



AN560

Portable Wireless Axle Weight Indicator



1-855-269-5623
www.anyload.com

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TECHNICAL MANUAL

V1.0.0

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Revision History:

Record with brief description of all revisions made to product or manual

Version	Date	Description
1.0.0	August 19 th , 2025	First public release version.

The most current version of this document, along with any software, firmware, and other product updates, can be found on our website:

www.anyload.com

1. Introduction

This manual provides information on installation, configuration, calibration, and servicing of the PART# [Category].

For questions regarding this manual or the operation of ANYLOAD products, please contact your authorized ANYLOAD distributor or visit our website at www.anyload.com for support resources and service information.

1.1 Safety

READ this manual BEFORE operating or servicing this equipment or systems with this equipment incorporated.

FOLLOW these instructions carefully.

DO NOT allow untrained personnel to operate, clean, inspect, maintain, service, or modify this equipment.

SAVE and distribute this manual for future reference.

Failure to follow the instructions or heed the warnings could result in injury or death. Contact any ANYLOAD dealer or distributor for replacement manuals.

Indicative Markings:

Symbol	Significance
 WARNING 	Warns of a potentially dangerous situation which can result in serious physical injury or death
 CAUTION	Warns of a potentially dangerous situation which can result in slight or moderate physical injury
Notice	Failure to comply to information with this marking may lead to damage to property
 Important	Important information about the product
 Tip	Application tips and other information that may be helpful
<i>For emphasis (Italics)</i>	Italics are used to emphasize key information

General Safety:

- Do not allow minors or inexperienced individuals to operate this unit.
- Ensure the unit is fully assembled before operation.
- Keep hands and fingers away from slots, openings, or any potential pinch points.
- Do not use this product if any component appears cracked or damaged.
- Avoid making alterations or modifications to the unit.
- Do not remove or obscure any warning labels.
- Do not submerge the unit in water.
- Before opening the unit, ensure the power cord is disconnected from the power source. Disconnect all power sources before servicing, as multiple power sources may be present. Failure to do so may result in property damage, personal injury, or death.
- For permanently connected equipment, incorporate a readily accessible disconnect device in the building's installation wiring.
- Pluggable units must be installed near an easily accessible socket/outlet.
- Use only copper or copper-clad aluminum conductors when wiring.

Recommendations for Proper Use:

- Keep the instrument away from heat sources and direct sunlight.
- Protect the instrument from rain unless it is a special IP-rated version.
- Do not clean with water jets unless specified for IP-rated models.
- Avoid dipping the instrument in water or spilling liquids on it.
- Use a soft, dry cloth for cleaning; do not use solvents or abrasive materials.
- Do not install the unit in areas with explosion hazards unless with specially rated models.
- If the working environment reaches the unit's temperature limits, ensure proper airflow around the instrument to prevent malfunctions such as sudden shutdowns or disconnections.

Disposal Guidelines:



Product Disposal: Dispose of this product at authorized waste collection centers at the end of its life cycle. Proper disposal prevents environmental and health risks and supports recycling. Illegal disposal may result in legal penalties.

Battery Disposal: Dispose of batteries at designated centers as per local laws. Batteries may contain harmful substances (e.g., Cd, Li, Hg, Pb) and must not be discarded with household waste. Improper disposal may result in legal penalties.

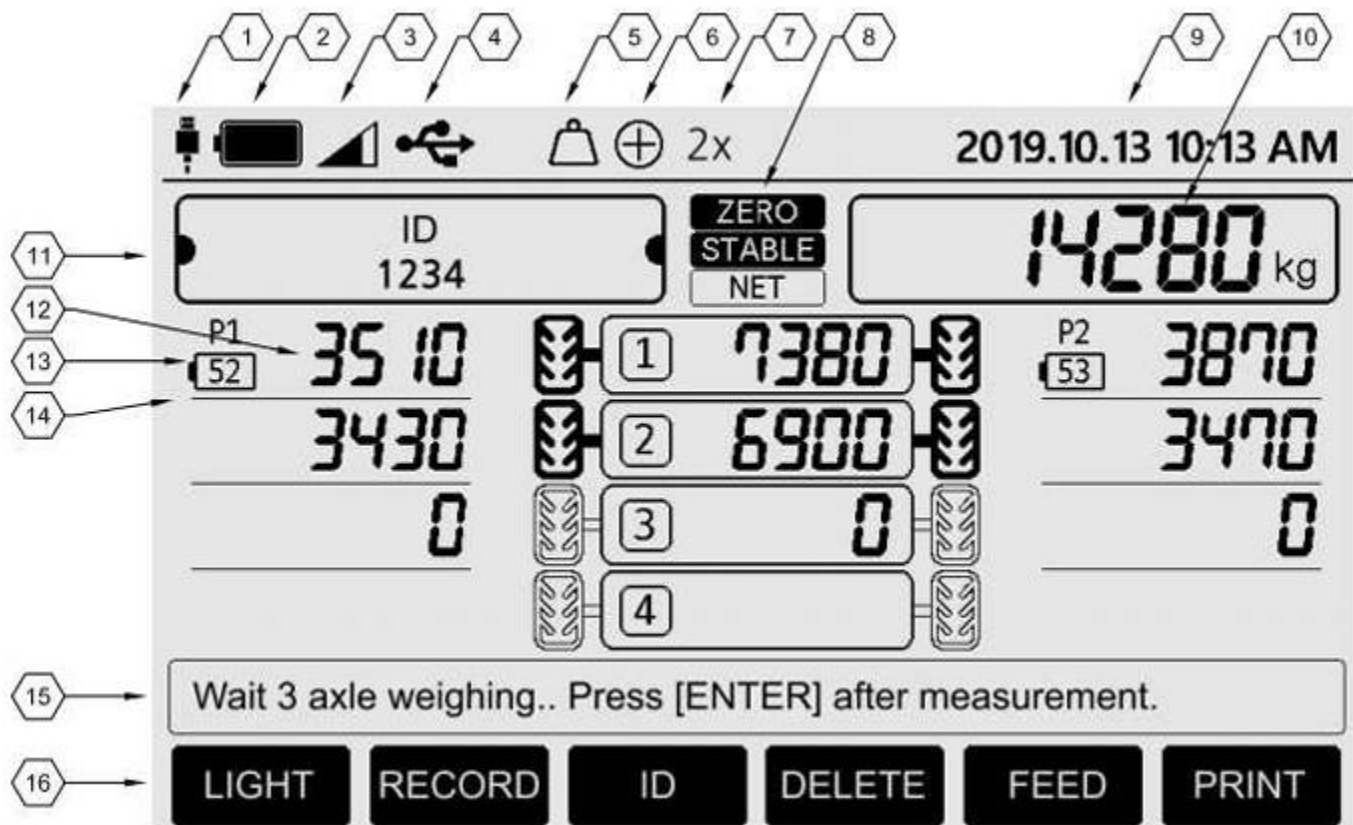
2. Description

2.1 General



No.	Name	Descriptions
1	E-ink Display	Displays the measurements as well as instructions on how to operate. Excellent in outdoor visibility, easier to read and provides wide viewing angles, maximizing efficiency even for long operation. The front light utilizing feature of the E-ink panels reduce eye fatigue even during night operations.
2	Secondary Keyboard	Consists of keys for specialized functions displayed on the E-ink display
3	Arrow Keyboard	Can easily move around the menu and select
4	General Keyboard	Numeric, text, zero functions and power on/off keys
5	Printer	Used to print measurement data
6	USB-B	Used to charge with the Quick charge adapter or transfer data to a PC
7	USB-A	Used to save data to a USB memory stick or use it when updating the firmware. ⚠ WARNING ⚠ Do not use for charging purpose, data transfer use only

2.2 E-ink Display



No.	Functions
1	Displays an icon indicating whether the device is currently charging
2	Shows an accurate representation of the battery level using an integrated fuel gauge chip
3	Displays signal strength for wireless connectivity (applicable to wireless models)
4	Appears when a USB memory stick or USB keyboard is connected to the device
5	Indicates that the displayed weight is a calibrated reference, not a live measurement from the scale (Refer to MENU / MEASUREMENT / CORRECTION FACTOR)
6	Measurement mode indicator (Sequence mode ⊕ / WIM mode ⊖ / Simultaneous mode ⊙)

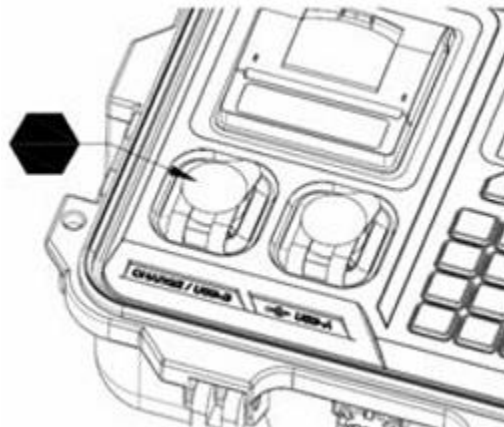
7	Displays when dual weighing or trailer weighing mode is selected
8	Indicates whether the scale is in a stable state or has returned to zero, in real time
9	Date and time
10	Cumulative gross weight of the measured axles. In synchronous weighing mode, measures real-time gross weight
11	Vehicle Identification Number (up to 10 digits in alphanumeric combination)
12	Shows the measured weight on the axle load scales. For sequence and WIM mode, the weight is fixed upon capture.
13	Displays the identification number assigned to the front of the axle load scales.
14	Indicates the remaining battery capacity of the axle load scales
15	Provides message indicating current or upcoming operations, including user instructions
16	Functions of each secondary keyboard keys

2.3 Battery

- This product has a built-in fuel gauge chip to display the remaining battery level accurately.
- If the battery level is low, open the CHARGE / USB-B rubber cover and charge with the charging adaptor.

⚠ CAUTION

Please be sure to use the supplied adapter and cable since the noise from the power source may enter the equipment during charging, causing malfunctioning.



- When charging with the power off, you can check the charging status by displaying the remaining battery level in real time at the center of the screen.



- The estimated time for a full charge is about 6 to 8 hours but may vary depending on environment conditions.

3. Installation

3.1 Installation

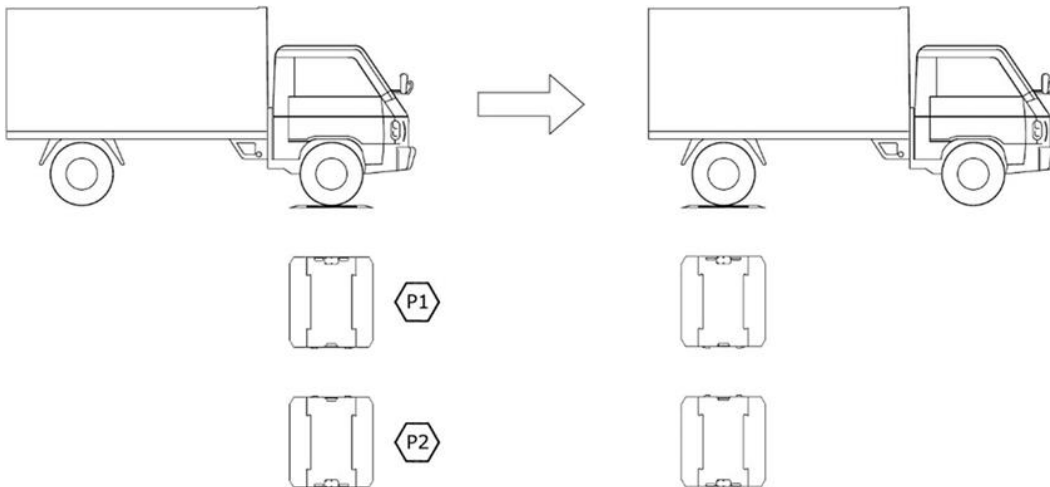
The indicator and the axle load scales can be installed in three types according to the weighing method. If there is no interference affecting the wireless communication, the indicator and the scales can communicate with maximum 100 meters, but it is recommended to be installed within 20 meters, because wireless communication distance may be reduced depending on the surrounding environment.

① **Tip** Please refer to the number attached to the front of the main body of axle load scales.

3.1.1 Sequence mode

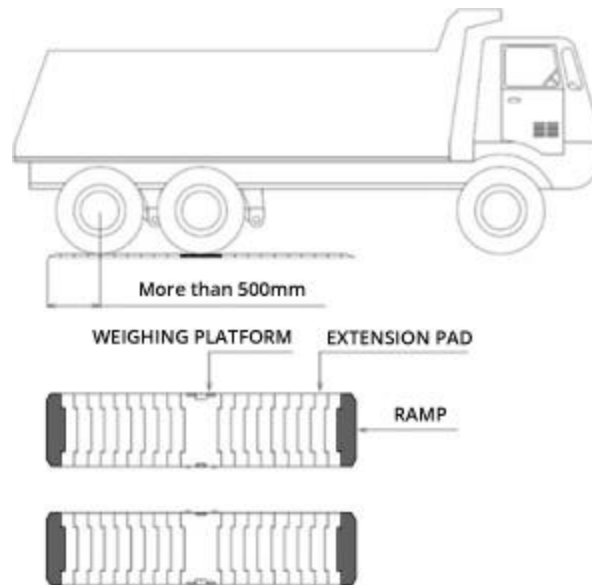
Install P1 on the left side of driving direction and install P2 on the right side.

Place the first axle on the scales, stop the vehicle then measure the weight. Repeat with the next axle. By measuring the weight of each axle in the same way, the total weight of the vehicle will be identified with accuracy of $\pm 0.1 \sim 0.3\%$.



⚠ CAUTION

As shown below, if the inter axle distance is short, you must install sufficient extension pads.



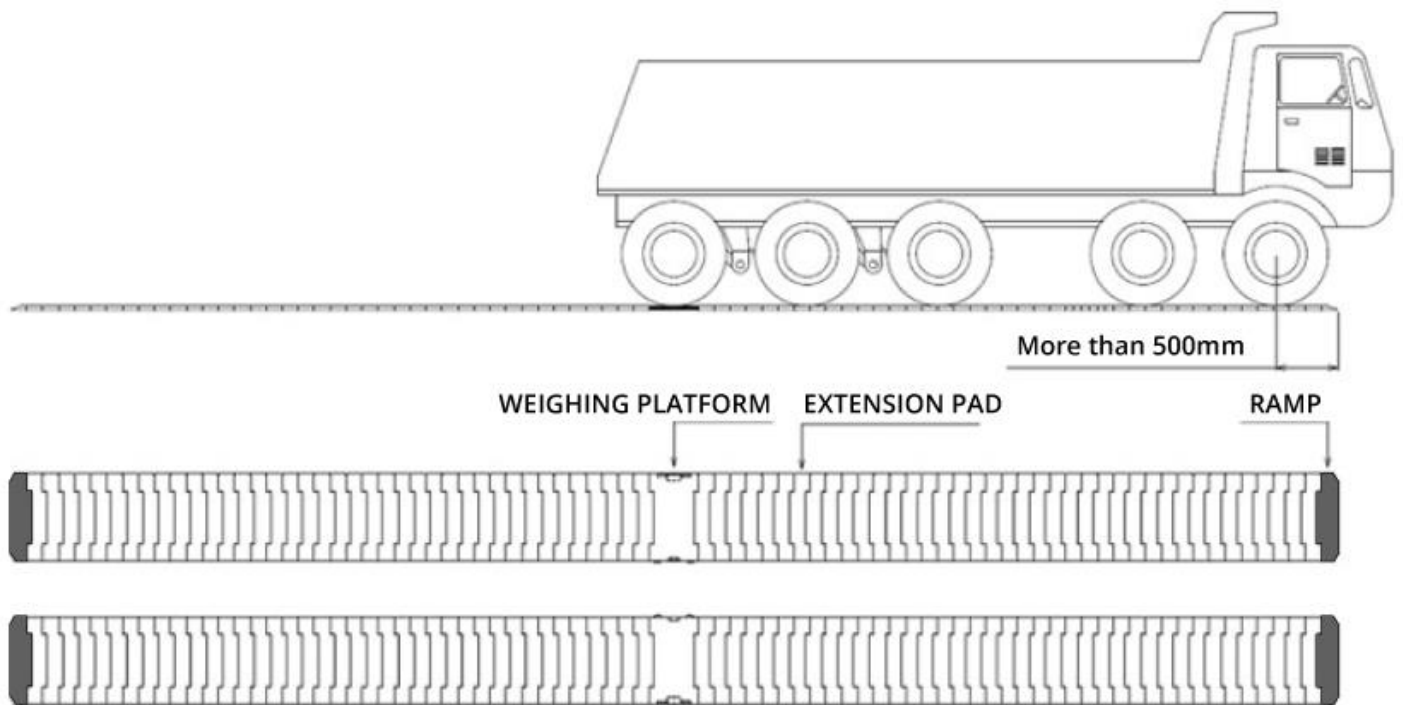
3.1.2 WIM mode (weigh in motion weighing)

Install the first scale on the left side of the driving direction and install the second scale on the right side.

Pass through with the vehicle at a speed of less than 10 km/h, the measurement results are automatically displayed. Accuracy of this method is $\pm 1 \sim 3\%$.

In order to use WIM mode, the 'AXA-8-EXT-90' extension pad must be purchased separately.

- Each box contains 30 pieces. Total of 3 boxes.
- A total of 45 pieces per side are required (90 pieces in total).
- Therefore, 3 boxes must be purchased.
- The third box will be split evenly, with 15 pieces used on each side.

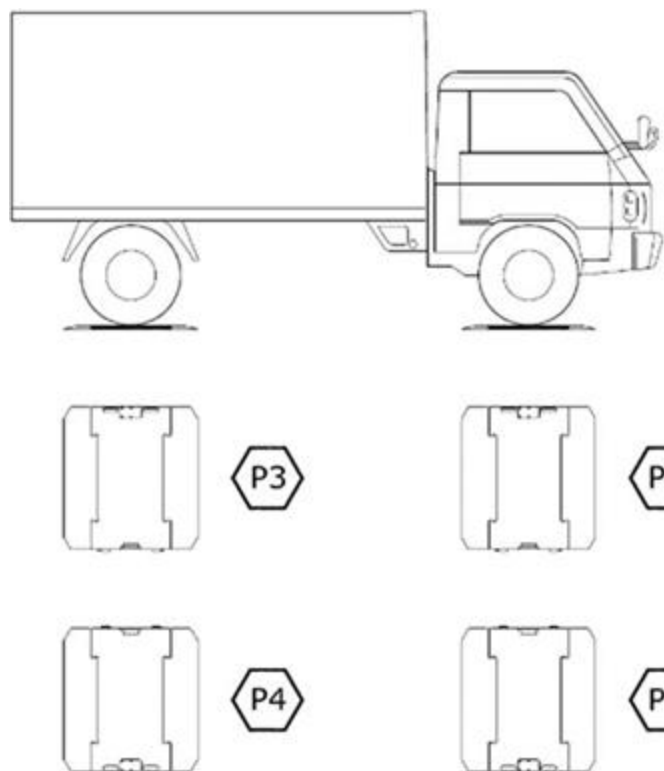


3.1.3 Simultaneous mode

Install P1 on the left side of the front axle in the driving direction, then P2 on the right side of the front axle.

In the same order, install all axles and measure the weight of the vehicle at once.

Accuracy for this method is $\pm 0.1\%$.



3.2 Storage

Store at a room with temperature $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 158^{\circ}\text{F}$), relative humidity 85% or less.

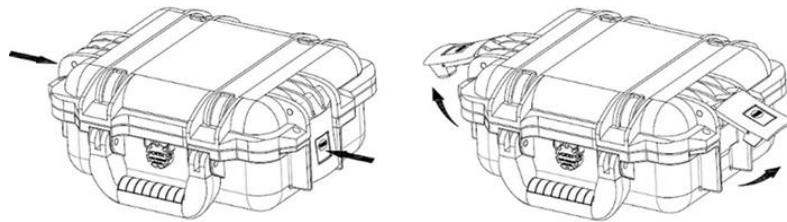
Turn off the product and close the cover to prevent foreign objects from entering the product.

For reference, the power off screen is shown below.

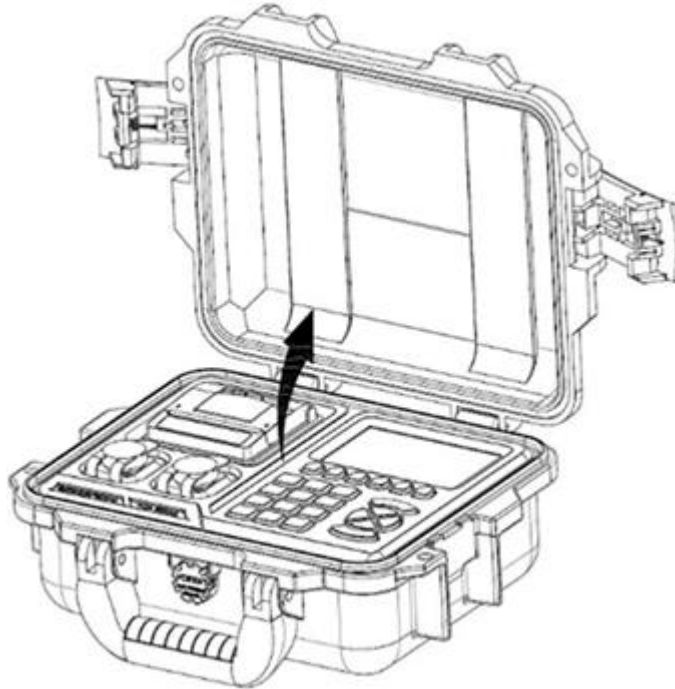


3.2.1 Opening and Closing the Case

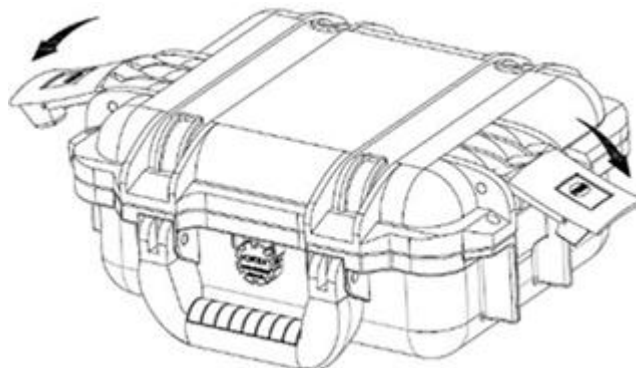
1) Press the buttons on both sides of the latch and lift the latch in the direction of the arrow.



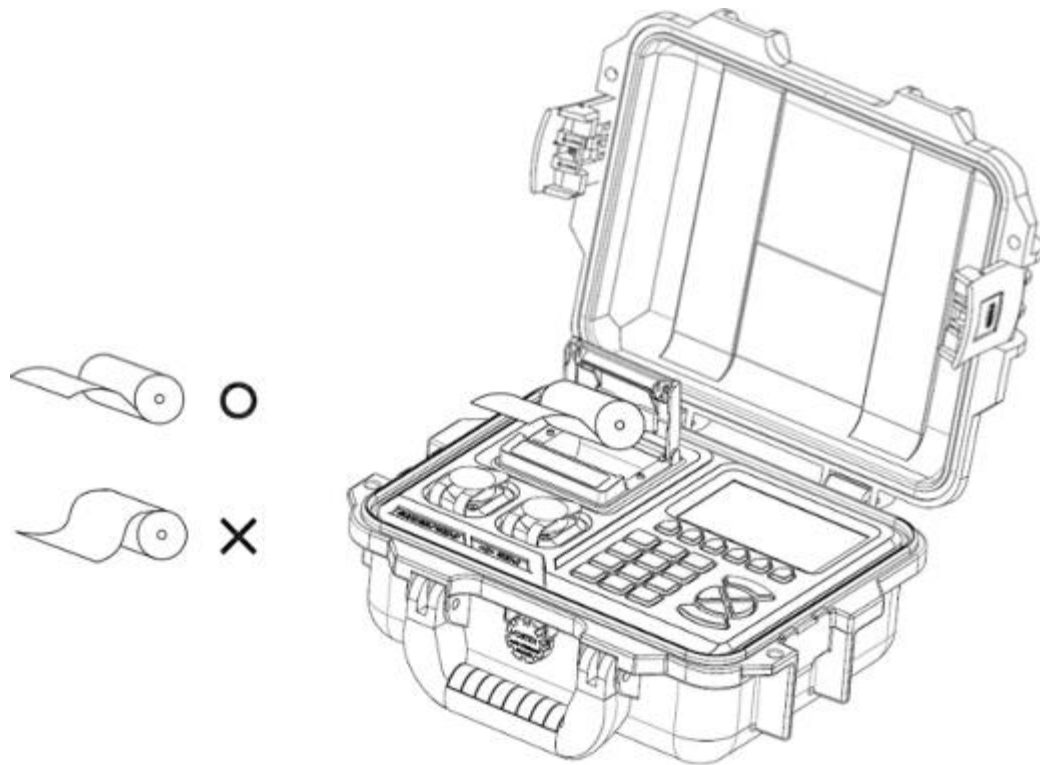
2) Raise the case cover to the end in the direction of the arrow (approx. 105 ° inclination).



3) When closing the case cover, press the latches on both sides in the direction of the arrow.



3.2.2 Replacing the Roll Paper



- 1) Make sure that the printer is not receiving data.
- 2) Pull the lever in front of the printer to open the cover.
- 3) Remove the used paper roll core if there is one.
- 4) Insert the new paper roll. (Be sure to note correct direction that the paper comes off the roll)
- 5) Pull out a small amount of paper, as shown. Then close the cover.

When closing the cover, press the center of the printer cover firmly to prevent paper miss-loading.

If it is closed incorrectly, the paper will not be ejected properly.

⚠ CAUTION

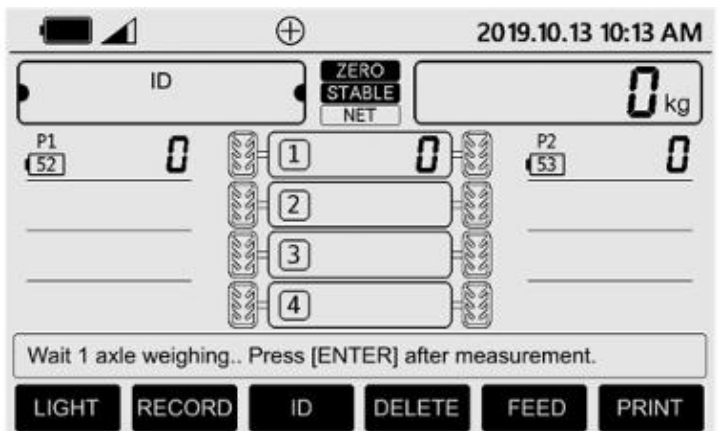
Be sure to use paper rolls that meet the specifications. Do not use paper rolls that have the paper glued to the core because the printer cannot detect the paper end correctly.

4. Operation

4.1 Start Setup

When turned on, main measurement screen is displayed, then the communication with the wireless scale is checked. After, it turns on the wireless axle load scales. (Takes up to 10 seconds)

When screen shown on the right is displayed, start operation of the product.



① **Tip** The [PRINT] key appears when more than one axle is measured.

- The [ENTER] key is used to select a menu, and the [MENU / ESC] key is used to cancellation but is used as a key to enter the setup menu in the initial screen.

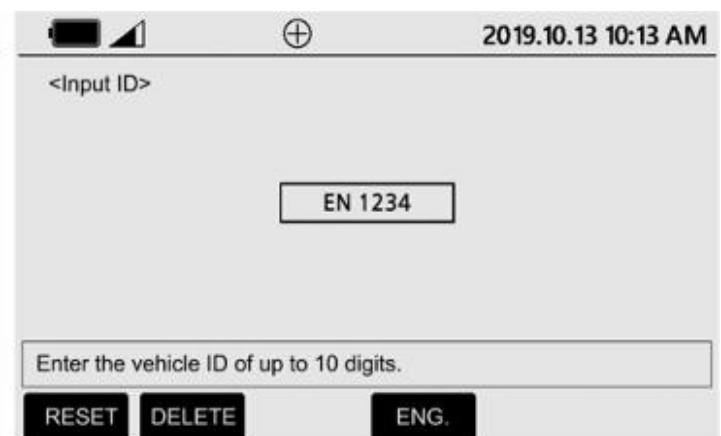


- Entering the vehicle number can be input at any time before printing.

Press the [Car number] key on the secondary keyboard and enter the car number (up to 10 digits).

Press the [English] key to enter the alphabet. Press the [123] key to return to the number input mode.

After input press the [ENTER] key.



4.2 Modes

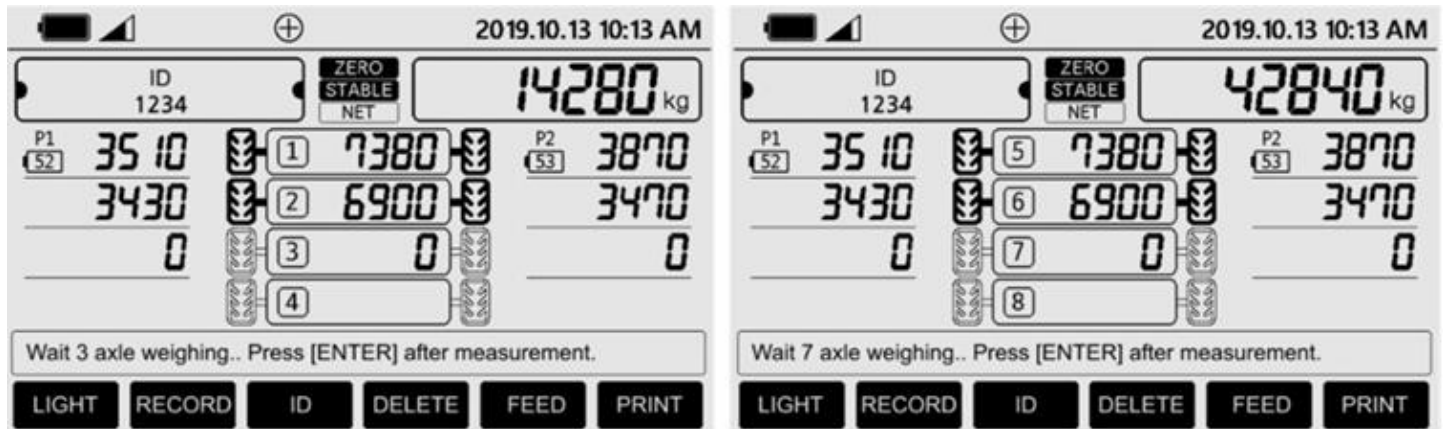
4.2.1 Sequence Mode

1) Measure the 1st axle. If the measured value is stabled, press the [ENTER] key.

The measured values are displayed on the real time screen.

You can measure the other axles in the same way.

When measuring more than 4 axles, you can use [<], [>] keys to switch the screen.



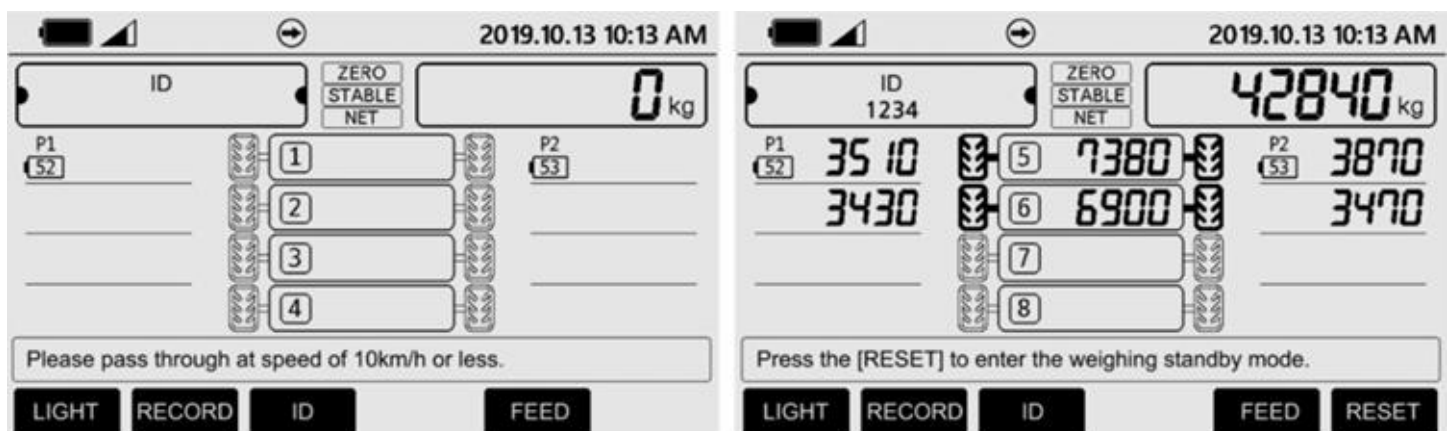
① **Tip** The left screen shows 2 measured axles, and the right screen shows 6 measured axles.

① **Tip** Pressing the [DELETE] key clears the values measured in the previous step, and pressing it continuously clears the first measured value

2) When you have finished measuring the last axle, press the [PRINT] key on the secondary keyboard to print and save the measurement.

4.2.2 WIM Mode (Weight in Motion Weighing)

1) After the vehicle passes through at the speed of 10 km/h or less, the measurement result will be printed automatically after 5 seconds (can be set 'MENU / Measurement / WIM print') after the last axle has passed.



① **Tip** The left is the initial screen, and the right is the screen that has been measured up to 6 axles.

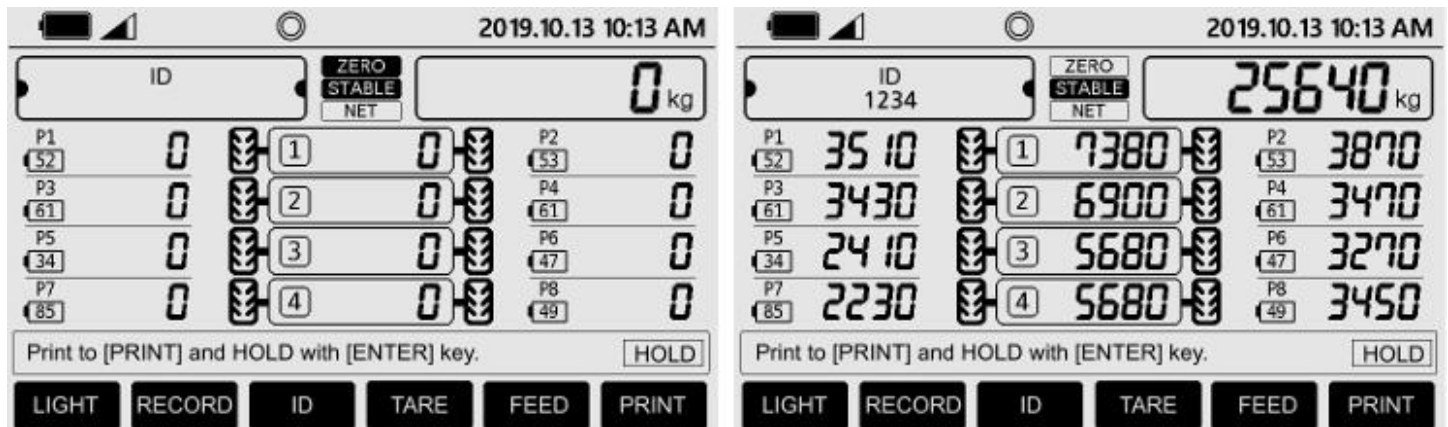
2) To perform the next measurement, press the [RESET] key.

If you want to initialize automatically, refer to "MENU / Measurement / WIM reset" and change it.

4.2.3 Simultaneous Mode

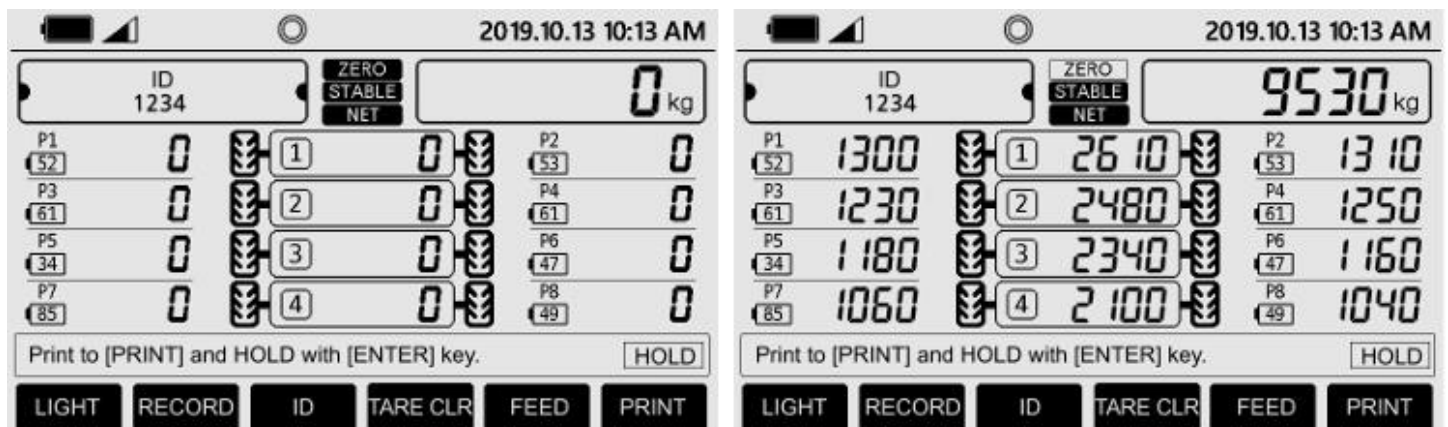
Press the [ENTER] key to hold the measured value and press it again to release the hold value.

1) Move the vehicle onto scales that has been installed for the number of wheels.

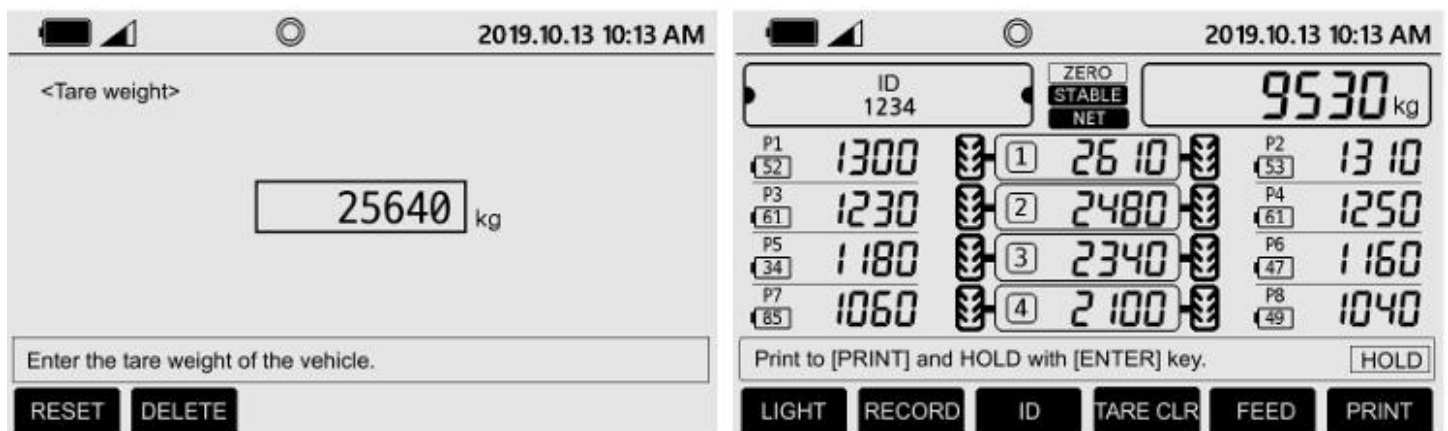


Tip The left screen is the initial screen with 8 axle load scales (8 wheels, 4 axles) activated.

2) To check the weight of loading / unloading cargo, press the [TARE] key. Then the NET will light and display the net weight. When unloading the cargo, no minus sign is displayed.



3) To input and use the own vehicle weight, press and hold the [TARE] key for 2 seconds.



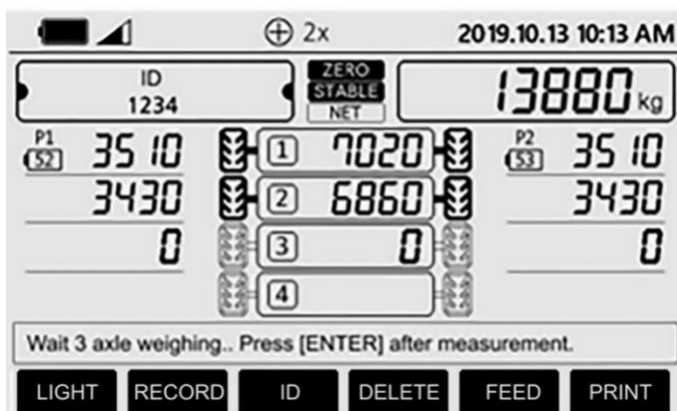
4) When the displayed value is stable, press the [PRINT] key on the secondary keyboard to print and save the measured value.

① **Tip** After printing, the tare clear is automatically released, and the tare clear is automatically released even when the vehicle descends from the scales.

4.2.4 2x Mode

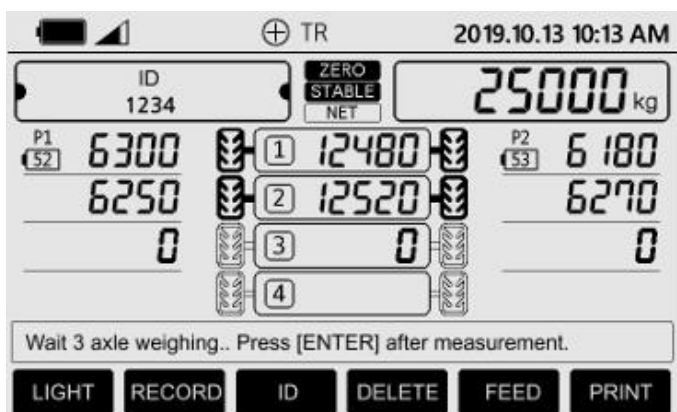
Measure using the scale on either side of the vehicle, left or right side.

Same measuring method as sequence mode and the simultaneous mode, and the weight on one side is displayed with the same value on the other side. The screen below is a screen for 2x mode.



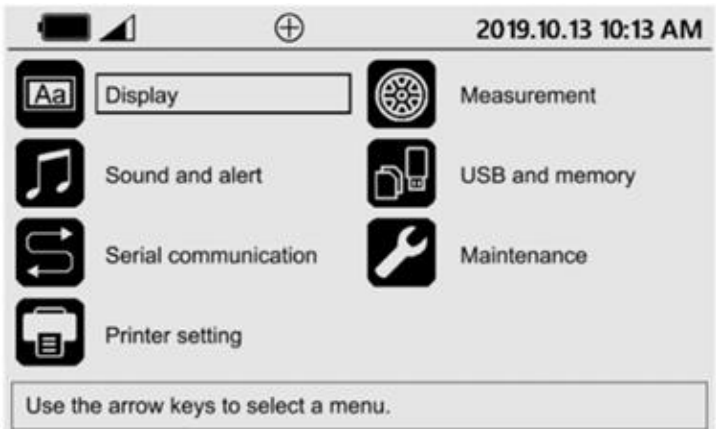
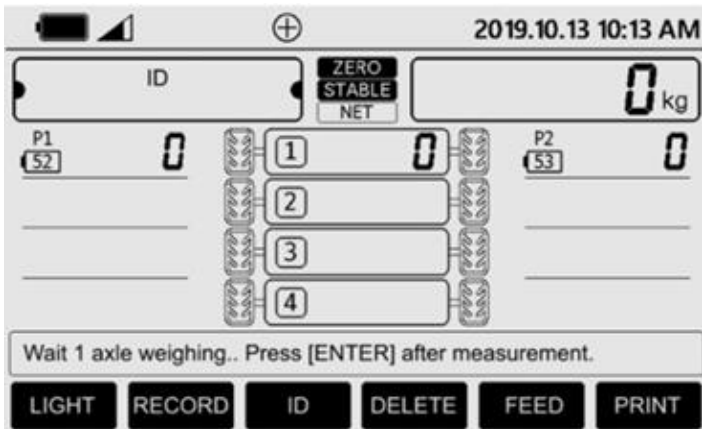
4.2.5 Wide Weighing

The sum of 1, 2 scale is displayed as the weight of the left wheel, and the sum of the 3, 4 scale is displayed as the weight of the right wheel. The measuring method is the same as the sequence mode.



4.2.6 Vehicle class mode

To activate vehicle class mode, first press the [MENU / ESC] key to move to the setting menu.

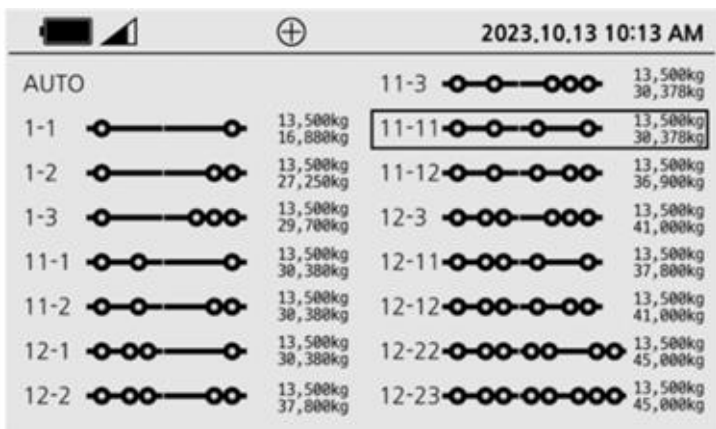
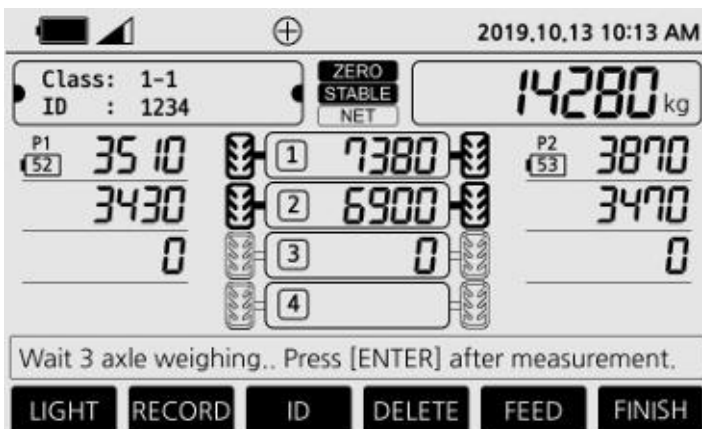


When the setup screen is displayed, press the 1, 3 and 8 keys simultaneously. Then a ringtone will sound, and the screen will change as shown below.

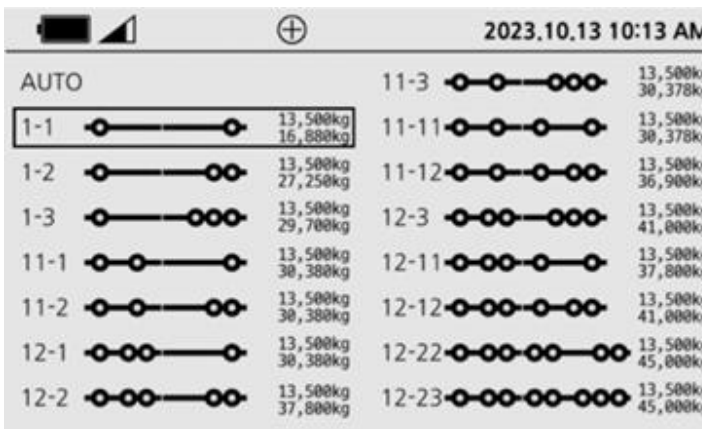
In weighing mode, press number pad 1 to move to vehicle class selection screen menu. When weighing is completed, the selected class number and vehicle number are initialized.

If set to AUTO, class is automatically selected by measured data.

When the currently selected class is not AUTO, and the selected class and measured data do not match, the class selection menu appears. Choose the right vehicle class.



Tip Press the 1, 3, and 8 keys simultaneously once again to cancel the vehicle class mode.



Tip Press the 0 key on the number you want to modify; you can modify both axle weight and total weight.

- FLU (Front Light Unit)

The E-ink panel does not emit light, causing it to feel like looking at a paper, with less fatigue for the eyes. In addition, the front light is turned downwards to minimize eye fatigue even during night work.

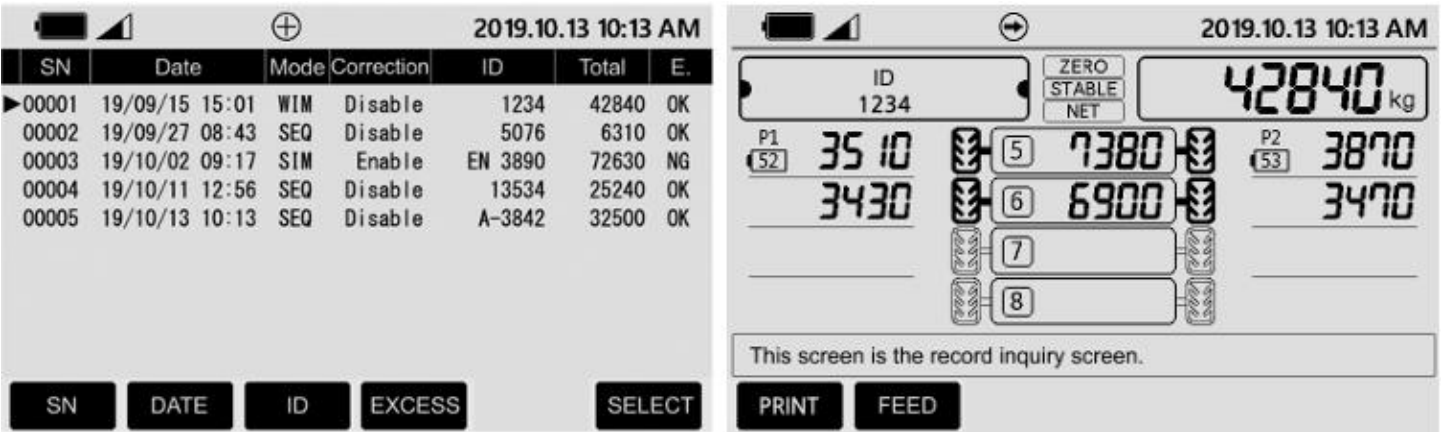
Tip The [LIGHT] key is not used frequently, so it is active only on the initial screen.

4.3 Recording

Pressing the [RECORD] key on the secondary keyboard displays the measured data so far.

Use the arrow keys to move to a specific history and press [ENTER] to display the full screen.

You can also find your desired history more easily with a total of 4 search conditions.

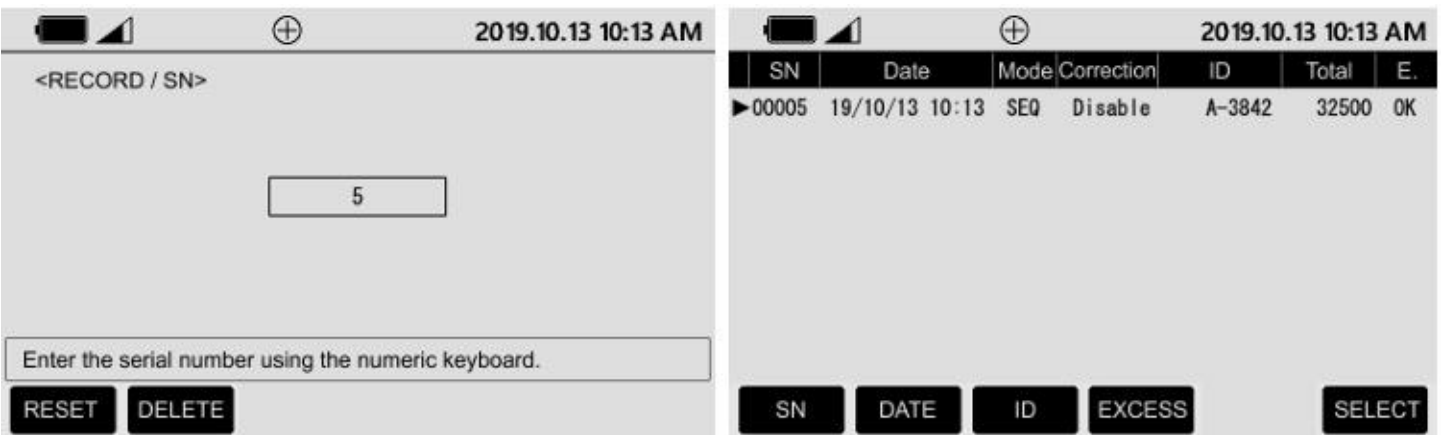


Tip Internal memory can store up to 100,000 measurement data.

If the storage space remains less than 100 data, warning message will be displayed when saving and printing. In this case, back up the data to the USB memory and delete the internal memory.

4.3.1 S/N Search

When you enter the serial number, the history of the corresponding number is displayed on the screen.



4.3.2 Date Search

If you enter the measurement date, the history of the date is displayed on the screen.

2019.10.13 10:13 AM

<RECORD / DATE>

2 0 [1] [9] [] [] [] []

Set the date and time using the numeric keyboard.

RESET DELETE

2019.10.13 10:13 AM

SN	Date	Mode	Correction	ID	Total	E.
▶00005	19/10/13 10:13	SEQ	Disable	A-3842	32500	OK

SN DATE ID EXCESS SELECT

4.3.3 Vehicle ID Search

If you enter the vehicle number, the history of the vehicle is displayed on the screen.

2019.10.13 10:13 AM

<RECORD / ID>

A-3842

Enter the vehicle ID of up to 10 digits.

RESET DELETE Eng.

2019.10.13 10:13 AM

SN	Date	Mode	Correction	ID	Total	E.
▶00005	19/10/13 10:13	SEQ	Disable	A-3842	32500	OK

SN DATE ID EXCESS SELECT

4.3.4 Excess Vehicle Search

Pressing the [EXCESS] key displays the history of the vehicle outside the overload criteria on the screen.

2019.10.13 10:13 AM

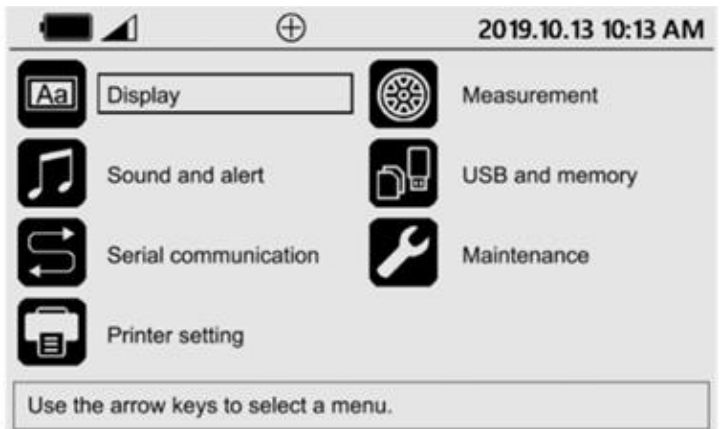
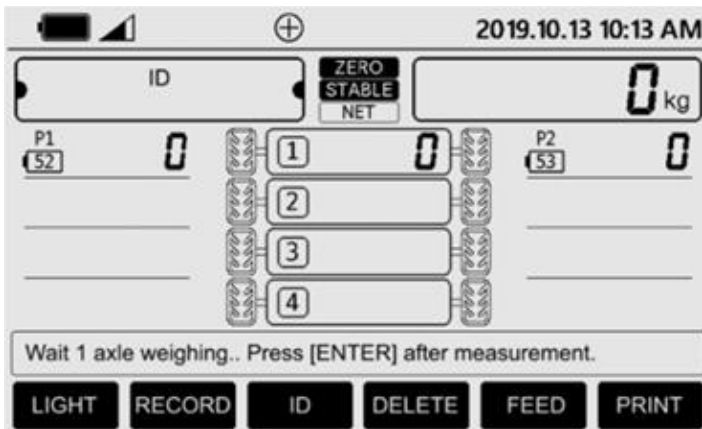
SN	Date	Mode	Correction	ID	Total	E.
▶00003	19/10/02 09:17	SIM	Enable	EN 3890	72630	NG

SN DATE ID EXCESS SELECT

5. Settings

Press the [MENU / ESC] key to move to the setting menu.

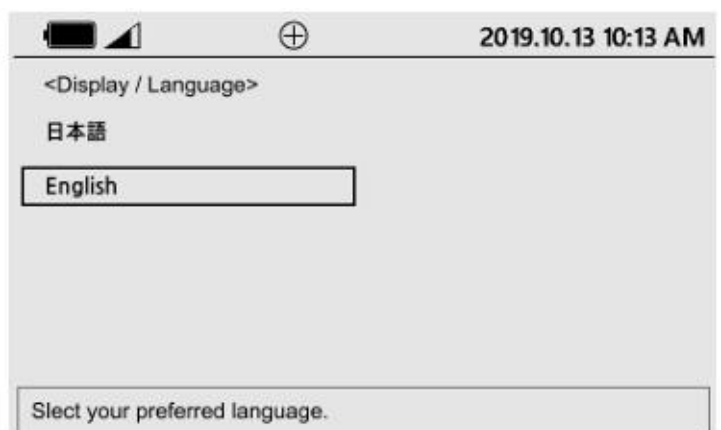
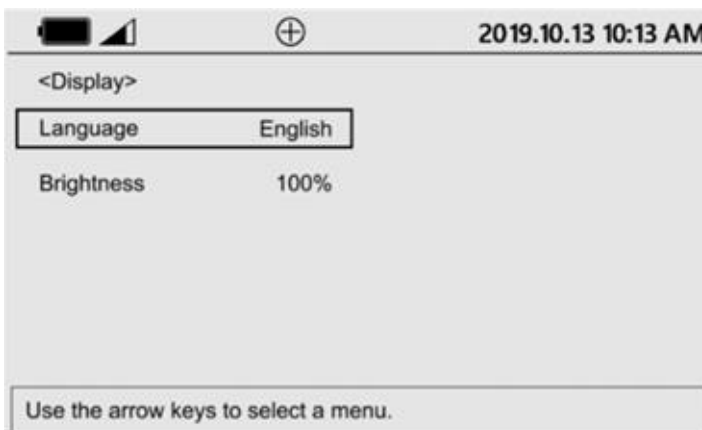
Entering the setting menu is only possible in the initial screen state as shown in the lower left screen.



5.1 Display

5.1.1 Language

Use the arrow keys to select the language displayed on the screen.

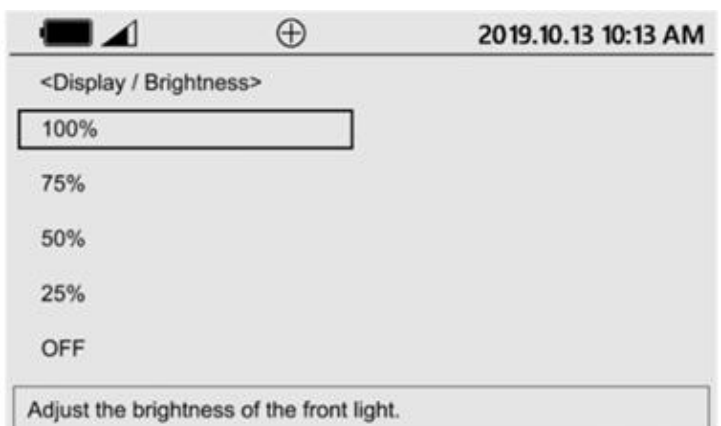
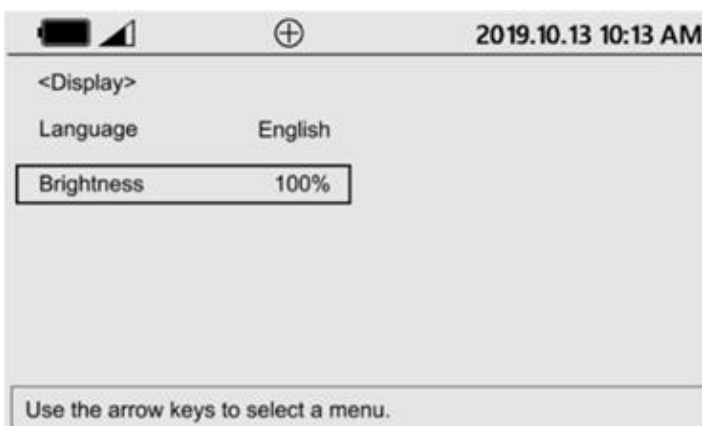


- Brightness

Use the arrow keys to select the brightness of the front light.

The selected brightness will be applied when you turn on the light.

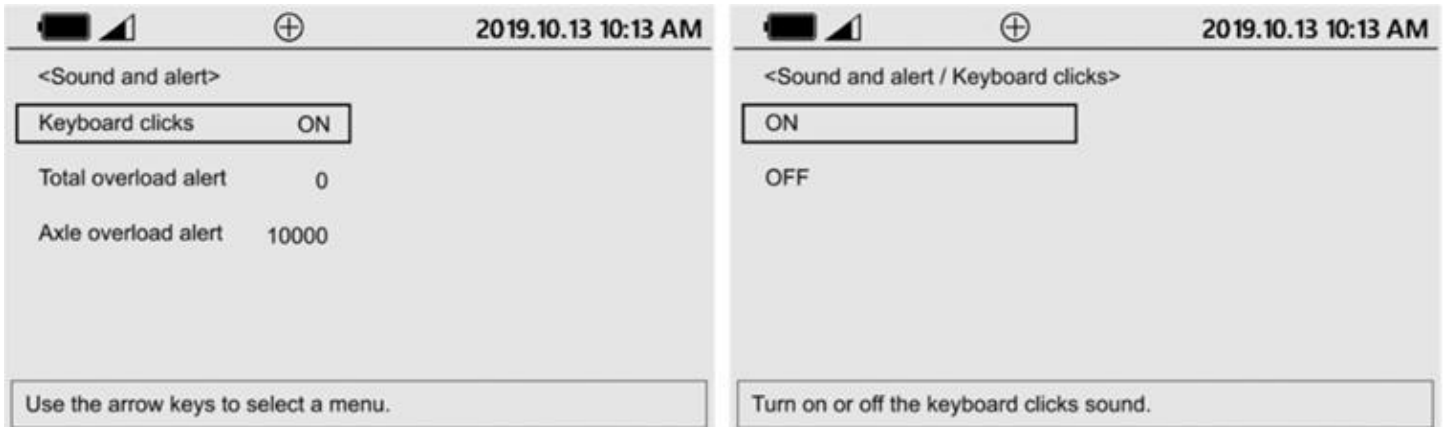
Tip When the brightness of the light is set to OFF, the [LIGHT] key is not displayed on the screen.



5.2 Sound and Alert

5.2.1 Keyboard Clicks

You can turn on / off the operation sound when a key is pressed.



5.2.2 Total Overload Alert

You can turn on or off the alert tone that occurs when the measured weight is out of range.

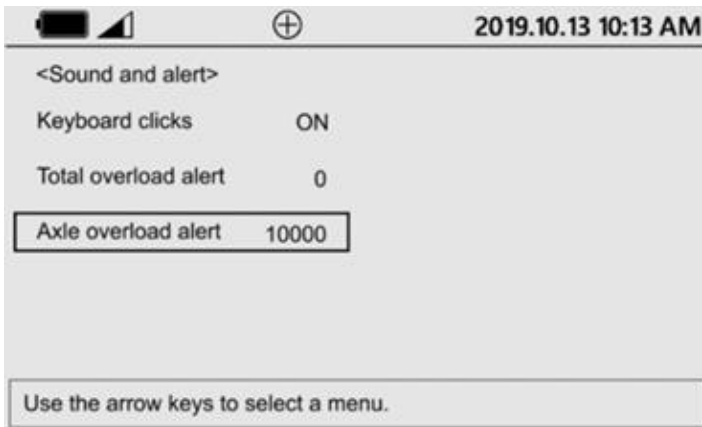
If the weight is over the set value, a beep will sound. If set to '0', no beep will sound.



5.2.3 Axle Overload Alert

You can turn on or off the alert alarm that occurs when the measured axles weight is beyond the overload reference range.

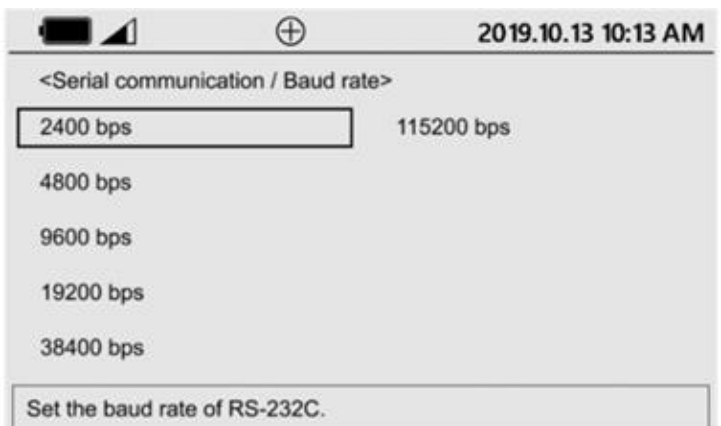
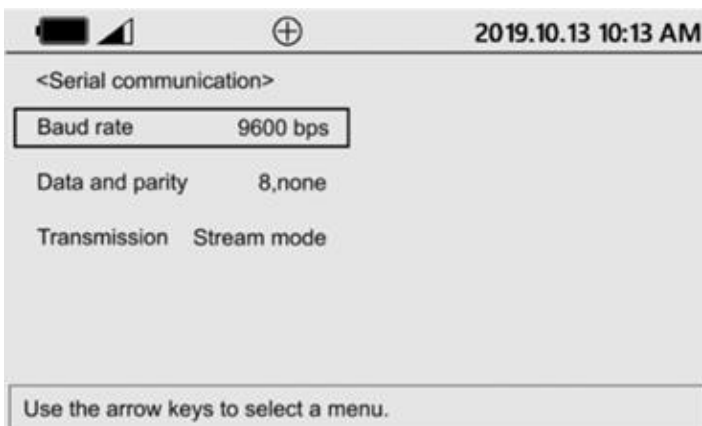
If the weight is over the setting value, beep will sound. If set to '0', no beep will sound.



5.3 Serial Communications

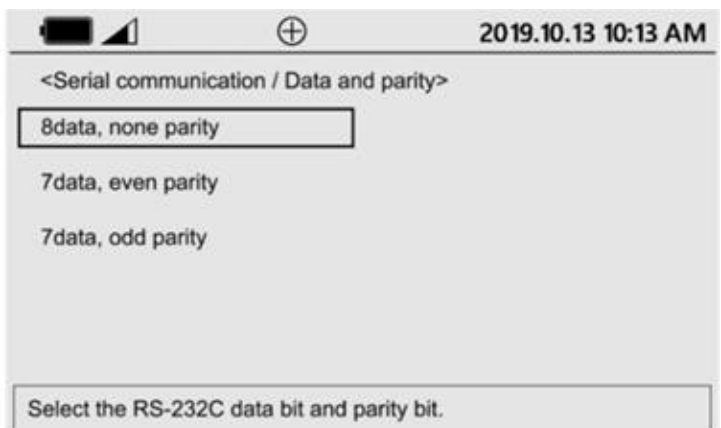
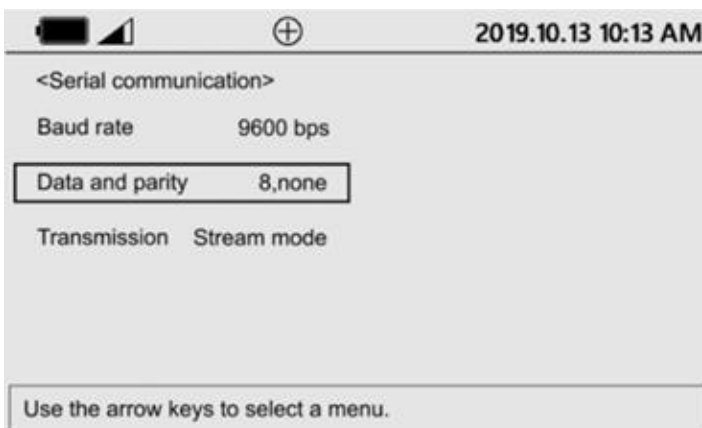
5.3.1 Baud Rate

Set the communication speed for serial communication with PC.



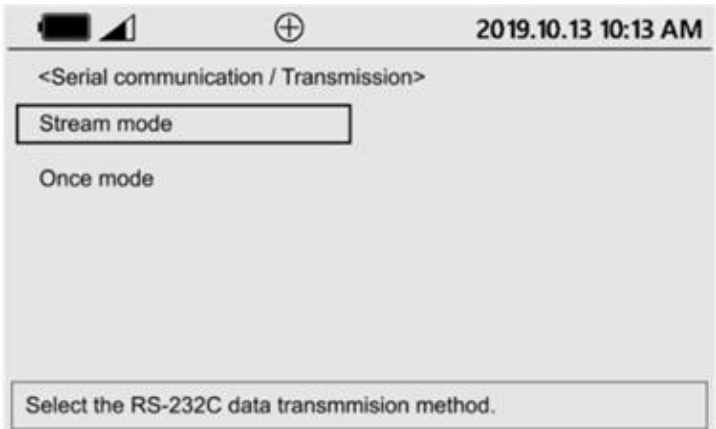
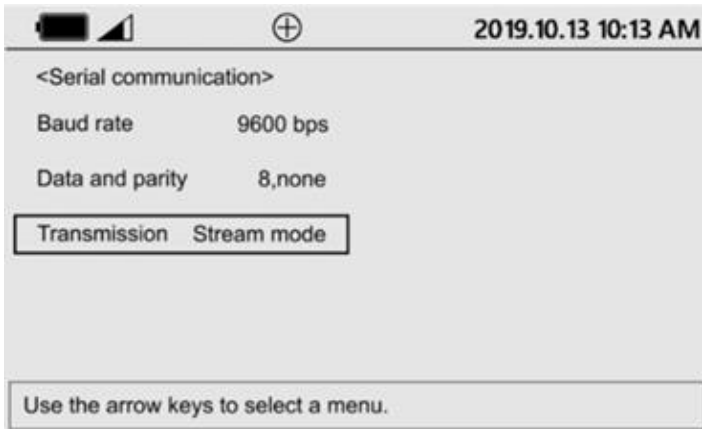
5.3.2 Data and Parity Bit

Set the data & parity bit for serial communication with PC.



5.3.3 Transmission Method

Set the transmission timing mode for serial communication with PC.



Tip If you select Once mode, the data is transmitted only once when the [PRINT] key is pressed.

Tip Transmission format (example of connection of two axes)

When setting the stream, after the weight of the first wheel is transmitted, the weight of the second wheel is transmitted, and the cycle is repeatedly transmitted.

In case of set to Once mode, when you press the [PRINT] key, the weight of the first wheel is transmitted and then the weight of the second wheel is transmitted, and the total weight is transmitted.

- 1) Start: STX (0x02)
- 2) SN: 5 ASCII code + (0x2C)
- 3) Vehicle ID: 10 ASCII code + (0x2C)
- 4) Axle load scales number: 2 ASCII code + (0x2C)
- 5) Weight: 5 ASCII code + (0x2C)
- 6) Unit: 2 ASCII code + (0x2C)
- 7) End: ETX (0x03)

Tip In WIM mode, it operates only when transmission of serial communication is in Once mode.

Tip For vehicle class type, the transmission format is as follows. Numbers 9 to 18 are repeated as many as the number of axles.

- 1) Start: STX (0x02)
- 2) SN: 5 ASCII code + (0x2C)
- 3) Time: 17 ASCII code + (0x2C)
- 4) Vehicle ID: 10 ASCII code + (0x2C)
- 5) Operation mode: 3 ASCII code + (0x2C)
- 6) Vehicle Class Type: 5 ASCII code + (0x2C)
- 7) GVW: 5 ASCII code + (0x2C)
- 8) Unit: 2 ASCII code + (0x2C)

- 9) AVW: 5 ASCII code + (0x2C)
- 10) Unit: 2 ASCII code + (0x2C)
- 11) Axle load scales number: 2 ASCII code + (0x2C)
- 12) Left Weight: 5 ASCII code + (0x2C)
- 13) Unit: 2 ASCII code + (0x2C)
- 14) Axle load scales number: 2 ASCII code + (0x2C)
- 15) Right Weight: 5 ASCII code + (0x2C)
- 16) Unit: 2 ASCII code + (0x2C)
- 17) Excess: 5 ASCII code + (0x2C)
- 18) Unit: 2 ASCII code + (0x2C)
- 19) Axle load scales number: 2 ASCII code + (0x2C)
- 20) Total Weight: 5 ASCII code + (0x2C)
- 21) Unit: 2 ASCII code + (0x2C)
- 22) End: ETX (0x03)

5.4 Printer Settings

5.4.1 Print Items

You can select the items to be printed. If no change is made, all are ON.

2019.10.13 10:13 AM

<Printer setting>

Print items

Header

ON

Copies

1 copy

Header text

Line feed

1 line feed

Printer

ON

Density

LIGHT

Use the arrow keys to select a menu.

2019.10.13 10:13 AM

<Printer setting / Print items>

S/N

ON

Excess

ON

ID

ON

Driver / Confirm

ON

Weighing mode

ON

Each plate

ON

Left / Right

ON

Select print items.

S/N	0001
Date	2023-10-13 12:34
ID	1234
Mode	SEQ
Veh class	1-1
GVW	16880kg
AVW	16880kg
1 axle	3340+ 3590= 6930kg
2 axle	3160+ 3210= 6370kg
Left	6500kg (48.9%)
Right	6800kg (51.1%)
Total	13300kg
Excess	0kg
Driver	
Confirm	

[Standard]

WEIGHBRIDGE STATION BRIGY. SAN JUAN STA RITA SAMAR KM095 000	
S/N	0001
Date	2023-10-13 12:34
ID	1234
Mode	SEQ
Veh class	1-1 0----0
GVW	16880kg
AVW	13500kg
1 axle	2000+ 2500= 4500kg
Excess	0kg
2 axle	2000+ 2400=4400kg
Excess	0kg
Left	4500kg (50.6%)
Right	4400kg (49.4%)
Total	8900kg
Excess	0kg
Driver	
Confirm	

[OK in Vehicle class with Header]

WEIGHBRIDGE STATION BRIGY. SAN JUAN STA RITA SAMAR KM095 000	
S/N	0001
Date	2023-10-13 12:34
ID	1234
Mode	SEQ
Veh class	1-1 0----0
GVW	16880kg
AVW	13500kg
1 axle	3340+ 3590= 6930kg
Excess	0kg
2 axle	6800+ 6850=13650kg
Excess	150kg
Left	10140kg (49.3%)
Right	10440kg (50.7%)
Total	20580kg
Excess	3700kg
Driver	
Confirm	

5.4.2 Copies

You can select the number of prints.

2019.10.13 10:13 AM

<Printer setting>

Print items

Header

ON

Copies

1 copy

Header text

Line feed

1 line feed

Printer

ON

Density

LIGHT

Use the arrow keys to select a menu.

2019.10.13 10:13 AM

<Printer setting / Copies>

1 copy

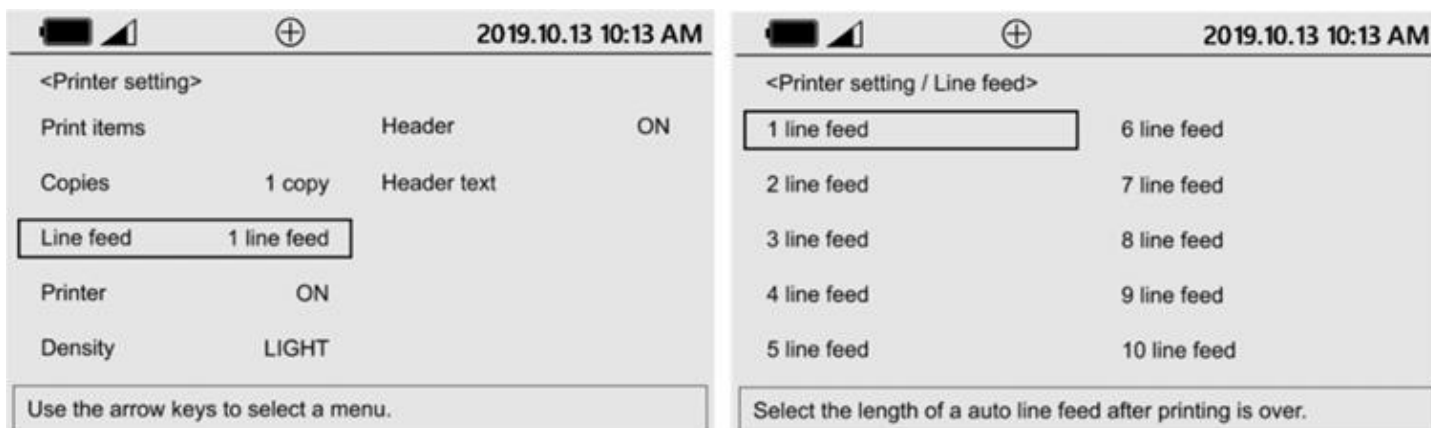
2 copy

3 copy

Select the number of copies.

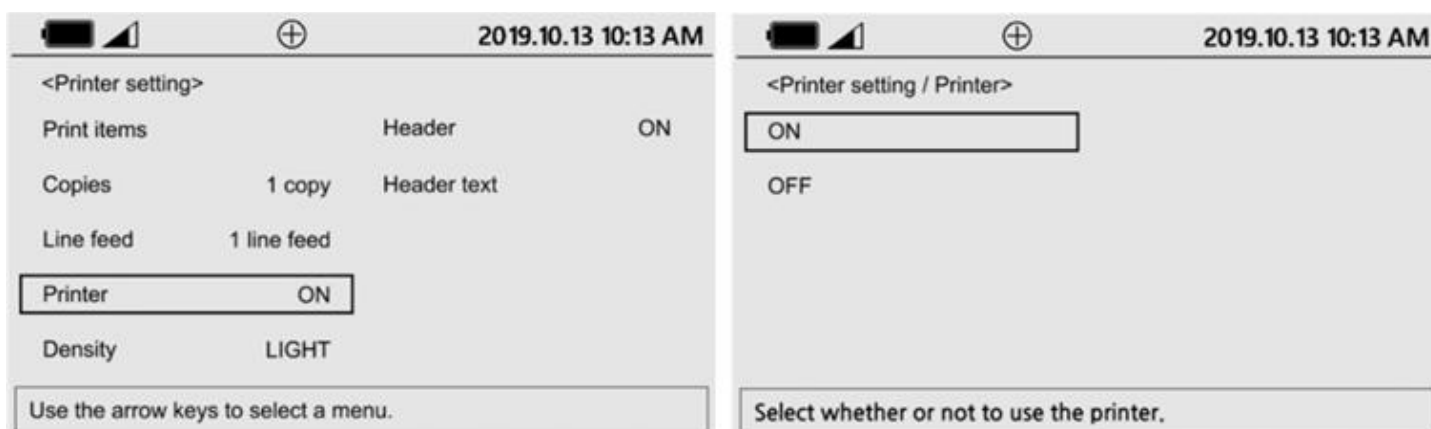
5.4.3 Line Feed

After printing, you can select the interval of automatic line feed.



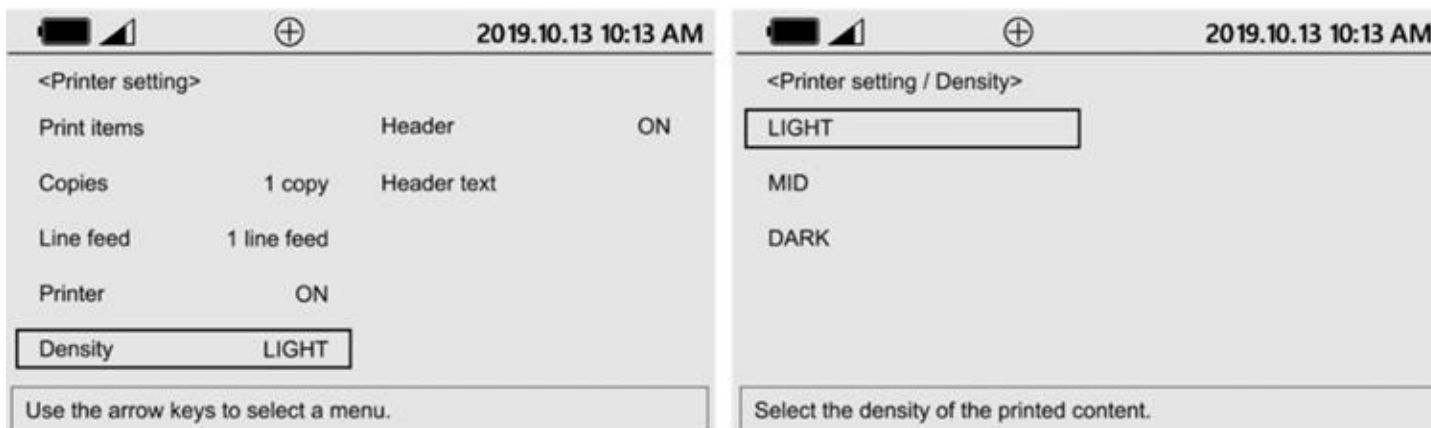
5.4.4 Printer ON / OFF

When OFF, the [PRINT] key is displayed as the [SAVE] key, and only the measurement data is saved when the key is pressed.



5.4.5 Density

You can change the print density.



5.4.6 Header ON / OFF

When ON, header text is enabled.

2019.10.13 10:13 AM

<Printer setting>

Print items	Header ON	
Copies	1 copy	Header text
Line feed	1 line feed	
Printer	ON	
Density	LIGHT	

Use the arrow keys to select a menu.

2019.10.13 10:13 AM

<Printer setting / Header>

ON

OFF

Select whether or not to use the print header.

5.4.7 Header Text

Enter the text for the print header. You can write up to 3 lines.

2019.10.13 10:13 AM

<Printer setting>

Print items	Header	ON
Copies	1 copy	Header text
Line feed	1 line feed	
Printer	ON	
Density	LIGHT	

Use the arrow keys to select a menu.

2019.10.13 10:13 AM

<Printer setting / Header text>

▶ TEST HEADER MESSAGE

Enter up to 3 lines of text to be include in the print header.

RESET DELETE ENG. SPACE LINE

5.5 Measurement

5.5.1 Mode Selection

You can choose one of three weighing mode.

2019.10.13 10:13 AM

<Measurement>

Mode	Sequence	Correction Mode	OFF
Number of scales	2	Weighing unit	kg
WIM print	5sec	Minimum division	10kg
WIM reset	Manual		
Correction Factor	1.00000		

Use the arrow keys to select a menu.

2019.10.13 10:13 AM

<Measurement / Mode>

Sequence

WIM

Simultaneous

2x weighing

Wide weighing

Please select a weighing mode.

5.5.2 Number of Scales

If simultaneous mode is selected, select the number of axle load scales be connected.

When select sequence mode and WIM mode, the number of axle load scales is fixed to 2.

2019.10.13 10:13 AM			
<Measurement>			
Mode	Simultaneous	Correction Mode	OFF
Number of scales	4	Weighing unit	kg
WIM print	5sec	Minimum division	10kg
WIM reset	Manual		
Correction Factor	1.00000		
Use the arrow keys to select a menu.			

2019.10.13 10:13 AM	
<Measurement / Number of scales>	
2	
4	
6	
8	
Select the number of wireless scales you are using.	

5.5.3 Auto Print time at WIM mode

If you select WIM mode, select the time at which the data will automatically be printed after the vehicle has passed.

It is not possible to change in the sequence mode and simultaneous mode.

2019.10.13 10:13 AM			
<Measurement>			
Mode	Sequence	Correction Mode	OFF
Number of scales	2	Weighing unit	kg
WIM print	5sec	Minimum division	10kg
WIM reset	Manual		
Correction Factor	1.00000		
Use the arrow keys to select a menu.			

2019.10.13 10:13 AM	
<Measurement / WIM print>	
5sec	10sec
6sec	11sec
7sec	12sec
8sec	13sec
9sec	14sec
After the vehicle has passing, select the time to auto-print.	

5.5.4 Auto Reset Time at WIM mode

In case of WIM mode selection, select the time to be initialized for the next weighing after printing.

For example, if you set it to 3 seconds, the measurement data remains displayed on the screen for 3 seconds after printing and is initialized for the next measurement.

It is not possible to change in the sequence mode and simultaneous mode.

2019.10.13 10:13 AM			
<Measurement>			
Mode	Sequence	Correction Mode	OFF
Number of scales	2	Weighing unit	kg
WIM print	5sec	Minimum division	10kg
WIM reset	Manual		
Correction Factor	1.00000		
Use the arrow keys to select a menu.			

2019.10.13 10:13 AM	
<Measurement / WIM reset>	
Manual	5sec
1sec	6sec
2sec	7sec
3sec	8sec
4sec	9sec
After printing, select the time when the screen will reset.	

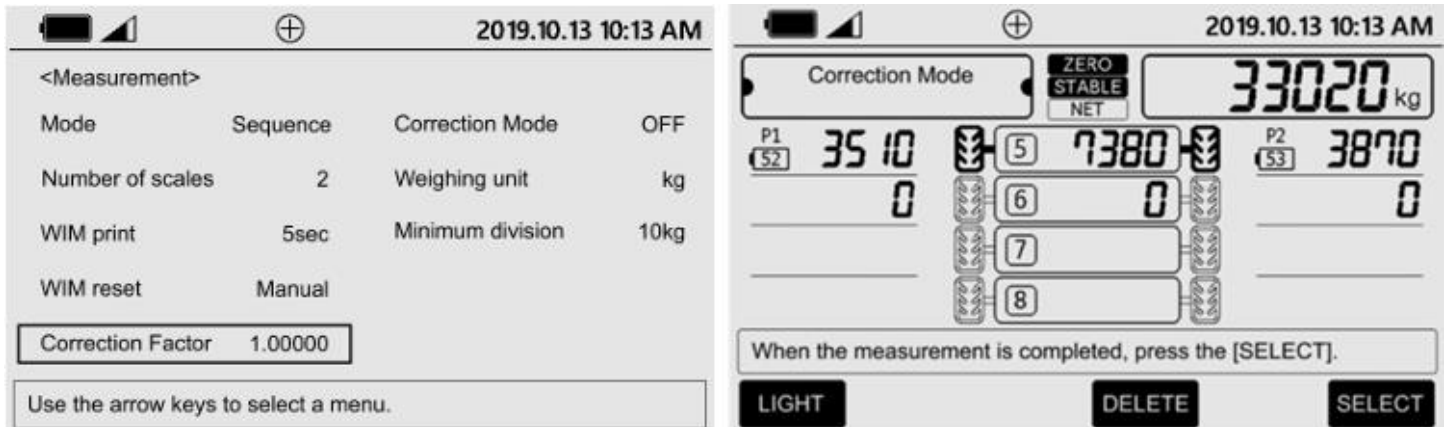
5.5.5 Correction Factor

Function to calculate the weight correction factor by the value measured in truck scale.

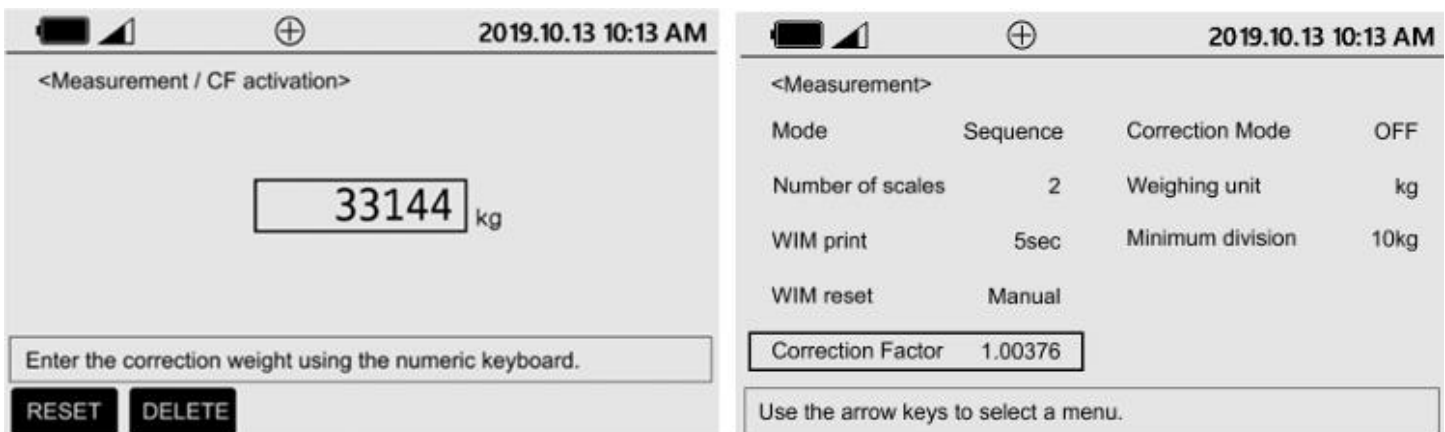
Tip Correction factor 1.00000 is a value when no weight compensation is performed.

1) If you select the 'Correction Factor', the 'Correction Mode' is displayed in the vehicle number field and the weighing screen appears.

The right screen is an example of a screen that is measuring by the sequence mode.



2) After the measurement is completed, press the [SELECT] key on the secondary keyboard, enter the weight measured in the truck scale, and press the [ENTER] key to save the correction factor and it is automatically calculated and displayed.



5.5.6 Apply Correction Factor

Determines whether the correction factor is applied.

When the correction mode is ON, minimum divisions is 1kg interval increments and the correction icon is displayed at the top of the screen and the correction factor are applied to the measured values.

Tip If OFF is selected, the correction factor is not applied when measuring.

2019.10.13 10:13 AM

<Measurement>

Mode	Sequence	Correction Mode	OFF
Number of scales	2	Weighing unit	kg
WIM print	5sec	Minimum division	10kg
WIM reset	Manual		
Correction Factor	1.00376		

Use the arrow keys to select a menu.

2019.10.13 10:13 AM

<Measurement / CF activation>

ON

OFF

When ON is selected, the weight correction constant is applied.

2019.10.13 10:13 AM

ID 1234

ZERO STABLE NET

33 144 kg

P1 3523 52 0

5 7408 6 0

7 8 0

P2 3885 53 0

Wait 6 axle weighing.. Press [ENTER] after measurement.

LIGHT RECORD ID DELETE FEED PRINT

5.5.7 Measurement Unit

The unit of measurement can be changed to kg or lb.

2019.10.13 10:13 AM

<Measurement>

Mode	Sequence	Correction Mode	OFF
Number of scales	2	Weighing unit	kg
WIM print	5sec	Minimum division	10kg
WIM reset	Manual		
Correction Factor	1.00394		

Use the arrow keys to select a menu.

2019.10.13 10:13 AM

<Measurement / Weighing unit>

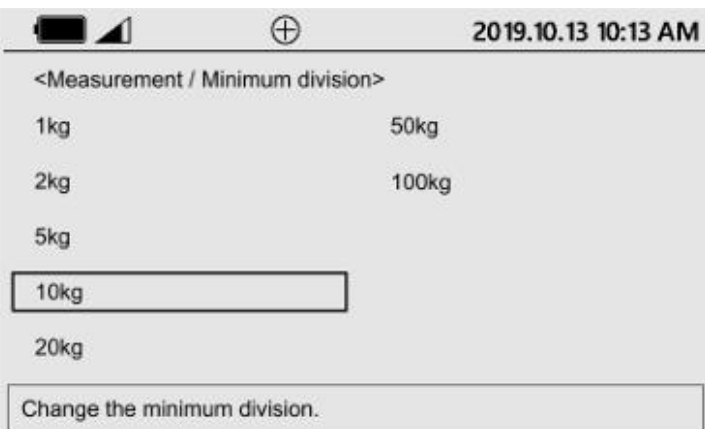
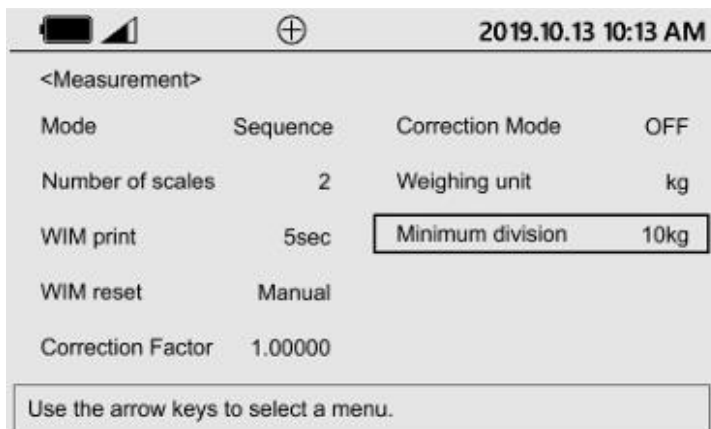
kg

lb

Please select a weighing unit.

5.5.8 Minimum Division

The unit of minimum division can be changed to kg or lb.



Tip Initial value is 10 kg, and precision cannot be guaranteed when changing to a small value. However, when applying calibration, it is recommended to change the minimum scale to 1kg for detailed display.

5.6 USB and Memory

5.6.1 USB Backup

Data stored in the internal memory can be backed up to USB memory.

CAUTION

- Never remove the USB memory stick or do not turn off the power during backup.
- USB memory formatted with FAT (or FAT16, FAT32) must be used.
- NTFS (exFAT) formatted products cannot be used.

2019.10.13 10:13 AM

<USB and memory>

Backup to USB memory

Delete internal memory

Registration from USB

Memory usage : [3 / 99999]

Use the arrow keys to select a menu.

2019.10.13 10:13 AM

<USB and memory / Backup to USB memory>

Yes

No

Do you want to run USB memory backup?

2019.10.13 10:13 AM

<USB and memory / Backup to USB memory>

Progress bar: [██████████]

Saving data on USB memory..

Filename is the date when backup is carried out, and data format is CSV (Excel file format).

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	S/N	Date	Time	Type	Comp	ID	Unit	P1	P2	Subtotal	P3	P4	Subtotal	P5	P6	Subtotal
2	1	2019-08-05	10:05	WIM	Disable	123	kg	3340	3490	6830	3160	5166	8326	1248	1566	2814
3	2	2019-08-06	10:05	SEQ	Disable	JP5076	kg	1232	1231	2463	1511	1515	3026			
4	3	2019-08-07	20:08	SIM	Enable	EN3890	kg	1351	5115	6466	15151	151	15302	1515	51131	52646

Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
P7	P8	Subtotal	P9	P10	Subtotal	P11	P12	Subtotal	P13	P14	Subtotal	P15	P16	Subtotal	Tare	Total
4894	1231	6125	5484	1231	6715											30810
															1000	5489
3151	15315	18466	1531	5131	6662	3151	1531	4682	3511	19310	22821	1321	1321	2642		129687

Tip Internal memory can store data of 100,000 vehicles. If the memory space is less than 100 vehicle's data, a warning message is displayed when you try to save data by pressing the [PRINT] or [SAVE] key.

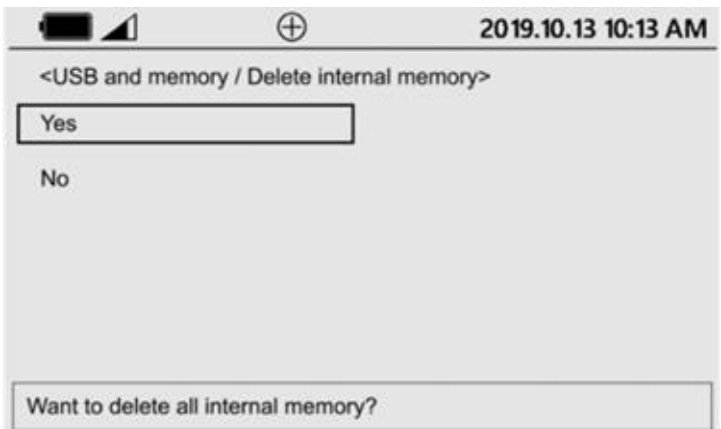
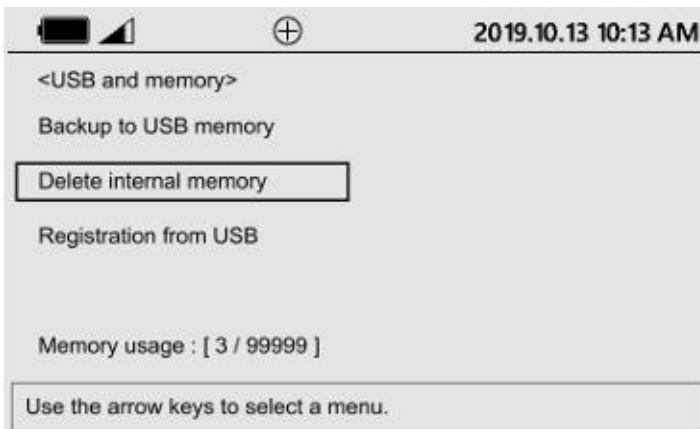
Please back up your data on a USB and delete the internal memory.

5.6.2 Delete Internal Memory

You can delete all the data stored in the internal memory.

CAUTION

Please note that if you delete the internal memory, it can't be recovered again.



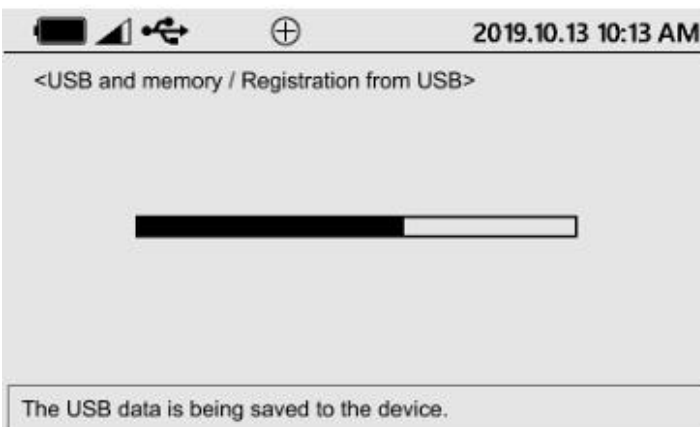
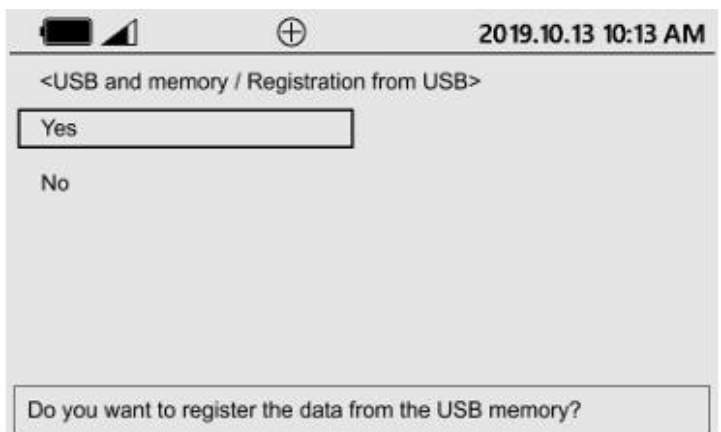
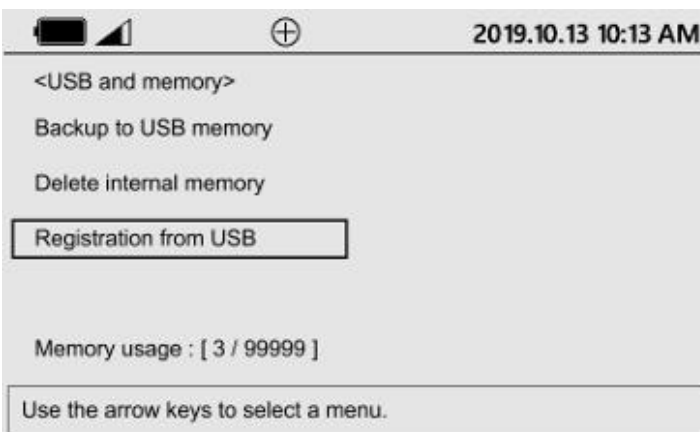
5.6.3 Registration from USB

To upload data to the device using a USB memory by editing or creating new data on a PC.

Edit or create data in the same format as CSV (Excel file format) for USB backup, save it as 'upload.csv' in USB memory, and upload it to the device.

⚠ CAUTION

This function must be used only for data recovery purposes such as deletion of measurement data due to mistakes, and the manufacturer and vendor does not take any responsibility for illegal activities such as manipulation of measurement data.



5.7 Maintenance

5.7.1 Date and time

Set the current date and time.

Tip Depending on the temperature and the surrounding environment, an error may occur. Therefore, please re-set the time once a month.

The left screenshot shows the maintenance menu with the following options: <Maintenance>, Date and time (highlighted), Test mode, and Firmware version. A footer message reads: 'Use the arrow keys to select a menu.'

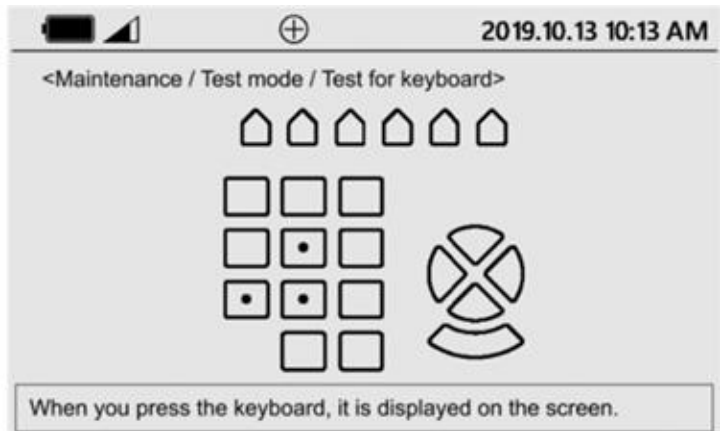
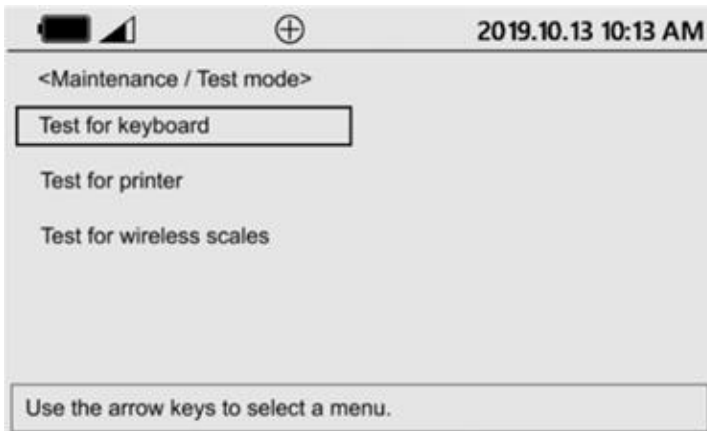
The right screenshot shows the date and time input screen. The title is '<Maintenance / Date and time>'. The date is displayed as 2019.10.13 and the time as 10:13. Below the input fields, a message reads: 'Set the current date and time using numeric keyboard.' At the bottom, there are two buttons: RESET and DELETE.

5.7.2 Test Mode

Each function of this product can be tested easily.

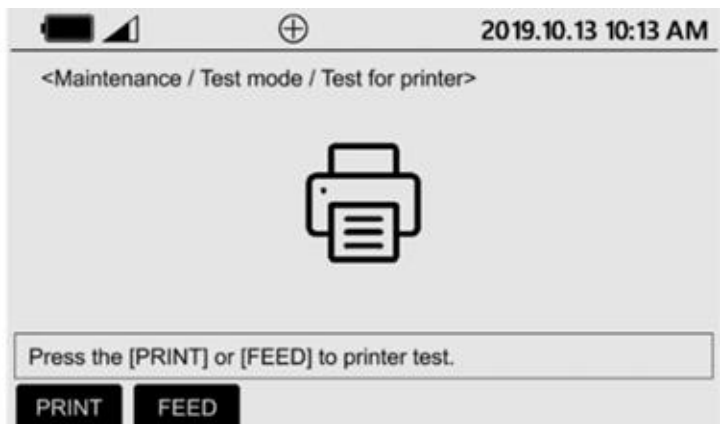
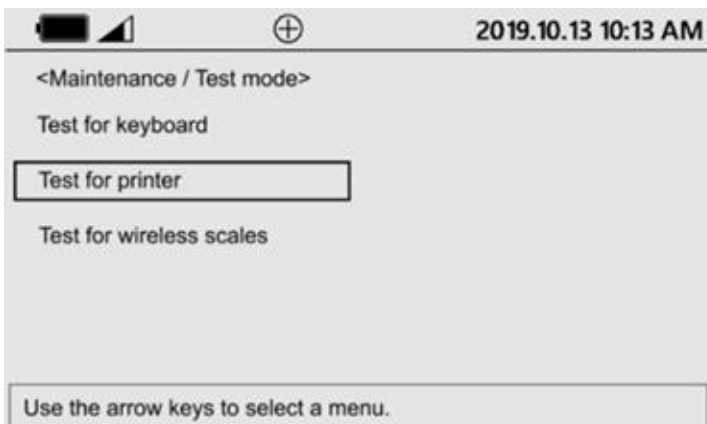
The screenshot shows the maintenance menu with the following options: <Maintenance>, Date and time, Test mode (highlighted), and Firmware version. A footer message reads: 'Use the arrow keys to select a menu.'

[Keyboard Test]



① **Tip** [ON / OFF], [MENU / ESC] keys do not appear on the screen.

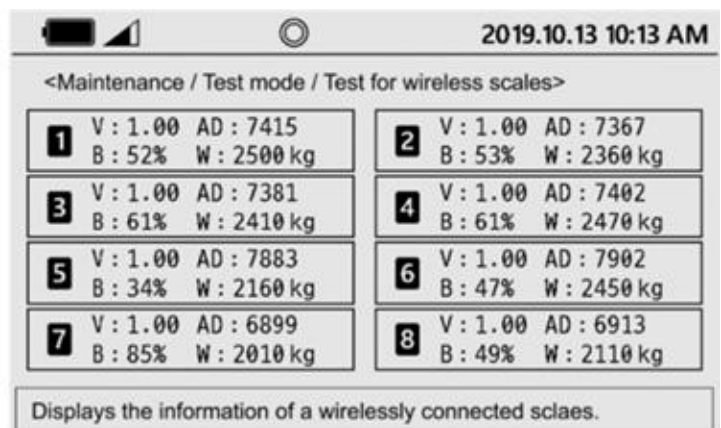
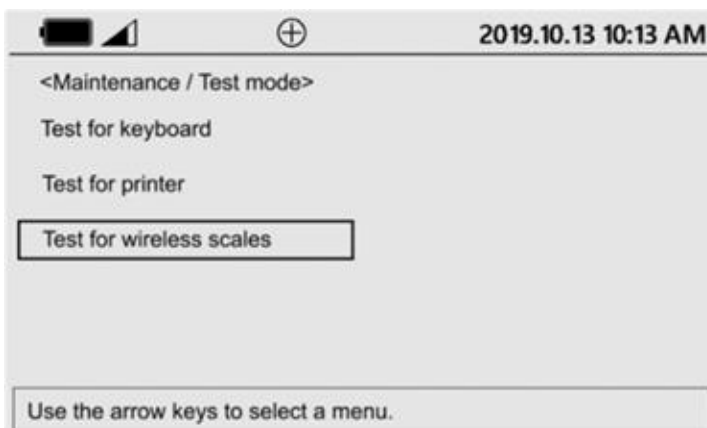
[Printer Test]



[Axle Load Scales Test]

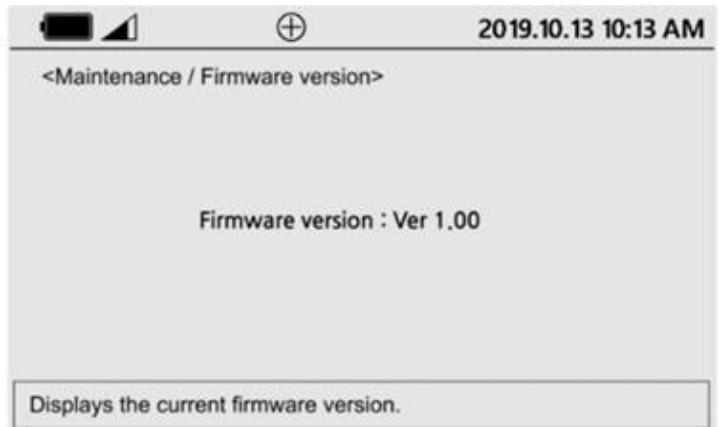
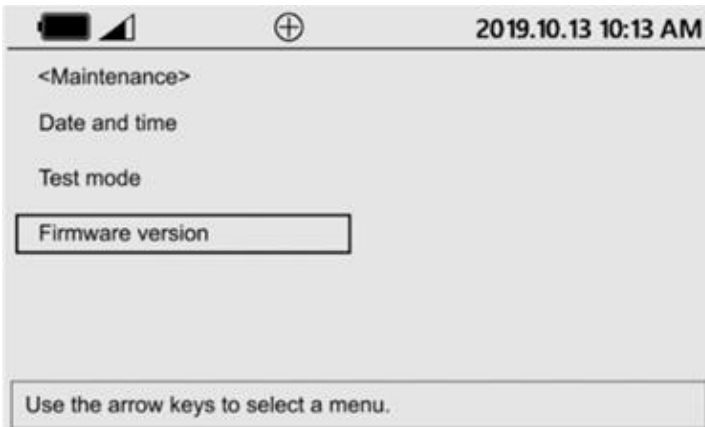
The information of axle load scales that has been wireless connected is displayed.

(version, A/D conversion value, battery remains, weight value)



5.7.3 Firmware Version

Displays firmware version information.



5.8 Firmware Update

Updating firmware is done through USB memory stick.

⚠ CAUTION

While updating, DO NOT remove the USB memory stick or turn the power off.

USB stick formatted with FAT (or FAT16, FAT32) must be used. NTFS (exFAT) formatted products cannot be used.

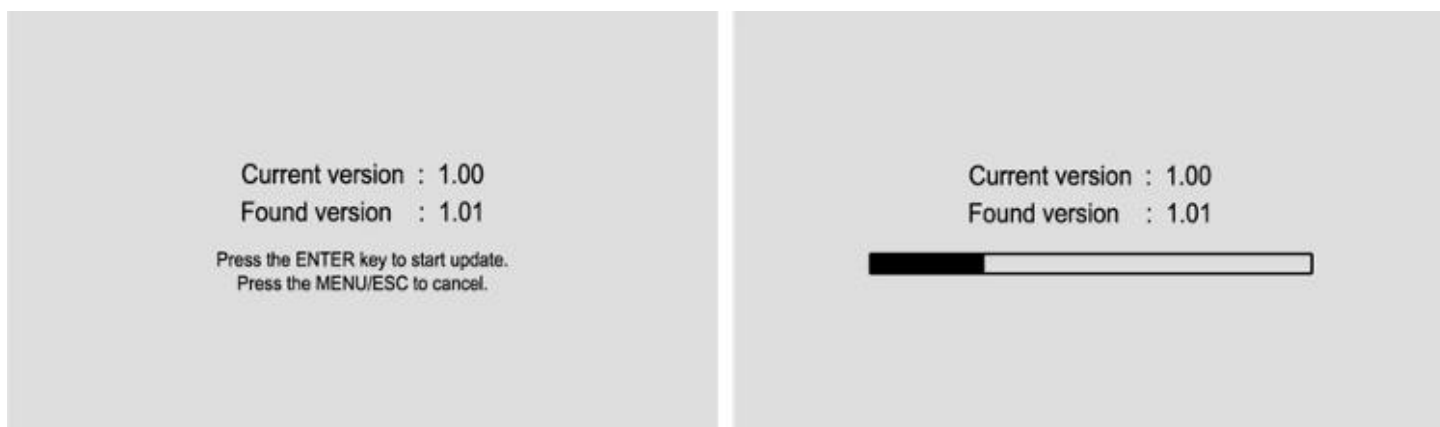
If unsure of the format of the USB stick, format with FAT32.

1) After connecting the USB stick to the USB-A port, turn on the power while pressing the [ENTER] key. Press the [ENTER] key lightly until the 'Device firmware update' is displayed. The screen below shows the version of the boot loader.



2) When the firmware file is recognized, the current and recognized versions of firmware are displayed on the screen. Press the [ENTER] key for the update.

When the update is complete, it will re-start automatically.

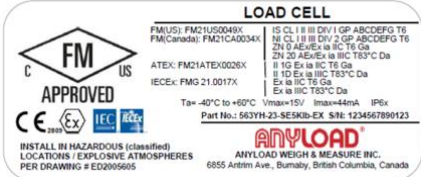


6. Error Messages

Display	Description
Check 01	Axle load scales are not detected, Check battery remain of axle load scales and make sure that the product is within the radio effective range.
Check 02	The power will be turned off automatically because the battery is very low. Please operate after charging the battery.
Check 03	The weight measured at the plate has exceeded the maximum capacity. <i>Do not exceed the maximum weight.</i>
Check 04	A problem occurred in the charging system (or inner battery). Make sure to use the provided power adapter. If this continues, contact your dealer.
Check 05	No response of the wireless module. If this continues, contact your dealer.
Check 06	USB device is not detected. Make sure that the USB memory stick is mounted, or make sure that it is formatted with FAT (or FAT16, FAT32)
Check 07	Something wrong with the printer. Make sure that the printer cover is closed properly.
Check 08	No paper for printer. Replace the paper roll.
Check 09	Invalid measurement in WIM mode. Press the [RESET] key to initialize the axle load scales.
Check 10	No file in the USB memory or the file name is invalid. Use the file saved as upload.csv.
Check 11	Data format or date and time alignment of the file to be registered is incorrect. Check the data type and xx-line of the file.

7. Compliance

Indicative Markings:

CE Certification 	The CE mark indicates that the manufacturer guarantees that the product complies with the requirements of the relevant EU Directives.
NTEP (US Legal-for-trade) Certification 	The NTEP mark denotes that the product is legal-for-trade certified in the US and other recognizing jurisdictions by meeting the National Type Evaluation Program (NTEP) requirements set by the National Conference of Weights and Measures (NCWM) in the United States of America.
OIML MAA Certification 	The OIML Mutual Acceptance Arrangement (MAA) mark indicates that the product is legal-for-trade certified in the EU, Australia, New Zealand, Canada, and other recognizing jurisdictions by meeting the standards set by the International Organization of Legal Metrology (OIML).
FM / Explosive Atmospheres Certification 	Important <i>Every single certified non-incendive / intrinsically safe product MUST bear this label, which shall indicate that the product is FM (US & Canada), ATEX, and IECEx-approved for use in potentially explosive environments in recognizing jurisdictions.</i> The model should also have an “-EX” suffix in its part number.

8. Specifications

8.1 General Specifications

DISPLAY	4.2" e-ink display & LED front-light
CASE	Watertight pelican case
MEMORY	1000 vehicle ID
SCALE CONNECTION	Up to 8 scales
PRINTER	Direct line thermal printer
WIRELESS METHOD	Zigbee
USB-A PORT	(1) For memory stick (2) Firmware upgrade (3) Optional interface for cabled scales
USB-B PORT	(1) Battery charging (2) Serial communication for PC
BATTERY	Built in Li-ion pack
CHARGER	Quick charge 2.0 or 3.0
OPERATING TIME	Approx. 600hrs (when the printer is not used)

OPERATING TEMPERATURE	-20°C ~ 60°C / -4°F ~ 140°F
OPERATING HUMIDITY	85% R.H. (no condensation)
STORAGE TEMPERATURE	-20°C ~ 60°C / -4°F ~ 158°F
STORAGE HUMIDITY	85% R.H. (no condensation)
PRODUCTION WEIGHT	2.7kg (6lb)

8.2 Printer Specifications

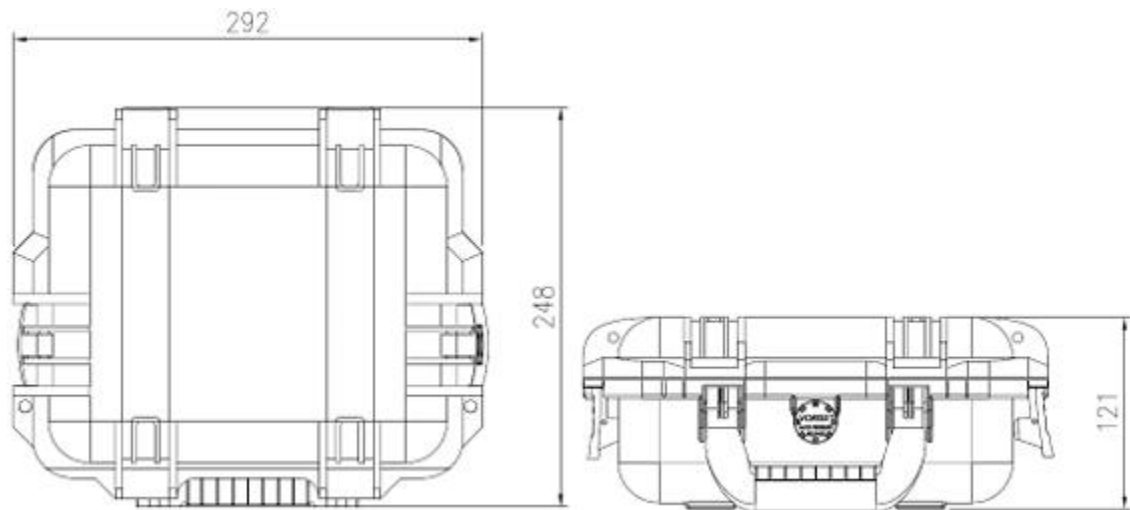
PRINT METHOD	Thermal mechanism
OUTPUT MODE	Black and white
RESOLUTION	203 dpi
PRINT SPEED	50~80 mm/s
PAPER SPECIFICATIONS	57 mm ± 0.5 mm (width) / ≤40 mm (Ø)
PRINT WIDTH	48 mm
PAPER THICKNESS	0.05 ~ 0.1 mm
POWER LOADING	5 ~ 9VDC, 1.5A
DIMENSIONS	77 x 77 x 48 mm

8.3 Wireless Specifications

TRANSEIVER CHIPSET	Silicon Labs EM357 SoC
DATA RATE	RF 250 Kbps, Serial up to 1 Mbps
INDOOR/URBAN RANGE SERIAL DATA INTERFACE	60 m (200ft)
OUTDOOR RANGE	1200 m (4000ft)
TRANSMIT POWER	3.1 mW (+5 dBm) / 6.3 mW (+8 dBm) boost mode
RECEIVER SENSITIVITY	-100 dBm / -102 dBm boost mode
SERIAL DATA INTERFACE	UART, SPI
CONFIGURATION METHOD	API or AT commands, local or over-the-air (OTA)
FREQUENCY BAND	ISM 2.4 GHz
PROTOCOL	XBee 802.15.4 (Proprietary 802.15.4)
INTERFERENCE IMMUNITY	DSSS (Direct Sequence Spread Spectrum)
ENCRYPTION	128-bit AES
RELIABLE PACKET DELIVERY	Retries / Acknowledgements

FILTRATION OPTIONS	PAN ID, Channel, and 64-bit addresses
CHANNELS	16 channels
SUPPLY VOLTAGE	2.1 to 3.6V
TRANSMIT CURRENT	33 mA @ 3.3VDC / 45 mA boost mode
RECEIVE CURRENT	28 mA @ 3.3VDC / 31 mA boost mode
POWER-DOWN CURRENT	<1 uA @ 25°C
APPROVALS	FCC, IC(NORTH AMERICA), ETSI(EUROPE), TELEC, KC

8.4 Dimensions Specifications (Unit: mm)



Please Contact Our Authorized Dealer for Technical Assistance:

Notes:

V1.0.0
PN-250801-A

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