# KOSO® Feel The Speed

INSTRUCTIONS

Thank you for purchasing our product. Before installing/operating the product, read the instructions carefully and retain them for future reference.

⚠ Attention!

- For installation, follow the steps described. Any damage caused by wrong installation shall be imputed to the users.
- To avoid a short circuit from occurring do not pull or modify the wires during installation.
- Do not disassemble or change any parts. Opening and disassembling this unit will void any warranty.
- Maintenance and repairs should be executed by our professionals only.

Flash | Light on

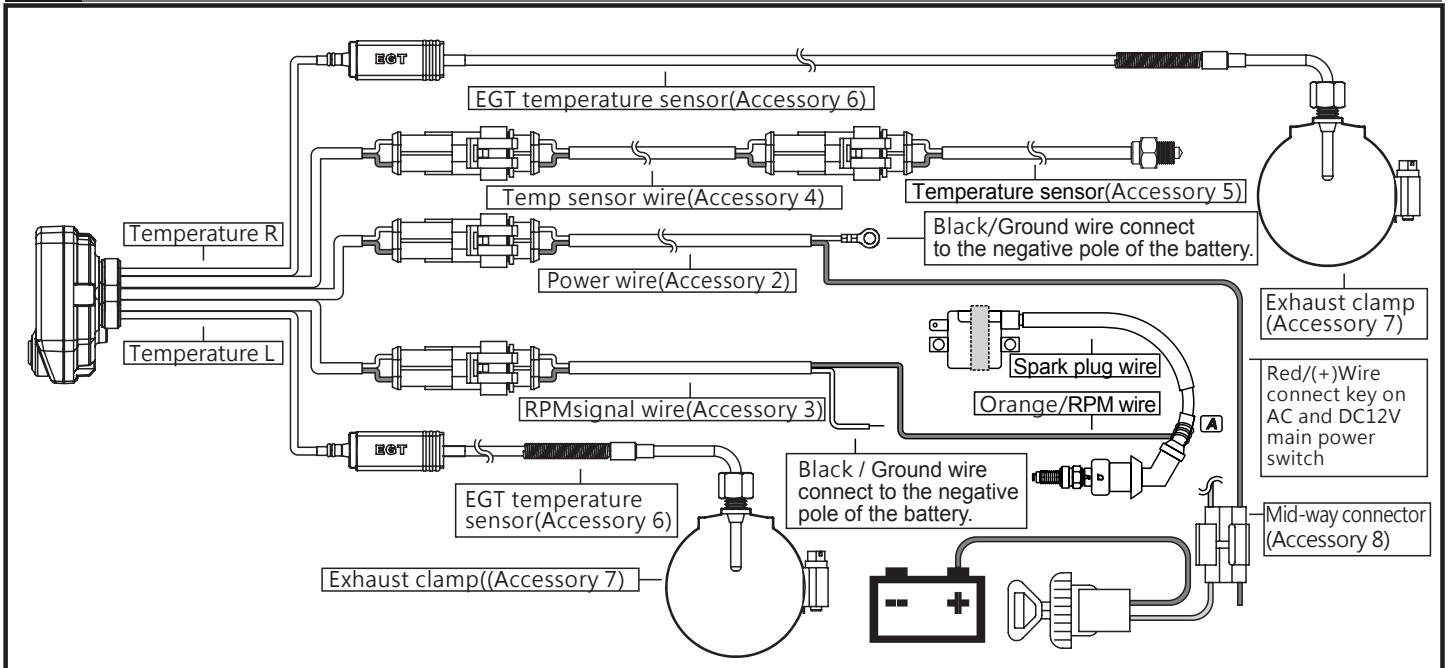Hold the Button 1 second | Hold the Button 3 seconds
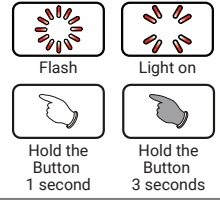
Symbol description:

NOTE

⚠ Some procedures must be followed to avoid damages to the product.

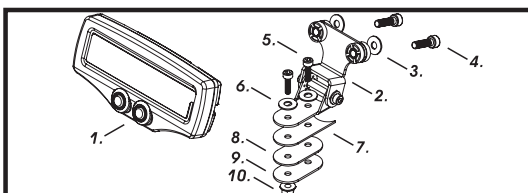⚠WARNING! Certain procedure must be followed to avoid damages to yourself, to the vehicle or to others.

1 Accessories

1 LCD meter X 1	**2** Power wire X 1	**3** RPM signal wire X 1	**4** Temp sensor wire X 1	**5** Water temp sensor X 1
6 EGT temperature sensor	**7** Exhaust clamp X 2	**8** Mid-way connector X 1	**9** Meter bracket X 1	**10** Rubber X 1 (A) Rubber X 1 (B)
11 Steel plate X 1	**12** M4 X 18L screw X 2 M5 X 18L screw X 2	**13** M4 washer X 2(A) M5 washer X 2(B)	**14** M4 X P0.8 nut X 2	**15** M3 allen key X 1 M4 allen key X 1

2-1 Wiring installation instructions

EGT temperature sensor(Accessory 6)

Temp sensor wire(Accessory 4)

Temperature sensor(Accessory 5)

Temperature R

Black/Ground wire connect to the negative pole of the battery.

Power wire(Accessory 2)

Exhaust clamp (Accessory 7)

Spark plug wire

Temperature L

Orange/RPM wire

RPMsignal wire(Accessory 3)

Red/(+)Wire connect key on AC and DC12V main power switch

EGT temperature sensor(Accessory 6)

Black / Ground wire connect to the negative pole of the battery.

Mid-way connector (Accessory 8)

Exhaust clamp((Accessory 7)

2-2 Installation instructions

When installing, follow the steps below

1. LCD meter(Accessory 1)
2. Meter bracket(Accessory 9)
3. M5 gasket x 2(Accessory 13-B)
4. M5 x 18L screw x2(Accessory 12-B)
5. M4 x 18L screw x2(Accessory 12-A)
6. M4 gasket x2(Accessory 13-A)
7. Rubber(Accessory 10-A)
8. Rubber(Accessory 10-B)
9. Steel plate(Accessory 11)
10. M4 x P0.8 nut x 2(Accessory 14)

3-1 Basic function instructions

Record
- Maximum number of recorded runs: 50 runs
- Maximum recording time for a single record run: 95m 34s 00; the recording will stop upon reaching the maximum time.
- Total recording time: Approximately 1.59 hours

Play mode Speed
- ◀ 1x rewind/pause
- ⑩ 1x play/pause
- ⅓ 1/3x play/pause
- ▶▶ 3x play/pause

Backlight brightness
- Setting range : 1-5~5-5
- Setting unit : 1

EGT L/R
- Display Range : 200~1,200℃(250~2100℉)
- Display unit : 1℃(℉)

L 266F   R 266F

Water Temp
- Display Range : 0~250℃(32~482℉)
- Display unit : 1℃(℉)

77F

RPM
- Display Range : 0~15000 RPM

15000 RPM

Voltage
- Display Range : 8.0~18.0V

180 v

Left button

Warning for RPM
- Setting range : 1,000~15,000 RPM
- Setting unit : 100RPM

7500 RPM ▸ 9000

Warning for temp (EGT L/R)
- Setting range : 200~1,000℃(392~1832℉)
- Setting unit : 1℃(℉)

L 1000F ▸ L 1050F

Warning for water temp
- Setting range : 60~250℃(140~482℉)
- Setting unit : 1℃(℉)

140F ▸ R 200F

Right button
- In main screen, **hold the right button for 3 seconds** to switch between ℃ and ℉

L 130C ▸ L 266F

- **Hold the right button for 3 seconds**, to clear the MAX recording screen.

MAX ----C   MAX ----C

Warning for low voltage
- Setting range : 8.0~13.0 V
- Setting unit : 0.1V

11.0

Warning for high voltage
- Setting range : 13.0~16.0 V
- Setting unit : 0.1V

15.0

3-2 Features and settings description

58.5mm
124mm
22mm
37mm

L 266F   R 266F
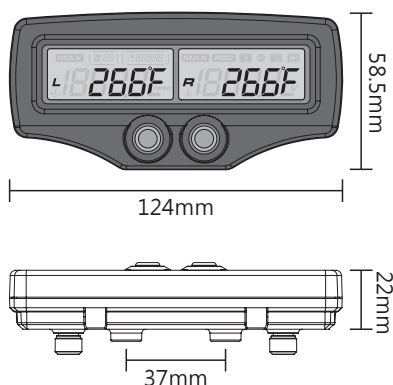
● Temperature	Display unit : ℃ 、℉		
● EGT L/R	Display Range : 100~1,200℃(250~2,100℉)	Display unit : 1℃(℉)	
○ Warning for temp (EGT L/R)	Setting range : 200~1,000℃(392~1,832℉)	Display unit : 1℃(℉)	
● Water temperature	Display Range : 0~250℃(32~482℉)	Display unit : 1℃(℉)	
○ Warning for temp (Water)	Setting range : 60~250℃(140~482℉)	Setting unit : 1℃(℉)	
● Tachometer	Display Range : 0~15,000	Display unit : 10 RPM	
○ Type of RPM signal	Setting range : HiAct 、LoAct		
○ RPM input pulse	Setting range : P-0.5 、P-1 、P-1.5 、P-2 、P-2.5 、P-3~P-24		
○ Warning for RPM	Setting range : 5,000~15,000		
● Max. EGT record	Display Range : 200~1,000℃(392~1,832℉)	Setting unit : 100 RPM	
● Max. Water record	Display Range : 60~250℃(140~482℉)	Display unit : 1℃(℉)	
● Max. RPM record	Display Range : 15,000	Display unit : 1℃(℉)	
● Voltmeter	Display Range : 0.8~18.0 V		
○ Warning for low voltage	Setting range : 8.0 ~ 13.0 V	Setting unit : 0.1 V	
○ Warning for high voltage	Setting range : 13.0 ~ 16.0 V	Setting unit : 0.1 V	
● Auto/Manual Record Stop	Setting range : 0~60 Sec	Setting unit : 1 Sec	
● Backlight brightness	Setting range : 1 - 5 (darkest)~ 5 - 5 (brightest)	Setting unit : 1	
● Operating voltage	DC 12 V		
● Temperature range	-30~+60℃		
● Specifications	JIS D 0203		
● Meter Size	W124 X L58.5 X H22 mm		
● Meter Weight	+/- 170 g		

NOTE Design and specifications may change without further notice.
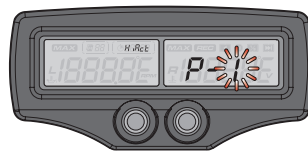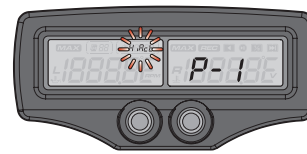
4 The Settings Screen Description

●Main screen
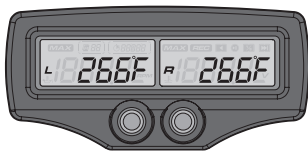
●Settings Screen

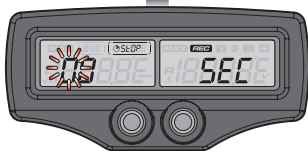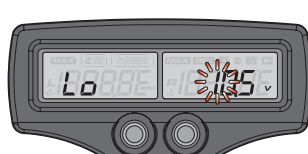●RPM input pulse

●Type of RPM signal

●Backlight brightness

●Auto/Manual Record Stop
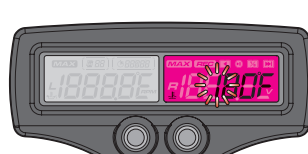
●In the main screen, **hold the right button and the left button for 3 seconds** to enter the setting screen.
●**Press the left button** to choose the setting number.
●**Press the right button** to choose the setting number / switch setting screen.In order; RPM input pulse、Type of RPM signal、Warning for RPM、Warning for temp (EGT L)、Warning for temp (EGT R)、Warning for water temp、Warning for low voltage、Warning for high voltage、Auto/Manual Record Stop、Backlight brightness

NOTE If you enter the settings screen and dont press any buttons for 20 seconds, it will automatically return to the main screen.

●Warning for RPM

●Warning for temp (EGT L)

●Warning for high voltage

●Warning for low voltage
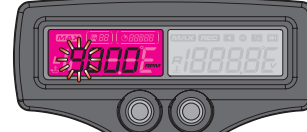
●Warning for water temp

●Warning for temp (EGT R)

4-1 RPM Input Pulse Setting
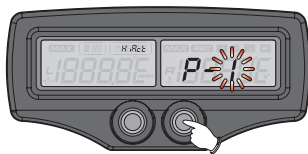
●In the main screen, hold the right button and the left button for 3 seconds to enter the RPM Input Pulse Setting.
●**EX. You want to connect the RPM signal wire to the pick up signal and there are 12 flywheel signals per turn.**
●**Press the right button once to choose the setting number.**

⚠ Now the setting value will blink.

NOTE

Setting range：P-0.5、P-1、P-1.5、
　　　　　　　P-2、P-2.5、P-3 ~ P-24。
Default value：P-1。
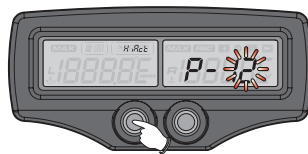
●Example：Set the RPM input pulse value from P-1 to P-12.
●Press the left button once enter the type of rotation speed signal.
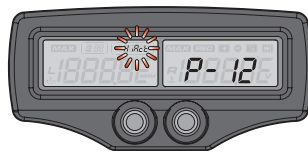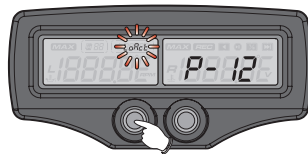
●Type of RPM signal screen.

4-2 Type Of RPM Signal Setting
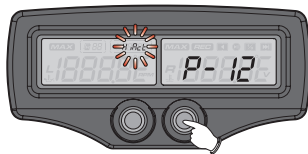
●EX：To set type of RPM signal value to Lo Act.
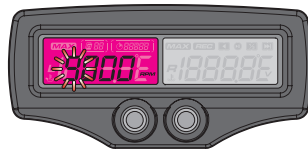●Press the right button once to choose the setting number.

⚠ Now the setting value will blink.

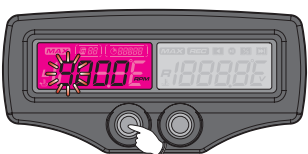**NOTE** Setting range : Hi Act、Lo Act
Default value : Hi Act

●Example：Set the type of RPM signal from Hi Act to Lo Act.
●**Press the left button once** to return to the Warning for RPM screen.

●Warning for RPM screen。

4-3 Over RPM Warning Setting

●**EX：To set the Warning for RPM value to 11,000 RPM**
●**Press the** left button once to choose the setting number.

⚠ Now the setting value will blink.

NOTE

Setting range：5,000 ~ 15,000 RPM。
Setting unit：100 RPM。
Default value：9,000 RPM。

●**Press the right button to** choose the setting number.
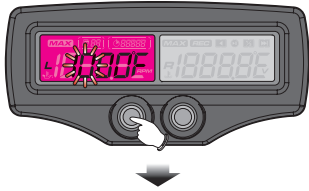
●**Example：Set the Warning for RPM value from 9,000 RPM to 11,000 RPM.**
●**Press the** left button once to enter the warning for temp (EGT L) screen.

●Warning for temp (EGT L) screen.
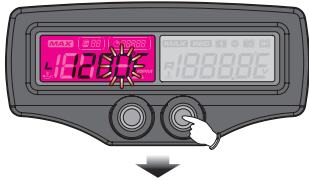
4-4 Over EGT L Warning Setting

- EX : To set the Warning for temp (EGT L) to 1200℉
- Press the left button once to choose the setting number.
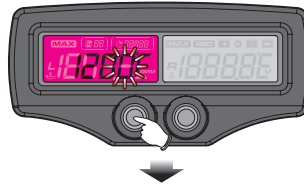- ⚠ Now the setting value will blink.

NOTE

Setting range : 200~1,000℃(392~1832℉)
Setting unit : 1℃(℉)
Default value : 538℃(1,000℉)
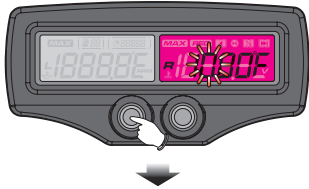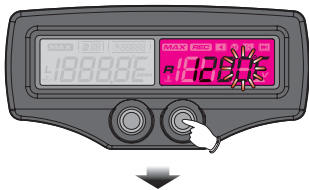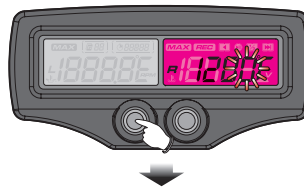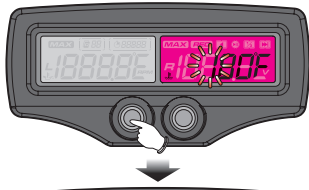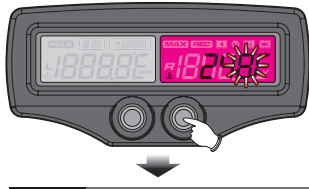
- Press the right button to choose the setting number.

- Example : Set the Warning for temp (EGT L) value from 1000℉ to 1200℉
- Press the left button once to enter the warning for temp (EGT R) screen.
- Warning for temp (EGT R) screen.

4-5 Over EGT R Warning Setting

- EX : To set the Warning for temp (EGT R) to 1200℉
- Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink.

NOTE

Setting range : 200~1,000℃(392~1832℉)
Setting unit : 1℃(℉)
Default value : 538℃(1,000℉)

- Press the right button to choose the setting number.

- Example : Set the Warning for temp (EGT R) value from 1000℉ to 1200℉
- Press the left button once to enter the warning for Water temp screen.
- Water temp screen.

4-6 Water Temp Warning Setting

- EX : To set the warning for water temp to 248℉
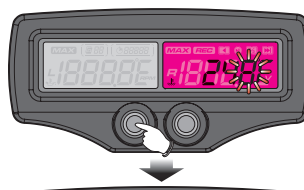- Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink.

NOTE

Setting range : 60~250℃(140~482℉)
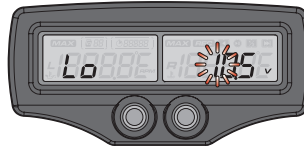Setting unit : 1℃(℉)
Default value : 82℃(180℉)
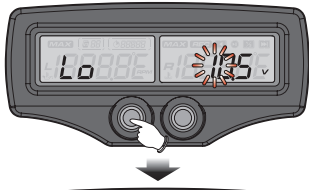
- Press the right button to choose the setting number.

- Example : Set the Warning for water temp from 180℉ to 248℉
- Press the left button once to enter the warning for low voltage.
- Low voltage screen.

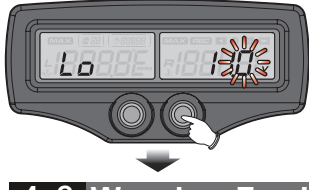## 4-7 Warning For Low Voltage Setting

- EX : To set the warning for low voltage to 11.0V
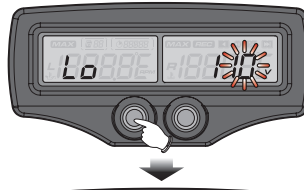- Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink.

NOTE

Setting range : 8.0 ~ 13.0 V
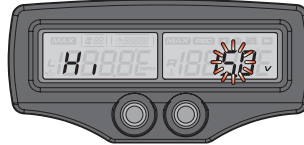Setting unit : 0.1 V
Default value : 10.5 V

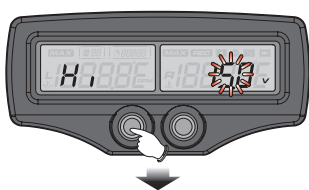- Press the right button to choose the setting number.

- Example : Set the warning for low voltage from 10.5 V to 11.0 V.
- Press the left button once to enter the warning for high voltage.
- High voltage screen.

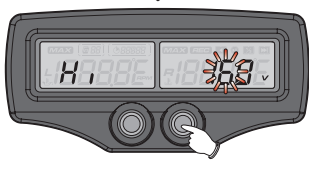## 4-8 Warning For High Voltage Setting

- EX : To set the warning for high voltage to 16V
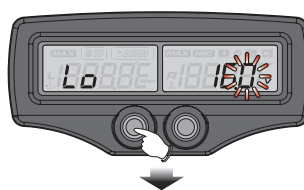- Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink.

NOTE

Setting range : 13.0 ~ 16.0 V
Setting unit : 0.1 V
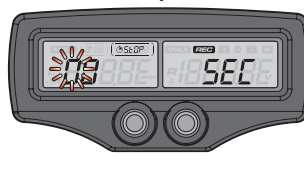Default value : 15.0 V

- Press the right button to choose the setting number.

- Example : Set the warning for high voltage from 15.0 V to 16.0 V
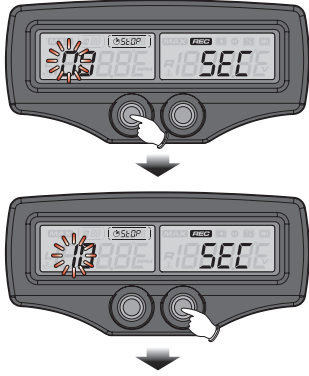- Press the left button once to enter the warning for Auto/Manual Record Stop screen.
- Auto/Manual Record Stop screen.
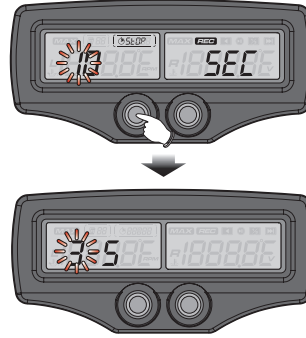
4-9 Auto / Manual Record Stop Setting

- EX : To set the Auto / Manual Record Stop to 10 Sec.
- **Press the left button once** to choose the setting number.
- ⚠ Now the setting value will blink. Auto / Manual Record Stop Function is off when setting is display "0 SEC".

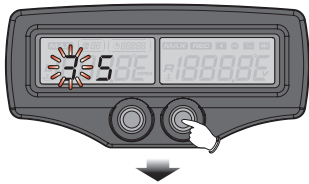- **Press the right button to** choose the setting number.

NOTE
Setting range : 0 ~ 60 Sec
Setting unit : 1 Sec
Default value : 0 Sec

- Example : Set the Auto / Manual Record Stop from 0 Sec to 10 Sec.
- **Press the left button once** to enter the backlight brightness screen.
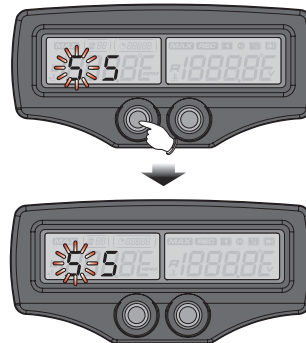
- Backlight brightness screen.

4-10 Backlight Brightness Setting

- EX : To set backlight brightness value to 5/5.
- **Press the right button once** to choose the setting number.

- ⚠ Now the setting value will blink.

NOTE
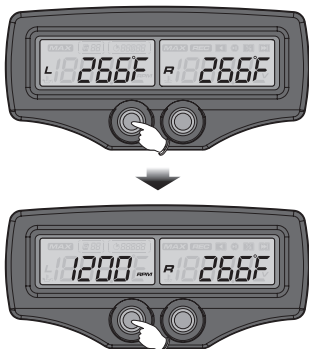Setting range : 1/5 ~ 5/5
Setting unit : 1/5
Default value : 3/5

- Example : Set the backlight brightness value from 3/5 to 5/5.
- **Press the left button once** to enter the main screen.
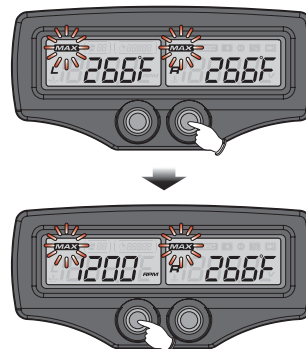
- Main screen

5-1 How to switch functions

- 5-1-1 Left button function instruction (EGT L、RPM、MAX)

- **Press the left button once** to switch from EGT L/R to RPM/EGT R.

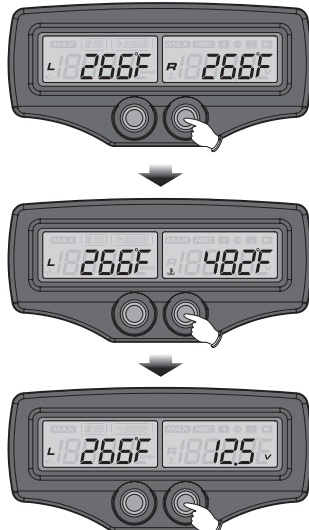- **Press the left button once** to switch from RPM/EGT R to MAX EGT L/R

- **Press the right button once** to switch from highest EGT L/R to MAX RPM/MAX water temp.
- **Hold the right button for 3 seconds,** to clear the MAX recording screen.

- **press the left button once** to return to the main screen.

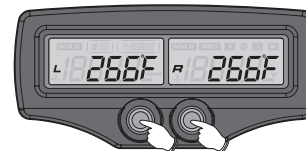- 5-1-2 Right button function instructiom (EGT R、Water temp、Voltage)

- **Press the right button once** to switch from EGT L/R to EGT L/Water temp.

- **Press the right button once** to switch from EGT L/Water temp to EGT L/Voltage.

- **Press the right button once** to switch from EGT L/Voltage to EGT L/R.

- 5-1-3 Recording Screen

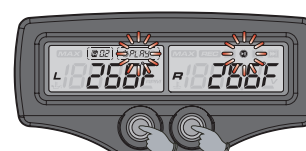- In the main screen, press the right & left buttons to enter the recording screen. (Check section 5-2 for detail)

- 4-1-4 Play Screen

- In the recording screen, press the right & left buttons to enter the playback screen. (Check section 5-3 for detail)
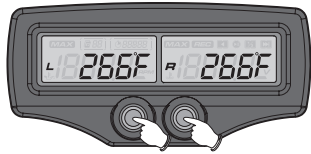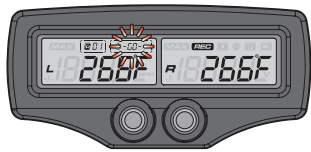
- 4-1-5 Setting Screen.

- In the main screen, hold the right button and the left button for 3 seconds to enter the setting screen. (Check section 4 for details)

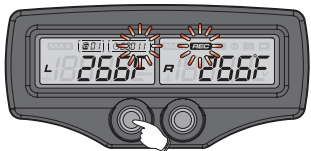## 5-2 Operating Description of the Recording Screen

- **Main screen, press the right & left buttons** to enter the Recording Screen.
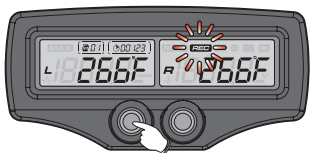
- Recording Screen。
  NOTE
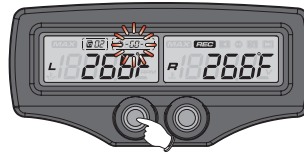 Hold the left button for 3 seconds, to enter the operating screen for clearing records.

- The recording screen, **press the left button once** to start recording.
  ⚠ Now the REC will blink.

- At the screen during recording, **press the left button once** to stop recording.
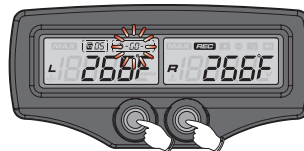- The first run has been recorded.

- To stop the recording screen, **press the left button once** to enter the recording screen for the second entry.

- Currently it is in the recording screen for the second entry.
- Currently it is in the recording screen for the third entry.
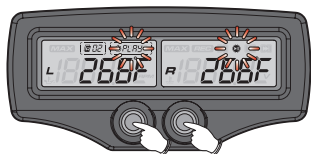- Currently it is in the recording screen for the fourth entry.

- Recording screen, **press the right & left buttons** to enter the Play Screen.
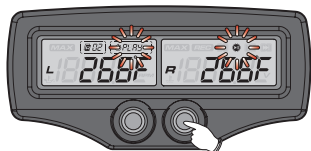
- Playback screen

5-3 Operating Description for the Playback Screen

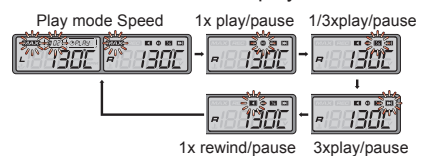- Recording screen, **press the right & left buttons** to enter the Play Screen.

- Previewing, **press the right button** to switch from EGT L/R to RPM/water temp。
- Playing, **press the right & left button** to switch from EGT L/R to RPM/water temp。
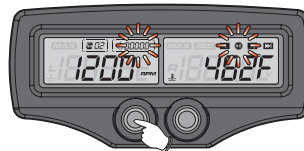
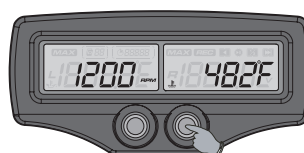- **Press the left button once** to select the run to be played.

- **Press the right button once** to select how the run is played.

  Play mode Speed   1x play/pause   1/3xplay/pause

  1x rewind/pause   3xplay/pause

- **Press the left button once** to enter the play / stop screen.

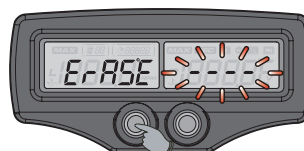- **Hold the right button for 3 seconds**, to enter the Main screen.

5-4 Operating Description for Clearing Records

- At the recording screen, **hold the left button for 3 seconds** to enter the operating screen for clearing records.

- **Hold the left button for 3 seconds,** clearing records.
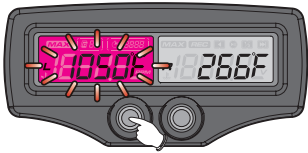- **Press the right or left button,** cancel clearing records.

- Clearing the record; wait for a few seconds to complete clearing.
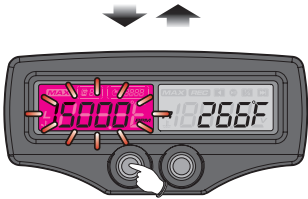
- Done

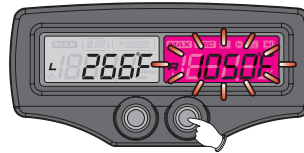## 5-5 Multiple Warning display Operating Description

● Left Screen
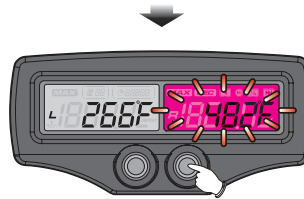

●Press the left button once to switch from EGT L to RPM.

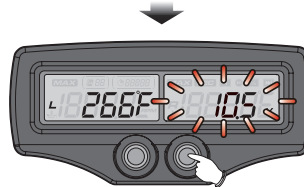

●Press the left button once to switch from RPM to EGT L.

●Right Screen

●Press the right button once to switch from EGT R to water temp.

●Press the right button once to switch from water temp to voltage.

●Press the right button once to switch from voltage to EGT R.

⚠ Now the warning value will blink.

NOTE Return to the first after 10 seconds.

6 Troubleshooting

The following situations do not indicate malfunctions of the product. Check the following before taking it in for repair.

Trouble	Check item	Trouble	Check item
The meter doesn't work when the power is on.	**●The power isn't supplied to the meter.** **→Please make sure the wiring is connected. The wiring and fuse are not broken.** **→The battery is too old to supply the needed power (DC 12 V).**	**Voltage doesn't appear or appears incorrectly.**	**●Wiring for the connector may be poorly installed.** **→Confirm whether the wires for the connector are properly installed.**
The meter shows wrong information. Tachometer doesn't appear or appears incorrectly.	●Check the voltage of your battery, and make sure the voltage is over DC 12 V. ●May be due to poor connection of wires. →Check whether the wiring is disconnected or has fallen off. ●May be due to the failure to change to the type R spark plug. ●May be wrong settings. →Check the settings menu to confirm whether the setting for RPM is correct.	Temp does not appear or appear incorrectly.	●Check the sensor →Check whether the wiring is disconnected or has fallen off.

※ If the problems still cannot be solved, contact our technical department for assistance.