

# Yamato

## OPERATION MANUAL

**Digital Platform Scale: DP-5602**  
**Digital Indicator: EDI-562**



Read this manual and keep it handy.

**Yamato Scale Co., Ltd.**

EXPORT-1302



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## Safety Precautions

Read carefully SAFETY PRECAUTIONS before use, and follow all the instructions. SAFETY PRECAUTIONS are designed for protecting users, other peoples and assets from physical and financial damages by your safety practices. This OPERATION MANUAL should be kept for the entire service life of the product. The hazardous levels and descriptions are defined as follows:

	<b>Danger</b>	:	Denotes where mishandling without compliance with this sign has a potential risk of suffering death or serious injury.
	<b>Warning</b>	:	Denotes where mishandling without compliance with this sign has a potential risk of suffering injury or damage on the property.
	<b>Caution</b>	:	Denotes a potential risk that may result in injury or damage on the equipment if operated without compliance with this sign.
	<b>Inhibition</b>	:	Denotes what is inhibited.
	<b>Compulsion</b>	:	Denotes what must be followed.

NOTE: Prior to use, read carefully the following descriptions of Danger, Warning and Caution to understand and comply with them.

	<b>Danger</b>	
		To avoid electrical shock:
		1. Ground the instrument.
		2. Do not step on a power cable under the feet or a cart.
		3. Do not disassemble the indicator.
		4. Connect or disconnect a power plug by holding the plug securely.
		To avoid explosion and fire:
		Avoid use in the flammable atmosphere, because this equipment is not explosion-proof type.
		To avoid fire and electrical shock:
		If a smoke or smell is found, disconnect the power cable immediately.
		Ask the service representative to check the instrument.

 **Warning**



: To avoid injury and damage:

1. Place an item on a platform securely.
2. Unplug a power cable after use.
3. Do not adjust the inside of the instrument after removing the platform cover.
4. Do not carry a scale by the indicator. Hold the platform base.

 **Caution**



: To avoid damage:

1. Do not scratch the display panel and keys.
2. Maintain the operating voltage and working condition.
3. Do not attempt to measure items heavier than the limit.
4. Do not give a shock to the platform.



: To maintain the scale performance:

1. Avoid vibration.
2. Avoid direct sunbeam and wind from the air conditioner.
3. Place the scale on the secured base.
4. Use the instrument at temperature between -10C and 40C.
5. Work on the level place. If not level, adjust the leveling legs.

**Storage and Disposition**

**STORING PLACE**

1. Do not store the equipment in the place with high temperature/humidity or receiving direct sunlight for a long period of time. It should also be noted that substantial changes in the ambient temperature may cause condensation inside the equipment, resulting in a failure of the operation.
2. This is electronic precision equipment. Do not store it in the place where vibration and/or shock can be expected.

**DISPOSAL**

This equipment should be dumped as an industrial waste. Follow the municipal regulations when dumping it.

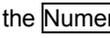
**Daily Checkup at Start Time**

Prior to operation, conduct a daily checkup and weight test to secure the correct measurement that is required by the Weights and Measures Law.

## Here are some of the functions

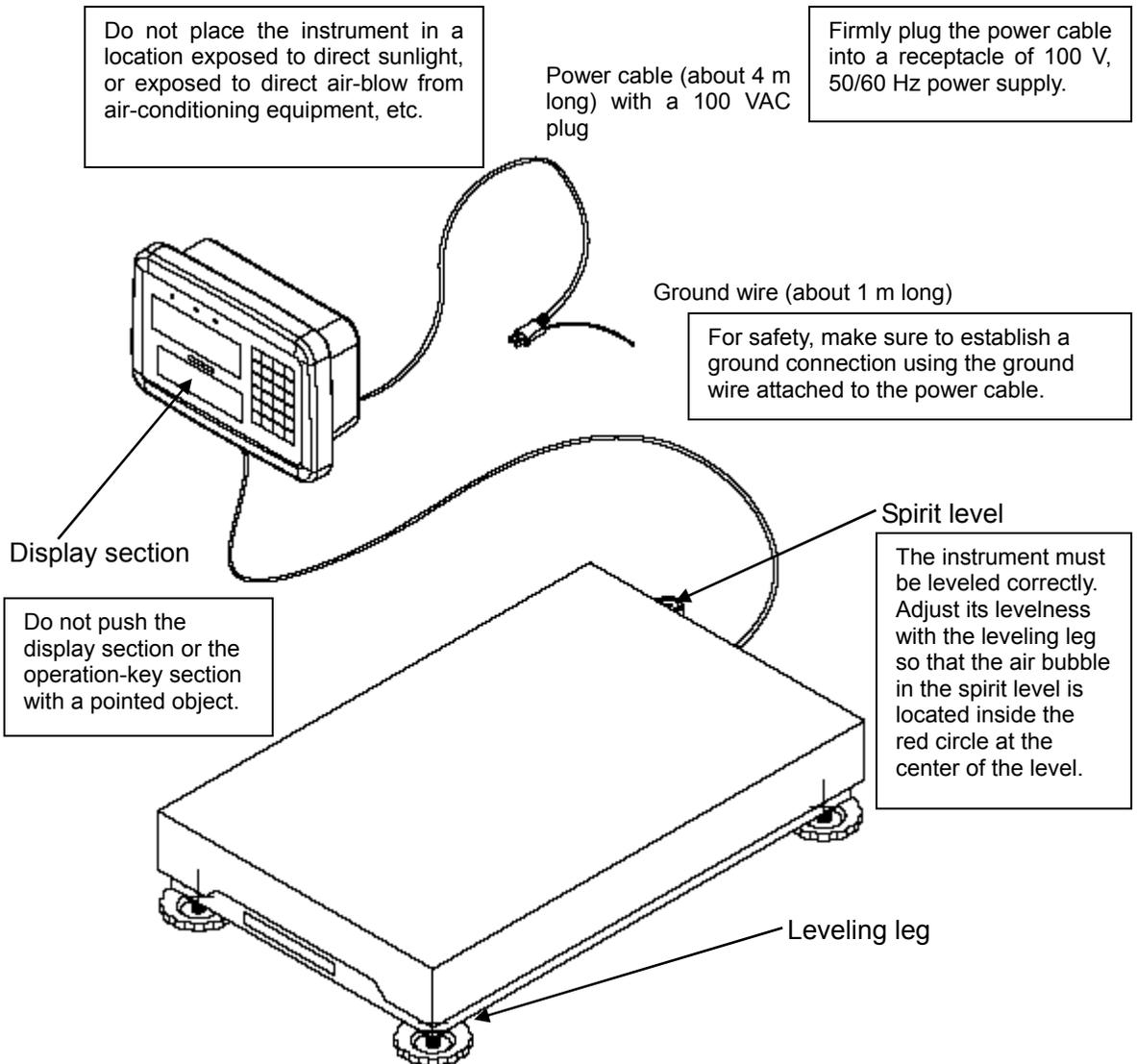
The DP-5602 allows the user to easily carry out effective weighing and counting operations. Make use of this instrument according to your needs.

This instrument has the following functions as standard.

Function/Purpose	Method	Remarks	Page
<b>Tare subtraction</b> Use this function when you wish to set the weight of any objects to be weighed or the weight of a container of such objects to "0" before weighing.	① This function can be carried out by simply touching the  key.		11
	② The setting can be made using the  keys and the  key.	The weight of the container must be measured in advance.	11
	③ A registered tare value can be set using the  key.	The weight of the container must be measured and registered in advance.	29
<b>Counting</b> Use this function when you wish to perform counting operation such as confirmation of the quantity, shortage check, etc.	① Use the  key to set the number of objects currently weighted, so that the individual weight can be set.		17
	② The  key allows the user to edit the registered individual weight.	The individual weight must be set and registered in advance.	29
<b>Check-weighing (Over/Under)</b> Use this function when you wish to perform weighing or counting of objects along with insufficient/excessive judgment.	① These limits can be set using the  and  keys.		18
	② The  key allows the user to edit the registered high and low limits.	The high and low limits must be set and registered in advance.	29
<b>Shortage guidance display</b> Use this function when you wish to produce fixed weight packages	① These limits can be set using the  and  keys.		20 to 21
	② The  key allows the user to edit the registered high and low limits.	The high and low limits must be set and registered in advance.	29
<b>Rank</b> Use this function when you wish to perform grading operation.	① Rank can be set using the  and  keys.	The high and low limits must be set and registered in advance.	23 to 24
	② The  key allows the user to edit the registered rank value.	The rank value must be set and registered in advance.	29
<b>Addition and total</b> Use this function when you wish to know the number of times measurement values are added as well as the total weight	① Addition and total display can be performed using the  and  keys.		13 to 14
	② Automatic addition can be performed using the  and  keys. The total can be displayed using the  key.		
<b>Registration</b> Use this function when you wish to register a tare value or a code number in the internal memory.	Registration can be done using the  key.		27 to 28

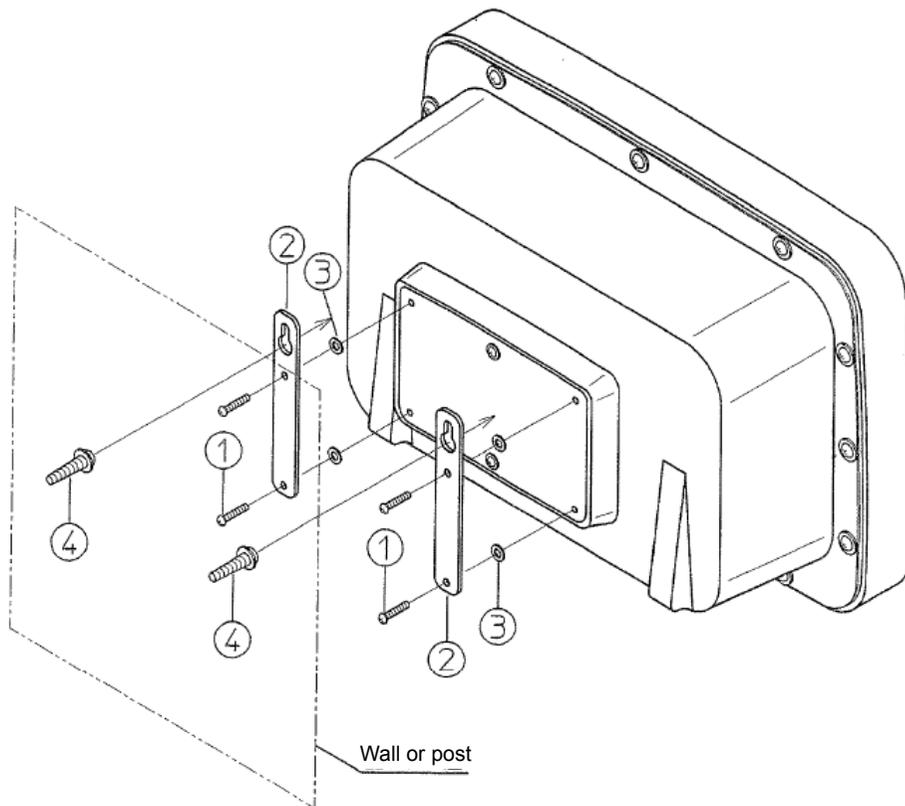
## Preparation before use

☆ Note the following points to properly use the instrument.



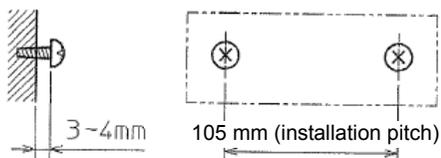
- Place the instrument on a solid floor.
- If the installed place is not flat, adjust the levelness with the leveling leg to make it stable.
- Keep the instrument away from any equipment that generates vibrations.
- The rated operating temperature of this instrument ranges from  $-10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ . Do not use the instrument outside of this temperature range.
- Unplug the power cable when the instrument is not in use or during inspection.
- When you weigh products which are easy to charge, it is recommended that a ground earth should be added (from a screw portion on the platform bottom cover).

## How to install the wall mount bracket



### Installation procedure

1. First, remove the 4 set screws ① on the back of the indicator. Then install the supplied 2 wall mount brackets ② by firmly tightening the 4 screws ① (make sure to insert the 4 washers ③ between the indicator and the 2 wall mount brackets ②).
2. Install the 2 wooden tapping screws ④ to a wall or post, as shown in the following figure.

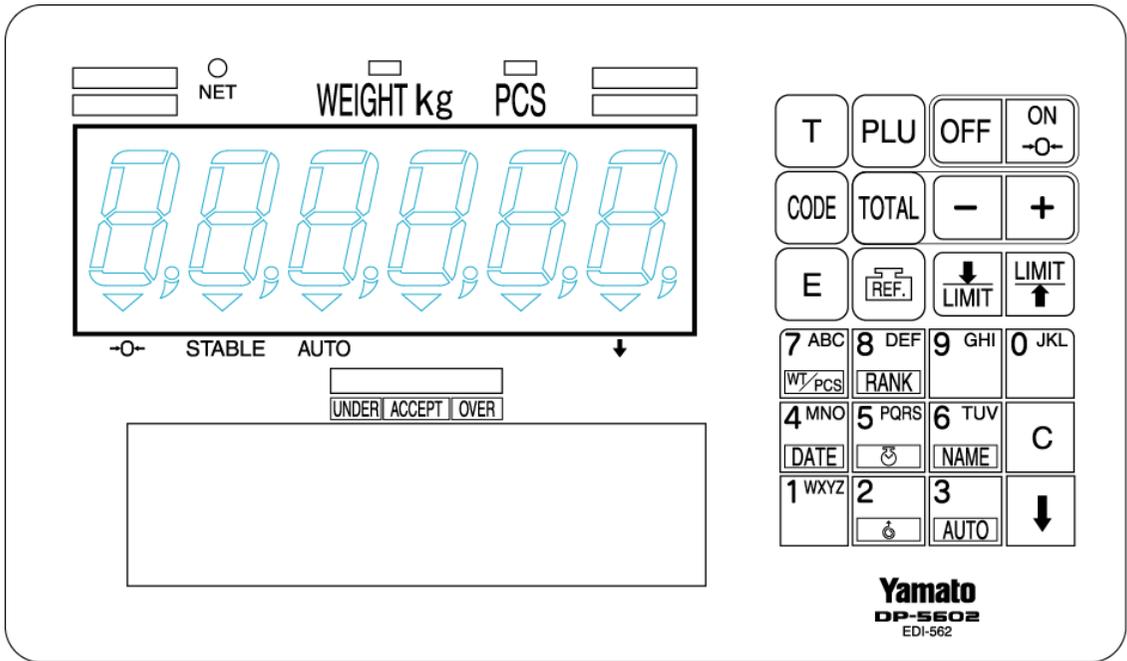


3. Using the upper holes of the 2 wall mount brackets ② set in the above step 1, hook the brackets onto the 2 wooden tapping screws ④ set in the above step 2. The installation is now complete.

### <Caution>

Since the 4 set screws ① have been tightened to a fixed torque at the factory, the enclosure is water-proof and dust-proof (i.e. IP66 protection rating), easy to wash, and hygienically sound (HACCP compliance). However, for the wall-mount type indicators, the user must remove the set screws ① and then install the wall mount brackets ②. Therefore, the "IP66" and "HACCP compliance" cannot be assured if the set screws ① are not firmly tightened or if the wall mount brackets ② are externally installed.

Display and operation-key sections

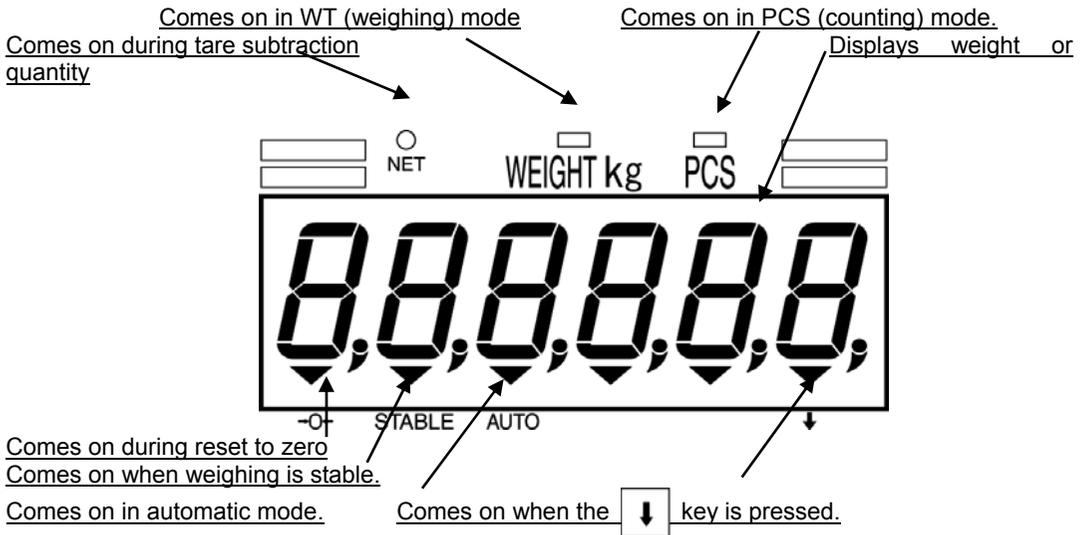


## Operation key section

	ON -O-	Turns on display or resets to zero.
	OFF	Turns the power OFF.
	PLU	Calls registered data, or registers data.
	T	Performs the quick tare subtraction.
	+	Manual addition or printout at addition.
	-	Subtraction or printout at subtraction.
	TOTAL	Totalizing or total printout.
	CODE	To set code number.
	LIMIT ↑	To set upper limit.
	LIMIT ↓	To set lower limit.
	REF.	To set sample number.
	E	Determines the setting value entered.
	0 JKL to 9 GHI	Enters a numerical value.
	C	Clear data entry or tare.
	↓	Change of function on keys  to .
		Feed the print paper (with  key) for Printer JPS-508.
		Changeover between automatic and manual (with  key).
		To set date (with  key).
		To set time (with  key).
		To set item name (with  key).
	Changeover between weighing and counting mode (with  key).	
	To set item rank (with  key).	

## Display section

### 1. Main display: Fluorescent display tube



#### ★ Under/over judgment lamp



With the high limit and the low limit being set,

- ① if a measured value is less than the low limit, the red lamp comes on,
- ② if a measured value is between the lower and high limits, the blue lamp comes on, or
- ③ if a measured value is more than the high limit, the yellow lamp comes on.

### 2. Auxiliary display: Full-dot LCD module

The auxiliary display can display up to eight items.

Enter setting values such as the high limit or the low limit through the auxiliary display (except for the user parameter settings described on page 31).

<b>Lo-LMT</b>	<b>0.00 kg</b>	<b>Hi-LMT</b>	<b>0.00 kg</b>
<b>TARE</b>	<b>0.00 kg</b>	<b>GROSS</b>	<b>0.00 kg</b>
<b>CODE</b>	<b>123456</b>	<b>NET</b>	<b>0.00 kg</b>
<b>DATE</b>	<b>01/03/09</b>	<b>TIME</b>	<b>08:40:02</b>

Example of the indication

## Items that can be displayed and their position

The display screen is divided into eight sections as shown in Fig. 1.

For the sections ① to ④ in the first two lines, items will be assigned automatically according to the mode.

For the remaining sections ⑤ to ⑧ in the third and fourth lines, the user can assign setting items of their choice.

To assign these settings, refer to "How to set user parameters" on page 28 and change the setting values of the parameters No. 070 to 073.

①	②
③	④
⑤	⑥
⑦	⑧

Fig. 1: Divided sections on the screen

- ①: Low limit (in WT or PCS mode), or Limit 1 (with the rank function enabled)
- ②: High limit (in WY or PS mode), or Limit 2 (with the rank function enabled)
- ③: Tare weight
- ④: Gross weight
- ⑤ and ⑥: Net weight, code number, item name\*<sup>1</sup>, date, clock time, number of times added, total (the number of times added and the total weight or the total quantity\*<sup>1</sup>), and individual weight value
- ⑦ and ⑧: Net weight, code number, item name\*<sup>1</sup>, date, clock time, number of times added, and total (the number of times added and the total weight or the total quantity\*<sup>1</sup>)

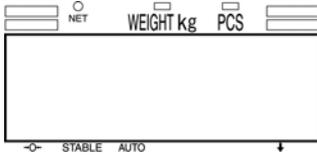
\*<sup>1</sup> Each of the item name and the total uses two sections. Therefore, always set them in the section ⑤ or ⑦.

If the item name and the total are specified in the section ⑤ or ⑦, the items that have been assigned in the sections ⑥ and ⑧ will not be displayed; if they are specified in the section ⑥ or ⑧, they will not be displayed.

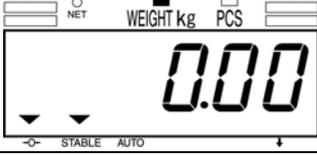
## How to carry out measurement

	Operating procedure	Panel display	Remarks
①	<p>[Turning ON the display] Press the  key.</p> <p>*Note: The indications of both WT and PCS modes are shown in this step. However, in the upcoming steps and procedures, the descriptions for PCS mode are omitted unless there is a significant difference between those modes.</p>	<p>All lamps come on and “0.00” appears. The ▼ signs above “→0←,” and “STABLE” come on. e.g.) Capacity: 30kg, Division: 0.01kg</p>  <p>or</p>  <p>All lamps continuously come on until the instrument becomes stable.</p>	<p>If the error code  or  appears after all lamps come on, refer to page 34.</p> <p>If the optional printer JPS-508 is connected and the error code  appears during use, press the  key and then  key. If the same code appears, consult with Yamato Scale's dealer.</p>
②	<p>[Start measurement] Place an object to be weighed on the platform of the instrument.</p>	<p>The weight of the object appears. (The following indication shows that the object weighs 10.00 kg.)</p> 	<p>If the error code  appears after an object is placed on the instrument, the weight of the object exceeds the measurable range of the instrument. Remove the object from the instrument, and use the instrument within its rated operating range.</p>

## How to power OFF

	Operating procedure	Panel display	Remarks
①	<p>[Turning OFF the display] Press the  key.</p>		<p>This instrument consumes standby power even with the display turned OFF. If the instrument is to be unused for a long time, unplug the power cable.</p>

## How to re-zero

	Operating procedure	Panel display	Remarks
①	<p>Press the  key. *This resets to zero and displays “0.00.”</p>		<p>The effective range of zero reset is within <math>\pm 1.9\%</math> of the weighing capacity.</p>

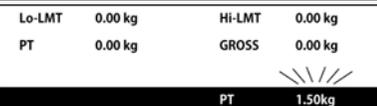
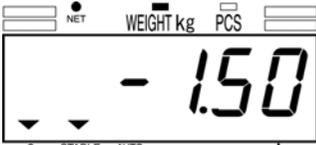
## How to carry out tare subtraction

### 1. One-touch tare ..... Simplified tare subtraction method using the **T** key only

	Operating procedure	Panel display	Remarks
①	Place a container on the platform of the instrument.	The weight of the container appears. (The following indication shows that the container weighs 1.00 kg.) 	
②	When the displayed value is stable, press the <b>T</b> key.		"0.00" appears and the NET lamp comes on.
③	[Weighing start] Place an object to be weighed in the container.		The net weight of the object appears.

### 2. Preset tare (when tare weight is already known) ..... Use the numeric keys and **E** key.

<Example> To set the tare weight to 1.50 kg:

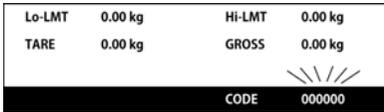
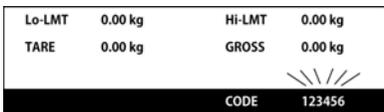
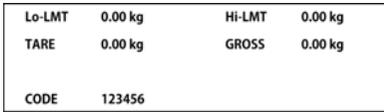
	Operating procedure	Panel display	Remarks
①	[Entering the tare weight] Enter <b>1</b> , <b>5</b> and <b>0</b> in that order.		A setting value can be entered through the auxiliary display. The setting value blinks.
②	Press the <b>E</b> key.		The auxiliary display returns to normal indication. On the main display, the entered value is shown as minus for tare subtraction and the NET lamp comes on.
③	[Weighing start] Place an object to be weighed on the instrument.		The net weight of the object appears.

## How to clear tare subtraction

	Operating procedure	Panel display	Remarks
①	Remove the container from the platform.		The panel shows the tare weight with a minus sign.
②	Press the <b>T</b> key.		"0.00" appears and the NET lamp goes out.

## How to enter a code number

<<Example>> To enter "123456" as the code number:

	Operating procedure	Panel display	Remarks
①	Press the <b>CODE</b> key. (The blinking field is used for setting a value.)		A setting value can be entered through the auxiliary display. The setting value blinks.
②	[Entering the code number] Enter <b>1</b> <b>2</b> <b>3</b> <b>4</b> <b>5</b> <b>6</b> and <b>NAME</b> in that order.		Up to 6 digits can be entered. If you enter the wrong number, press the <b>C</b> key and then enter the correct number.
③	Press the <b>E</b> key.		The display returns to normal indication. (The left figure shows the panel when the parameter number 072 is set to "4.")

## How to add and total

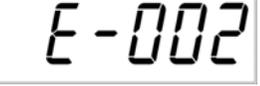
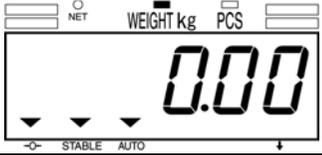
Use this function when you wish to add each measured value to the internal memory of the instrument and confirm the total cycle or the total weight.

### 1. How to carry out manual addition

When a printer or other devices are connected to the system, refer to the respective instruction manuals.

	Operating procedure	Panel display	Remarks
①	Place an object to be weighed on the platform of the instrument.	 <p>The panel display shows '10.00' in large digits. Above the display, 'NET', 'WEIGHT kg', and 'PCS' are visible. Below the display, 'STABLE' and 'AUTO' indicators are present.</p>	The weight of the object appears.
②	<p>[Addition] Press the <b>+</b> key with the object placed. *To cancel the addition, press the <b>-</b> key.</p>	<p>There is no change in the indication.</p>  <p>If the parameter number 035 is set to any numbers other than "0," "SEnd" appears for the preset seconds.</p> 	<p>If the total value has exceeded the storage capacity of the internal memory after addition, the following error codes appear.</p> <ul style="list-style-type: none"> <li>- The number of measurement times has exceeded.</li> </ul>  <ul style="list-style-type: none"> <li>- The total weight has exceeded.</li> </ul> 
③	Remove the object from the instrument.	 <p>The panel display shows '0.00' in large digits. Above the display, 'NET', 'WEIGHT kg', and 'PCS' are visible. Below the display, 'STABLE' and 'AUTO' indicators are present.</p>	The display returns to "0.00."
④	<p>- One cycle of addition is now complete. - By repeating Steps ① to ③, each measurement value is added to the internal memory.</p>		

## 2-1 How to carry out automatic addition

	Operating procedure	Panel display	Remarks
①	Press the  key and then press the  key.		The ▼ sign appears above “AUTO” after the ▼ sign lights above “SHIFT”.
②	[Addition] Place an object to be weighed on the platform of the instrument. When the reading becomes stable, automatic addition is carried out and a short beep sounds. *To cancel addition, press the  key.	 If the parameter number 035 is set to any numbers other than “0,” “SEnd” appears for the preset seconds. 	If the total value has exceeded the storage capacity of the internal memory after addition, the following error codes appear. - The number of measurement times has exceeded.  - The total weight has exceeded. 
③	Remove the object from the platform.		The display returns to “0.00.”
④	- One cycle of automatic addition is now complete. - By repeating Steps ① to ③, each measurement value is added to the internal memory. The timing of automatic addition can be set at parameter #69.		

## 2-2 How to return to manual addition

	Operating procedure	Panel display	Remarks
①	Press the  key and then the  key.		The ▼ sign appears above  and then the sign above the “AUTO” goes out.

## How to cancel addition

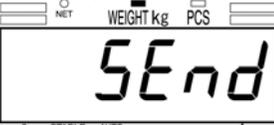
The DP-5601 has a function to cancel the added data in the scale memory. There are two ways to cancel added data and the way can be chosen by parameter setting #086. The default setting is “086 = 0”.

Setting value	Name	Function	Remarks
0	Cancel last addition	Cancel last minute addition data	Only once available.
1	Subtraction of weight	Subtract the weight on platform from the scale memory.	Multiple subtractions available.

### 1. How to cancel last addition

	Operating procedure	Panel display	Remarks
①	Press the  key after addition.	 <p>If the parameter number 035 is set to any numbers other than “0,” “SEnd” appears for the preset seconds.</p> 	The last addition weight is canceled, regardless of the displayed weight.

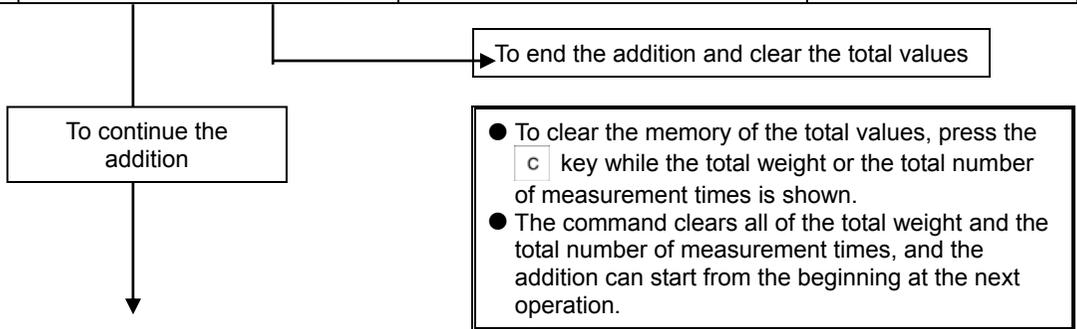
### 2. How to subtract weight

	Operating procedure	Panel display	Remarks
①	Place weighing items you desire to subtract on platform after addition.		The display shows the weight of items.
②	Press the  key.	<p>The display remains the same.</p>  <p>If the parameter number 035 is set to any numbers other than “0,” “SEnd” appears for the preset seconds.</p> 	
③	Remove the items from the platform.		The display returns to “0.00.”
④	<p>- One cycle of subtraction of weight is now complete.</p> <p>- By repeating Steps ② to ③, the continuous subtractions of weight from the internal memory are available.</p>		

## How to use the TOTAL key

Added measurement results (the total weight and the total number of measurement times) can be confirmed.

	Operating procedure	Panel display	Remarks												
①	Press the <span style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">TOTAL</span> key. Up to 4 digits of integer value can be used for the total number of measurement times. Up to 9 digits of integer value can be used for the total weight.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">Lo-LMT</td> <td style="font-size: small;">0.00 kg</td> <td style="font-size: small;">HI-LMT</td> <td style="font-size: small;">0.00 kg</td> </tr> <tr> <td style="font-size: small;">TARE</td> <td style="font-size: small;">0.00 kg</td> <td style="font-size: small;">GROSS</td> <td style="font-size: small;">0.00 kg</td> </tr> <tr style="background-color: #f0f0f0;"> <td style="font-size: small;"><b>TOTAL</b></td> <td style="font-size: small;"><b>5600 times</b></td> <td style="font-size: small;"><b>140280.00 kg</b></td> <td></td> </tr> </table>	Lo-LMT	0.00 kg	HI-LMT	0.00 kg	TARE	0.00 kg	GROSS	0.00 kg	<b>TOTAL</b>	<b>5600 times</b>	<b>140280.00 kg</b>		The total values appear on the auxiliary display.
Lo-LMT	0.00 kg	HI-LMT	0.00 kg												
TARE	0.00 kg	GROSS	0.00 kg												
<b>TOTAL</b>	<b>5600 times</b>	<b>140280.00 kg</b>													

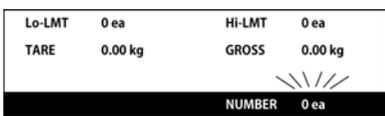
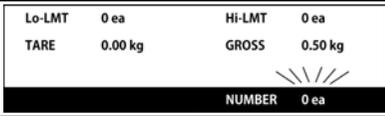
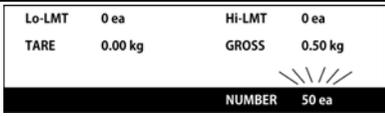
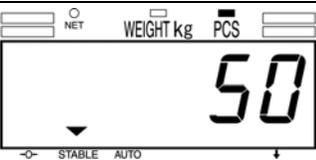


②	Press the <span style="border: 1px solid black; border-radius: 5px; padding: 2px 5px;">TOTAL</span> key.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">Lo-LMT</td> <td style="font-size: small;">0.00 kg</td> <td style="font-size: small;">HI-LMT</td> <td style="font-size: small;">0.00 kg</td> </tr> <tr> <td style="font-size: small;">TARE</td> <td style="font-size: small;">0.00 kg</td> <td style="font-size: small;">GROSS</td> <td style="font-size: small;">0.00 kg</td> </tr> </table>	Lo-LMT	0.00 kg	HI-LMT	0.00 kg	TARE	0.00 kg	GROSS	0.00 kg	The display returns to normal indication.
Lo-LMT	0.00 kg	HI-LMT	0.00 kg								
TARE	0.00 kg	GROSS	0.00 kg								
③	Continue to carry out the cycle of addition.										

## How to count the number of samples

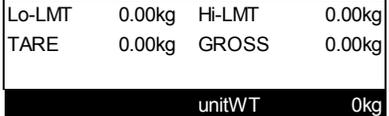
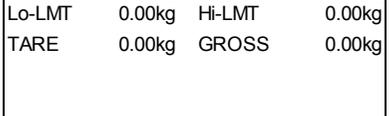
### 1. Setting by sample weighing

<<Example>> When the weight of 50 samples is 0.50 kg:

	Operating procedure	Panel display	Remarks
①	Press the  key.		The main display switches to the PCS display and the PCS lamp comes on.
②	Place 50 samples on the platform of the instrument.		"0.50 kg" appears at the total weight (GROSS).
③	Enter  and  in that order.		
④	Press the  key. The individual weight is set to 0.01 kg and counting operation starts.		The auxiliary display returns to normal indication.

### 2. Setting by a unit weight entry with numerical keys

<<Example>> When the unit weight is 0.05 kg:

	Operating procedure	Panel display	Remarks
①	Press the  key.		The main display switches to the PCS display and the PCS lamp comes on.
②	Press the  key or the  key		When pressing the  key or the  key again, the display returns to ①.
③	Press the  ,  and  in that order.		The  key substitutes for decimal point. Max.5 digits available.
④	Press the  key. The individual weight is set to 0.01 kg and counting operation starts.	 The set unit weight can be displayed when parameter #70 or 71 is set at "12".	When the individual weight is too small (= 1/10 of the scale interval), the error code "E-001" appears and the individual weight is not set. Press the  key and reenter an appropriate individual weight. Any value less than 1/10 of the scale interval will be discarded from the individual weight entered.

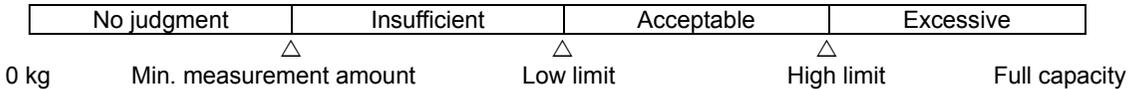
## How to switch to the weighing mode

Press the  key and then the  key.

## How to set the over/under judgment function

### Over/ Under judgment function

Use this function when a target weight value or quantity is specified using the allowable lower and upper limits in order to determine that the samples fall within a proper range.

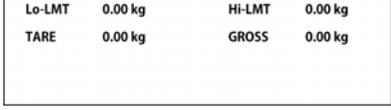


### How to set the high and low limits

<<Example>> To set the low and high limits to 14.90 kg and 15.10 kg, respectively:

	Operating procedure	Panel display	Remarks												
①	Press the  key.	<table style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Lo-LMT</td><td>0.00 kg</td> <td>Hi-LMT</td><td>0.00 kg</td> </tr> <tr> <td>TARE</td><td>0.00 kg</td> <td>GROSS</td><td>0.00 kg</td> </tr> <tr style="border-top: 2px solid black;"> <td colspan="2">Lo-LMT</td> <td colspan="2">0.00kg</td> </tr> </table>	Lo-LMT	0.00 kg	Hi-LMT	0.00 kg	TARE	0.00 kg	GROSS	0.00 kg	Lo-LMT		0.00kg		The setting value blinks.
Lo-LMT	0.00 kg	Hi-LMT	0.00 kg												
TARE	0.00 kg	GROSS	0.00 kg												
Lo-LMT		0.00kg													
②	[Entering the low limit] Enter  ,  ,  and  in that order.	<table style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Lo-LMT</td><td>0.00 kg</td> <td>Hi-LMT</td><td>0.00 kg</td> </tr> <tr> <td>TARE</td><td>0.00 kg</td> <td>GROSS</td><td>0.00 kg</td> </tr> <tr style="border-top: 2px solid black;"> <td colspan="2">Lo-LMT</td> <td colspan="2">14.90kg</td> </tr> </table>	Lo-LMT	0.00 kg	Hi-LMT	0.00 kg	TARE	0.00 kg	GROSS	0.00 kg	Lo-LMT		14.90kg		The setting value blinks.
Lo-LMT	0.00 kg	Hi-LMT	0.00 kg												
TARE	0.00 kg	GROSS	0.00 kg												
Lo-LMT		14.90kg													
③	Press the  key.	<table style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Lo-LMT</td><td>14.90 kg</td> <td>Hi-LMT</td><td>0.00 kg</td> </tr> <tr> <td>TARE</td><td>0.00 kg</td> <td>GROSS</td><td>0.00 kg</td> </tr> </table>	Lo-LMT	14.90 kg	Hi-LMT	0.00 kg	TARE	0.00 kg	GROSS	0.00 kg					
Lo-LMT	14.90 kg	Hi-LMT	0.00 kg												
TARE	0.00 kg	GROSS	0.00 kg												
④	Press the  key.	<table style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Lo-LMT</td><td>14.90 kg</td> <td>Hi-LMT</td><td>0.00 kg</td> </tr> <tr> <td>TARE</td><td>0.00 kg</td> <td>GROSS</td><td>0.00 kg</td> </tr> <tr style="border-top: 2px solid black;"> <td colspan="2">Hi-LMT</td> <td colspan="2">0.00kg</td> </tr> </table>	Lo-LMT	14.90 kg	Hi-LMT	0.00 kg	TARE	0.00 kg	GROSS	0.00 kg	Hi-LMT		0.00kg		The setting value blinks.
Lo-LMT	14.90 kg	Hi-LMT	0.00 kg												
TARE	0.00 kg	GROSS	0.00 kg												
Hi-LMT		0.00kg													
⑤	[Entering the high limit] Enter  ,  ,  and  in that order.	<table style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Lo-LMT</td><td>14.90 kg</td> <td>Hi-LMT</td><td>0.00 kg</td> </tr> <tr> <td>TARE</td><td>0.00 kg</td> <td>GROSS</td><td>0.00 kg</td> </tr> <tr style="border-top: 2px solid black;"> <td colspan="2">Hi-LMT</td> <td colspan="2">15.10kg</td> </tr> </table>	Lo-LMT	14.90 kg	Hi-LMT	0.00 kg	TARE	0.00 kg	GROSS	0.00 kg	Hi-LMT		15.10kg		The setting value blinks.
Lo-LMT	14.90 kg	Hi-LMT	0.00 kg												
TARE	0.00 kg	GROSS	0.00 kg												
Hi-LMT		15.10kg													
⑥	Press the  key.	<table style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Lo-LMT</td><td>14.90 kg</td> <td>Hi-LMT</td><td>15.10 kg</td> </tr> <tr> <td>TARE</td><td>0.00 kg</td> <td>GROSS</td><td>0.00 kg</td> </tr> </table>	Lo-LMT	14.90 kg	Hi-LMT	15.10 kg	TARE	0.00 kg	GROSS	0.00 kg					
Lo-LMT	14.90 kg	Hi-LMT	15.10 kg												
TARE	0.00 kg	GROSS	0.00 kg												
⑦	[Weighing start] Place an object on the platform of the instrument. The under/over judgment is performed as soon as weighing starts.		<p>Depending on the results,</p> <ul style="list-style-type: none"> <li>- the LED lamp lights up in the following colors:</li> <li style="padding-left: 20px;">Underweight: Red</li> <li style="padding-left: 20px;">Acceptable weight: Blue</li> <li style="padding-left: 20px;">Overweight: Yellow</li> </ul> <p>- The information shown on LCD may vary. For details, refer to &lt; LCD display during the under/over judgment &gt; on the next page.</p>												

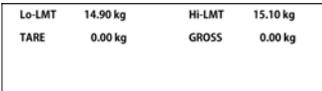
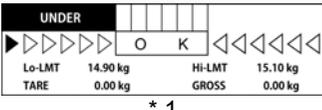
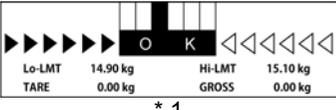
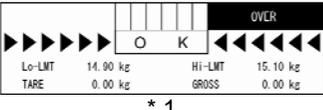
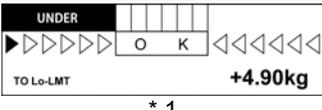
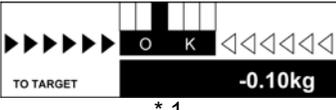
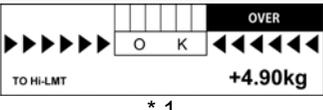
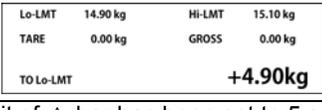
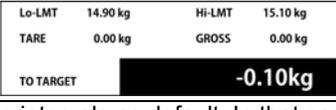
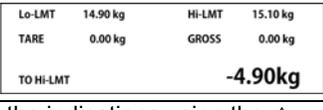
## How to clear the over/under judgment settings

	Operating procedure	Panel display	Remarks
①	Press the  key.		The setting value blinks.
②	[Clearing the low limit] Press the  key.		The setting value blinks.
③	Press the  key.		
④	[Clearing the high limit] Similarly, press the  ,  and  keys in that order.		

## LCD display during the over/under judgment

The information shown on LCD depends on the setting value in the user parameter 054. The default setting is "2."

To change the indication, make changes in the user parameter by referring to page 33.

Setting	Underweight	Acceptable weight	Overweight
0		Same as the left	Same as the left
1			
2 (Standard)			
3			

\*1: The unit of  $\Delta$  bar has been set to 5 scale intervals as default. In that case, the indications using the  $\Delta$  and  $\blacktriangle$  bars can be interpreted into the range of  $\pm 25$  scale intervals from the acceptable weight. The unit of the  $\Delta$  bar can be changed through the user parameter number 055. A larger setting value allows the user to visually check a wider range of measurements.

## Shortage guidance display function

### Shortage guidance display function

With this function, the high and low limits as well as the weight per work unit are specified in advance in order to display the remaining number of items in work unit (insufficient number of items) that must be measured before being acceptable. When a specific number of items must be measured, the under/over judgment function was used until now to display the weight shortage. Items to be weighed were added on or removed from the platform of the instrument while the number was determined to be appropriate. In contrast, since this function displays the remaining amount in work unit (insufficient number of items) instead of weight shortage, the operator only needs to load or unload the insufficient number of items to reach the appropriate amount, thus leading to substantial improvement in the work efficiency.

### How to make the settings

Setting the user parameter No. 187 to "1" enables the shortage guidance display function.

For how to change the user parameter, refer to page 33.

For setting the high and low limits, refer to pages 18.

Note: ~~When the shortage guidance display function is enabled, the PCS mode cannot be used.~~

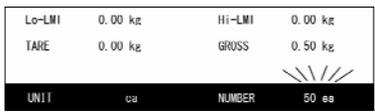
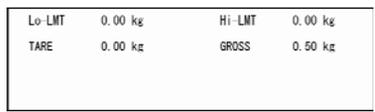
~~In addition, the  key is assigned to switch between the WT mode and the shortage guidance display function.~~

### How to set the weight per work unit (individual weight)

(where the weighing capacity is 30 kg and the scale division is 0.01 kg)

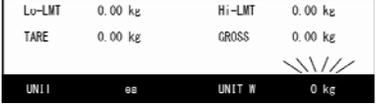
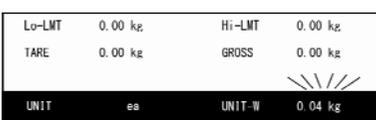
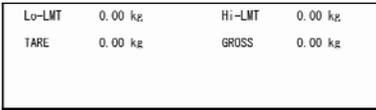
1. Setting by sample weighing

<< Example >> When the weight of 50 samples is 0.50 kg:

	Operating procedure	Panel display	Remarks
①	Press the  key.		Pressing the key proceeds to the sample weighing setting.  * To change the work unit, do it before setting the individual weight, by referring to the next page.
②	Place 50 samples on the platform of the scale.		"0.50 kg" appears at the total weight (GROSS).
③	Press the  and  keys in that order.		
④	Press the  key. The individual weight is set to 0.01 kg.		The individual weight set here can be displayed by setting the parameter No. 70 or 71 to "12."

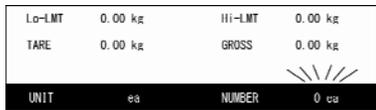
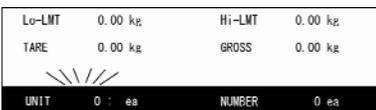
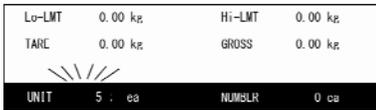
2. Setting when the weight per work is known (setting through individual weight entry):

<< Example >> To set the individual weight to 0.04 kg:

	Operating procedure	Panel display	Remarks
①	Press the  key.		Pressing the key proceeds to the sample weighing setting. * To change the work unit, do it before setting the individual weight, by referring to the next page.
②	Press the  or  key.		Pressing the key proceeds to the setting of individual weight entry. Pressing the  or  key again returns to the sample weighing setting.
③	Press the  ,  and  keys in that order.		 key: Enters a decimal point. A value of up to 5 digits can be entered.
④	Press the  key.	  The individual weight set here can be displayed by setting the parameter No. 70 or 71 to "12."	When the individual weight is too small (= 1/10 of the scale interval), the error code "E-001" appears and the individual weight is not set. Press the  key and reenter an appropriate individual weight. Any value less than 1/10 of the scale interval will be discarded from the individual weight entered.

How to set the work unit

<< Example >> To change the work unit from pcs (standard) to each (work unit):

	Operating procedure	Panel display	Remarks
①	Press the  key.		Pressing the key proceeds to the sample weighing setting.
②	Press the  key. Note: The work unit can also be specified from the setting of individual weight entry.		Pressing the key proceeds to the work unit setting.
③	Press the  or  key five (5) times.		
④	Press the  key.		This operation returns the display to the sample weighing setting. Proceed to set the individual weight.

How to clear the shortage guidance display settings

Refer to "How to clear the over/under judgment settings" on page 19.

## LCD display with the shortage guidance display function enabled

The information shown on LCD depends on the setting value in the user parameter number 054. The default setting is "2."

To change the indication, make changes in the user parameter by referring to page 32.

Note: When the setting of #54 is 0 or 1, the shortage guidance display function cannot be used.

<<Example>> when the low limit and high limit are set to 5.00 kg, 5.10 kg respectively and the individual weight is 0.01 kg:

Setting	Underweight (measured weight: 4.50kg)	Acceptable weight (measured weight: 5.05kg)	Overweight (measured weight: 5.50kg)
0		Same as the left	Same as the left
1			
2 (Standard)			
3			

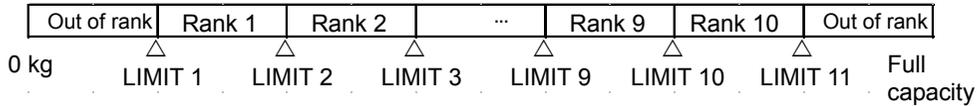
\*1: The unit of  $\Delta$  bar has been set to 5 scale intervals as default. In that case, the indications using the  $\Delta$  and  $\blacktriangle$  bars can be interpreted into the range of  $\pm 25$  scale intervals from the acceptable weight. The unit of the  $\Delta$  bar can be changed through the user parameter number 055. A larger setting value allows the user to visually check a wider range of measurements.

## How to set the grading function

### Grading function

This function indicates the ranking of measured items according to the weight values of each rank that have been stored to the instrument in advance.

With the 1 to 11 limits settable, up to 10 ranks can be specified.



### How to set the rank

<<Example>> To set Rank 1 to 1.00 - 3.00 kg, Rank 2 to 3.00 - 5.00 kg, and Rank 3 to 5.00 - 7.00 kg

	Operating procedure	Panel display	Remarks
①	Press the  key and then the  key.		A setting value can be entered through the auxiliary display. The setting value blinks.
②-1	[Rank 1 setting] Enter ,  and  in that order.		key: Proceeds to LIMIT 2 setting.
②-2	Press the  key.		key: Proceeds to LIMIT 3 setting. key: Returns to LIMIT1 setting. key: Changes RANK name.
②-3	Enter ,  and  in that order.		key: Proceeds to LIMIT 3 setting. key: Returns to LIMIT1 setting. key: Changes RANK name.
③	<p>[Changing a RANK name] To change a RANK name, press the  key. Select a rank name from Table 1, and enter the corresponding setting value.</p> <p>For example, to specify "S" for the rank name, enter  and  in that order. Press the  key to return to rank value entry.</p>		<p>The setting value for the rank name blinks.</p> key: Returns to rank value entry. key: Adds 1 to the Rank name setting value. key: Subtracts 1 from the Rank name setting value.

	Operating procedure	Panel display	Remarks
④	[Rank 2 setting] Press the <b>+</b> key. Enter <b>5</b> <small>PCRS</small> , <b>0</b> <small>JKL</small> and <b>0</b> <small>JKL</small> in that order.		The setting value blinks. <b>+</b> key: Proceeds to LIMIT 4 setting. <b>-</b> key: Returns to LIMIT 2 setting. <b>T</b> key: Changes RANK name.
⑤	[Rank 3 setting] Press the <b>+</b> key. Enter <b>7</b> <small>ABC</small> , <b>0</b> <small>JKL</small> and <b>0</b> <small>JKL</small> in that order.		To register the rank setting values, follow the steps ② to ④ of tare value registration on page 23.
⑥	Press the <b>E</b> key.		The display returns to normal indication.
⑦	[Weighing start] Place an object on the platform of the instrument. The ranking is performed as soon as weighing starts.		Depending on the results, - the LED lamp lights up in the following colors: Rank 1 or 8: Blue Rank 2 or 9: Green Rank 3 or 10: Light blue Rank 4: Red Rank 5: Purple Rank 6: Yellow Rank 7: White

Table 1: List of rank names

Setting value	1	2	3	4	5	6	7	8	9	10
Rank name	1	2	3	4	5	6	7	8	9	10
Setting value	11	12	13	14	15	16	17	18	19	20
Rank name	2S	S	M	2M	L	2L	3L	XL	XXL	XXXL

### How to clear the rank settings

	Operating procedure	Panel display	Remarks
①	Press the <b>↓</b> key and then the <b>DEF</b> <small>RANK</small> key.		The setting value blinks.
②	Press the <b>C</b> key.		The setting value blinks.
③	Press the <b>E</b> key.		All rank settings are cleared.

## Advanced ranking function

### Subtractive ranking function

\* Do not use this feature for trade use.

This function enables the ranking of an item as soon as the item is taken out of the platform of the instrument.

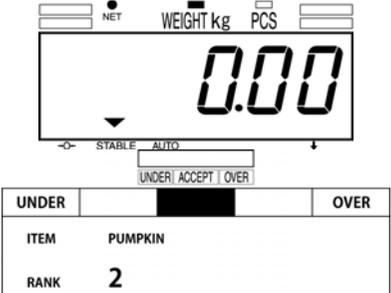
### How to enable the function

Setting the user parameter number 092 to "1" enables the subtractive ranking function.

For how to change the user parameter, refer to page 32.

<<Example of use>> There is a container (total weight: 15 kg) containing 10 pumpkins that weigh 0.80 to 2.00 kg each. One of these pumpkins will be randomly taken out for ranking.

Rank 1: 0.80 to 1.20 kg, Rank 2: 1.20 to 1.60 kg, and Rank 3: 1.60 to 2.00 kg

	Operating procedure	Panel display	Remarks									
①	Place the container on the platform of the instrument.	 <p>The panel display shows a large digital scale reading of 0.00. Above the display, there are indicators for NET, WEIGHT kg, and PCS. Below the display, there are labels for STABLE and AUTO. At the bottom, there are labels for UNDER, ACCEPT, and OVER. A data table is shown below the display:</p> <table border="1" data-bbox="509 788 900 894"> <tr> <td>LIMIT 1</td> <td>0.80 kg</td> <td>LIMIT 2</td> <td>1.20 kg</td> </tr> <tr> <td>TARE</td> <td>15.00 kg</td> <td>GROSS</td> <td>15.00 kg</td> </tr> </table>	LIMIT 1	0.80 kg	LIMIT 2	1.20 kg	TARE	15.00 kg	GROSS	15.00 kg	The NET lamp comes on. Since the automatic tare subtraction is enabled during the subtractive ranking, the main display always shows zero.	
LIMIT 1	0.80 kg	LIMIT 2	1.20 kg									
TARE	15.00 kg	GROSS	15.00 kg									
②	[Ranking] Take out one pumpkin from the container.	 <p>The panel display shows a large digital scale reading of 0.00. Below the display, there are labels for UNDER, ACCEPT, and OVER. A data table is shown below the display:</p> <table border="1" data-bbox="509 1093 900 1199"> <tr> <td>UNDER</td> <td></td> <td>OVER</td> </tr> <tr> <td>ITEM</td> <td>PUMPKIN</td> <td></td> </tr> <tr> <td>RANK</td> <td>2</td> <td></td> </tr> </table>	UNDER		OVER	ITEM	PUMPKIN		RANK	2		The LED lamp lights up in green.
UNDER		OVER										
ITEM	PUMPKIN											
RANK	2											
③	Carry out Step ② to continue ranking. Additional loading returns the auxiliary display to that shown in Step ①.											

## How to enter an item name

<<Example>> To enter “GRAPEFRUIT” as the item name:

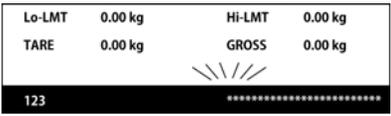
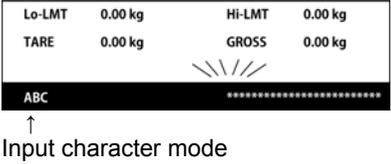
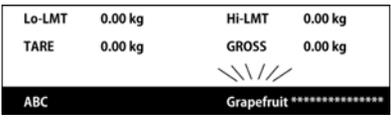
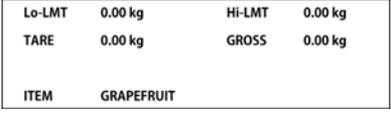
	Operating procedure	Panel display	Remarks
①	Press the  key and then the  key.		An item name can be entered through the auxiliary display. The setting value blinks.
②	[Switching the input character modes] Press the  key.		 key: Switches to different input character modes in the following order: Numeric mode (123) ↓ Alphabetic mode (ABC)  Characters in ( ) appear in the lower left of the display.
③	[Entering the character] Input the characters by referring to Table 2. For example, to enter “G”, press the  key once.		
④	Press the  key.		The display returns to normal indication. (The left figure shows an example where the parameter number 072 is set to “5.”)

Table 2: List of characters assigned to each key

Key	Numeric mode	Alphabetic mode
T	To alphabetic mode	To numeric mode
0	0	J K L j k l 0
1	1	W X Y Z w x y z 1
2	2	2
3	3	3
4	4	M N O m n o 4
5	5	P Q R S p q r s 5
6	6	T U V t u v 6
7	7	A B C a b c 7
8	8	D E F d e f 8
9	9	G H I g h i 9
CODE	, . - (space)	, . - (space)

## How to register the entries

The DP-5602 can individually or collectively save the tare weight, code number, high and low limits, individual weight, item name, and rank values in each call number.

The call numbers No.1 to 100 are available, and 100 sets of data can be stored in total.

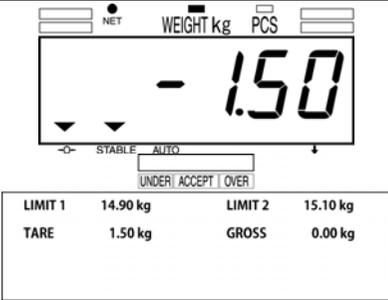
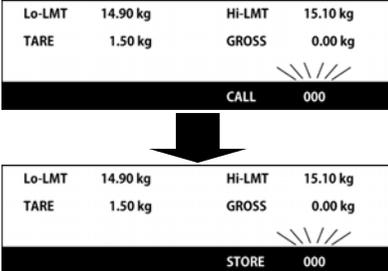
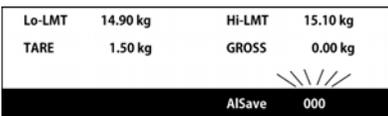
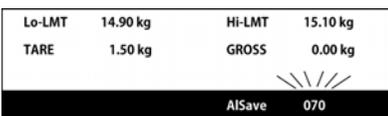
Since these data are saved in the internal memory, they cannot be lost even if the instrument is powered OFF.

The registration of frequently used data simplifies the settings before work, and further improves working efficiency.

### 1. How to register the entries collectively Method of registering the setting data all at once.

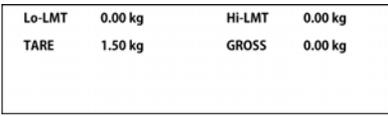
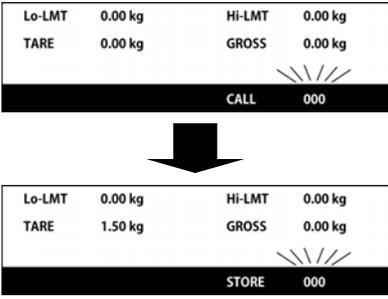
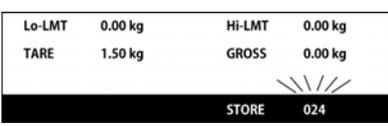
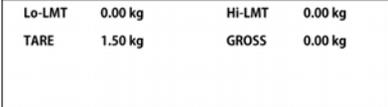
<<Example>> To register the following settings in the call number 70:

Tare weight: 1.50 kg, Code number: 123456, High limit: 15.10 kg, and Low limit: 14.90 kg

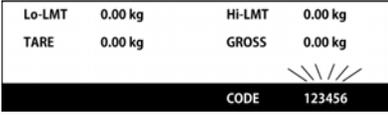
	Operating procedure	Panel display	Remarks
①	Enter and set all the data in advance. Only the preset data can be registered.		If there are any measured objects on the platform of the instrument after data setting, remove them from the platform.
②	Press and hold the <b>PLU</b> key. (The blinking field is used for setting a value.)		This key works only when GROSS is zero (i.e. there is nothing on the weighing unit).
③	Press the <b>TOTAL</b> key.		Pressing the <b>TOTAL</b> key once again returns to individual registration (tare weight).
④	[Entering a call number] Enter <b>7</b> and <b>0</b> in that order.		To cancel the registration, press the <b>C</b> key. After confirming that the call number is shown as "000," proceed to Step ⑤. The system sounds an alarm buzzer and cancels the registration.
⑤	Press the <b>E</b> key.	The display returns to indication in Step ① (weighing display).	

## 2. How to register the entries individually Method of registering only one item of settable data.

<<Example>> To register a tare weight of 1.50 kg in the call number 24 (in PCS mode, the individual weight is also registered at the same time):

	Operating procedure	Panel display	Remarks
①	Enter and set the tare weight. This example shows the case where the quick tare subtraction is used. However, the preset tare method can also be used.		If there are any measured objects on the platform of the instrument, remove them from the platform.
②	[Registration] Press and hold the <b>PLU</b> key. (The blinking field is used for setting a value.)		This key works only when GROSS is zero (i.e. there is nothing on the weighing unit).
③	[Entering a call number] Enter <input type="text" value="2"/> and <input type="text" value="4"/> in that order.		
④	Press the <b>E</b> key.		The display returns to normal indication.

<<Example>> To register a code number of 123456 in the call number 24:

	Operating procedure	Panel display	Remarks
①	For entry of the code number, press the <b>CODE</b> key and then enter <input type="text" value="1"/> <input type="text" value="2"/> <input type="text" value="3"/> <input type="text" value="4"/> <input type="text" value="5"/> and <input type="text" value="6"/> in that order.		The setting value blinks.
②	Follow Steps ② to ④ of the previous example.		

Individual registration of the high and low limits, rank values, and item name:  
Use the same procedure as the registration of a code number.

- ① Press and hold the **PLU** key while the setting value blinks.
- ② Enter the call number.
- ③ Press the **E** key.

## The difference between collective registration and individual registration

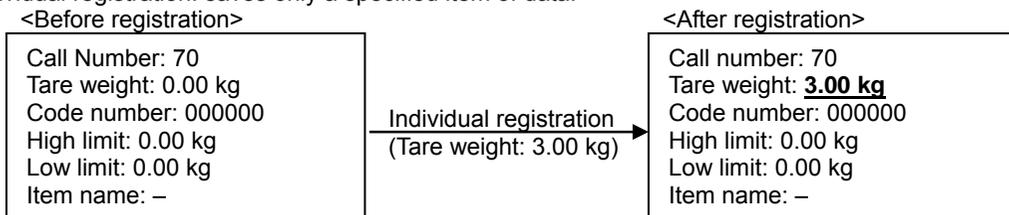
Registered data are saved in the memory for each call number. At the time of purchase, no data has been registered in the memory.

<<Example>> To register data in the call number 70:

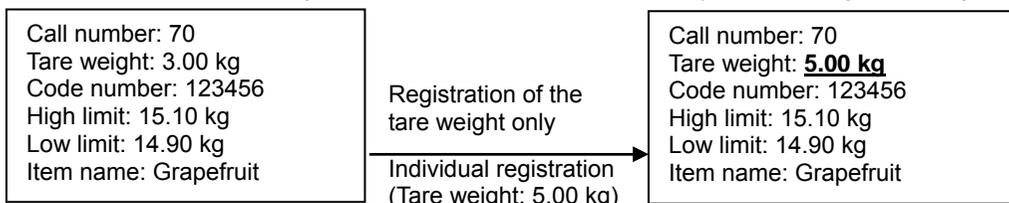
- Collective registration: saves all preset data.



- Individual registration: saves only a specified item of data.



Data modification <after registration>



## How to call registered data

<<Example>> To call the registered data from the call number 70, which was registered in the previous section:

	Operating procedure	Panel display	Remarks
①	Press the <b>PLU</b> key.		This key works only when GROSS is zero (i.e. there is nothing on the weighing unit). The setting value blinks.
②	Enter <b>7</b> and <b>0</b> in that order.		Enter a call number whose data you wish to display.
③	Press the <b>E</b> key.		

## How to clear registered data

Setting to "0" and registering it clears the corresponding registered data.

The data can be registered individually or collectively in the procedure described on pages 27 to 28.

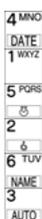
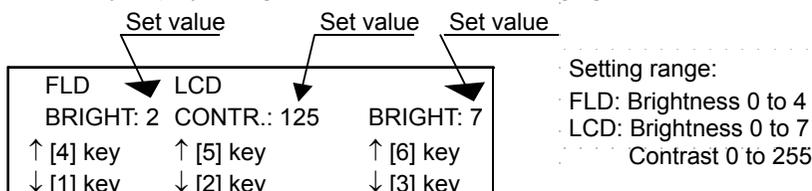
## How to adjust the brightness and contrast of LCD

- ① Press the **PLU** key while pressing the **T** key.

The parameter setting mode on page 28 appears.

- ② Press the **↓** key.

The auxiliary display changes as shown in the following figure.



key: Use this key when you wish to increase the brightness of the main display.

key: Use this key when you wish to decrease the brightness of the main display.

key: Use this key when you wish to increase the contrast of the auxiliary display.

key: Use this key when you wish to decrease the contrast of the auxiliary display.

key: Use this key when you wish to increase the brightness of the auxiliary display.

key: Use this key when you wish to decrease the brightness of the auxiliary display.

- ③ Press the **E** key. The display returns to the user parameter setting mode.

- ④ Pressing the **E** key once again returns the display to the normal mode.

## Optional functions

The DP-5602 has a variety of optional functions in order to increase the efficiency of daily weighing operation. Please utilize these functions according to the environment of use.

### If journal printer is connected:

The journal printer is directly connected to the back of the indicator unit. Therefore, it requires less space, increases its usability, and makes a wealth of print contents available. A separate model of this printer, which can be installed away from the indicator, is also available. For details, refer to the dedicated instruction manual.

### If external relay I/O is used:

The external relay I/O enables input of the tare subtraction and zero reset signals externally, as well as output of data (underweight, just-before acceptable weight, acceptable weight, overweight, large amount loading, and small amount loading), and therefore improves working efficiency further. For details, refer to the dedicated instruction manual.

### If RS232C I/O is used:

The RS232C I/O can be used for various data inputs and outputs, operation commands, and other purposes. This is useful for the system management of weighing operations. For details, refer to the dedicated instruction manual.

### If wireless communication is used:

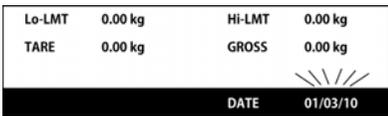
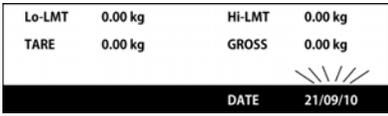
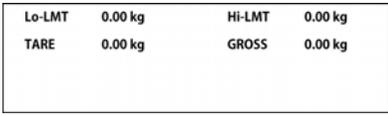
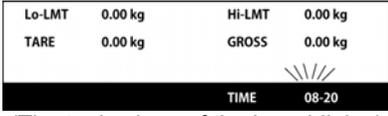
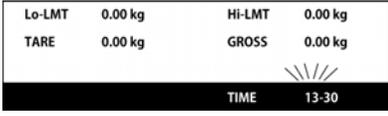
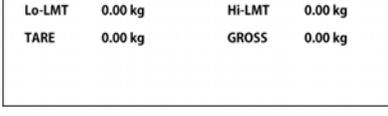
The wireless communication allows output of various data. This is useful for the system management of weighing operations. For details, refer to the dedicated instruction manual.

### If USB flash drive is used:

For data management, the system can save various data in a USB flash drive. For details, refer to the dedicated instruction manual.

## How to set date and time

Note: The instrument has a built-in clock. Once the clock is set, it automatically starts ticking.

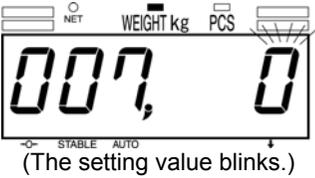
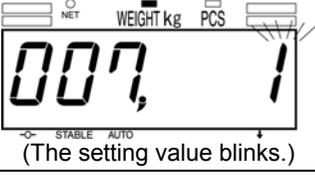
	Operating procedure	Panel display	Remarks
①	<p>[Date setting]</p> <p>Press the  key and then the  key.</p> <p>The example shows March 1, 2010.</p>	 <p>(The ten's place of the year blinks.)</p>	<p>The date is expressed in day/month/year format of the Western calendar (2 digits each). Specify the year of the Western calendar.</p>
②	<p>Using the numeric keys, enter the day, month, and year in that order.</p> <p>Example: To change the date to 21 September 2010, enter , , , , , and  in that order.</p> <p>After entry, press the  key. The screen returns to the weighing display.</p>	 	
③	<p>[Time setting]</p> <p>Press the  key and then the  key.</p> <p>The example shows 8:20.</p>	 <p>(The ten's place of the hour blinks.)</p>	<p>The time is shown in 24-hour format (hour-minute). Specify the hour in 24-hour format.</p>
④	<p>Using the numeric keys, enter the hours and minutes in that order.</p> <p>Example: To change the time to 13:30, enter , , , , and  in that order.</p> <p>After entry, press the  key. The screen returns to the normal display.</p>	 	<p>Enter the hours and minutes in two digits each. Example: "08"- "20"</p>

Caution: If the instrument is left unused for a long time (about 1 year with the power cable unplugged), the self-charging backup battery runs out, resulting in deletion of date/time data.

## How to set user parameters

The DP-5602 has 41 user parameters. You can change their settings according to the environment of use so as to achieve optimum operation of the instrument. When changing any of them, refer to the user parameter table on the next page.

<<Example>> To change the parameter No. 007 (non-addition) from 0 to 1:

	Operating procedure	Panel display	Remarks
①	Press the <b>PLU</b> key while pressing the <b>T</b> key.	 (The setting value blinks.)	The display switches to user parameter setting mode.
②	Press the <b>+</b> key until the parameter number whose setting you wish to change appears. Pressing the <b>-</b> key decreases the parameter number.	 (The setting value blinks.)	Keep pressing the <b>+</b> key automatically cycles through the parameters in the forward direction. (The <b>-</b> key has the same function – only goes backward.)
③	Using the numeric keys, change the setting. Press the <b>1</b> key.	 (The setting value blinks.)	If you enter the wrong number, press the <b>C</b> key to clear the entry and enter the correct number.
④	To set other parameters, repeat the above Steps ② to ③.	 (The setting value blinks.)	
⑤	Press the <b>E</b> key. The display returns to the weight display.  This example shows no load on the platform of the instrument.	 (The setting value blinks.)	

## User Parameter List

NO.	ITEM	VALUE	DEFAULT	FUNCTION	REMARKS
001	DISPLAY BRILLIANCE	000: 001: 002: 003: 004:	002	VERY DIM DIM STANDARD BRIGHT VERY BRIGHT	Adjust the brilliance of the display.
002	DIMMER TIMER	000: 001-006:	010	DIMMER OFF PERIOD BEFORE RETURN TO BRILLIANCE 00	
003	UPPER AND LOWER LIMIT BUZZER	000: 001: 002: 003: 004:	000	NO BEEP BEEP AT UNDERWEIGHT BEEP AT ACCEPTABLE WEIGHT BEEP AT OVERWEIGHT BEEP AT UNDER & OVERWEIGHT	
004	DETECTING STABILITY OF UPPER AND LOWER LIMIT JUDGMENT	000: 001:	000	JUDGE IRRESPECTIVE OF STABILITY JUDGE ONLY IN STABILITY	
005	AUTOMATIC TOTALIZATION	000: 001:	000	ADD IRRESPECTIVE OF JUDGED RESULT ADD ONLY ACCEPTED JUDGMENT	
006	MANUAL TOTALIZATION	000: 001:	000	[+], [-] KEYS INVALID IN AUTOMATIC MODE [+], [-] KEYS VALID IN AUTOMATIC MODE	
007	NON-ADDITION	000: 001:	000	TOTALIZE NO TOTALIZATION, DATA OUTPUT ONLY ([TOTAL] KEY DOES NOT WORK.)	
008	PRINTER, JPS-508	000: 001: 002: 003: 004:	001	PRINTER JPS-508 NOT USED NET WEIGHT PRINTED GROSS, TARE AND NET WEIGHT PRINTED DO NOT SET OVER AND SHORT PRINTED (TO BE SET #68=1)	
009	PRINT ITEM	000: 001: 002: 003: 004-007:	003	CODE NO. AND MEASUREMENT TIMES NOT PRINTED CODE NO. PRINTED MEASUREMENT TIMES PRINTED EVERY WEIGHING CODE NO. & MEASUREMENT TIMES PRINTED DO NOT SET	
010	PRINT TIME AND DATE	000: 001: 002: 003: 004: 005:	002	TIME AND DATE NOT PRINTED TIME PRINTED EVERY WEIGHING DATE PRINTED AT TOTALIZATION DATE PRINTED AT TOTALIZATION AND TIME PRINTED EVERY WEIGHING DATE PRINTED EVERY WEIGHING TIME AND DATE PRINTED EVERY WEIGHING	
011	FEED AFTER PRINT	000: 001-020:	000	NO PAPER FEED FEED SPECIFIED LINES AFTER WEIGHING	
012	FEED AFTER TOTAL PRINT	000: 001-20:	006	NO PAPER FEED AFTER TOTAL PRINT FEED SPECIFIED LINES AFTER TOTAL PRINT	
031	NOT USED		000	DO NOT CHANGE	
033	TIMING OF LOW-LOW LIMIT (VALID AT #175=27)	000: 001-200:	000	NO SIGNAL SENT LOW-LOW LIMIT SIGNAL SENT AT THE TIMING OF [Lower limit] - [Specified Division]	For relay output
035	"SEnd" DISPLAY TIME PRINTER TPS-503W	000: 001-008:	001	NO "SEnd" DISPLAYED AT ADDITION "SEnd" DISPLAYED FOR SPECIFIED SECONDS AT ADDITION	
053	LCD CONTRAST	000-255:	125	VERY DIM TO VERY BRIGHT	
054	LCD DISPLAY AT OVER/UNDER FUNCTION	000: 001: 002: 003:	5601: 000 5602: 002	SETTING VALUES DISPLAYED SWEEP BAR + SETTING VALUES DISPLAYED SWEEP BAR + SHORTAGE GUIDANCE DISPLAYED SETTING VALUES + SHORTAGE GUIDANCE DISPLAYED	
055	DEFINITION OF LCD SWEEP BAR	000: 001-050:	005	ONE BAR STANDS FOR 5 DIVISIONS BY SPECIFIED DIVISION	
056	LED BRIGHTNESS OF JUDGMENT LAMP	000: 001: 002:	000	25% (DIM) 50% 75% (BRIGHT)	
058	AUTO POWER ON	000: 001:	000	NOT POWER ON AT PLUG IN POWER ON AT PLUG IN	
059	AUTO CALL AT POWER ON	000: 001:	000	NO FUNCTION CALL #1 DISPLAYED AUTOMATICALLY AT POWER ON	
060	AUTO ADDITION MODE AT POWER ON	000: 001:	000	MANUAL ADDITION MODE AT POWER ON AUTO ADDITION MODE AT POWER ON	
061	AUTO CANCEL OF TARE	000: 001: 002-003:	000	NO FUNCTION TARE CANCELED WHEN G/W IS LESS THAN 4 DIVISIONS NOT USED	

NO.	ITEM	VALUE	DEFAULT	FUNCTION	REMARKS																		
062	ITEMIZED TOTAL & GRAND TOTAL	000: 001: 002: 003:	000	ITEMIZED TOTAL NOT AVAILABLE ITEMIZED TOTAL AVAILABLE (AT #59=001) GRAND TOTAL AVAILABLE GRAND TOTAL, MAX, MIN, AVERAGE AND PRINT RANGE ARE EFFECTIVE	VALID ONLY CONNECTION TO PRINTER JPS-508.																		
063	GROSS CALCULATION	000: 001:	000	INITIAL COUNTS CONVERTED INTO WEIGHT CALCULATED BY NET+TARE (VALID AT #194=0)																			
064	NOT USED		000	DO NOT CHANGE																			
065	NOT USED		000	DO NOT CHANGE																			
066	ONE-TIME ADDITION	000: 001: 002:	001	MANUAL ADDITION EVEN FOR THE SAME ITEM IS POSSIBLE AT ANY TIME THE WEIGHT IS STABLE ONE-TIME MANUAL ADDITION IS POSSIBLE WHEN IT IS STABLE AFTER PASSING THE VICINITY OF THE ZERO POINT REAL TIME ADDITION IRRESPECTIVE OF STABILITY																			
067	DELAY TIME FOR AUTOMATIC ADDITION	000: 001-050:	000	ADDITION WITH NO DELAY TIME ADDITION AFTER THE SPECIFIED TIME - THE SETTING VALUE x 100ms																			
068	ZERO ADDITION	000: 001: 002:	000	NO ADDITION WITH THE INDICATION BEING 0 ADDING EVEN IF THE INDICATION IS 0. (ADD CYCLE +1) ADDING EVEN IF THE INDICATION IS 0. (ADD CYCLE 0) * POSSIBLE TO PRINT 0 AND ANY WEIGHT WITHIN THE WEIGHING RANGE (MIN. TO OVER SCALE)																			
069	MOTION DETECTION	000: 001: 002:	000	MANUAL ADDITION BY MOTION DETECTION / AUTOMATIC ADDITION BY ZERO DETECTION  MANUAL ADDITION BY MOTION DETECTION / AUTOMATIC ADDITION BY MOTION DETECTION  MANUAL ADDITION BY ZERO DETECTION / AUTOMATIC ADDITION BY ZERO DETECTION																			
070	LCD ASSIGNMENT (3rd LINE/ LEFT SIDE)	000-019	000	<table border="1"> <tr> <td>0: NO DISPLAY</td> <td>6: DATE</td> <td>11: UPPER LIMIT</td> </tr> <tr> <td>1: TARE</td> <td>7: TIME</td> <td>12: UNIT WEIGHT</td> </tr> <tr> <td>2: GROSS</td> <td>8: Total cycle(weight)</td> <td>13-17: DO NOT SET</td> </tr> <tr> <td>3: NET</td> <td>9: Total cycle+ Weight or PCS.</td> <td>18: Low limit1(grading)</td> </tr> <tr> <td>4: CODE</td> <td>10: LOWER LIMIT</td> <td>19: Low limit2(grading)</td> </tr> <tr> <td>5: ITEM</td> <td></td> <td></td> </tr> </table>	0: NO DISPLAY	6: DATE	11: UPPER LIMIT	1: TARE	7: TIME	12: UNIT WEIGHT	2: GROSS	8: Total cycle(weight)	13-17: DO NOT SET	3: NET	9: Total cycle+ Weight or PCS.	18: Low limit1(grading)	4: CODE	10: LOWER LIMIT	19: Low limit2(grading)	5: ITEM			
0: NO DISPLAY	6: DATE	11: UPPER LIMIT																					
1: TARE	7: TIME	12: UNIT WEIGHT																					
2: GROSS	8: Total cycle(weight)	13-17: DO NOT SET																					
3: NET	9: Total cycle+ Weight or PCS.	18: Low limit1(grading)																					
4: CODE	10: LOWER LIMIT	19: Low limit2(grading)																					
5: ITEM																							
071	LCD ASSIGNMENT (3rd LINE/ RIGHT SIDE)		000																				
072	LCD ASSIGNMENT (4th LINE/ LEFT SIDE)	000-009	000	<table border="1"> <tr> <td>0: NO DISPLAY</td> <td>4: CODE</td> <td>8: Total cycle(weight)</td> </tr> <tr> <td>1: TARE</td> <td>5: ITEM</td> <td>9: Total cycle+ Weight or PCS.</td> </tr> <tr> <td>2: GROSS</td> <td>6: DATE</td> <td></td> </tr> <tr> <td>3: NET</td> <td>7: TIME</td> <td></td> </tr> </table>	0: NO DISPLAY	4: CODE	8: Total cycle(weight)	1: TARE	5: ITEM	9: Total cycle+ Weight or PCS.	2: GROSS	6: DATE		3: NET	7: TIME								
0: NO DISPLAY	4: CODE	8: Total cycle(weight)																					
1: TARE	5: ITEM	9: Total cycle+ Weight or PCS.																					
2: GROSS	6: DATE																						
3: NET	7: TIME																						
073	LCD ASSIGNMENT (4th LINE/ RIGHT SIDE)		000																				
074	PRINTING TIMES	000 001-009	001	PRINT ONCE PRINT THE SPECIFIED TIMES	Specify printing times for a weighing.																		
086	SUBTRACTION OF ADDED DATA FROM SCALE MEMORY	000: 001:	000	CANCEL LAST MINUTE ADDITION DATA SUBTRACT WEIGHT ON PLATFORM FROM SCALE MEMORY																			
092	NEGATIVE COUNT	000: 001: 002:	000	NO MANUAL ADDITION OR NO OVER/UNDER JUDGMENT WHEN THE NET WEIGHT IS NEGATIVE. MANUAL ADDITION OR OVER/UNDER JUDGMENT ONLY WHEN THE NET WEIGHT IS NEGATIVE. MANUAL ADDITION OR OVER/UNDER JUDGMENT DESPITE OF THE VALUE OF NET WEIGHT.																			
182	FINE FEED DETECTING DIVISION	000: 001 -6000:	000	NO OUTPUT SIGNAL OUTPUT SIGNAL OF FINE FEED AT THE SPECIFIED DIVISION (WEIGHT).	Specify the division to output signal.																		
183	ROUGH FEED DETECTING DIVISION	000: 001 -6000:	000	NO OUTPUT SIGNAL OUTPUT SIGNAL OF ROUGH FEED AT THE SPECIFIED DIVISION (WEIGHT).																			
187	SHORTAGE GUIDANCE DISPLAY	000: 001:	000	DISABLE ENABLE																			

## Error code

Panel display	Conditions that trigger the error code	Corrective action
	When there are any objects placed on the platform of the instrument, pressing the  key to turn ON the display may generate this code.	Remove the object from the platform and press the  key. The panel shows "0.00"; and the instrument is operational.
	When there are any objects placed on the platform of the instrument, pressing the  key to perform the zero reset may generate this code.	
	When foreign material is caught between the platform of the instrument and the container or when the platform is removed, pressing the  key to turn ON the display may generate this code.	Correctly install the platform and press the  key. The panel shows "0.00"; and the instrument is operational.
	When the platform of the instrument is removed, pressing the  key to perform the zero reset may generate this code.	
	Placing any objects that are heavier than the weighing capacity of the instrument displays this sign during operation.	Removing the object returns to the weighing display. Use the instrument within its rated operating range.
	Removing the platform of the instrument displays this sign during operation.	Correctly install the platform. The panel shows "0.00"; and the instrument is operational.
	When the counting function is set to the individual weight, specifying a too small individual weight generates this code.	Press the  key to clear this error, and set the correct individual weight.
	When the number of measurement times added has reached the maximum number (9999), further addition of the number generates this code.	Press the  key. Then clear the number of measurement times added by referring to page 15.
	This code appears when the added value exceeds the maximum value (999,999,999).	Press the  key to reset the error. Then clear the added value by referring to page 15.
	This code appears in the event of abnormal A/D conversion., or when the connected optional journal printer does not function properly due to a paper jam, etc.	Check the printing section for the paper jam, etc. Power OFF and then ON by pressing the  key and then the  key.

Panel display	Conditions that trigger the error code	Corrective action
	<When the optional RS232C is in use> This code appears when connected equipment is not ready for receiving a signal.	Check the connector connection. Press the  key to reset the error and then restart communication.
	<When the optional RS232C is in use> This code appears when an unknown command is received.	Check the data transmitted by the connected equipment. Press the  key to reset the error and then restart communication.
	<When the optional RS232C is in use> This code appears when an unknown header is received.	Check the data transmitted by the connected equipment. Press the  key to reset the error and then restart communication.
	<When the optional RS232C is in use> This code appears when received data such as tare weight exceed the rated operating range.	Check the data transmitted by the connected equipment. Press the  key to reset the error and then restart communication.
	<When the optional RS232C is in use> This code appears when a received header and the unit of numeric values are incorrect.	Check the data transmitted by the connected equipment. Press the  key to reset the error and then restart communication.
	<When the optional RS232C is in use> This code appears when the BCC values are not matched.	Check the results of BCC calculated by the connected equipment. Press the  key to reset the error and then restart communication.
	<When the optional RS232C is in use> This code appears when the connected equipment transmits too many data.	Divide the transmission data of the connected equipment into two parts and then transmit each part separately. Alternatively, reduce the volume of the transmission data. Press the  key to reset the error and then restart communication.
	This code appears when the instrument has received an addition command during pre-stable condition.	Press the  key to reset the error. After the instrument has become stable, transmit the addition command again.
	<When the optional RS232C is in use> This code appears when a received zero adjustment command specifies an invalid zero adjustment range.	Transmit a command within the valid zero adjustment range (within the range of $\pm 1.9\%$ of the weighing capacity) Press the  key to reset the error and then restart communication.

Panel display	Conditions that trigger the error code	Corrective action
	<p>&lt;When the optional RS232C is in use&gt;  This code appears when the instrument has received a tare subtraction command, but is not ready for tare subtraction.</p>	<p>Check the specifications/status of the instrument. Make the instrument ready for tare subtraction and then transmit the command.  Press the  key to reset the error and then restart communication.</p>
	<p>&lt;When the optional RS232C is in use&gt;  This code appears when an inexecutable command is received. For example, an addition command is received when there are no objects placed on platform of the instrument.</p>	<p>Check the specifications/status of the instrument. Make the instrument ready for the command and then transmit the command.  Press the  key to reset the error and then restart communication.</p>
	<p>&lt;When the optional RS232C is in use&gt;  This code appears when an undefined ZS99 command is received.</p>	<p>Check the data transmitted by the connected equipment.  Press the  key to reset the error and then restart communication.</p>
	<p>&lt;When the optional RS232C is in use&gt;  This code appears when the transmitted data length is too long.</p>	<p>Check the data transmitted by the connected equipment.  Press the  key to reset the error and then restart communication.</p>
	<p>&lt;When the optional printer is in use&gt;  This code appears when the call number is "0" although the summary setting for individual call numbers is enabled.</p>	<p>Press the  key and set the call number. Then restart weighing.</p>
	<p>&lt;When the optional USB flash drive feature is used&gt;  This code appears when a USB flash drive for writing is not connected.</p>	<p>Check that a USB flash drive has been inserted.  Press the  key to reset the error and then restart communication.</p>
	<p>&lt;When the optional USB flash drive feature is used&gt;  This code appears when there is no free space left in the USB flash drive for writing.</p>	<p>Check the free space of the USB flash drive.  Press the  key to reset the error and then restart communication.</p>
	<p>&lt;When the optional USB flash drive feature is used&gt;  This code appears when the USB flash drive for writing has been set to read only.</p>	<p>Check that the USB flash drive is set to read/write.  Press the  key to reset the error and then restart communication.</p>
	<p>&lt;When the optional USB flash drive feature is used&gt;  This code appears when the writing time into the USB flash drive is too long.</p>	<p>Check the data to be written in the USB flash drive.  Press the  key to reset the error and then restart communication.</p>

Note: Proper use of the instrument does not cause generation of errors.  
If any of the above error codes is displayed, carry out the respective Corrective actions.  
If the problem persists even after the above measures are taken, the instrument has internal failure. Contact your dealer from which you purchased the instrument.  
If "E-101" or higher number of error codes shows up, contact the dealer.

## Specifications

- |    |                    |   |                                     |
|----|--------------------|---|-------------------------------------|
| 1. | Model              | : DP-5602   |                                     |
|    | Platform           | : BW-302  |                                     |
|    | Indicator          | : EDI-562   |                                     |
| 2. | Weighing system    | : Strain gauze load cell  |                                     |
| 3. | Weighing capacity  | : 3 kg to 2,000 kg  |                                     |
|    | Platform dimension | : Refer to “Capacity & Platform size” list  |                                     |
| 4. | Display tube       |   |                                     |
|    | Main display       | : 7-segmented 6 digit Fluorescent tube  |                                     |
|    | Character size     | : 32H x 14.6W (mm)  |                                     |
|    | Auxiliary display  | : Full-dot LCD module   |                                     |
|    | Dot size           | : 0.5H x 0.5W (mm)  |                                     |
| 5. | Display contents   |   |                                     |
|    | Main display       | : Weight (Number)   | Max. 5 digits (6 digits)            |
|    | Auxiliary display  | : Weight  | 5 digits                            |
|    |                    | : Low Limit   | 5 digits                            |
|    |                    | : High Limit  | 5 digits                            |
|    |                    | : Rank value  | 5 digits                            |
|    |                    | : Code  | 6 digits                            |
|    |                    | : Date  | 6 digits                            |
|    |                    | : Time  | 6 digits                            |
|    |                    | : Tare  | 5 digits                            |
|    |                    | : Total weight  | 9 digits                            |
|    |                    | : Total cycle (weight)  | 4 digits                            |
|    |                    | : Call No.  | 3 digits                            |
| 6. | Indication sign    |   |                                     |
|    | Center zero        | : Indicator ▼ lights within $0 \pm 1/4$ division  |                                     |
|    | Stable             | : Indicator ▼ lights at stable  |                                     |
|    | Automatic          | : Indicator ▼ lights in automatic mode  |                                     |
|    | Shift              | : Indicator ▼ lights when  key is pressed. |                                     |
|    | Lamp indication    |   |                                     |
|    | Net                | : Red LED lights during tare subtraction  |                                     |
|    | Under/over         | : Under   | Red LED lights at underweight       |
|    | judgment           | : Accept  | Blue LED lights at accept condition |
|    |                    | : Over  | Yellow LED lights at overweight     |

7. Keys

	Turns on display or resets to zero.
	Turns the power OFF.
	Calls registered data, or registers data.
	Performs the quick tare subtraction.
	Addition or printout at addition.
	Subtraction or printout at subtraction
	Totalizing or total printout
	To set code number.
	To set upper limit.
	To set lower limit.
	To set sample number.
	Determines the setting value entered.
 to 	Enters a numerical value.



Clear data entry or tare

Change of function on keys to

Feed the print paper (with key) for JPS-508.

Changeover between automatic and manual (with key).

To set date (with key).

To set time (with key).

To set item name (with key).

Changeover between weighing and counting mode. (with key).

To set rank (with key).

- |     |  |  |  |
|-----|--|--|--|
| 8.  | Tare setting                           | : 3 types of tare setting  | <ul style="list-style-type: none"> <li>- One-tough by Tare key</li> <li>- Numerical entry</li> <li>- Recall by PLU number</li> </ul>   |
| 9.  | Max. Tare<br>Recalling registered data | : up to capacity<br>Range  | <p>Within weighing capacity. Recall command with the display reading below zero recalls various data and stores them in respective memory locations.</p> <p>Registration method<br/>Data to be registered</p> <p>Individual or Multiple registration<br/>Tare, Code No., Upper limit, Lower limit, Unit weight, Item name, Rank setting value, Rank name</p> |
| 10. | Option                                 |  |  |
|     | a)Built-in journal printer             |  |  |
|     | Contents of print<br>(each print)      | Weight (5 digit), Code (6 digit), Total cycle (4 digit), Date (6 digit), Time (4 digit)  |  |
|     | (Total print)                          | Total weight (9 digit), Total number of weighing times (4 digit)   |  |
|     | b)RS232C interface                     |  |  |
|     | Connectable device                     | : USB Memory, PC etc.  |  |
|     | Output data                            | : Date, Code, Gross weight, Net weight, Tare, Total weight, Times of addition, Number (at counting mode), Total number, Upper limit, Lower Limit |  |
|     | Input data                             | : Addition command, Total command, Tare command, Zero reset command, Code, Date, Tare, Upper limit, Lower limit                                  |  |
|     | c)Relay input/output                   |  |  |
|     | Output                                 | : 6 outputs available (Underweight, Pre-lower limit, Acceptable weight, Overweight, Rough feed, Fine feed)                                       |  |
|     | Input                                  | : Tare, Zero reset, Addition, Total  |  |
|     | d)USB Memory                           |  |  |
|     | e)Wireless communication               |  |  |
| 11. | Power supply                           | : AC110V, 120V, 200V, 220V, 230V +10%~-15%, 50/60Hz  |  |
| 12. | Power consumption                      | : Approx. 23W  |  |
| 12. | Indicator                              | Material   | Stainless Steel  |
|     |  | IP rating  | IP66   |
| 13. | Operating condition                    | Temperature  | -10°C to 40°C  |
|     |  | Humidity   | 30% to 85%RH (no condensation)   |
| 14. | Cable                                  | Power cable  | Approx. 4 meter  |
|     |  | Load cell cable  | Approx. 3 meter (small & middle size)<br>Approx. 5 meter (large & extra-large size)  |
| 15. | Accessory                              | Hook for hanging on walls.   |  |

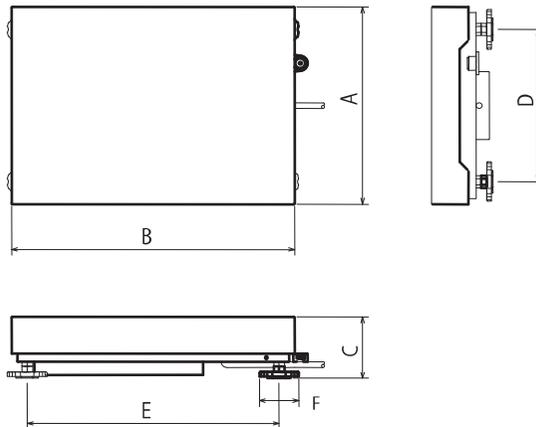
## Outline view drawing

Capacity & Platform Size (Model: BW-302)

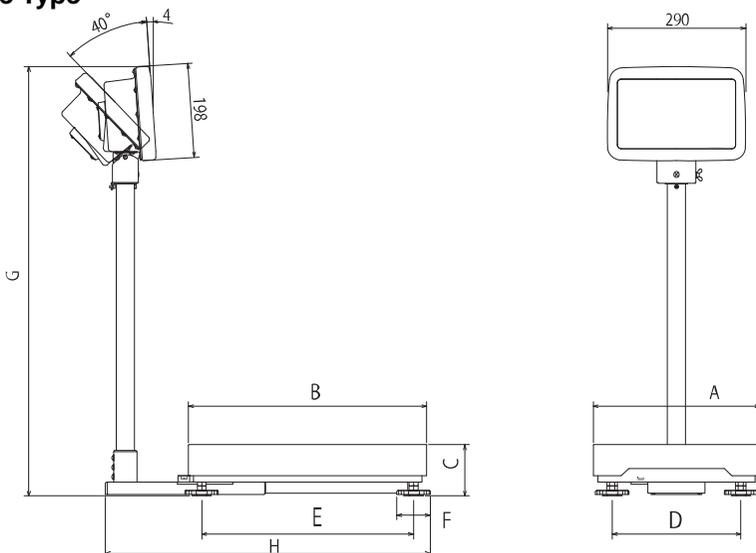
(Unit: mm)

Platform Size	Desk-top	Small	Medium	Ex-Medium	Large	Extra Large
Capacity (kg)	3 6 15	30 60 150	60 150 300	600	300 600 1200	1200 1500 2000
A	350	350	500	500	850	1200
B	300	500	750	750	1000	1200
C	80,+0~10	112,+0~20	148,+0~20	236,+0~30	236,+0~50	246,+0~50
D	270	270	400	400	720	1070
E	305	495	660	660	855	1070
F	φ 38	φ 70	φ 70	φ 75	φ 75	φ 75
G (Pole type)	556,+0~10	903,+0~20	910,+0~20	935,+0~30	935,+0~50	nil
H (Pole type)	370	683	896	895	1145	nil

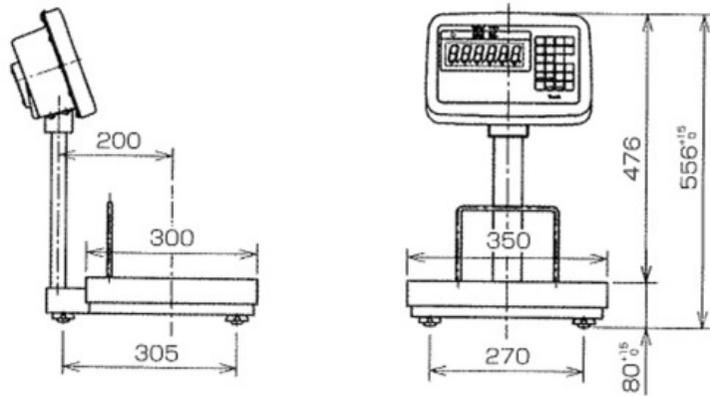
### Separate Type (Standard)



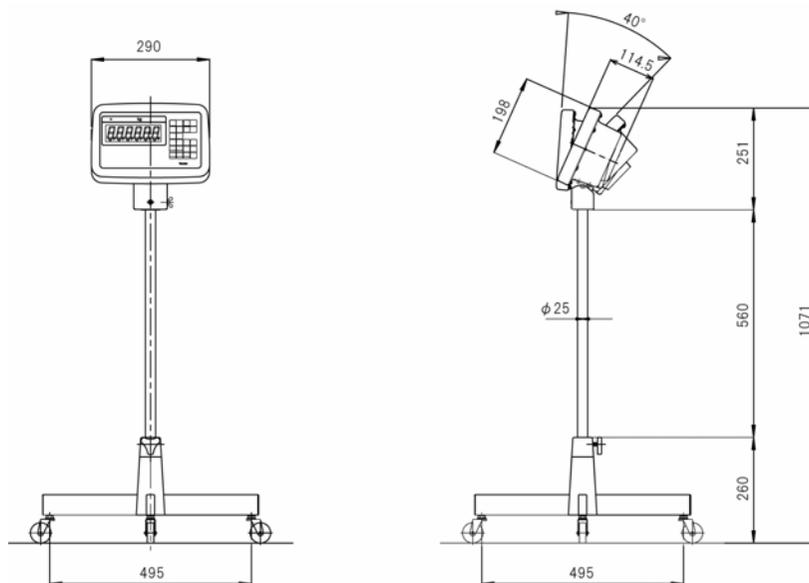
### Integrated Pole Type



## Desk-top Type



## Separate Stand Type



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