

## ○ Important safety and warning

This section contains important information on the safety and efficient operation of your TPMS device. Read this information carefully before using your TP2 system (TPMS).



### CAUTION

You are cautioned that any change or modification not expressly approved in this manual could void your authority to operate this equipment.

## ○ Important safety warning

It can be caused to death or serious injury in case of wrongly use.

- TP2 is strongly recommended to install at the authorized dealer shops by SEETRON Inc, or his representatives.
- TP2 is installed for the 4 tire vehicles—sedans, RV, SUV— with radial tires whose tire pressure is less than 50 PSI. TP2 cannot work for the tube tire vehicles.
- TP2 is designed to monitor tire pressure and temperature and transmit those data to the monitor inside the vehicles by wireless. It is unable to generate any warning signal in advance of the abrupt tire explosion.
- The valve nut should be tightened using a calibrated torque wrench to 4.0~4.5 N·m when you install it to the tire wheel. You should use torque wrench to tighten it and check the torque value after tightening. Improperly tightened tire pressure sensor may be loosened during the driving. If the nut of tire pressure sensor is over-tightened, sensor can be damaged. If the nut is under-tightened, it may cause air leaks.
- You may install the monitor in the cigarette socket or somewhere on the cockpit and may be unable to hear the warning alarm and display due to position of monitor. Install the monitor in visible and audible area.
- Do not place the monitor in the air bag deployment area.
- Do not place the monitor to interrupt your driving.
- The alert alarm can be disturbed by AV system in vehicle.
- TP2 is wireless device and there is no guarantee that interference will not occur by unexpected radio frequency energy. It may malfunction briefly.
- The antenna of receiver locates in the monitor. Keep certain distance not to interrupt the antenna.
- Do not adjust the monitor during driving.
- When the alert and warning occur, reduce speed and proceed to a safe location. And stop the car and check the tires.

TP2 is designed to provide convenience of preventing potential accidents, SEETRON shall not be liable for any accidents due to tire explosion or otherwise in terms of any law.





## The general warning

It can be caused to serious injury or damage of TP2 in case of wrongly use.

- Do not shake or strike the TP2.
- All warranties are void when TP2 disassembled or modified without supervision of SEETRON Inc.
- The rubber seal of tire sensor valve should be replaced whenever you change the tire. Hardened rubber seal can cause air-leaks of tire.
- Do not inject any tire liquid or aerosol tire sealant into tires, as this may cause a malfunction of the tire sensor.
- TP2 tire sensor cannot be mounted in the temporary tire (spare-tire) and special design wheel that has the diameter of valve hole is not Ø 11.5 mm and special contour on the rim.
- The monitor in the cigarette socket may be loosened by rolling of long driving or rattle over the road. Check the power connection of monitor before start.
- When you install the monitor on the cockpit, demount the flexible power adaptor from the monitor and connect additional power cable. The matching of antenna may be influenced by location.
- Do not contact with liquid, water, rain, extreme humidity or heavy perspiration, sand, dirt or the like.
- The TP2 will not be able to give any indication if tire get punctured during parking time.
- When the battery is discharged, the tire pressure sensor should be replaced.



### CAUTION

Max capacity of outlet connection at 12 V inlet/outlet port

Do not connect the electric device over 200 mA, to outlet port. The outlet port is designed for low power device like GPS, radar detector, etc.

While the flexible power adapter is connected, do not input power through 12V input/output port together.

## NOTICES

### 1. FCC NOTICE

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

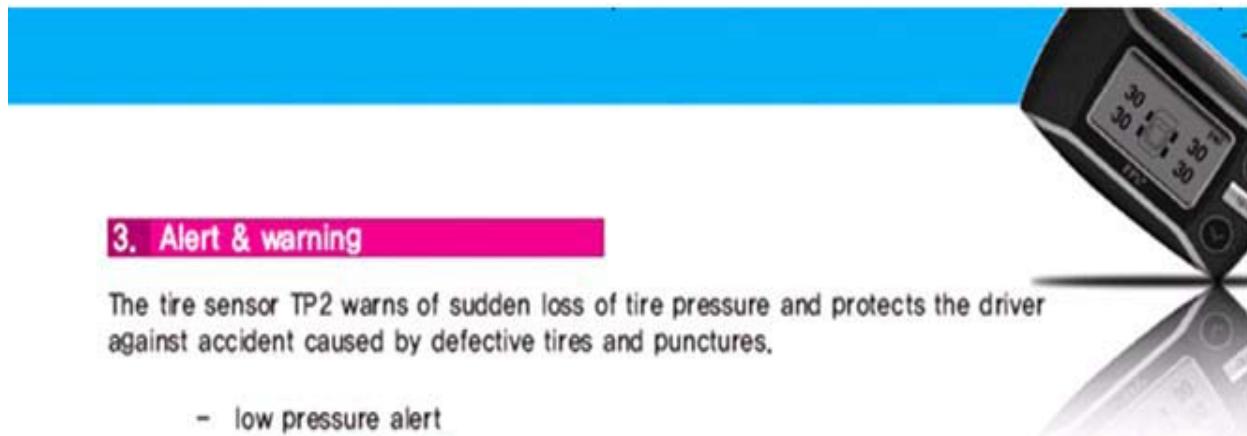
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution : Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### 2. European regulation

This device complies with all European Electromagnetic compatibility regulations (95/54/EC and EN300 220-1). The equipment has been tested and found to comply with the above regulations, and in addition it meets the requirements for low powered transmitters/ receivers as defined by the relevant radio approval authority. The regulations are designed to provide reasonable protection against harmful interference or susceptibility. Changes made to this device without the express approval of Seetron Inc. may void the user's authority to use this device.





### 3. Alert & warning

The tire sensor TP2 warns of sudden loss of tire pressure and protects the driver against accident caused by defective tires and punctures.

- low pressure alert
- low pressure warning
- high temperature alert
- high pressure alert
- battery low warning
- broken sensor warning

### 4. specification

#### Tire sensor

Frequency: 314.98 MHz

Out put power : FCC Part 15.231 / EN300 220

Operating temperature -40°C to 125°C

-40°F to 257°F

Operating pressure : 0 ~ 51 PSI ( 0 ~ 3.5 bar )

Size L X H X W : 50 x 33 x 12 mm (1.97 x 1.3 x 0.47 inch)

Weight : 39 g ( 1.37 oz )

Power : 3.6 VDC Battery

#### Monitor

Frequency : 314.98 MHz

Power consumption : below 100 mA

Operating temperature -20°C to 80°C

-4°F to 176°F

Size L X H X W : 78 X 48 X 24 mm ( 3.1 X 1.9 X 0.9 inch )

Weight : 80 g ( 2.82 oz )

Power : 12 VDC



## Installation and start

### Quick start guide

1. Plug in the monitor to cigarette socket and turn on the key to ACC mode

**Caution:** Do not keep ACC mode too long to prevent discharge of battery.

2. Mount the tire sensor on the wheel

3. Confirm the monitor display shows all tire pressure.

**NOTE :** Check the tire pressure in ACC mode.

4. Input your placard tire pressure in MENU1 tire pressure mode



ACC MODE

### Quick location guide of tire sensor

Four tire sensors ( red, yellow, green, and blue ) have preset location and mount the tire sensor according to color.

Remember the color location that follows the color sequence of rainbow in clockwise.



Use color code sticker on the wheel and wheel base to mark the location correctly.

**NOTE :** If the tire sensor location does not correct, the wrong information shall be displayed on the monitor.

## Mounting of tire sensor

1. Remove the tire and deflate the tire by removing valve core.  
Make the bead-unseating process by the bead breaker of tire changer. ( photo 1 )



photo 1

2. Place the tire/wheel assembly on the turn table and press the tire by bead pressing tool ( photo 2 ). Remove the valve and mount the sensor valve. When the bead is too stiff, remove the tire from the wheel completely and mount the sensor valve.

**Caution :** Clean the bead seats and valve stem hole thoroughly.

**Caution :** Lubricate the rubber seal ( grommet ) on the tire sensor.

**Caution :** Push the sensor down gently into the hole to seat the rubber seal without wrinkle.



photo 2

3. Tighten the hex nut by hand until it contacts the wheel. Torque the hex nut to 4.0 ~ 4.5 N.m using a calibrated torque wrench. Tighten it slowly to reduce the spring back of rubber seal. ( photo 3 )

**Caution :** Overtightening the valve nut will cause the sensor valve to break. Make sure tighten the nut below 5 N.m  
**NOTE :** 4.0 N.m = 35 INCH Lbs.



photo 3



## Installation of monitor

### 1. Installation on cigarette socket or 12V power outlet



- 1) Plug in the flexible power adaptor built-in monitor to the socket.
- 2) Adjust the viewing angle.

### 2. Installation on the cockpit



- 1) Demount the flexible power adaptor from the monitor and mount the stand. Position the monitor in any convenient location on the cockpit within sight and reach of the driver.
- 2) Connect the additional power cable to 12V in/out port.
- 3) Fix the monitor stand using double coated tape.

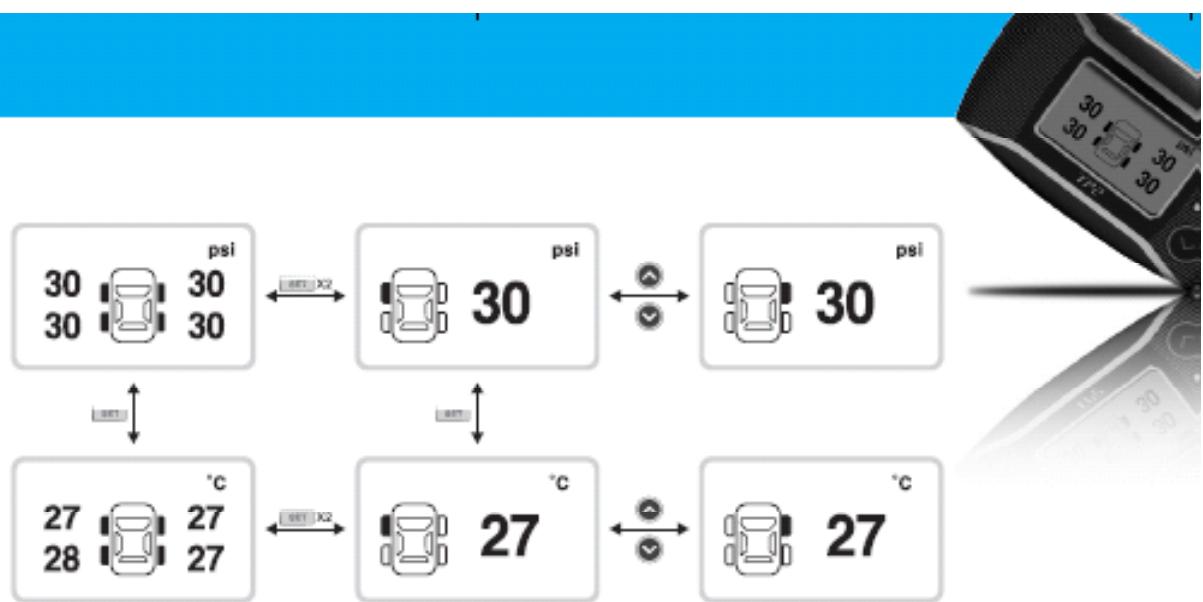
Caution : Do not place the monitor in the air bag deployment area.



## Operation

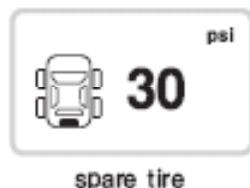
### 1. RUN MODE

Once turn on the power, the monitor goes into stand-by mode waiting for transmission of sensor. After receiving the data, monitor displays the tire pressure in sequence. Monitor displays 4 tires data as standard and the single display is selected by double pressing button. Press button to scroll through the tires in single display.



Press **SET** button to select tire temperature from pressure display.

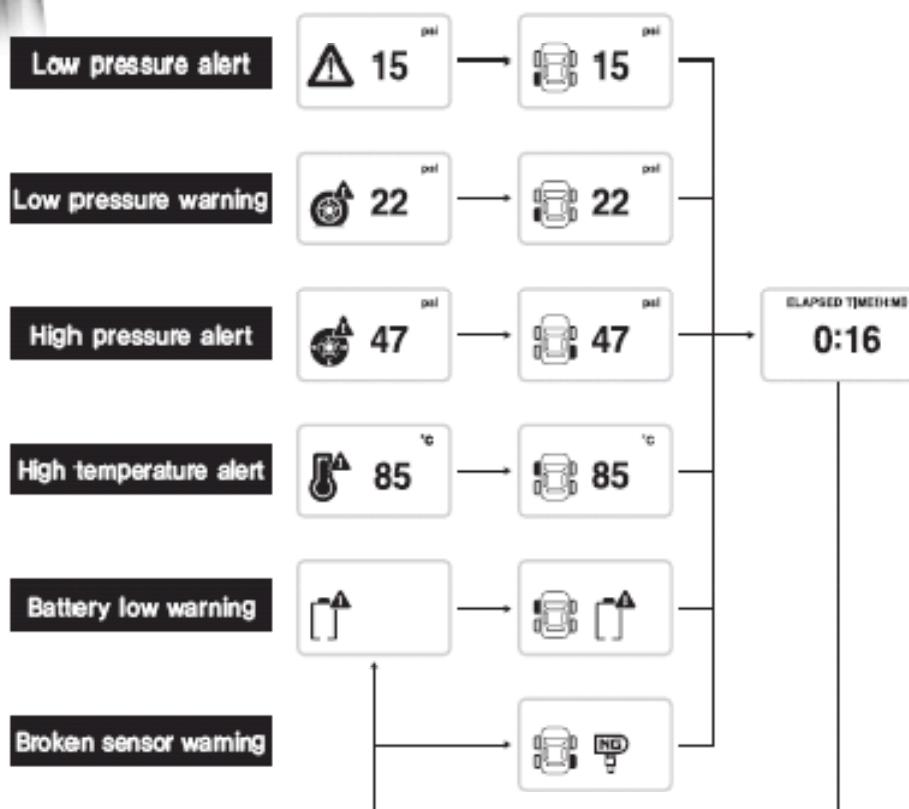
**Caution :** No data shall be displayed without receiving the sensor transmission .  
**Caution :** The data of spare-tire can be seen in single display only after registration.



## 2. Warning mode

Alerts and Warnings	Threshold and conditions
Low pressure Alert	Lower than 18 PSI or sudden pressure drop
Low pressure warning	When tire pressure falls below 20% or 25% of recommended tire pressure. The percentage can be preset in menu 2.
High temperature Alert	When the tire temperature is higher than 80°C (176°F)
High pressure Alert	Tire pressure is higher than 49 PSI ( 2 bar ) The high pressure can be preset in menu 10.
Battery low warning	The battery of tire sensor is discharged
Broken sensor warning	No transmission from the sensor

Under alert and warning mode, the red alarm backlight warning and alert icons and the audible alarm turn on and off continuously. Also, the warning and alert icons and tire location and the elapsed time information are displayed in sequence.  
 The icons and displays are as belows;



Press any button to acknowledge and stop the flashing and alarm.  
Press any button once to stop the audible alarm and press any button again to revert to a normal run mode. But the alert icons and alarm red backlight on LCD screen remains on and the display reverts to a normal run mode.

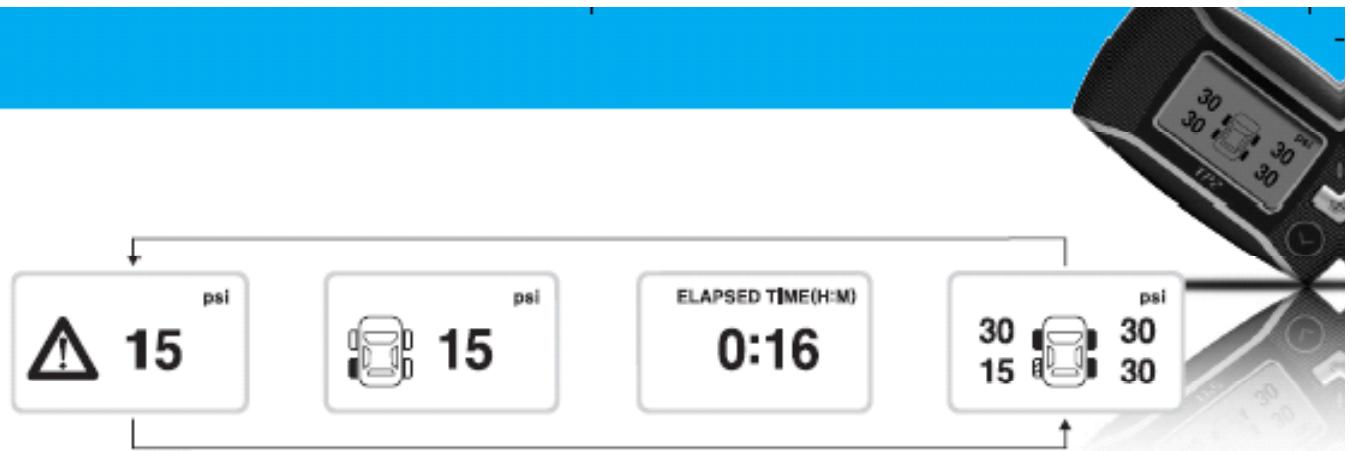


reverted display from low pressure warning



reverted display from broken sensor warning

NOTE : Under low pressure alert mode, the visible and audible alarms remain after pressing twice but display of run mode is added in sequence of alert display.



the display of low pressure alert after acknowledgement

When the alert occurs, reduce speed and proceed to a safe location to check tires. The warnings and alerts are cancelled when the tire are properly re-inflated to correct level.

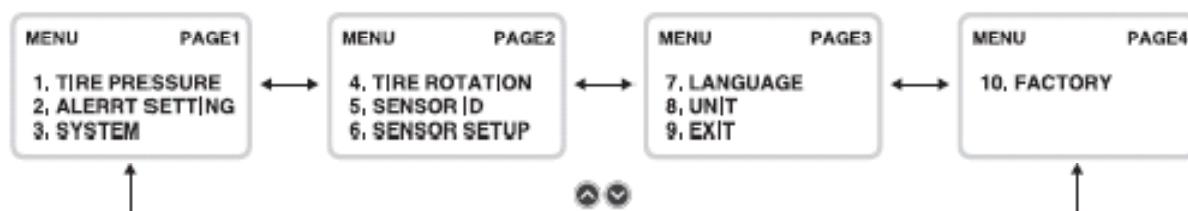
NOTE : The elapsed time of warning can provide a guide of limited mileage for RUN-Flat tire and PAX tire after puncture.

### 3. Program mode



Press the **SET** button over 2 seconds to move to program mode.

Press the **SET** button over 2 seconds to revert to RUN mode or select menu 9 EXIT using **SET** button.



NOTE : How to use function keys:

- 1) **SET** button : Enter menu
- 2) **SET** button over 2 seconds: Exit menu
- 3) **▲ ▼** button: shift, scroll and value change



## MENU1. Recommended tire pressure in cold

☞ Programming steps :



1. To enter, press **SET** button
2. Input the recommended pressure using **▲** **▼** button for front axle.
3. Press **SET** button over 2 seconds to return.
4. The front axle pressure is copied to rear axle automatically but press **SET** button to input the real tires pressure differently, if required.

**Caution** - Locate the recommended tire pressure on the vehicle's tire information placard, certification label, or in the owner's manual.

**Caution** - The cold pressure is the air pressure inside the tire inflated at the ambient temperature before driving a vehicle.

**NOTE** : Factory default = 30 PSI ( 2.1 bar )

## MENU2. Alert setting

☞ Set the low pressure warning threshold,



Programming step :

1. To enter, press **SET** button
2. Select under-pressure value 20% or 25% using **SET** button
3. Press **SET** button over 2 seconds to save the threshold value
4. The monitor displays the threshold of low pressure warning shortly and return to menu

**NOTE** : 20% warning threshold : recommended by tire manufacturers

25% warning threshold: recommended by NHTSA in USA

NOTE : Warning threshold value can be changed from 10% to 25% by  buttons  
 The example : calculation of threshold

Recommended tire pressure = 30 PSI, Under-pressure value = 20 %  
 $30 - (30 \times 20/100) = 24 \text{ PSI}$



## MENU3. SYSTEM

☞ Set light on time and light color

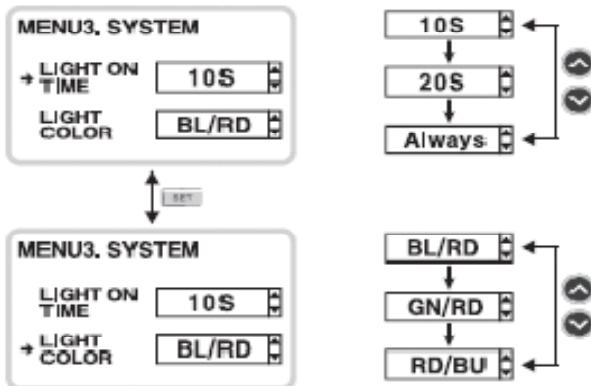
☞ Light on time

The monitor has an energy saving feature that turns light on/off to selected time only and it turns light on automatically when required to display alert or program the unit

☞ Light color is consist of two colors - normal and alert condition. The monitor has three combinations of light color as below table.

### Light color description

Icon	Normal condition	Alert condition
BU/RD	BLUE	RED
GN/RD	GREEN	RED
RD/BU	RED	BLUE





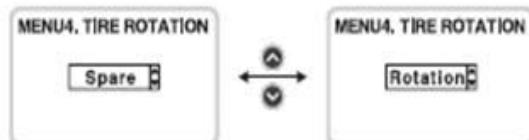
#### Programming steps

1. To enter, press SET button
2. Select the light on time or light color using SET button
3. Select the light on time or light color using  $\wedge\vee$  button
4. Press SET button to return.

NOTE : Factory defaults are 10 seconds and Blue/Red.

### MENU4. TIRE ROTATION

※ Used for tire rotation and replacement of located tire to spare tire



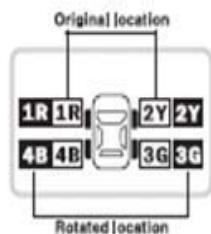
#### Programming steps

1. To enter, press **SET** button
2. Without spare tire sensor, it goes to Rotation mode first
3. When a spare tire sensor is registered, you should select rotation or replacement first.
4. Select spare or Rotation cursor using  $\wedge\vee$  button.
5. See the menu4.1 Rotation for tire rotation
6. See the menu4.2 Spare for replacement of located tire to spare tire

※ The icon and tire location with color code

ICON	Tire Location	NO	Color code
<b>1R</b>	LEFT FRONT	1	RED
<b>2Y</b>	RIGHT FRONT	2	YELLOW
<b>3G</b>	RIGHT REAR	3	GREEN
<b>4B</b>	LEFT REAR	4	BLUE
<b>5W</b>	SPARE TIRE	5	WHITE

## MENU4.1 Tire Rotation (without spare tire sensor)



### Programming steps

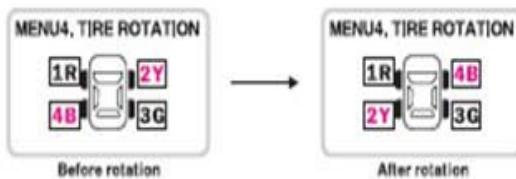
1. To enter, press **SET** button
2. Press **▲ ▼** button to scroll through a tire positions
3. Press **SET** button to select it for editing ( **1R** )
4. Locate the editing tire to rotated position using **▲ ▼** button
5. Press **SET** button to set it as rotated tire ( **4B** )
6. Press **SET** button over 2 seconds to enter it
7. Select **Y** to save and return to menu or select **N** or **C** using **▲ ▼** button to cancel the editing and press **SET** button to enter it

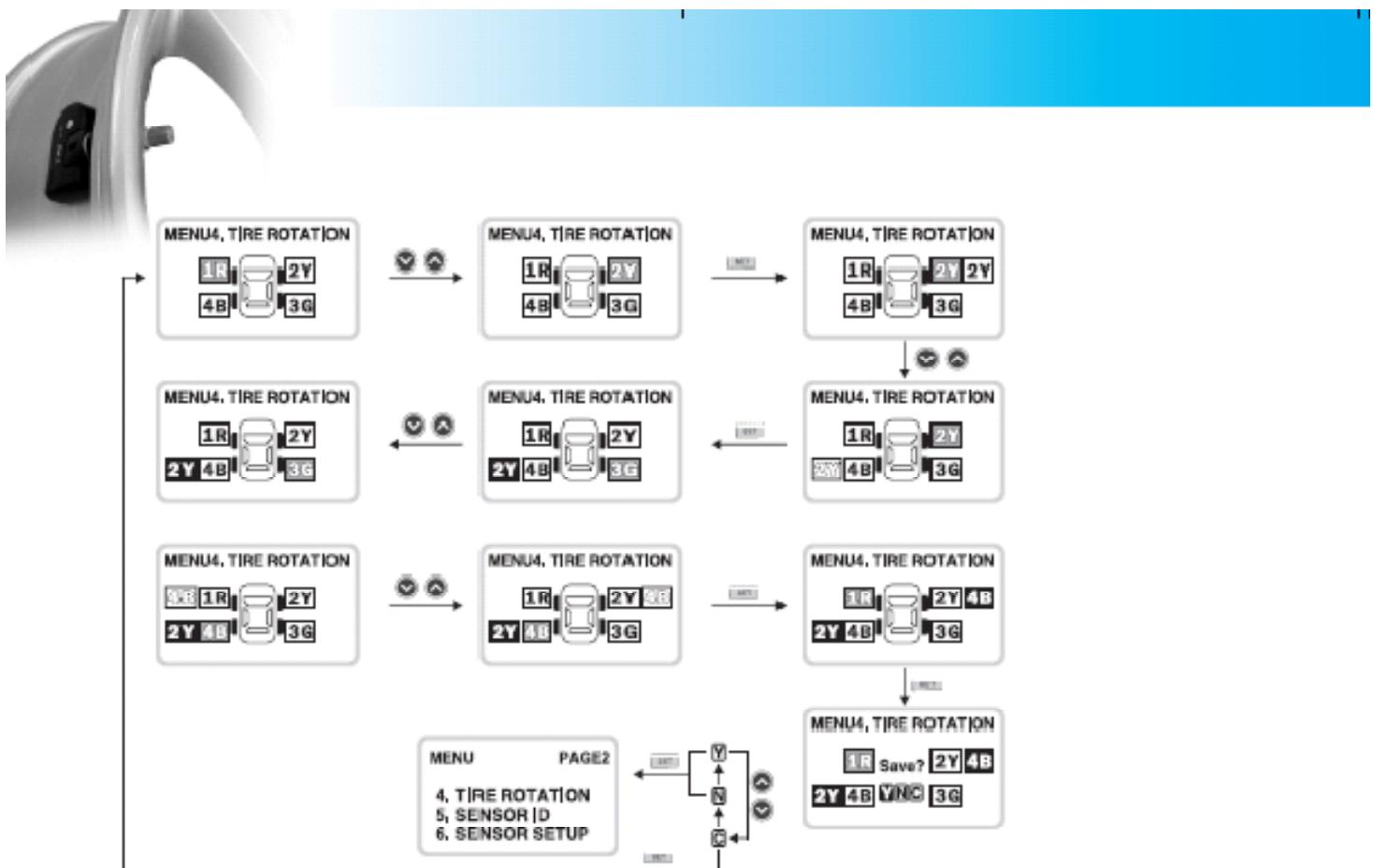
### NOTE : Y,N,C icons

**Y** for Yes : save it and return to menu  
**N** for No : do not save it and return to menu  
**C** for Cancel : Cancel the editing and program it again.

### Easy guide of tire rotation

To rotate Front Right tire to Rear Left





NOTE : Press **SET** button over 2 seconds to cancel the editing or select **N** or **C** icons

NOTE : Error message



If press the save button before completion of editing, the error message is displayed. Press **SET** button to return from error.

## MENU4.2 Replacement of located tire to spare tire

