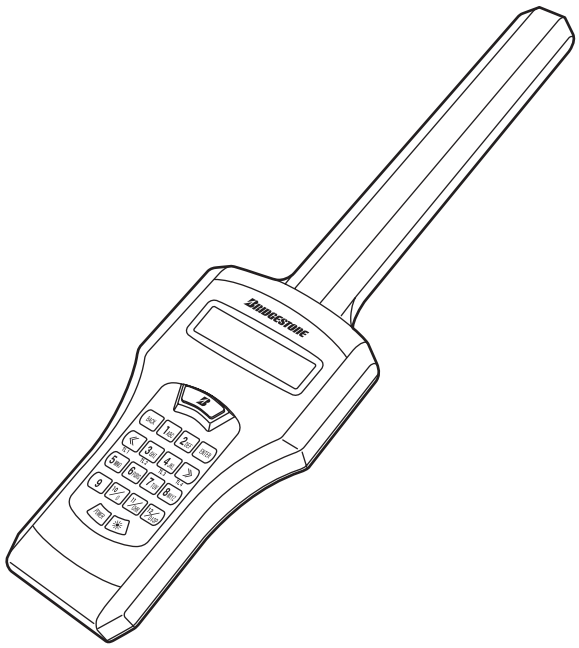
BRIDGESTONE

Tire-Pressure Monitoring System

Hand Reader Operation Guide



What is a Tire-Pressure Monitoring System?

Tire-pressure monitoring system is an advanced system that measures the tire pressure and temperature with sensors mounted inside the tire and enables vehicle management using the measured data.

⚠ Notice to user

- This product is designed exclusively for trucks and buses.
- This product has two design for use within Europe and USA.
  It cannot be used other country due to difference in radio wave regulations. Attention for product model number.
  For Europe ..... model H212
  For USA ..... model H211
- Be sure to read and understand the content of the operation guide before installing or removing.
- Keep this guide in a safe place and refer to it as necessary.

For truck and bus
For use only in Europe (model:H212) or U.S.A. (model:H211)

Introduction

This guide describes how to use the hand reader for tire-pressure monitoring system (referred hereafter as "this product" or "hand reader"). Please read and understand the content before using.

About This Product

This product can collect tire pressure and internal temperature data from the tire-pressure monitoring system sensors mounted inside the tire (rim) and save them in its memory.
Tire pressure and internal temperature are measured by bringing the antenna of the hand reader near the valve of the tire and receiving the radio wave. In addition, the following functions are available using the keys.

Store view received data

You can store and view pressure and temperature data for up to 90 vehicles (1080 tires or 90 vehicles x 12 per vehicle for 12 wheeler).
Refer to section "4-1 Saving and controlling measured data" (page 19) for the content of the saved data.

Transfer saved data to PC

You can use the included Data Transfer Tool to transfer the data saved in the hand reader to a PC in Microsoft Excel readable format (CSV). You can use the data with many applications once it is transferred.

REG information by tire position

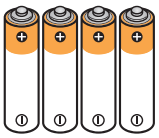
You can register and REG pressure and temperature data by tire position. You can transfer the registered data to PC for use with other applications.

Package Content

Check that the following items are included in the package.

Items included in the hand reader package

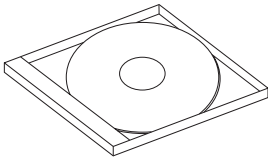
Hand reader x 1



Battery (AAA) x 4

Connection cable x 1

Optionally purchased items



Data Transfer Tool
CD-ROM x 1

Operation Guide x 1

Option

Depth gauge

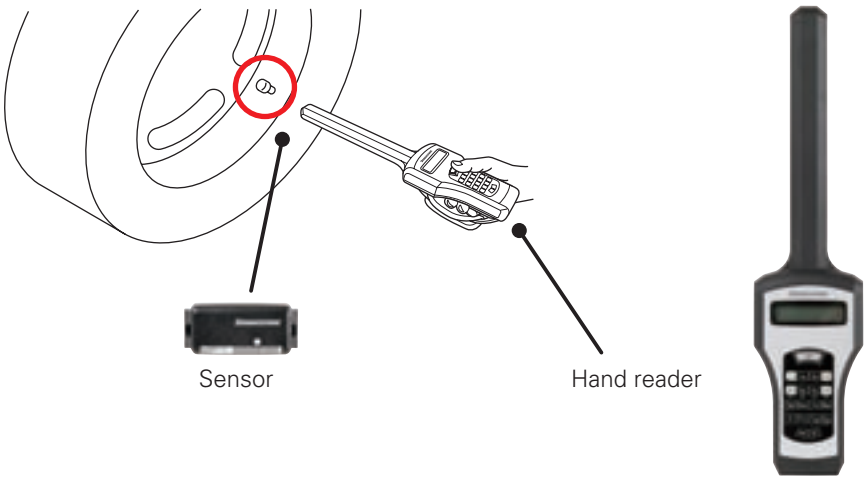
About Tire-Pressure Monitoring System

The tire-pressure monitoring system (hereafter referred to as "system" or "this system") is a system that monitors the tire pressure and temperature using sensors mounted inside tires (rim).
This system is available as "Hand Reader Type" and "On-Board Type". Purchase the product that is appropriate for your intended use.

Hand reader type

This system receives the radio wave from the sensor with a portable hand reader.
The radio wave from the sensor is received with the vehicle stopped. It cannot be used when moving.

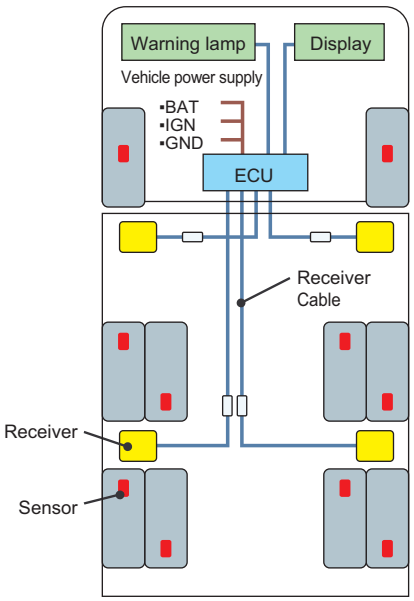
<Equipment Configuration>



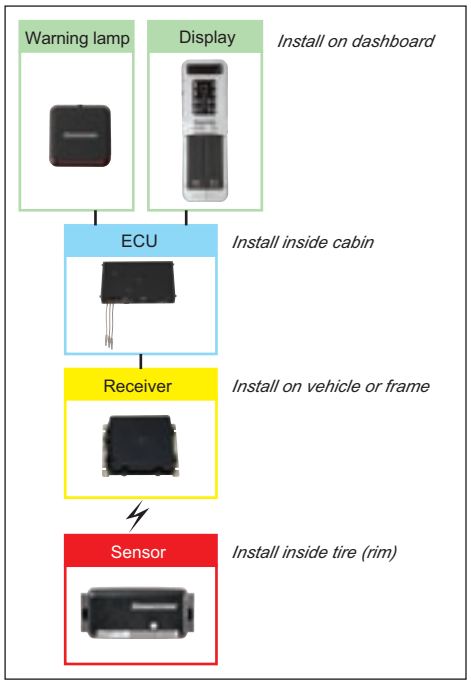
On-board type

This system measure and monitors the radio wave from the sensor with a display and warning lamp mounted on the dashboard.
When there is a tire problem, the display and warning lamps on the dashboard emit alarms to notify the driver. The tire status can be monitored while moving.

<Equipment Configuration>



Example of installing
4 receivers and 10 sensors



Operation Guide Combination

The following two operation guides are necessary to use the Hand Reader type of Tire-Pressure Monitoring System. Read the guide appropriate for your system.

Guide	Content
Tire-Pressure Monitoring System **Hand Reader Operation Guide (this guide)**	Describes the hand reader operation method and precautions
Tire-Pressure Monitoring System **Sensor Operation Guide**	Describes sensor installation, rim installation and removal, and precautions

- Unauthorized duplication or reprint of any part of this operation guide or in its entirety is prohibited.
- If this operation manual becomes smudged and unreadable, obtain a new one from your dealer.
- Contact your dealer if there is any misprint or missing page and for questions about its content.
- Microsoft and Excel are registered trademarks of Microsoft Corporation in the U.S. and other countries.
- Other system and product names are registered trademark or trademark of the respective company. The trademark and copyright symbols are not used in this document.

Warranty and Disclaimer

Warranty

- This is a system that measures the tire pressure and temperature using sensors mounted inside tires (rim). Bridgestone shall not be liable for any damage resulting from use of this product for other purposes or in combination with other manufacturer's product.
- Do not disassemble or modify this product. Bridgestone shall not be liable for any damage resulting from disassembly or modification of this product.
- Read the operation guide carefully and understand its content before using this system. Bridgestone shall not be liable for any damage resulting from misuse of this product.
- The warranty in case this system fails is limited to the scope described in the warranty notice. Bridgestone makes no warranty of any kind, implied or otherwise beyond the scope described in the warranty.

Product specification limitations

- This system is designed exclusively for trucks and buses.
- This product have two designs for use within Europe and USA. It cannot be used other country due to difference in radio wave regulations. Attention for product model number.
  For Europe : model H212
  For USA : model H211
- This system has no function to maintain the status of the tire itself in good condition.

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Safety Precautions

Warning symbols

This guide uses the following symbols to describe items that you must observe in order to use the hand reader safely. Read and observe these items carefully.

⚠ WARNING	Failure to observe this item may result in death or severe injury.
⚠ CAUTION	Failure to observe this item may result in minor injury or property damage.
NOTE	Failure to observe this item may result in damage to the product. This also describes items that you should keep in mind.

Pictograms

- Indicates item that must be observed.
- Indicates action that is prohibited.
- Indicates danger of bodily harm.

1. Hand reader handling

⚠ WARNING	
!	Stop the vehicle on a level safe location and engage the parking brake before using the hand reader. Working at an unstable location may cause the vehicle to move and result in accident.

NOTE

- This products are designed for use within Europe or USA. It cannot be used overseas due to difference in radio wave laws (It's different radio wave laws Europe and USA).

You may damage the hand reader if you fail to observe the following precautions.

- Do not disassemble or modify this product.
- Do not operate with wet hands or where there is moisture.
- Use only specified battery. [AAA dry cell battery (including rechargeable battery)]
- Do not drop, step on, or hit against hard objects.
- Turn off the power before removing the batteries.
- Turn off the power of the hand reader and PC before connecting the hand reader to a PC.
- Do not store in location where there is severe change in temperature or exceeding the allowed temperature range.
- Remove the batteries from the hand reader when it is not used for an extended period.
  Otherwise, the batteries may leak and damage the hand reader.

2. Battery handling

⚠ CAUTION	
⊘ !	Failing to observe the following warnings may cause the battery to leak or heat due to short circuit or charging and cause it to burst or inflict burns. • Do not throw batteries in fire, heat it, or disassemble. • Do not mix new and old batteries or batteries of different manufacturer. • Make sure the positive and negative poles are correct.

Notices for using in USA

This device complies with Part 15 of the FCC Rules and IC RSS-Gen. 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 and IC RSS-Gen.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates use and can radiate radio frequency energy and, if not installed and used in accordance with 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 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.

⚠ WARNING	
!	Changes or modifications not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment.

WARNING for using in Europe

We, the manufacturer (BRIDGESTONE CORPORATION) hereby declare that this equipment (TPMS), model H212 is in compliance with the essential equirements and other relevant provisions of Directive 1999/5/EC.

CE 0891

BRIDGESTONE CORPORATION
Model No.: H212

TCAM agreed that it is sufficient to add the following statement as part of the user information:

English	*Hereby, (BRIDGESTONE CORPORATION), declares that this (HAND READER:H212) is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.*
Finnish	*(BRIDGESTONE CORPORATION) vakuuttaa täten että (HAND READER:H212) tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.*
Dutch	*Hierbij verklaart (BRIDGESTONE CORPORATION) dat het toestel (HAND READER:H212) in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG*
	Bij deze verklaart (BRIDGESTONE CORPORATION) dat deze (HAND READER:H212) voldoet aan de essentiële eisen en aan de overige relevante bepalingen van Richtlijn 1999/5/EC.
French	*Par la présente (BRIDGESTONE CORPORATION) déclare que (HAND READER:H212) est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE*
	Par la présente, (BRIDGESTONE CORPORATION) déclare que ce (HAND READER:H212) est conforme aux exigences essentielles et aux autres dispositions de la directive 1999/5/CE qui lui sont applicables
Swedish	*Härmed intygar (BRIDGESTONE CORPORATION) att denna (HAND READER:H212) står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.*
Danish	*Undertegnede (BRIDGESTONE CORPORATION) erklærer herved, at følgende udstyr (HAND READER: H212) overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF*

German	*Hiermit erklärt (BRIDGESTONE CORPORATION), dass sich dieser/diese/dieses (HAND READER:H212) in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet". (BMWi)*
	Hiermit erklärt (BRIDGESTONE CORPORATION) die Übereinstimmung des Gerätes (HAND READER: H212) mit den grundlegenden Anforderungen und den anderen relevanten Festlegungen der Richtlinie 1999/5/EG. (Wien)
Greek	*ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ (BRIDGESTONE CORPORATION) ΔΗΛΩΝΕΙ ΟΤΙ (HAND READER:H212) ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ*
Italian	*Con la presente (BRIDGESTONE CORPORATION) dichiara che questo (HAND READER:H212) è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.*
Spanish	*Por medio de la presente (BRIDGESTONE CORPORATION) declara que el (HAND READER:H212) cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE*
Portuguese	*(BRIDGESTONE CORPORATION) declara que este (HAND READER:H212) está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.*
Czech	*Společnost (BRIDGESTONE CORPORATION) tímto prohlašuje, že (HAND READER:H212) splňuje základní požadavky a další příslušné ustanovení Direktivy 1999/5/EC.*
Estonia	*Sellega kinnitab (BRIDGESTONE CORPORATION), et see (HAND READER:H212) vastab direktiivi 1999/5/EC põhilistele nõudmistele ja muudele asjakohastele määrustele.*
Latvia	*Ar šo, (BRIDGESTONE CORPORATION), apstiprina, ka (HAND READER:H212) atbilst Direktīvas 1999/5/EK galvenajām prasībām un citiem tās nosacījumiem.*
Lithuania	*Šiuo, (BRIDGESTONE CORPORATION), pareiškia, kad šis (HAND READER:H212) atitinka pagrindinius Direktyvos 1999/5/EB reikalavimus ir kitas svarbias nuostatas.*
Hungary	*Alulírott, (BRIDGESTONE CORPORATION), kijelenti, hogy a jelen (HAND READER:H212) megfelel az 1999/5/EC irányelvben meghatározott alapvető követelményeknek és egyéb vonatkozó előírásoknak.*
Malta	*Hawnhekk, (BRIDGESTONE CORPORATION), tiddikjara li (HAND READER:H212) josserva l-ħtiġijiet essenzjali u dispożizzjonijiet relevanti oħra tad-Direttiva 1995/5/KE.*
Poland	*(BRIDGESTONE CORPORATION) niniejszym oświadcza, że (HAND READER:H212) spełnia zasadnicze wymogi oraz inne istotne postanowienia dyrektywy 1999/5/EC.*
Slovenia	*S tem (BRIDGESTONE CORPORATION) izjavlja, da je ta (HAND READER:H212) v skladu z osnovnimi zahtevami in ostalimi ustreznimi predpisi Direktive 1999/5/EC.*
Slovakia	*Spoločnosť (BRIDGESTONE CORPORATION) týmto vyhlasuje, že (HAND READER:H212) spĺňa základné požiadavky a ďalšie príslušné ustanovenia Direktívy 1999/5/EC.*
Bulgaria	*С настоящия документ (BRIDGESTONE CORPORATION) декларира, че (HAND READER:H212) е в съгласие с основните изисквания и съответните постановления на Директива 1999/5/EC.*
Romania	*Prin prezenta, (BRIDGESTONE CORPORATION) declară că acest (HAND READER:H212) este conform cu cerințele principale şi cu celelalte prevederi relevante ale Directivei 1999/5/EC.*
Turkey	*İşbu belge ile (BRIDGESTONE CORPORATION), bu (HAND READER:H212)'in 1995/5/EC Yönetmeliği esas gereksinimlerine ve diğer şartlarına uygun olduğunu beyan eder.*

Part Names and Functions

1-1 Part names and functions

Antenna	: Used to exchange data with sensor mounted inside the tire (rim).
LCD panel	: Displays setup menus and measurement results.
B button	: Press when measuring tire pressure and internal temperature.
REG panel	: Used to select mode and for character and number key input.
Power switch	: Used to turn ON the hand reader power (the power turns off automatically if there is no action for approximately 3 minutes).
LCD backlight switch	: Used to turn on the LCD panel backlight (the LCD backlight turns off automatically if there is no action for approximately 15 seconds).
Battery cover	: Remove the battery cover when replacing batteries.
PC connector	: Connect the included connection cable to transfer saved data to PC. Also used to connect depth gauge (option).

1-2 Replacing batteries

Installing batteries

1. Pull out the battery cover while pressing the battery cover tab.

2. Set four AAA batteries in the battery box with positive and negative poles set correctly.

3. Set the battery cover back and close it securely.

⚠ CAUTION

Failing to observe the following warnings may cause the battery to leak or heat due to short circuit or charging and cause it to burst or inflict burns.

- Do not throw batteries in fire, heat it, or disassemble.
- Do not mix new and old batteries or batteries of different manufacturer.
- Make sure the positive and negative poles correct.

NOTE

- Use only specified battery. You may damage the hand reader if you use other batteries.
- Check that the battery voltage is sufficient before using. Carry spare batteries if necessary.

When

You want know when to replace batteries

The hand reader has a function to monitor the battery voltage.

When the voltage is low, a battery voltage low warning appears on the LCD panel.
The hand reader can still be used with this warning displayed, but replace the batteries promptly according to the procedure described in section "1-2 Replacing batteries".

```
SELECT MENU    LB
1REG 2MES 3OB
```

Battery voltage low warning

This battery voltage low warning disappears when the Panel screen is switched. Be careful not to overlook it.
It will reappear when the power is turned back on.

If you continue to use the hand reader with the battery voltage low warning displayed, the voltage will continue to drop and battery voltage alarm will appear on the LCD panel.

```
SELECT MENU
 BATTELY ALARM
```

Battery voltage alarm

If you continue to use the hand reader under this condition, you may not be able to save the measured data. Replace the batteries immediately.

Removing the batteries

1. Pull out the battery cover while pressing the battery cover tab.

2. Remove the batteries.

3. Set the battery cover back and close it securely.

NOTE
Be sure to turn off the power before removing the battery. Otherwise, you may damage the hand reader.

1-3 Installing/removing the strap (option)

1. With the Velcro side of the strap facing up, pass the strap through the fastener at the back of the hand reader.

2. Bend the end of the strap and fasten with Velcro.

3. Fasten the other end of the strap in the same manner.

2 Basic Operation

This chapter describes the basic operation of the hand reader.

2-1 Power ON

1. Check that the battery is installed properly and turn on the power switch.

2. The power turns on and the software version appears on the LCD panel (for 2 seconds).

```
T/B HANDREADR
 Ver3.0 RevA
```

Software Version Display screen

3. The Select Menu screen appears.

```
SELECT MENU
1REG 2MES 3OB
```

Select Menu screen

2-2 Power OFF

1. The power turns off automatically if there is no action for approximately 3 minutes.

2. The Display screen goes out when the power is turned off.

NOTE

- The power will not go off while transferring data to PC or while erasing data.
- If the power goes off while in REG mode, the information registered until the power goes off is saved.
- There is no power off switch.

When

You get lost during operation

1. Press the **[BACK]** key until the Select Menu screen appears.

2. When the Select Menu screen appears, repeat the operation from the beginning.

2-3 Turning on the backlight

1. Press the LCD backlight switch (☀).

```
SELECT MENU
1REG 2MES 3OB
```

2. The LCD panel backlight turns on.

```
SELECT MENU
1REG 2MES 3OB
```

Approximately 15 seconds later

3. The LCD backlight turns off automatically if there is no action for approximately 15 seconds.

```
SELECT MENU
1REG 2MES 3OB
```

2-4 Selecting operation mode

There are three operation modes.

No.	Operation Mode	Description
1	REG mode (Register)	This is the mode to save the measured data in hand reader memory.
2	MES mode (Measure)	This is the mode to measure without saving the data.
3	OB mode (On-board)	This is the mode to set the sensor when using the tire-pressure monitoring system as the On-bard type. This mode is not used for the Hand Reader type.

NOTE

- Do not use 3., OB mode for the Hand Reader type. SET mode is for use with the On-board type and will affect the life of the sensor.

1. Press the POWER switch to turn on the power.
Check that the SELECT Menu appears.

```
SELECT MENU
1REG 2MES 3OB
```

Select Menu screen

2. Enter the number of the desired mode with the number key.

REG mode ..... 1 ABC

MES mode ..... 2 DEF

3. When you enter the number, the screen of the corresponding mode appears.

When you select REG mode

```
DATE=060523
USER=PQR
```

Date, Customer No. Input screen

When you select MES mode

```
MES MODE
READY
```

MES mode Input Wait screen

2-5 Entering numbers

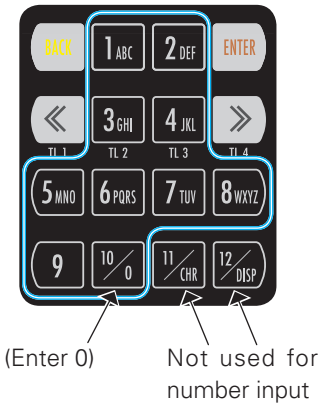
Enter the numbers one by one using the number keys on the REG panel to enter date, customer no., or vehicle no.

1. Press the number key to enter a number.

To enter 1 to 9: Press the corresponding number key.

To enter 0: Press the **[10/0]** key.

- The **[11]** and **[12]** key cannot be used.



2. When you enter a number, the cursor moves automatically to the next digit.

3. Continue with the input of the next number.

```
DATE=060523
USER=PQR
```

Cursor

When

You entered the wrong operation mode number

1. Press the [BACK] key until the Select Menu screen appears.

2. Press the correct key when the Select Menu screen appears.

You want to return to Select Menu screen

When you want to return to Select Menu screen after selecting each mode, press the **[BACK]** key until the Select Menu screen appears.

When

You want to correct the entered number

Move the cursor to the desired location with the **[«]** or **[»]** key and enter the correct number.

You want to move to top or bottom line

When you enter up to the end of the top line, the cursor automatically moves to the beginning of the bottom line.
To move between the top and bottom line when modifying, move the cursor with **[«]** or **[»]** key.

4. After you finish entering, press the **[ENTER]** key to confirm the entry.

- If an invalid number is entered, a long alarm (1.5 seconds) sounds when you press the **[ENTER]** key. Enter the correct number.

When

You want to move the cursor to the previous digit

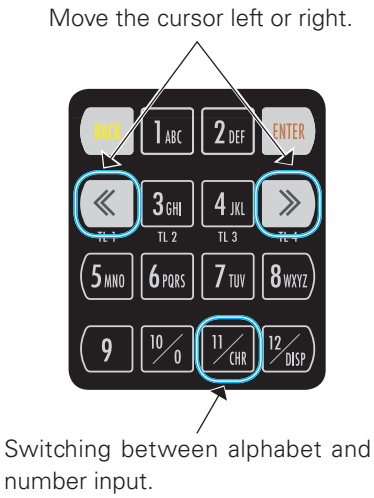
Move the cursor with **[«]** key. Do not use the **[BACK]** key to move the cursor to the previous digit. When you press the **[BACK]** key, the LCD panel returns to the Previous Mode screen.

2-6 Entering characters

Enter the character using the number keys on the REG panel to enter characters for customer no. and vehicle no.

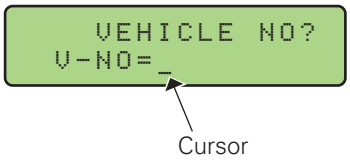
1. Move the cursor to the desired location with the **[«]** or **[»]** key.

2. Press the **[CHR]** key to change to character input mode.
   Then you can enter characters with the number keys.



3. Press the number key printed with the desired character.
The alphabets printed on the key are displayed in order each time you press the key.

Example) Entering "C"
Press the **[1]** key three times.



When

You want to continue entering character in the next digit

Press the number key printed with the desired character to enter the character.
The character is entered in the next digit.

To enter the character printed on the same number key in the next digit (such as entering "AB"):
1. Enter the first character.
2. Move the cursor to the next digit with **[»]** key.
3. Enter the character with the same number key.

Example) Entering "AB"
1. Press the **[1]** key once to enter "A".
2. Move the cursor to the next digit with **[»]** key.
3. Press the **[1]** key twice to enter "B".

You want to return to number input mode

Press the **[CHR]** key. The mode changes to number input mode.

4. After you finish entering, press the **[ENTER]** key to confirm the entered character.

- Depending on the input item, you may not need to enter all digits, but you cannot use space between characters.
  If there is a space between characters, a long alarm (1.5 seconds) sounds when you press the **[ENTER]** key.

2-7 Entering the tire position

The arrangement of the number keys on the control panel corresponds to the installed position of the tires on the vehicle. The tire position depends on the type of vehicle (truck (tractor), bus, or trailer), number of tires, and axle arrangement. Enter the tire position by number according to the relationship between tire position and number keys show on page 15.

1. Press the number key corresponding to the desired tire position in the Tire Position Input screen.

```
    PUSH TIRE
POSITION BUTTON!
```

Tire Position Input screen

- If an invalid tire position is entered, a long alarm (1.5 seconds) is sounded. Enter the correct tire position.

2. When you enter the tire position, the Information Input Wait screen appears.

```
VN=EF5253 TP=08
RES=567   READY!
```

Information Input Wait screen

When

You want to move to top or bottom line

When you enter up to the end of the top line, the cursor automatically moves to the beginning of the bottom line.
To move between the top and bottom line when modifying, move the cursor with **[«]** or **[»]** key.

You want to erase a space

To erase space between characters:

1. Press the **[BACK]** key to return to the previous menu.
2. Reenter the characters from the beginning.

You can also overwrite the space with a character to erase the space as follows:

Example)
To erase the space in "AA BB"

1. Press the **[«]** key twice to move the cursor to the space.
2. Press any key to overwrite the space with a character.