

It's quite obvious! You can immediately see actual changes in your mileage.

## Multi-Mileage Meter

e - n e n p i  
Fuel Consumption Monitor

Thank you for purchasing PIVOT e-nenpi. Please read these instructions carefully before installing or using this device.  
Please do not lose this user's guide, as you will held liable for the cost of reissuing it.

By installing this product the user agrees that Pivot Corporation is in no way whatsoever responsible nor liable for any damage to the product or automobile or for any accident that is the result of improper installation or use of the product including any disregard by the user to the various Cautions or Warnings.

### Before installing !

#### CAUTION

- Installation cannot be carried out on some car models; please check your car model with the Compatible Car Model List before installing.
- Please be sure to check that e-nenpi operates properly before installing it in the car or drilling holes for installation.

#### WARNING

Improper use in disregard of this display may result in the injury or death of people.

- Installing or using e-nenpi in places where ventilation is poor may result in an to humans due to vehicle exhaust emission poisoning or fire.
- During installation be sure to remove the minus cable from the battery so as to prevent fire and damage resulting from the shorting of circuits, etc...
- Please be careful that the cable does not get crushed by the seat rail or car door steel plate. Trying to do these operations while the car is moving, may cause trouble and damage.
- Because, it is very dangerous if, while in use, the product falls off and interferes with braking, please securely fasten it to a stable place.
- It is very dangerous to pull tangled wires by force or allow tangled wires to interfere with driving. So, please be sure to store bundle away all wires with tape, etc...
- Operating or checking the display during driving may cause an accident; please use with the utmost consideration for safety.

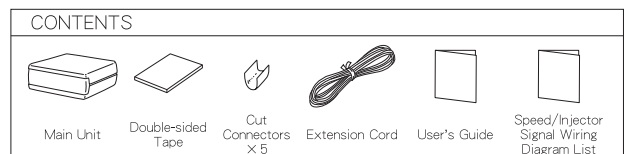
#### CAUTION

Improper use in disregard of this display may cause injury to persons, damage the product and / or other things.

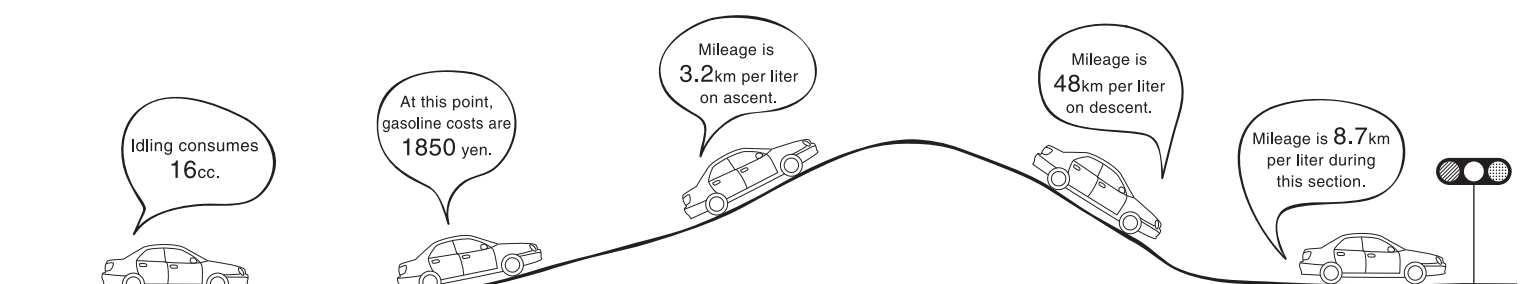
- When installing this product, we recommend that if technical knowledge becomes necessary please consult a qualified mechanic.
- This product is for DC12V cars; installation cannot be carried out on cars with other voltage batteries.
- Wiring should be carried out using the attached "cut connector" or by soldering, make sure to securely insulate all wiring parts with insulation tape, and confirm that no wires are sticking out.
- Do not, in any manner, process, take apart, or make changes to this product.
- Do not install e-nenpi in any place subject to high temperature or any place where water may be splashed.
- Do not install e-nenpi in any place subject to high temperature or any place where water may be splashed.
- When double-sided tape is used for an installation be warned that when hot the tape temporarily loses adhesiveness so no strong pressure should be applied. Make sure to replace all screws and parts that were removed during installation to their original place.

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- Instant Gas Mileage ● Average Gas Mileage ● Accumulative Gas Mileage ● Consumption Amount
- Gasoline Cost ● Sectionalized Gas Mileage ● Idling Consumption ● Accumulative Consumption Amount



## FEATURES

Easy-to-grasp display for various types of fuel consumption.

### High Precision Fuel Consumption Display

Rapidly calculates each type of fuel consumption from the jet emission and car speed and accurately displays.

### Easy-to-grasp Title Display

You can see various changes in the amount of consumption according to use.

### See Changes in Mileage at a Glance

No need to wait for refueling to calculate mileage; see your mileage immediately!

### Two Types of Easy-to-perform Settings

Immediately after installation it's possible to input mileage and refueling amounts.

### Easy-to-see Mileage Improvement

You can see the results of Eco-Driving and mileage improvement in an instant.

### Compatible with Wide Range of Car Models

The injector detection system allows for wide compatibility.

## MEASUREMENT APPLICATIONS

- ECO** Results of Eco-Driving
- Timing** Eco-Driving Timing
- How** Differences by Driving Style

- ?** Results from Mileage Improvement Items, etc...
- Route** Differences by Driving Route
- Slope** Differences by Slope of Car

- C** Differences by Influence of Outside Temperature
- warm up** Consumption During Idling and Warming Up

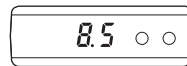
- Sect** Mileage for Each Section of Driving from Start to Stop
- ¥** Accurate Gasoline Cost according to Driving Style

### Instant Gas Mileage (km/L)

Momentary mileage according to driving style.



Now, **6.8km per liter**...  
**3.2km per liter**... **15.6km per liter**...



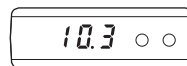
Ex: Instant Gas Mileage 8.5km per liter

### Average Gas Mileage (km/L)

Average fuel consumption after engine has been started.



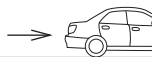
Start To this point,  
**9.8km per liter**...  
**10.3km per liter**



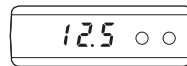
Ex: Average Gas Mileage 10.3km per liter

### Accumulative Gas Mileage\* (km/L)

Accumulative fuel consumption costs after device has been reset.



To this point,  
**12.5km per liter**



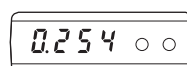
Ex: Accumulative Gas Mileage 12.5km per liter

### Consumption Amount (L)

Accumulative amount of gas consumption after engine has been started.



Start To this point,  
**0.253L**...  
**0.254L**



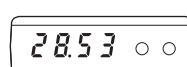
Ex: Consumption Amount 254cc

### Accumulative Consumption Amount\* (L)

Accumulative amount of gas consumption after device has been reset.



To this point,  
**28.53L**



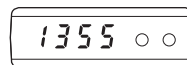
Ex: Accumulative Consumption Amount 28.53L

### Gasoline Cost (Each price)

Accumulative amount of gasoline cost after engine has been started.



Start To this point,  
**1353yen**...  
**1355yen**



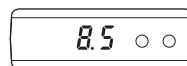
Ex: Gasoline Cost 1355yen

### Sectionalized Gas Mileage (km/L)

Mileage for each section of driving from start to stop. (When your car stops, the display usually scrolls 2 times.)



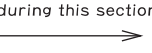
Departure **8.5km per liter** during this section Stop



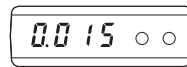
Ex: Sectionalized Gas Mileage 8.5km per liter

### Idling Consumption (L)

Accumulative amount of gas consumption during idling.



After stopping, Idling Consumption **15cc**



Ex: Idling Consumption 15cc

\*By driving for a distance over 4,700km without resetting, the Accumulative Gas Mileage and the Accumulative Consumption Amount will automatically be reset.

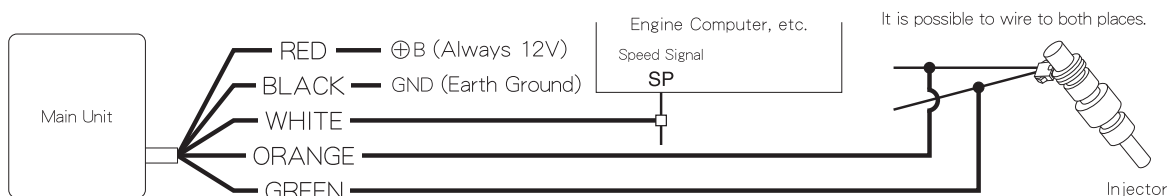
## BASIC WIRING

Please check the "Speed / Injector Signal Wiring Diagram List" when wiring for each type of signal.



1. Possible to take the speed signal from the cars navigation system.
2. For details about wiring for some model of cars, see the Special Compatible Car Model List.

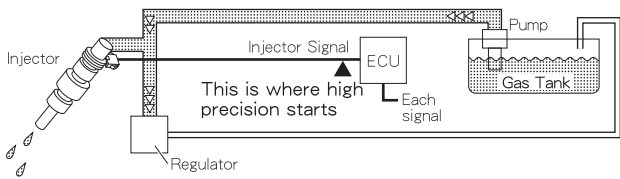
Case of the wire directly to an injector (Only in cases where the ECU wiring place is unidentified.)



# PRINCIPLES OF MEASUREMENT

## Quick and highly accurate fuel consumption display.

In order to display accurately and be compatible with a wide range of car models, the fuel consumption is rapidly calculated from the injector jet emission and displayed.



## Easy setting for jet emission amounts.

It's possible to select from two kinds of jet emission amount settings for each injector or use them in conjunction, and set the high precision display easily immediately after installation.

### ① Mileage Input Method (Enter the actual driving mileage)

After entering the actual mileage, the emission coefficient is devised from the estimated injector jet emission time for the distance traveled on one liter; from this coefficient and the emission time the consumption amount is calculated and displayed.

- Temporary Display (Up to a distance for one liter) = Driving Distance ÷ Input Mileage
- Fuel Consumption Amount Display (After that) = Injector Jet Emission Time ÷ Coefficient (Measurement calculation for temporary display section)

### ② Refueling Amount Input Method (Full tank ~ Refueling amount input)

The emission coefficient is devised from the estimated injector jet emission time from full tank until refueling and the actual amount of gasoline at refueling; from this coefficient and the emission time, the consumption amount is calculated precisely and displayed.

- Highly Accurate Fuel Consumption Amount Display = Injector Jet Emission Time ÷ Highly Accurate Coefficient (Measurement calculation between refueling)

# DETAILED SETTINGS FOR JET EMISSIONS

## Settings for Jet Emissions

Because the relation between the injector jet emission time and the injector jet emission amount is changed by various factors such as, car model, grade of car or combustion pressure, in order to display consumption amounts accurately, it is necessary to accurately set the coefficient for each car model. FCM makes it possible to set easily and accurately by improving precision through the use of both the ① Mileage Input Method and the ② Refueling Amount Input Method.

### ◇ Features of Each Input Method

#### ① Mileage Input Method

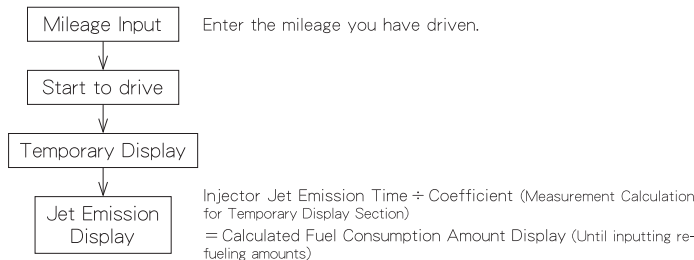
**Strong Points** Entering only mileage allows for quick measurement

**Uses** Optimal for easy mileage comparison

**Weak Points** Because the calculation coefficient depends on driving state for the temporary display section, the accuracy is slightly different.

In order to lessen the margin of error, please drive for the temporary display section under conditions, as much as possible, as you would normally drive. For example, if you mostly drive in urban areas, but for the temporary display section you drive on a highway, the margin of error will increase.

(Procedure)



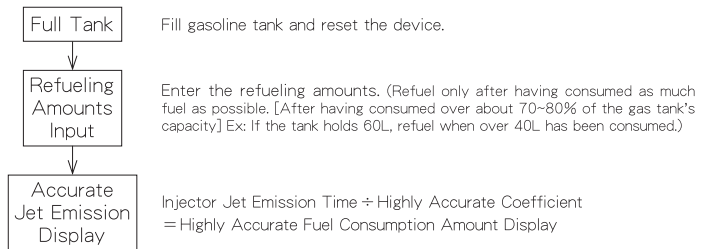
#### ② Refueling Amount Input Method

**Strong Points** Accurate Measurement is Possible

**Uses** Optimal for accurate mileage comparison

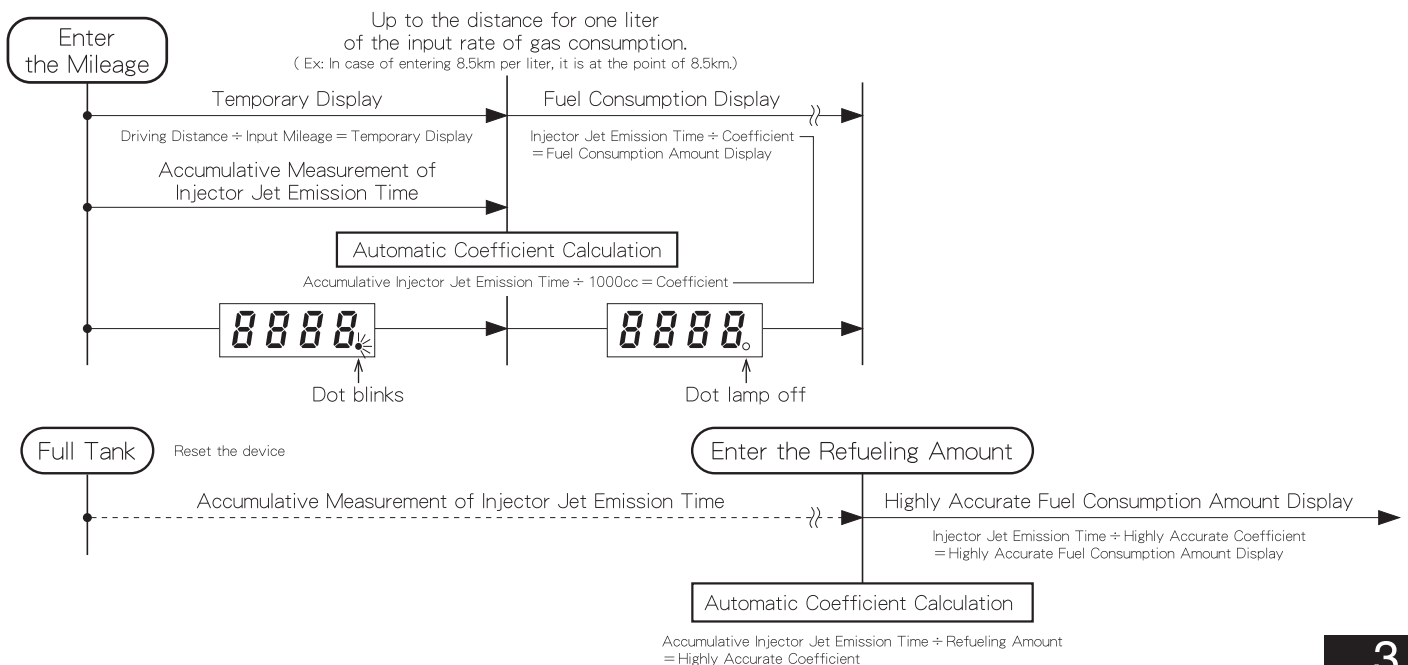
**Weak Points** For the Coefficient Measurement, time is needed from when the tank is full until refueling takes place.

(Procedure)

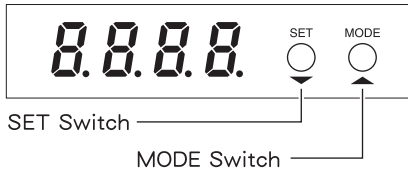


◇ About Each Input Method You can select to use only the Mileage Input Method, but we strongly suggest using in combination with the Refueling Amount Input Method.

Only these three operations need to be carried out



# SWITCH OPERATIONS



**NOTE** When setting, if the key is turned off before returning to the main display, the settings will not be recorded correctly.

## Change Main Display

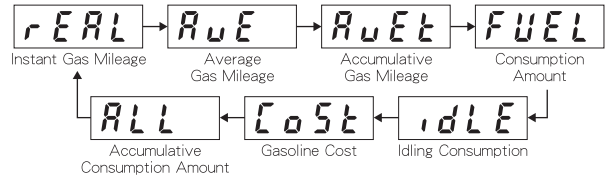
e-nenpi Display

**1** Engine Start



Main Display

**2** Change the mode by pressing in on the MODE Switch, after 3 seconds displays each values



# EXPLANATION OF EACH DISPLAY

Display Order	Title Display → Display Example	Explanation of Example
1. Instant Gas Mileage	rEARL → 8.5	8.5km per liter
2. Average Gas Mileage	AVE → 10.3	10.3km per liter
3. Accumulative Gas Mileage	AVELT → 12.5	12.5km per liter
4. Consumption Amount	FUEL → 0.254	0.254L

Display Order	Title Display → Display Example	Explanation of Example
5. Idling Consumption	idLE → 0.015	0.015L
6. Gasoline Cost	CoSt → 1355	1355yen
7. Accumulative Consumption Amount	ALL → 28.53	28.53L

When your car stops, Sectionalized Gas Mileage Display usually scrolls twice in the display.

※Not displayed during idling consumption display.

※Not displayed until you drive for over 140m after starting the engine or displaying the rate of fuel consumption for that section.

Display	Title Display → Display Example	Explanation of Example
Sectionalized Gas Mileage	SECT → 8.5	Sectionalized Gas Mileage 8.5km per liter



Refueling amounts and the display of this product may be slightly different (5~10%) for reasons as below.

● Differences in what comprises a "full tank" by the person who refuels the tank ● Effects of the gasoline route to the engine ● Differences in the slope that a car is on during refueling ● Structural differences in gas tanks

# CAR MODEL SETTINGS BY TYPE

Please set the (Car Speed Pulse) and the (Gas Price) according to car model type.

## Car Speed Pulse Setting

Car speed pulse by car model

When the Car Speed Pulse Setting is completed, every setting returns to the default except the Gasoline Price Setting and the Dot Setting.

**1** Key Switch OFF



**2** Push in SET Switch for 3 seconds



**3** Push SET Switch, Change the Setting Mode



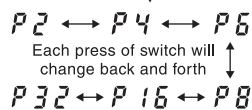
※ After 5 seconds of no operation, the display will go off.

**4** Push MODE Switch

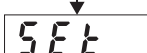


**5** Car Speed Pulse Setting

Push SET or MODE Switch



**6** With no operation for over 5 seconds



### Fixing Method

Fix ⇒ Push SET Switch



Make Settings over again

⇒ Push MODE Switch



※ If no operation occurs for 5 seconds, the lamp will go off and return to the main display without the setting being fixed.

## Gasoline Price Setting

Gasoline price per liter

**1** Engine Start



e-nenpi Display

Main Display

**2** Push SET Switch, Change the Setting Mode



※ After 5 seconds of no operation, the display will go off.

**3** Push MODE Switch



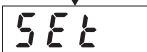
**4** Gasoline Price Setting

Push SET or MODE Switch



Setting Range :  
1 ~ 999 (No decimal points)  
0.1 ~ 99.9 (Decimal to the tenths place)  
0.01 ~ 99.99 (Decimal to the hundredths place)  
0.001 ~ 9.999 (Decimal to the thousandths place)

**5** With no operation for over 5 seconds



# SETTINGS FOR JET EMISSIONS

Measure the injector jet emission time and the coefficient of the jet emission amount and set automatically.

## Mileage Input

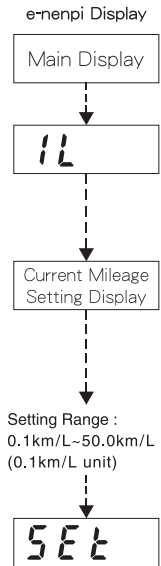
Enter the actual rate of fuel consumption until now.  
Temporary Display ~ Fuel Consumption Amount Display

When you cannot enter your rate of fuel consumption for that you have driven because the mileage is not clear, you cannot use this method; please use the refueling amount input method. Also, until completing the refueling input, the display will be in the default setting, having nothing to do with the actual consumption amount.



**NOTE** By storing the Mileage Input, the Refueling Amount Input will be reset.

- 1** Engine Start
- 2** Push SET Switch, Change the Setting Mode Push  
※ After 5 seconds of no operation, the display will go off.
- 3** Push MODE Switch Push
- 4** Mileage Setting Push SET or MODE Switch  
Down Up
- 5** With no operation for over 5 seconds



### Fixing Method

Fix ⇒ Push SET Switch Push

Make Settings over again ⇒ Push MODE Switch Push

※ If no operation occurs for 5 seconds, the lamp will go off and return to the main display without the setting being fixed.

- 6** Start to Drive
- 7** Temporary Display (Up to the distance for one liter of the input rate of gas consumption.) Dot blinks →  
Driving Distance ÷ Input Mileage = Temporary Display  
  - During this time, the dot display is blinking.
  - During this time, the next item becomes - - - -, and is not displayed. [Instant Gas Mileage / Average Gas Mileage / Accumulative Gas Mileage / Idling Consumption / Accumulative Consumption Amount]
  - During this time, the Sectionalized Gas Mileage display is not on.
  - Turning the key off will not result in the distance being reset.

- 8** Fuel Consumption Amount Display Dot lamp off →  
Injector Jet Emission Time ÷ Auto-calculation of the coefficient = Fuel Consumption Amount Display  
  - Auto-calculation of the coefficient is the numerical value obtained by calculating from the driving distance during the temporary display section and the accumulated value of the Injector Jet Emission Time.
  - You can use any of the items.

## Refueling Amount Input

Enter the amount of gas consumed from a full tank. Highly accurate display



**NOTE** Refueling amounts and the display of this product may be slightly different (5~10%) for reasons as below.

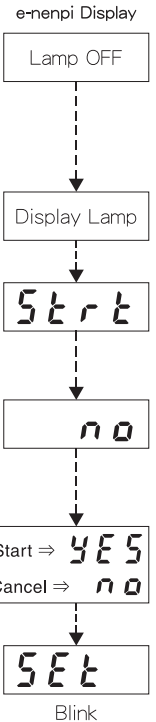
- Differences in what comprises a "full tank" by the person who refuels the tank
- Effects of the gasoline route to the engine
- Differences in the slope that a car is on during refueling
- Structural differences in gas tanks

### ◇ Cautions for Refueling (both times)

(Because refueling amounts change greatly due to the slope the car is in during refueling, etc... please pay attention to the following:)

- ① Try to refuel at the same place at the same gas station.
- ② Try not to change the inclination of the car by differences in load or passengers.
- ③ Try to refuel slowly and to as near as possible to a full tank. (Self-service stations are useful for these purposes.)

- 1** Filling up the Gas Tank
- 2** Key Switch OFF
- 3** Push in SET Switch for 3 seconds Long 3 sec
- 4** Push SET Switch, Change the Setting Mode Push  
※ After 5 seconds of no operation, the display will go off.
- 5** Push MODE Switch Push
- 6** Measuring the Refueling Amount Push SET or MODE Switch  
NO YES
- 7** With no operation for over 5 seconds



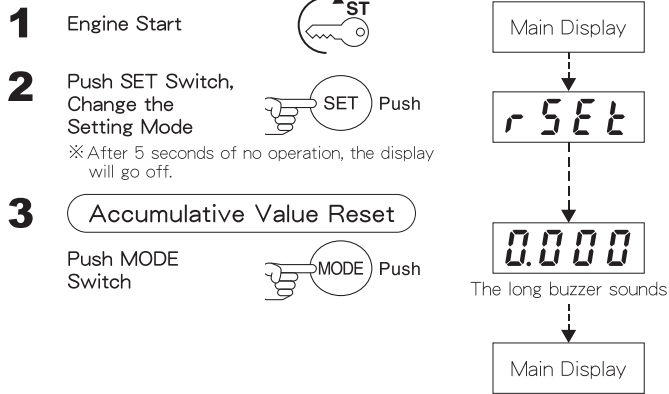
- 8** Start to Drive
- 9** Refueling ※ Refuel only after having consumed as much fuel as possible (over about 70~80% of the gas tank's capacity).
- 10** Key Switch OFF
- 11** Push in SET Switch for 3 seconds Long 3 sec
- 12** Push SET Switch, Change the Setting Mode Push  
※ After 5 seconds of no operation, the display will go off.
- 13** Push MODE Switch Push
- 14** Refueling Amount Input Push SET or MODE Switch  
Down Up
- 15** With no operation for over 5 seconds



- 16** Accurate Consumption Amount Display

## Accumulative Gas Mileage • Consumption Amount Reset

By driving for a distance over 4,700km without resetting, the Accumulative Gas Mileage and the Accumulative Consumption Amount will automatically be reset.



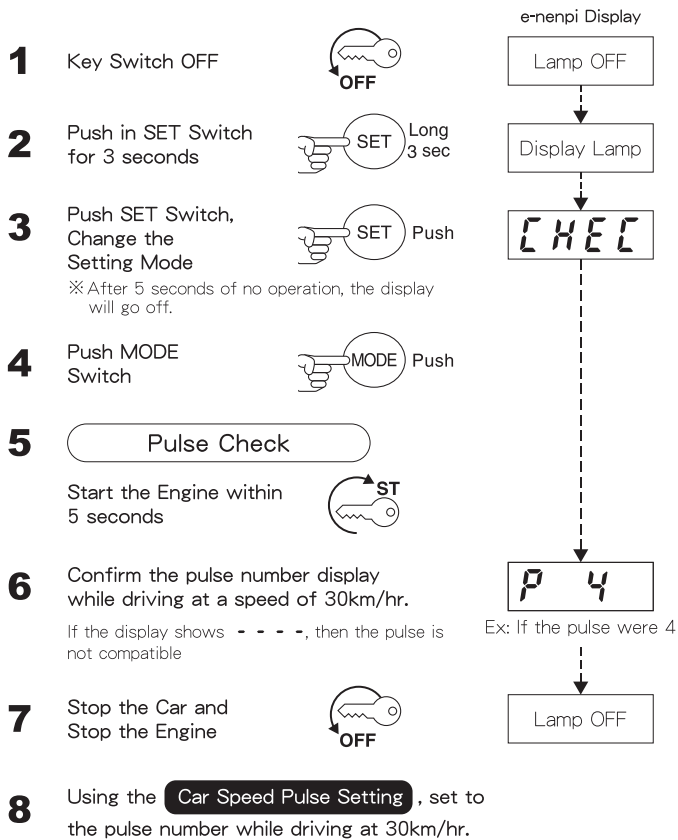
## SPECIAL SETTINGS This Check / Under normal conditions, it is not necessary to set this.

### Pulse Check Check the car speed pulse

Please set it if the car pulse is unidentified or an error display appears. (This is not necessary in cars for which the speed pulse is known.)

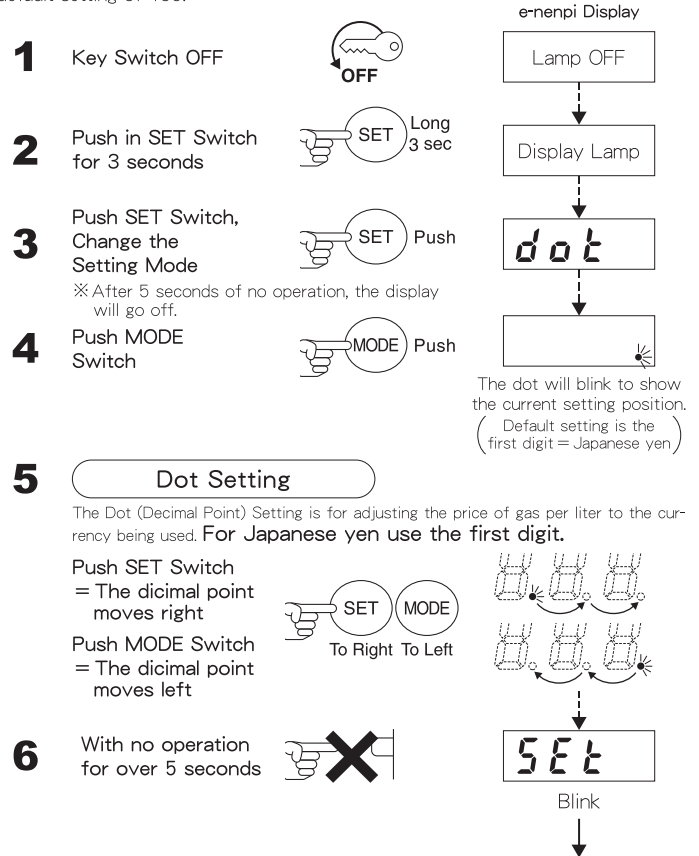
### ⚠ WARNING

- Please check the display while driving in a safe place. Careless driving may result in terrible accidents including those that cause serious injury or even death.
- Please obey all traffic safety rules while on the road.



### Dot Setting Set the gasoline price unit

This is not necessary when setting in Japanese yen. This setting is only necessary when matching the decimal point to the unit price in a foreign currency. By storing the Dot Setting, the Gasoline Price Setting returns to the default setting of 135.



### Fixing Method

Fix ⇒ Push SET Switch  Push

Make Settings over again ⇒ Push MODE Switch  Push

※ If no operation occurs for 5 seconds, the lamp will go off and return to the main display without the setting being fixed.

### Reference Examples of settings by country and type of currency.

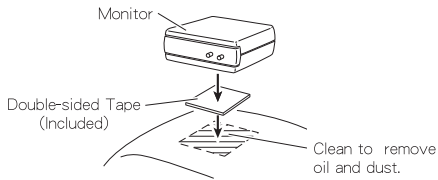
Country Name	Example of Gasoline Cost (per liter)	Price Unit	Input Example	Decimal Point Position
Singapore	1.34	Singapore Dollar	1.34	after first digit
Malaysia	1.38	Ringgit	1.38	after first digit
Thailand	19.79	Baht	19.8	after second digit
Philippines	26.56	Peso	26.6	after second digit
HongKong	11.93	Hong Kong Dollar	11.9	after second digit
Taiwan	19.8	New Taiwan Dollar	19.8	after second digit
Korea	1392	Won	1.39※	after first digit

Because in the USA, the unit of speed and distance is miles, it is not compatible.

※Input at 1/1000



# MONITOR INSTALLATION ※When affixing with the double-sided tape.



- ① Clean oil and dust from the monitor and from the area where you wish to affix it.
- ② Make sure to securely affix it with the double-sided tape provided in the kit.

**⚠** Do not reuse the tape; it will lose adhesiveness.

## HOW TO USE THE CUT CONNECTORS

※If soldering is possible, please do so.

Method 1 Connecting a new wire to the middle of another wire.		Method 2 Connecting two wires at their ends.		<small>※Use a crushing tool to press the cut connector, if you do not have such a tool, use pliers or such to fold and crush the connector together for a secure contact.</small> <small>※After covering, make sure to insulate properly with vinyl tape.</small>
1  Peel off about 10mm of the vinyl cover at connection.	2  Peel off about 10mm of the vinyl cover at the end of the product's wire.	1  Peel off about 10mm of the vinyl covers at the end of the wires to be connected.	2  Twist the uncovered wires.	
3  Twist the uncovered wires.	4  Close tightly with cut connector.	3  Close tightly with cut connector.		

## TROUBLESHOOTING

※Please make the following checks before seeking repair.

Trouble	Possible Causes	Possible Solutions
There is no display while the engine is running.	Poor connection of RED • BLACK • ORANGE • GREEN wire.	Check each wire connections or conditions.
There are no fuel consumption displays while driving.	Poor connection of WHITE wire.	Check the WHITE wire connections or conditions.
The mileage entry was made, but while driving the consumption amounts are not being added.		Check to make sure of a proper connection to the SP.
In <b>[HEE]</b> mode, the display would not change from - - - - .		
Something is wrong with the fuel consumption display.	The Car Speed Pulse Setting is wrong.	Check the pulse in <b>[HEE]</b> mode. <small>※When the Car Speed Pulse Setting is completed, every setting returns to the default except the Gasoline Price Setting and the Dot Setting.</small>
	The Accumulative Measurement of Injector Jet Emission Time is not being done properly.	Please enter the mileage value again or enter the refueling amount.

PIVOT CORPORATION

87-3, Shimookada Okada, Matsumoto-shi, Nagano, 390-0313 JAPAN TEL0263-46-5901