

USER'S MANUAL (Product Number: OBM)

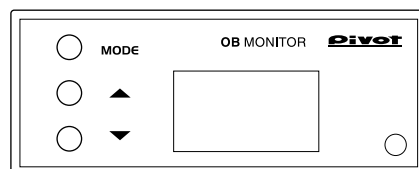
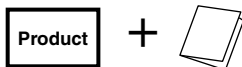
OB MONITOR

OBD MULTI MONITOR with OLED DISPLAY

Thank you for purchasing PIVOT product.

Please read this manual carefully and keep it for future reference.

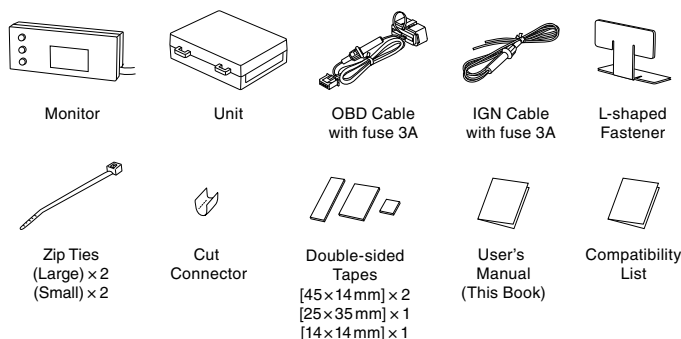
- If this product is given to another user, make sure to include this User's Manual.



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Please check the contents of the package



! WARNING

Improper use or disregard of these warnings may result in the injury or death of people.

- This product cannot be installed in non-compatible car models.
- Make sure to keep car stopped while working and be aware of the ventilation, such as exhaust emission.
- Do not operate while driving to prevent an accident.
- Do not crush the cable, nor nipped by metals or something.
- Please securely fasten the product not to fall the product while driving.

! CAUTION

Improper use or disregard of these warnings may cause injury to persons, damage the product and other things.

- The display will not be proper if the ECU being used is not the standard one or if a sub-computer is being used, even in compatible car models.
- Cannot be used in combination with other company's products that use Diagnostic Monitoring Connectors.
- For details about using in combination with other PIVOT products that use Diagnostic Monitoring Connectors please see our Web Site at <https://pivotjp.com/obd-e/>

Features

Compact Easy-to-read Next-generation OBD Multi-Monitor

■ Compact and Easy-to-read

Our special scale design coupled with the high contrast and wider field of view offered by organic EL brings you an easy-to-read compact multi monitor that won't interfere with the standard built-in meters or look like it was just added onto the dashboard.

■ Single-display and Multi-display

The display can be easily switched between our specially designed analog/digital single display type and a digital triple display type to meet your needs.

■ Easy installation

Simply connect to the diagnostic monitoring connector.

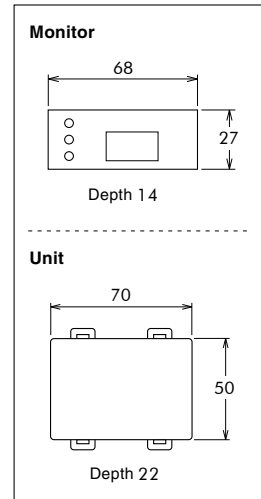
■ Switch Display Areas

The single display can be also be easily switched to show an analog display of boost or vacuum and the easy-to-read numerical area can be changed to view such values as motor and engine rpm for hybrid cars.

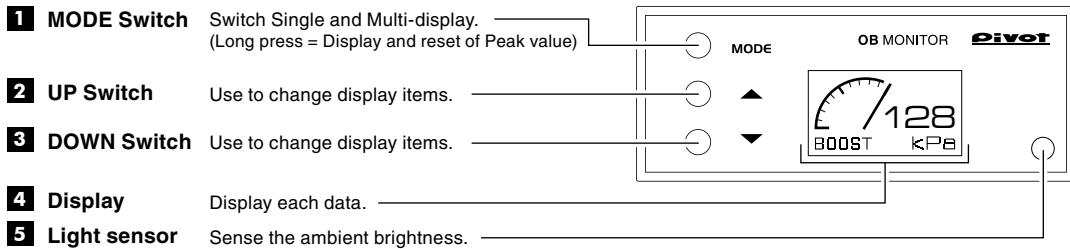
■ Self-Adjusting Brightness

The display will automatically adjust brightness to fit the ambient light conditions; making sure it is not blinding at night. Also, if the car interior becomes overheated, the display brightness will self adjust to lessen a decrease in performance.

Size [Unit : mm]



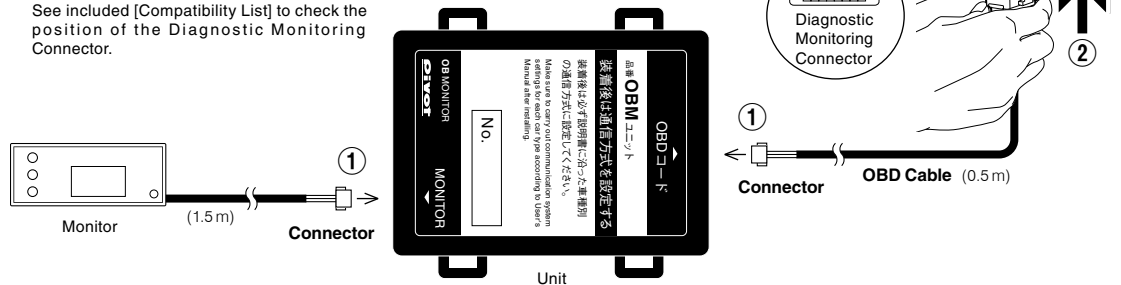
Part Names of Monitor



Connecting The Connectors

- ① Insert Connectors of the Monitor and the OBD Cable to the Unit.
- ② Insert the OBD Connector to the Diagnostic Monitoring Connector.

See included [Compatibility List] to check the position of the Diagnostic Monitoring Connector.



[Reference] Notes about using the OBD Connector

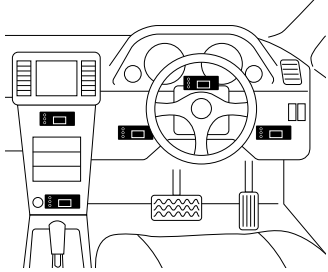
<p>Make sure to grip the distended portions when pulling it out or inserting it.</p>	<p>CAUTION</p> <p>Do not pull on the wires when trying to remove the connector; the wires may become disconnected.</p>	<p>If you unable to get a grip on the distended portions.</p> <p>If you unable to get a grip on the distended portions.</p>	<p>In such case, pull out the connector by pulling on the end of the zip tie.</p>
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Installing the Product

Installing the Monitor

Install to a position which is easy to see and which allows for easy operation.

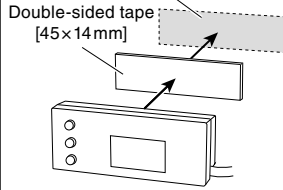
(Example of Installation)



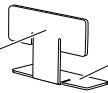
● Directly mounting

Affix with double-sided tape to the mounting side of the monitor.

Clean to remove oil and dust.



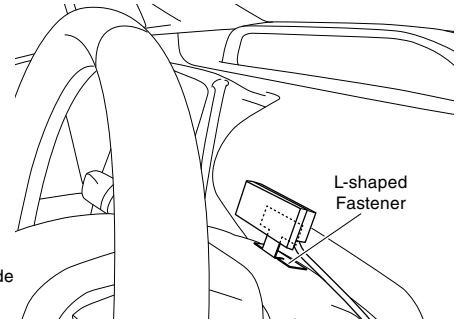
L-shaped Fastener
Long side



Short side

● Using L-shaped Fastener

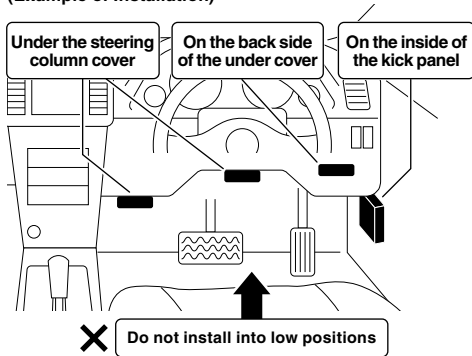
Affix the monitor to long side with double-sided tape when mounting on higher position, or use short side when mounting on lower position.



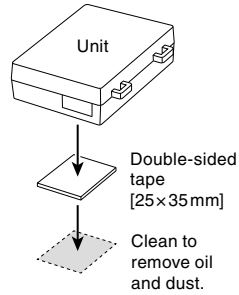
Installing the Unit

As shown in the diagram below, fasten the unit into positions not usually affected by water.

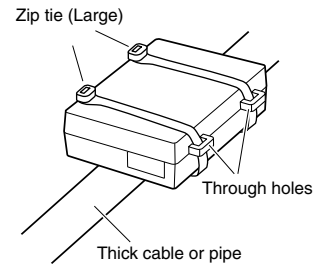
(Example of Installation)



● Fastening to a Flat Place



● When Fastening to a Cable or Pipe



Bundle away all wires


While in use if wires become free they may interfere with driving and cause accidents. Also, wires which are smashed or crushed may result in a short out and can be extremely dangerous.

Setting Communication System

 Must be set after mounting product

[Before setting]

Find proper setting on Compatibility List


 Check the Communication-system of installing car on included Compatibility list. ("通信方式" means Communication-system on the chart.)
e.g.) TOYOTA Isis (from Oct. 2009)


Check this column

車名	年式	エンジン型式	通信方式	回転	水温
アイリス	H21.9~	3ZR-FAE	A	○	○
		2ZR-FAE			

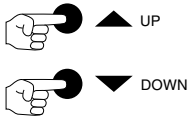
[Set]

- 1 Engine Start**
(READY mode in Hybrid cars)

 **START**
- 2 Press the UP switch for 5 seconds**


 **UP**
Press for 5 seconds

Note: You can move to setting even if the monitor is during display or off at this time.
- 3 The setting items will change with each pressing UP / DOWN switch. Select proper Communication-system.**



A ↔ B ↔ C ↔ M ↔ H

Please make sure to set proper setting. If the car which needs to be set Communication-system C set to others, it will cause the battery goes flat.
- 4 Confirm the setting item.**
(Press the MODE switch, or automatically fixed after 5 seconds.)

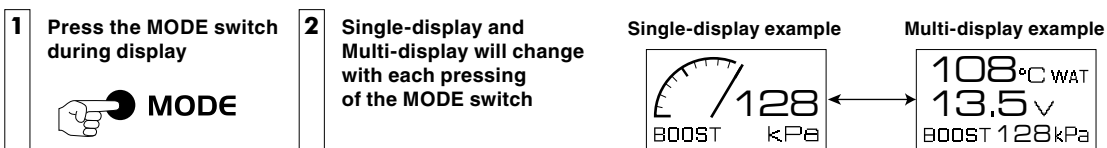
 **MODE**
- 5 Setting completed**

Real-time display

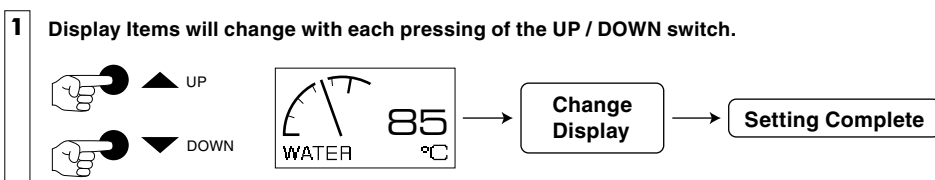
Note that the setting of Communication-system is stored. No need re-setting when you unplug the OBD connector or replace the battery.

Operation

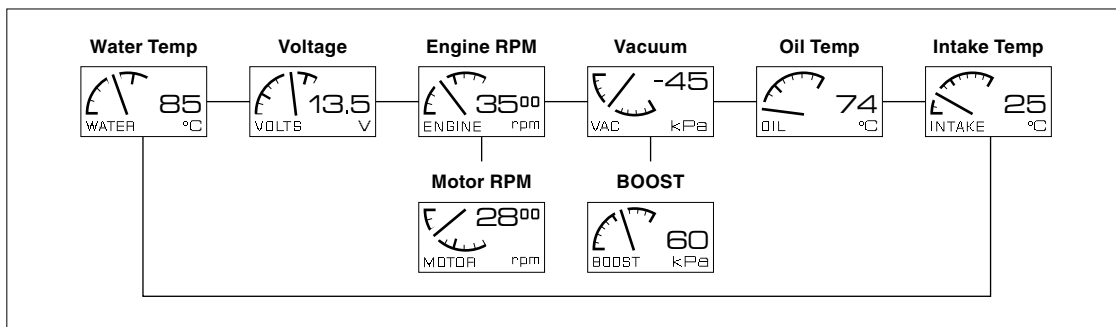
Switch the Display mode Switch between Single-display and Multi-display



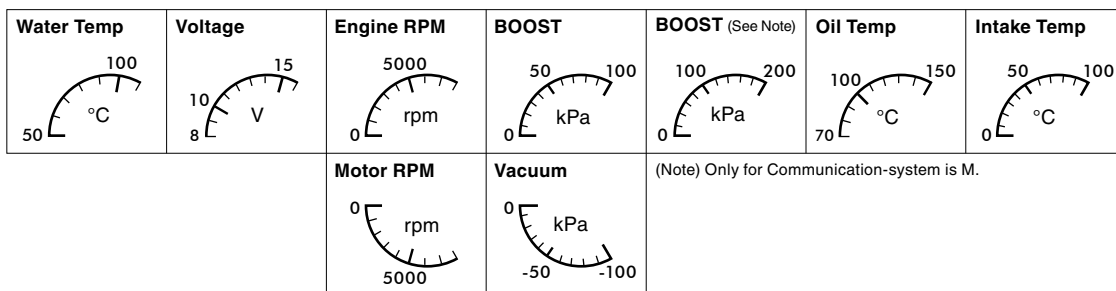
Switch Display Items on the Single-display



[Each Display Item] Note that display item is different by Communication-system (See page 7 of this manual).

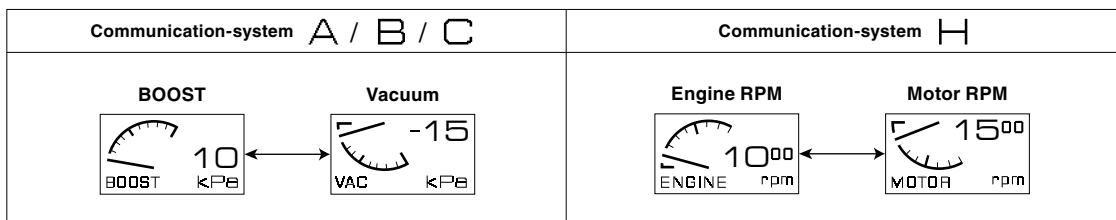


[Each Analog Display Dial] Note that it's not display each value.



[Switch Display Areas]

In the following Communication-system, automatically switch display areas in accordance with the reading value of analog display.

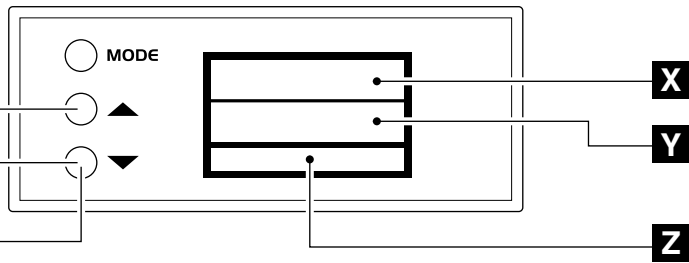


Switch Display Items on the Multi-display

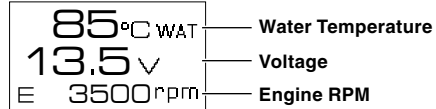
1 Each display will change with following operation during Multi-display

- Change display item of **X** by each pressing
- Change display item of **Y** by each pressing
- Change display item of **Z** by pressing for 3 seconds

After pressing for 3 seconds, change display item by each pressing of the UP / DOWN switch during display blinking.

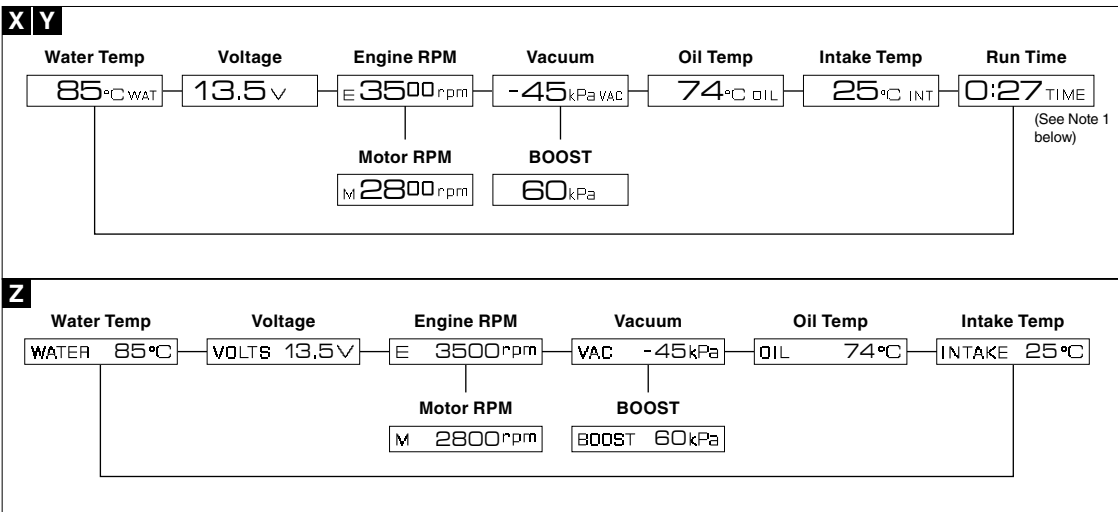


Display example



2 **Setting Complete**

[Each Display Item] Note that display item is different from Communication-system (see page 7 of this manual).



Note 1: Run Time (time elapsed from start of engine) can only be shown in **X** and **Y**, not in **Z**.

Display the Peak value

1 Press the MODE switch for 3 seconds during Real-time display

MODE
Pressing for 3 seconds

2 **Display the Peak value**

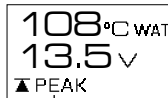
(Note)

- For Voltage the lowest, and the others the highest value will be displayed.
- The Peak value of motor RPM is not displayed.

Example of Single-display



Example of Multi-display



3 Release the switch and no operation for 5 seconds

Real-time display

[Reset the Peak value]

1 Press the MODE switch for 3 seconds during display the Peak value

MODE
Pressing for 3 seconds

Reset the Peak value

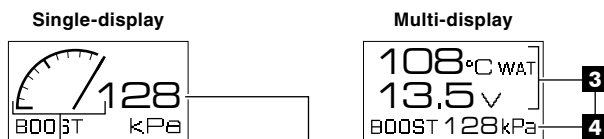
2 **Back to Real-time display**

Real-time display

(Note)

- Reset peak values of all display items.
- Peak readings are reset when the key is turned OFF.

Display Item and Range



Communication system	Display Item	Display Range		
		1 Analog	2 Digital	3 4
A B C	Water Temperature	50 to 110 °C	-35 to 150 °C	-35 to 150 °C
	Voltage	8.0 to 16.0 V	8.0 to 18.0 V	8.0 to 18.0 V
	Engine RPM	0 to 8000 rpm	0 to 9900 rpm (See Note 2)	0 to 9900 rpm (See Note 2)
	BOOST (Vacuum)	-101 to 100 kPa	-101 to 154 kPa	-101 to 154 kPa
	Intake Temperature	0 to 100 °C	-35 to 150 °C	-35 to 150 °C
	Run Time (See Note 1)	---	---	0:00 to 9:59 min.
M	Water Temperature	50 to 110 °C	-35 to 150 °C	-35 to 150 °C
	Voltage	8.0 to 16.0 V	8.0 to 18.0 V	8.0 to 18.0 V
	BOOST	0 to 200 kPa	0 to 249 kPa	0 to 249 kPa
	Oil Temperature	70 to 150 °C	-35 to 150 °C	-35 to 150 °C
	Intake Temperature	0 to 100 °C	-35 to 150 °C	-35 to 150 °C
	Run Time (See Note 1)	---	---	0:00 to 9:59 min.
H	Water Temperature	50 to 110 °C	-35 to 150 °C	-35 to 150 °C
	Voltage	8.0 to 16.0 V	8.0 to 18.0 V	8.0 to 18.0 V
	Engine RPM	0 to 8000 rpm	0 to 9900 rpm (See Note 2)	0 to 9900 rpm (See Note 2)
	Motor RPM	0 to 8000 rpm	0 to 9900 rpm (See Note 2)	0 to 15000 rpm (See Note 2)
	Run Time (See Note 1)	---	---	0:00 to 9:59 min.

Note 1: Run Time (time elapsed from start of engine) can only be shown in Multi-display **3** and minimum display unit is 1 min.

Note 2: Minimum display unit is 100 rpm.

Explanation of each Display Item

Display Item	Explanation
Water Temperature	Temperature of the cooling water
Voltage	Voltage of the battery
Engine RPM	Engine Rotation
Motor RPM	Motor Rotation of Hybrid car
Vacuum	Negative pressure to the engine
BOOST	Positive pressure of turbo engine

Display Item	Explanation
Oil Temperature	Temperature of the engine oil
Intake Temperature	Temperature of Intake air to the engine
Run Time	Elapsed Time from start of engine (Grasp of the driving time, etc.)

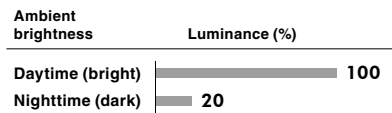
Troubleshooting

Trouble	Possible Causes	Possible Solutions
Does not display with Engine start.	Poor connection of each Cable or Connector.	Reconfirm whether wiring and connections are correct or not.
	The unit has been installed into an incompatible car model.	Check the "Compatibility List".
	Wrong Communication-system has set.	Check the "Setting Communication system".(See page 4 of this manual)
The battery goes flat on the car which needs to be set communication-system C. (Prius ZVW50, etc.)	The communication-system has set something other than C.	Set communication-system to C.
The display is dark when the temperature in-car is high on start-up.	The brightness has automatically adjusted by safety function of the product.	It will return to the normal brightness in a few minutes when the temperature in-car dropped.
The engine has been turned OFF but the display remain on.	This product is interlocked with the ECU (engine computer) power. Depending on the model of car, the display may remain on for up to 3 minutes even after the engine has been turned off; this is normal.	

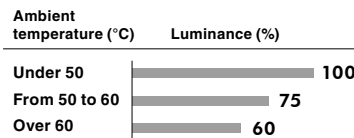
Self-Adjusting Brightness

Brightness of the display is automatically adjusted under the following conditions.

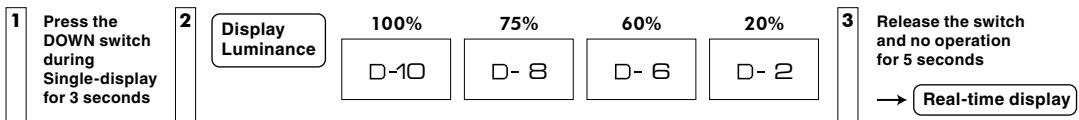
● Adjustment according to ambient brightness (reduce nighttime glare)



● Adjustment according to ambient temperature (prevent the product deterioration)



[Check the Luminance] (Normally not necessary)

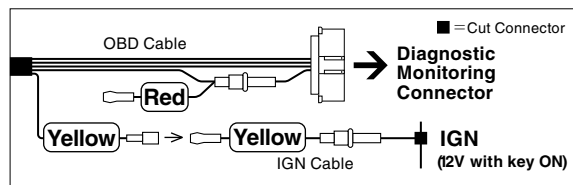


If connect the power cable to IGN (The installing car model mentioned in the Compatibility List)

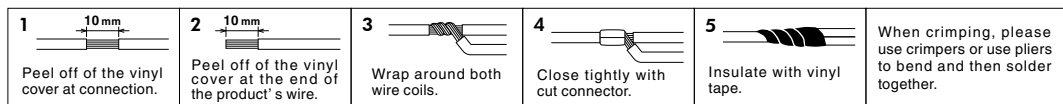
Change the wiring to IGN, if the installing car model mentioned in the Compatibility list or the display does not lit with engine start sometimes.

[Connecting]

Unplug the connector of **Red** and **Yellow** cable of OBD Cable and connect the connector of **Yellow** cable to IGN.



How to use the Cut Connectors



- (Note)**
- Our products have already been recognized as our Industrial Property or are in the process of receiving Industrial Property status.
 - We plan in the near future to take all possible legal measures to protect against unfair competition from look-alike products using similar designs, regulating characteristics, circuitry and circuitry layout.
 - We strictly prohibit the unlicensed use of the PIVOT trademark and the unauthorized use of PIVOT User's Manual.