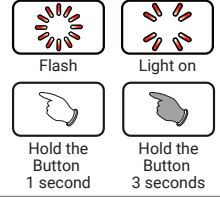




Thank you for purchasing our product. Before installing/operating the product, read the instructions carefully and retain them for future reference.

⚠ 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.



Symbol description:

NOTE

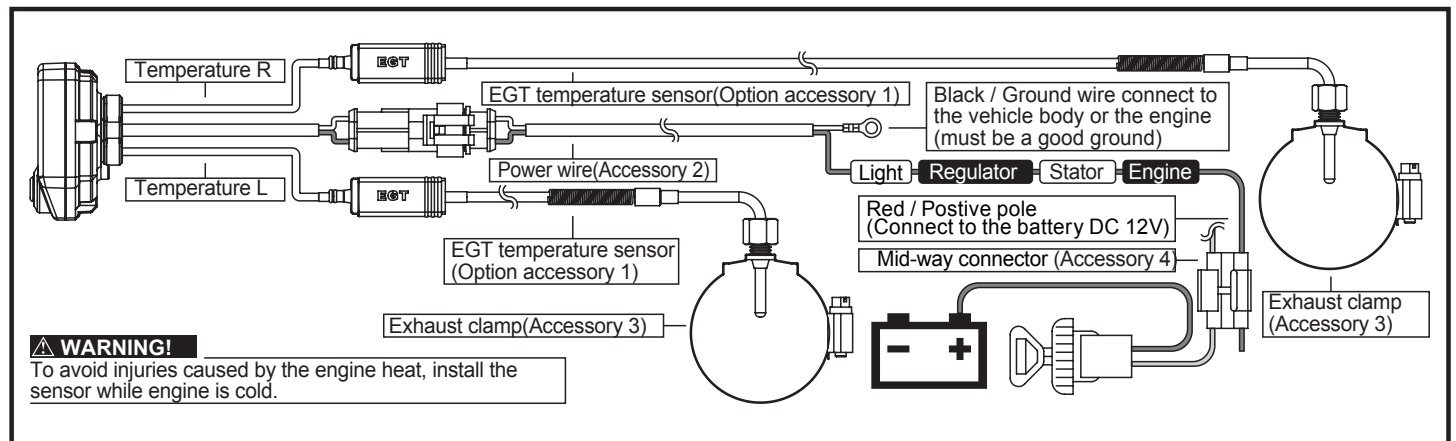
⚠ Some procedures must be followed to avoid damages to the product.

⚠ 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 Exhaust clamp X 2 	4 EGT temperature sensor 	5 Mid-way connector X 1
6 Meter bracket X 1 	7 Rubber X1 (A) 	8 Rubber X 1 (B) 	9 Steel plate X 1 	10 M4 X 14L screw X 2
11 M5 X 18L screw X 2 	12 M4 washer X 2(A) M5 washer X 2(B) 	13 M4 X P0.8 nut X 2 	14 M3 allen key X 1 	15 M4 allen key X 1

2-1 Wiring installation instructions



2-2 Installation instructions

	When installing, follow the steps below
	<ol style="list-style-type: none"> 1.LCD meter(Accessory 1) 2.Meter bracket(Accessory 5) 3.M5 gasket x2(Accessory 11-B) 4.M5 x 18L screw x2(Accessory 10) 5.M4 x 18L screw x2(Accessory 9) 6.M4 gasket x2(Accessory 11-A) 7.Rubber(Accessory 6) 8.Rubber(Accessory 7) 9.Steel plate(Accessory 8) 10.M4 x P0.8 nut x2(Accessory 12)

3-1 Basic function instructions

Record

- Maximum number of recorded runs: 50 runs
- Maximum recording time for a single record run: 99m 59s 9; recording will stop upon reaching the maximum time.
- Total recording time: Approximately 3.18 hours

Play mode Speed


- ◀ 1x rewind/pause
- ▶ 1/3x play/pause
- ▶ 1x play/pause
- ▶▶▶ 3x play/pause

Backlight brightness

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

EGT L/R

- Display Range : 200~1,200°C(250~2100°F)
- Display unit : 1°C(°F)



Warning for low voltage


- Setting range : 8.0~13.0 V
- Setting unit : 0.1V

Warning for high voltage

- Setting range : 13.0~16.0 V
- Setting unit : 0.1V

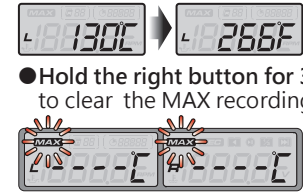
Warning for exh. temp. (EGT L/R)

- Setting range : 200~1,000°C(392~1832°F)
- Setting unit : 1°C(°F)




Right button

- In main screen, hold the right button 3 seconds to switch °C and °F
- Hold the right button for 3 seconds, to clear the MAX recording screen.

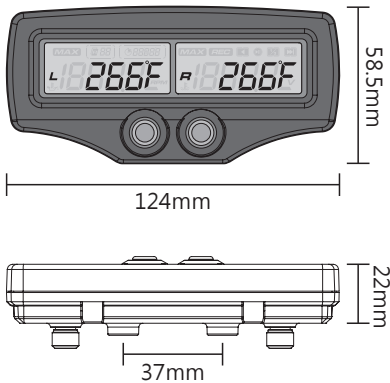


Voltage

- Display Range : 8.0~18.0V



3-2 Features and settings description




● Temperature	Display unit : °C 、 °F for alternative
● EGT L/R	Display Range : 100~1,200°C(250~2,100°F) Display unit : 1°C(°F)
○ Warning for exh. temp. (EGT L/R)	Setting range : 200~1,000°C(392~1,832°F) Display unit : 1°C(°F)
● Max. EGT record	Display Range : 200~1,000°C(392~1,832°F) Display unit : 1°C(°F)
● Voltmeter	Display Range : 0.8~18.0 V Display unit : 10 RPM
○ 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°C
● 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

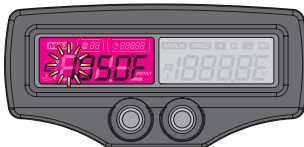
● Main screen



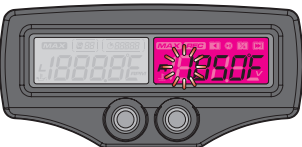
● Settings Screen



● Warning for exh. temp. (EGT L)



● Warning for exh. temp. (EGT R)



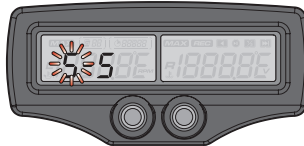
● In the main screen, hold the right button and the left button for 3 seconds to enter the setting screen.

● Press the left button to choose the setting number.

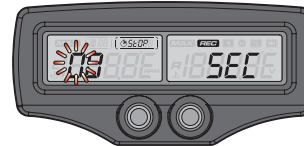
● Press the right button to choose the setting number / switch setting screen. In order; Warning for temp (EGT L) · Warning for temp (EGT R) · Warning for low voltage · Warning for high voltage · Auto/Manual Record Stop · Backlight brightness.

NOTE If you enter the settings screen and don't press any buttons for 20 seconds, it will automatically return to the main screen.

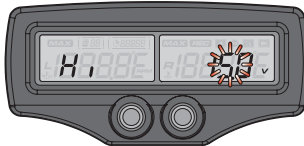
● Backlight brightness



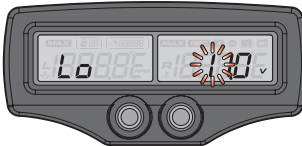
● Auto/Manual Record Stop



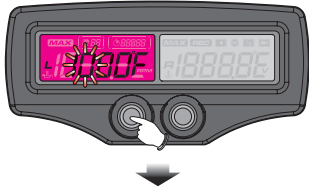
● Warning for high voltage



● Warning for low voltage



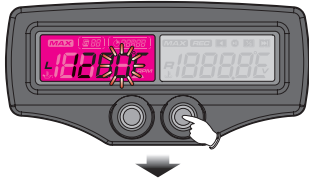
4-1 Over EGT L Warning Setting



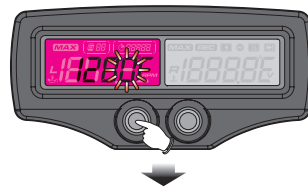
- EX : To set the Warning for temp (EGT L) to 1200°F value to 11,000 RPM
 - Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink.

NOTE

Setting range : 200~1,000°C(392~1832°F)
Setting unit : 1°C(°F)
Default value : 538°C(1,000°F)



- Press the right button to choose the setting number.

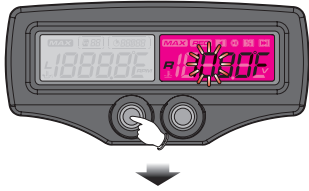


- Example : Set the Warning for temp (EGT L) from 1000°F to 1200°F
- Press the left button once to enter the warning for temp (EGT R) screen.



- Warning for temperature (EGT R) screen.

4-2 Over EGT R Warning Setting



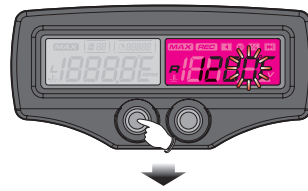
- EX : To set the Warning for temp (EGT R) to 1200°F
 - Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink.

NOTE

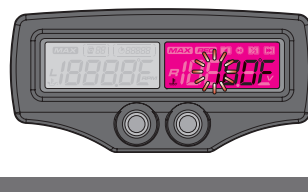
Setting range : 200~1,000°C(392~1832°F)
Setting unit : 1°C(°F)
Default value : 538°C(1,000°F)



- Press the right button to choose the setting number.

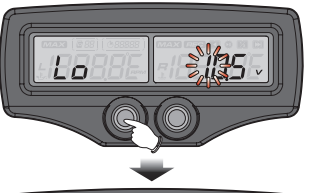


- Example : Set the Warning for temp (EGT R) from 1000°F to 1200°F
- Press the left button once to enter the warning for Water temp screen.



- Water temp screen.

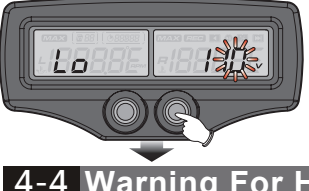
4-3 Warning For Low Voltage Setting



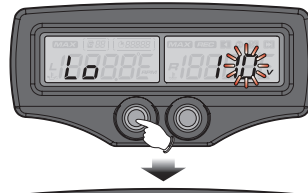
- EX : To set the warning for low voltage value to 11.0V
 - Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink.

NOTE

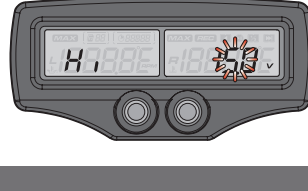
Setting range : 8.0 ~ 13.0 V
Setting unit : 0.1 V
Default value : 10.5 V



- Press the right button to choose the setting number.

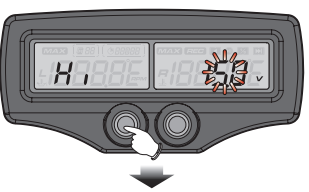


- Example : Set the warning for low voltage value from 10.5 V to 11.0 V.
- Press the left button once to enter the warning for high voltage screen.



- High voltage screen.

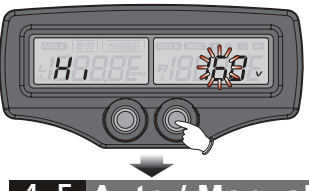
4-4 Warning For High Voltage Setting



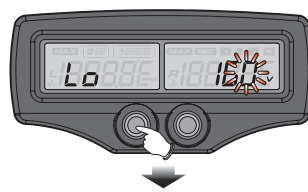
- EX : To set the warning for high voltage value to 16V
 - Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink.

NOTE

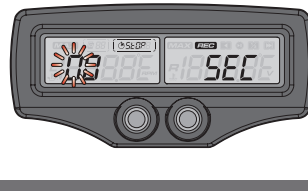
Setting range : 13.0 ~ 16.0 V
Setting unit : 0.1 V
Default value : 15.0 V



- Press the right button to choose the setting number.

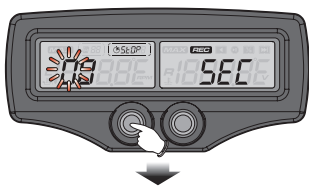


- Example : Set the warning for high voltage value from 15.0 V to 16.0 V
- Press the left button once to enter the warning for Auto/Manual Record Stop screen.



- Auto/Manual Record Stop screen.

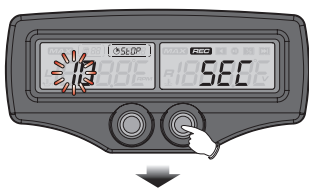
4-5 Auto / Manual Record Stop Setting



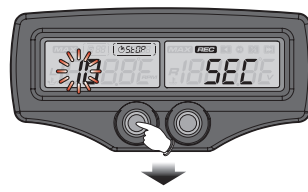
- EX : To set the Auto / Manual Record Stop to 10 Sec.
 - Press the left button once to choose the setting number.
- ⚠ Now the setting value will blink. Auto / Manual Record Stop Function is off when setting is display "0 SEC".

NOTE

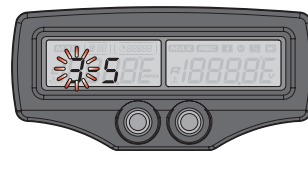
Setting range : 0 ~ 60 Sec
Setting unit : 1 Sec
Default value : 0 Sec



- Press the right button to choose the setting number.

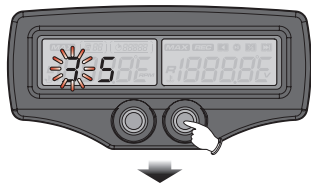


- Example : Set the Auto / Manual Record Stop from 0 Sec to 10 Sec.
- Press the left button once to enter the backlight brightness screen.



- Backlight brightness screen.

4-6 Backlight Brightness Setting

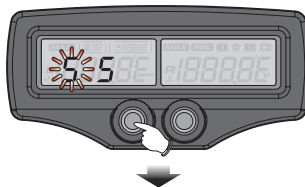


- EX : To set backlight brightness value to 5/5.
- Press the right button once to choose the setting number.

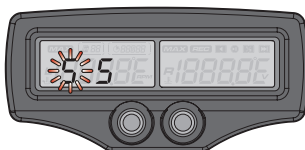
⚠ Now the setting value will blink.

NOTE

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



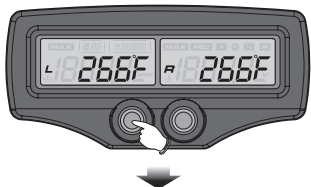
- Example : Set the backlight brightness value from 3/5 to 5/5.
- Press the left button once to enter the main screen.



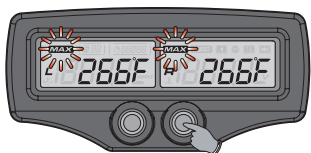
- Main screen

5-1 How to switch functions

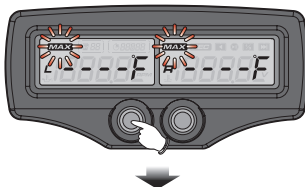
5-1-1 Left button function instruction(EGT L · MAX)



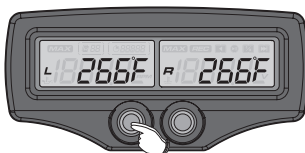
- Press the left button once to switch from EGT L/R to MAX EGT L/R.



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

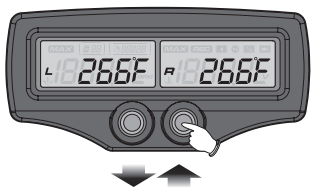


- press the left button once to return to Main screen.

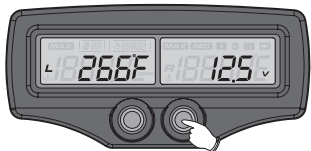


- Main screen

5-1-2 Right button function instruction(EGT R · Voltage)



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



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

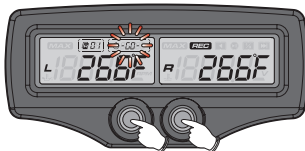
5-1-3 Recording Screen



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



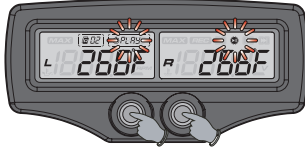
5-1-4 Play Screen



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



5-1-5 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 detail)



5-2 Operating instruction of the recording screen



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



- Recording Screen · Hold the left button for 3 seconds, to enter the operating screen for clearing records.



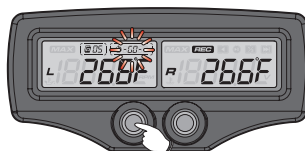
- The recording screen, press the left button once to start recording.
- ⚠ Now the REC will blink.



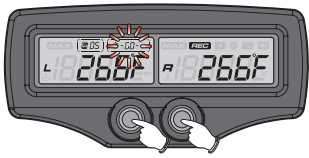
- At the screen during recording, press the left button once to stop recording.
- The first run has been recorded.



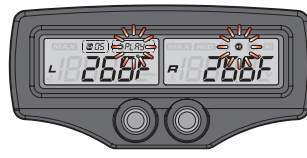
- To stop the recording screen, press the left button once to enter the recording screen for the second entry.



- 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.

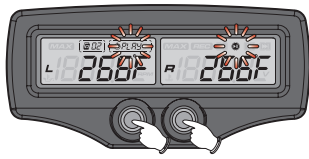


- Recording screen, Press the right & left buttons to enter the playback Screen.

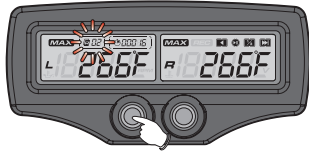


- playback Screen

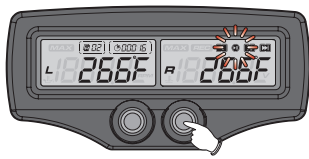
5-3 Operating instruction of the playback screen



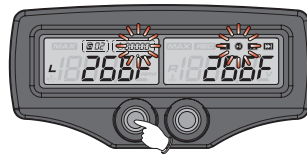
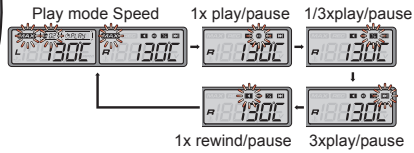
- Recording screen, Press the right & left buttons to enter the playback screen.



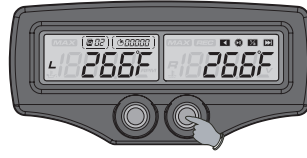
- Press the left button once to choose the run to be played.



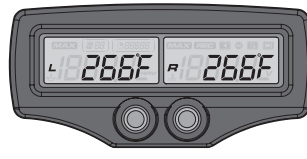
- Press the right button to choose how the run is played.



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



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

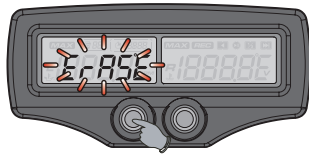


- Main screen

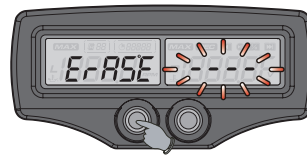
5-4 Operating instruction for clearing the recorded data



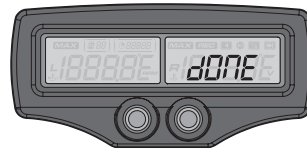
- In the recording screen, hold the left button for three seconds to enter the operating screen for clearing data.



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



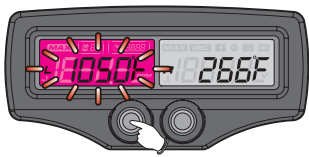
- Clearing the data; wait for a few seconds to complete clearing.



- Done

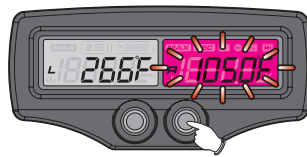
5-5 Multiple Warning display Operating Description

● Left Screen



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

● Right Screen



- Press the right button once to switch from EGT R 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.	<ul style="list-style-type: none">●The power isn't supplied to the gauge. →Make sure the wiring is connected. The wiring and fuse are not broken.→The battery is too old to supply needed power (DC 12 V).	Voltage doesn't appear or appears incorrectly.	<ul style="list-style-type: none">●Wiring might be poorly installed →Confirm whether the wirings for the connector are properly installed and whether the wirings are connected.
The meter shows wrong information.	<ul style="list-style-type: none">●Check the voltage of your battery, and make sure the voltage is over DC 12 V.	Temp does not appear or appear incorrectly.	<ul style="list-style-type: none">●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.