backing of ESC, in electric car.



**Full Throttle** 



- ■This function are useful to avoid time-lag of clutch meet at Engine car.
- Can adjust starting point of brakes of engine car.
- Can put the initial punch to Forward and backing of ESC, in electric car.

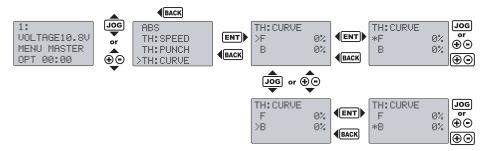
### **TH CURVE (Thorottle curve)**

#### Put the curve on actual servo operation to the trigger operation of the throttle.

In throttle operation, can be made quick or mild by hanging a curve to a signal. Besides, can brakes made quick or mild by hanging a curve.

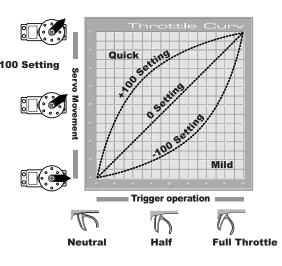


#### [How to open the set-up screen.]



To change the value of each item, push "Enter" at each item to cursor changes to \*.

- From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.
- Use "Jog dial" key or "+,-" keys. to choose the "TH:CURVE" from Menu list. and then push "Enter" key.
- Push Enter key to start setup the Thorottle curve.
  - ●When push Enter key at F(Forward) or B(Brakes), cursor +100 Setting change ⇒ to : then can adjust the value using by Jog dial or +,- keys.



- Setting value : + makes quick makes mild.
- •Quick curve : sensitive at initial response
- •Mild curve : insensitive at initial response



- ●When other functions are used together, please set up while confirming movement.
- Only the curve can adjust at this function. to adjust throttle punch (Page 39) to be make bigger the initial movement.

## TH BRAKE (Throttle Brake)

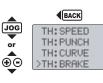
#### Adjust only the brake of throttle.

Adjust only the brake of throttle. maximum brake will change.



[How to open the set-up screen.]









To Adjust the movement of servo, of the time that push the trigger.



From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



Use "Jog dial" key or "+,-" keys. to choose the "TH:BRAKE" from Menu list.



Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys, to adjust the value..

- When make large the value at Engine car, a burden of Servo to increase. please check the movement while adjust the value.
- In Electric car, When set value is too small the amplifier can not show better performance. Please start from 100 (factory setting) the setup.
- ●This function can be assigned and adjusted to ET lever. but It becomes a relative value over the value set up on this screen. (It is assigned to ET-3 at the time of factory shipments.) Keep in mind that a brake does not work even if it enlarges a numerical value, when a setup is 0.
- •When assigning ET lever, the contents of operation are automatically displayed only by operating a lever. (AUTO Display) and Keep in mind that a brake does not work even if it enlarges the numerical value of this function, when a setup with ET lever is 0%.

Minimum value are 0, but doesn't operate to braking.



●Can change the assigned button (ET-3) to other button when use SET UP function (see page 60)

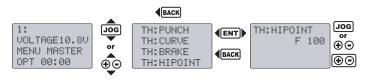
## TH HIPOINT (Throttle high points)

#### Set only the value of forward movement, on the throttle.

Set only the value of forward movement on the throttle. use this function. Electric car use Highest point of ESC. Engine car use "High"



[How to open set-up screen]





To Adjust the movement of servo, of the time that pull the trigger



From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



Use "Jog dial" key or "+,-" keys. to choose the "TH:HIPOINT" from Menu list.



Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.

- •Set only the value of forward movement on the throttle. It is easy to set up especially on Engine car.
- •When make large the value at Engine car, a burden of Servo to increase. please check the movement while adjust the value.
- •In Electric car, When set value is too small the amplifier can not show better performance. Please start from 100 (factory setting) the setup.

Minimum value are 0, but doesn't operate to forward.



●Throttle trim is a center trim. When made small the value of "TH HIPOINT". and then, when set large value to an advance direction of the trim. the amount of operation extremely will be small. (Please see page 23 about Center trim)

### TH PRESET (Throttle Preset)

#### Move the throttle servo to set point, using by ET or BT button.

Use this function to set at ET or BT button.

Can move at point you set when control the button assigned.

#### • JogDial • JogDial • Hey • Reset

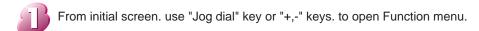
® Back Key

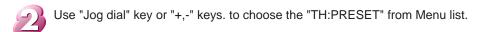
Enter Key

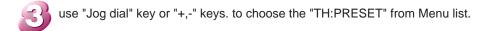
#### [How to open the set-up screen.]



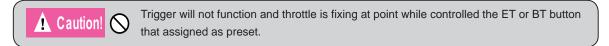








- ●The range can setup 0 to F150 and 0 to B150
- ●Other function for the throttle are not affected by this function. (If set at F100 when control ET or BT button, the throttle will move to the set point, even TH:HIPOINT are 0.)
- ●It is useful for Engine cut, Idling up, Full brake, Move Backward





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## TH ACCEL (Throttle Acceleration) 1

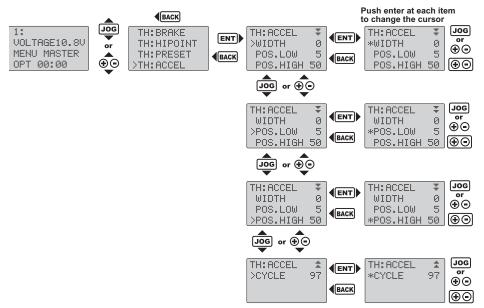
#### Set a awing at forward part of throttle.

The expert driver using Delicate throttle work. In this function do automatically to make faster the cornering of the car

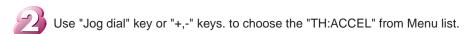
#### 

■ Back Key

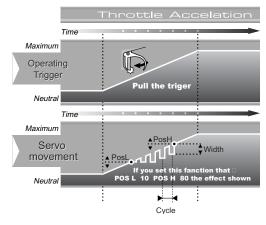
#### [How to open the set-up screen.]



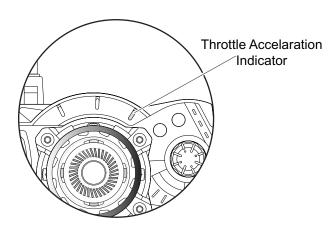




Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.



- Accelaration are off When WIDTH set at 0.
- Accelaration are off when POS.LOW and POS.HIGH are same
- ●Indicator will blinking when on the throttle accelaration.



45

# TH ACCEL (Throttle Acceleration) 2

# Back Key Enter Key JogDial O Reset

#### **Setting Item**

WIDTH(Width)	Set the swing width
POS.LOW(Low Position)	Set the lower part of throttle trigger for swing action
POS.HIGH(High Position)	Set the upper part of throttle trigger for swing action
CYCLE(Cycle)	Set the cycele of swing action

#### Range of setting value

Setting Item	Maximum	Minimum	Initial value	
ACCEL.WIDTH	100	0	0	
ACCEL POS.LOW	100	0	5	(Can not set higher value than POS.HIGH)
ACCEL POS,HIGH	100	0	50	(Can not set lower value than POS.LOW)
ACCEL CYCLE	100	1	97	

- Start swing action, When throttle trigger was position between POS.LOW and POS.HIGH.
- Set the swing width at WIDTH. This function can adjust during running, when assign it to ET (from ET1 to ET5) the "WIDTH" (set the "WIDTH" to 100)
- ●"CYCLE" can adjust during running the cycle of swing action When assign this function to ET (From ET1 to ET5)
- Can assign to the BT1 or BT2, on/off of functions.
- \*When activate on/off at BT button, then even if the setting are not effective (ex. "WIDTH" is 0), The Throttle Acceleration Indicator be flashing.

★An Ideal setup isn't know till actual run. because it will change in various factors (Servo, Car, road surface, etc.)



When set large value at set up, increase Consumption electric currents, it will cause of damage to servo.



To use ET or BT with other function. Modified at "SET UP" function (page 60).

**Function** 

## ST SPEED (Steering speed) 1

#### Make late the Speed of steering Servo.

Limit the Max speed of Steering servo. Can set separately the Turn and Return. Divide between center of neutral and maximum rudder angle. It is possible to set each angle. (2 WAY)

+/- Key ⊕⊙ Reset

● Back Key Enter Kev **JogDial** 

#### [How to open the set-up screen.]

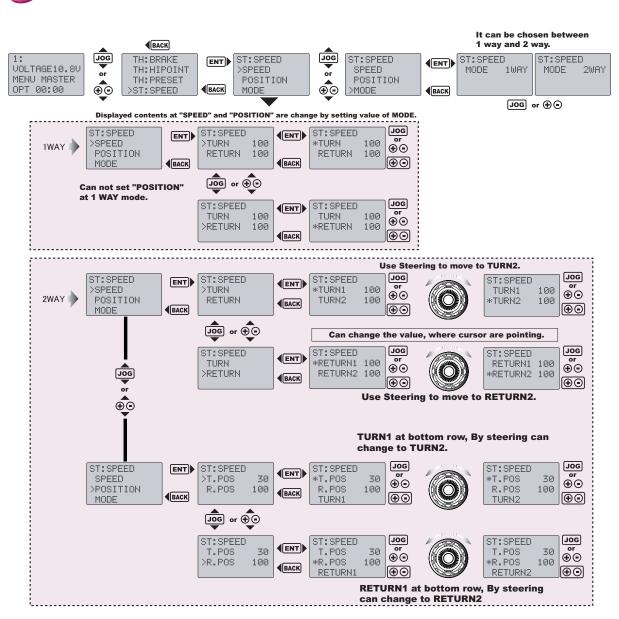


From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



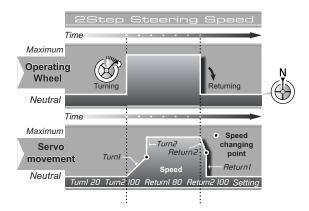
Use "Jog dial" key or "+,-" keys. to choose the "ST:SPEED" from Menu list.

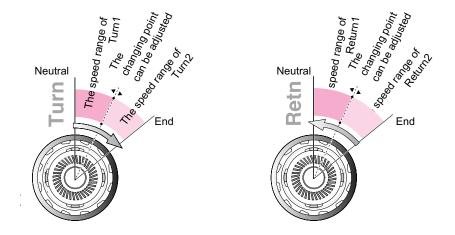
Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.



## ST SPEED (Steering Speed) 2







#### Display contents at "1 way" and "2 way" are different by setting item of MODE.

- ●1WAY 1 WAY: become same speed in whole area. Can set each TURN and RETURN speed. In 1way, displayed POSITION but isn't functioning. (Can't be chosen)
- ●2WAY To set the position can assign by two areas.

★An Ideal setup isn't know till actual run. because it will change in various factors (Servo, Car, road surface, etc.)



It is totally different about result of this function by speed spec of servo.

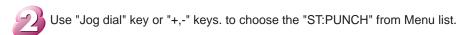
## **ST PUNCH (Steering Punch)**



#### [How to open the set-up screen.]



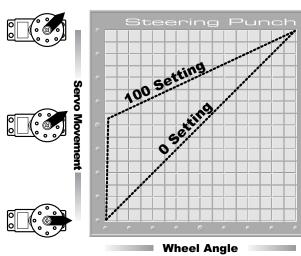
From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value. To reset the value Push together "+,-" keys.



- When large the set value, the moving volume become big.
- Effective at Steering linkage. But Don't improve straightness.











■ When use with other function please check the effect one by one

## ST CURVE (Steering Curve)

#### Adjusting the steering servo turning angle with the wheel operation.

Put a curve in Servo movement against for steering operation. Can set to quick curve or mild. curve.

#### 

🌬 Back Key

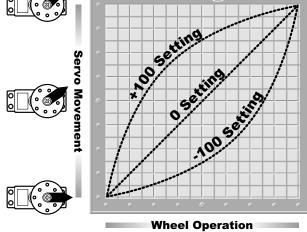
#### [How to open the set-up screen.]





From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.

- 2
- Use "Jog dial" key or "+,-" keys. to choose the "ST:CURVE" from Menu list.
- Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.
- Push Back key or Enter key to return at menu list.
  - Change a movement angle of Servo for an operation angle of wheel like a figure.
  - ◆At + side (+1 to +100), react greatly at the start, and a response becomes loose later.
  - At side (-1 to -100), react loosely at the start, and a response becomes big later.











- •When use with other function please check the effect one by one.
- •Adjust Steering punch (see page 50) to change initial reaction of steering.

## ST BALANCE (Steering Balance)

■ Back Key Enter Key

● JogDial

⊕**ુ**ં≎ +/- Key **⊕⊙** Reset

### Adjusting the steering servo turning angle in the left and right directions independently. (Steering Balance)

Adjust the steering servo turning angle in the left and right directions independently when turning the wheel fully.

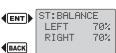
#### [How to open the set-up screen.]











ステアリングを操作することで、カーソルが変化して ジョグダイヤルまたは、+、-キーで設定値が変更できる。









From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



Use "Jog dial" key or "+,-" keys. to choose the "ST:BALANCE" from Menu list.



Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.



A setting value is a reset key (+--simultaneous aggressiveness), and is initialized to 70%.



Press "Back Key", back to function menu list screen.

Steering show up to turn left or right When push Et button that assign steering trim

# advice

When adjust the steering balance



Make 0 the Trim.



Adjust sub trim to run straight at neutral position.



Adjust at steering balance the each turn radius.



Adjust at steering travel the full rudder angle.



Adjust the trim when didn't run straight.

\*See also About Sub trim (page 23 and page 34)

Back Key

(⊕<u>૦</u>૦) +/- Key

**Enter Key JogDial** 

## ST TRAVEL(Steering Travel)

#### Adjust the total movement of steering.

Adjust the movement of steering servo when cut the steering wheel...

#### [How to open the set-up screen.]















From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



Use "Jog dial" key or "+,-" keys. to choose the "ST:TRAVEL" from Menu list.



Push "Enter" key. to enter setup menu. Use "Jog dial" key or "+,-" keys, to adjust the value. Initial value is 100. Maximum value is 150. Minimum value is 0.

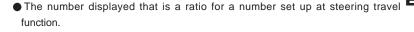


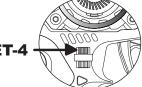
Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.



Press "Enter Key" or "Back Key", back to function menu list screen.

● ET4 assign initialy for steering travel. when control ET4 Indication such as the right appears.





AUTO DISPLAY ET4-TRAVEL 100 100%

Steering will not function, When the value of steering travel are 0.



- Use Steering balance (see page 50) to adjust Right and left individually.
- do not set at excessive angle.
- \* It will cause of damage to the servo