



IWQ-150/30

OPERATION MANUAL



IMPORTANT

- Do not carry out installation, operation, service or maintenance until thoroughly understanding the contents of this manual.
- Keep this manual available at all times for installation, operation, service, and maintenance.

ISHIDA CO., LTD.

You can help improve this manual by calling attention to errors and by recommending improvements.

Please convey your comments to the nearest Ishida Company regional representative.

Thank you!

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SAFETY CONSIDERATIONS

To ensure the safe operation of this machine, the general safety considerations below must be followed:

Grounding

This instrument is a Class 1 device which requires protective grounding for safe operation.

To avoid potential shock hazards, a protective grounding conductor for the instrument must be securely connected to the main grounding provision by qualified service personnel.

Do not remove covers or enclosures.

To avoid personal injury and shock, do not open or remove any covers or enclosures of the instrument unless specified in the manual.

Do not perform unspecified maintenance.

For your own personal safety, do not perform any maintenance procedures which are not specified in the manual.

Disconnect the power supply before servicing.

To ensure your personal safety, disconnect the power supply before servicing.



WARNING!

Power supply to the machine is disconnected only when the electrical plug is removed from the electrical outlet. For safe operation of this machine, connect the plug to the nearest and most accessible outlet.

The following symbols are used to alert service personnel of potential danger or special circumstances related to the safe and proper servicing of this machine:



WARNING!

Precautions which must be followed to prevent the possibility of death or serious injury.



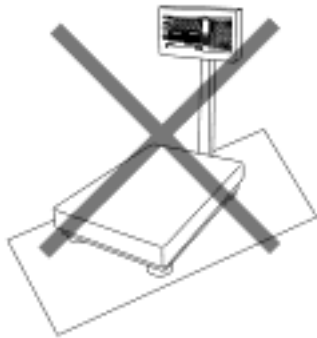
CAUTION!

Precautions which must be followed to prevent the possibility of light or moderately severe injury to personnel or damage to the equipment.

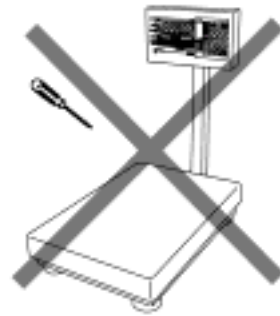
NOTE:

Important information for the operation of the machine.

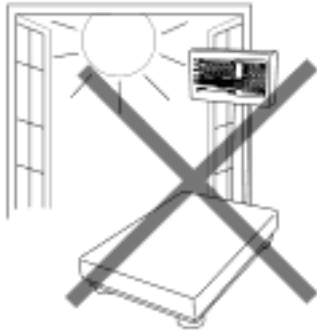
CAUTIONS FOR USE



Always operate the scale on a level surface.



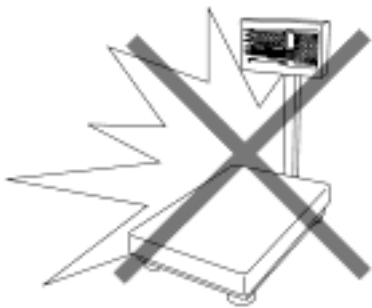
Do not disassemble the scale.



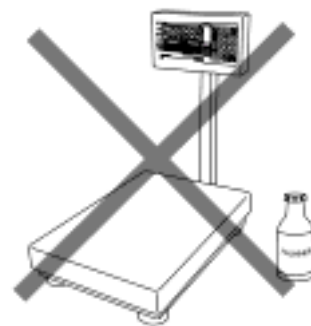
Do not expose the scale to direct sunlight for long period.



Do not allow any liquids to come into contact with the scale.



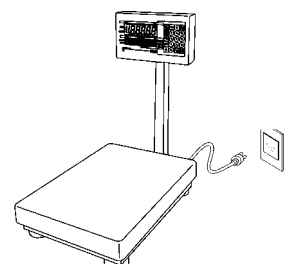
Do not drop or apply a strong shock to the scale.



When cleaning the scale, only use a soft dry cloth wetted with a neutral cleanser. Never use thinner or other volatile liquids.

WARNING!

- 1) Always operate the scale with the same rated AC power supply shown on the specification plate.
- 2) To disconnect the power supply, remove the electrical plug from the electrical outlet.



Avoid Locating the Scale in the Following Places:

A place of low temperature, high temperature or high humidity

A place exposed to direct sunlight

A place frequently exposed to vibration

On an unstable floor or table.

A place directly exposed to cold or hot air

A place directly exposed to cold air from a cooler or refrigerator. A place exposed to hot air from an air conditioner or heater. A place exposed to wind from a fan or other pneumatic device.

A dusty place

A place provided with fluctuating power supply voltage

Use of an electrical outlet also being used with a vibrator, radio, or other noise sources may affect the performance of the scale. Be sure to provide an outlet exclusively for use by the scale. Also avoid putting many loads on one electrical outlet.

Power Supply

Use a power supply that conforms to product specifications.

Provide a power line to be exclusively used for the scale.

If the power supply voltage fluctuates, the scale may malfunction.

Do not tread on or place a heavy load on the power cable.

The cable will be damaged. Continued use of the cable under such conditions may lead to an accident or problems with the scale.

Be sure to ground the scale to avoid electricity leakage.

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1. Before Using Your Scale

1-1 Cautions for Handling

- **Do not disassemble or reconstruct your scale.**

Incorrect disassembly may lead to scale failure. Reconstructing the scale, disassembling part(s), or fitting unspecified part(s) may cause serious accidents or personal injuries. This scale is waterproof. Do not loosen the cover fixing screws to remove the cover on the rear side of the display unit. Once the cover is removed, waterproofing may deteriorate. If disassembled or reconstructed the scale may not be allowed to be reused as an approved scale.

- **Do not use your scale in abnormal conditions.**

If smoke, disgusting smell, or any other abnormality is detected from the scale, immediately disconnect the power supply cable plug from the outlet and contact the nearest ISHIDA regional representative for repair. Continued use of the scale under such abnormal conditions may cause a fire or electric shock. For your personal safety, never repair the scale by yourself.

- **Your scale is a precision machine. Do not give the scale any shock.**

The scale may be impaired or its weighing performance may be deteriorated.

- **Do not insert/remove the plug in/from the outlet with wet fingers.**

An electric shock or short-circuit may occur.

- **Do not remake the electrical plug or power cable.**

A fire or electric shock may occur.

- **Do not pull strongly, break, or remake the power cable.**

The core wires may be cut and cause a fire, electric shock, or defective functioning of the scale.

- **Be sure to insert the load cell into the display pole.**

Do not pour an excessive amount of water or high pressure water on the scale.

- **Do not leave any items on the weighing platter.**

- **Before using the scale, be sure to level the scale body.**

Otherwise, the scale may malfunction.

- **Never use thinner or other volatile agent for servicing the scale.**

Discoloration may result. Wipe the scale body gently with a soft dry cloth, or use a neutral detergent.

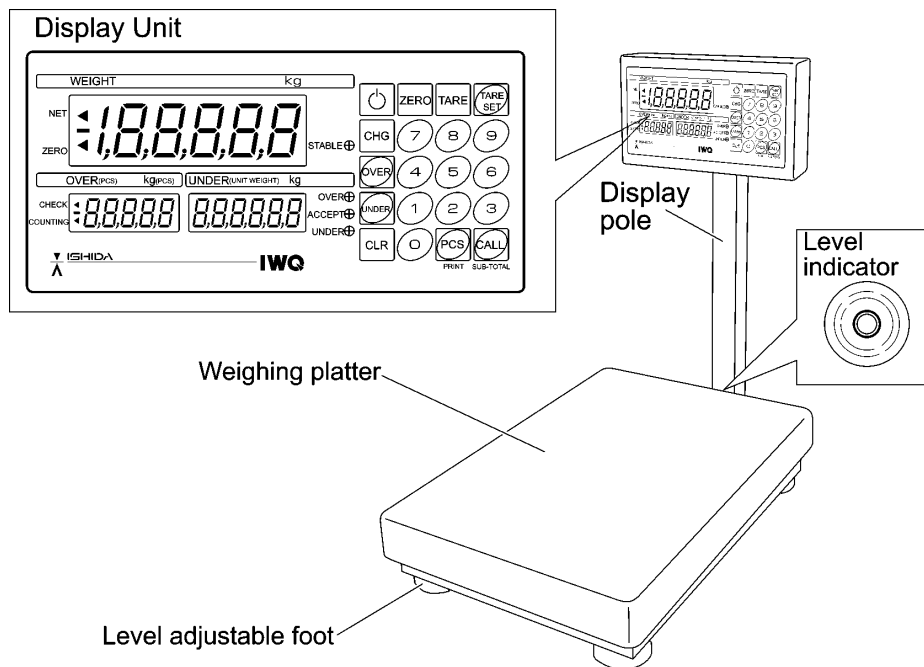
- **When carrying the scale, be sure to hold it at the bottom.**

Do not move the scale by holding only the display unit or display pole.

- **Never peel off the seal affixed to the scale body.**

2. Name and Function of Each Component

2-1 External View of the Scale



2-2 Function of Each Key



Used to turn ON/OFF display function of scale.

NOTE:

The ON/OFF key turns ON or OFF the display function of the scale. Power to the scale is still active even when the key is switched OFF. When moving the scale or leaving it for a long period without use, be sure to disconnect the power by removing the electrical plug from the outlet.



Used to set upper limit value.



Used for zero adjustment to reset weight indicator to zero.



Used to set lower limit value.



Used to set tare weight.



Used to clear keyed-in numeric value.



Used to set tare weight with ten-key pad.



(1) Used to call registered tare weight and upper/lower limit weights.
(2) Used to print out weight data when printer is connected.



Used to change to counting mode/checker mode.



(1) Used to set unit weight in counting mode.
(2) Used to print out subtotal data when printer is connected.

NOTE:

Turning the power ON will resume the previous mode.

3. Preparing the Scale

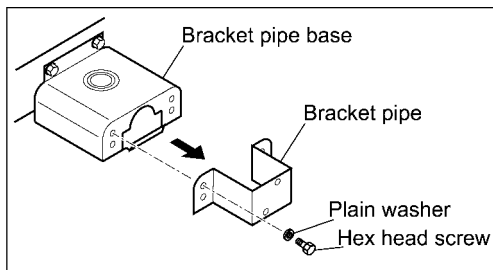
The following describes the procedure for preparing the scale before operation.

3-1 Fitting the Display Pole and Setting Up the Scale

The display unit and display pole are fitted together with a tightening knob. The display pole and the bracket pipe base are separated.

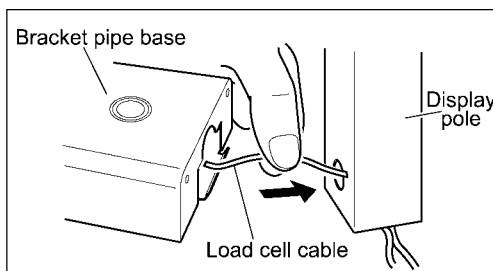
1. Remove the Bracket Pipe.

Remove the bracket pipe from the bracket pipe base (by loosening the four hex head screws).



2. Pass the Load Cell Cable through the Display Pole.

Push the extra length of cable protruding from the bracket pipe base into the display pole.



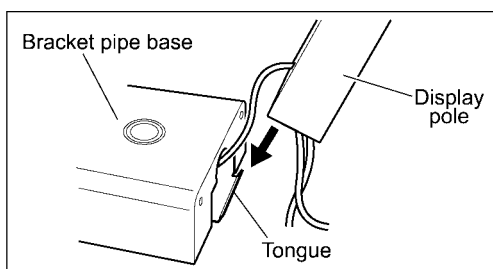
NOTE:

Do not pull strongly on the load cell cable when pushing it into the display pole. Otherwise, it may be cut.

If the cable covering material is scratched, water may penetrate into the cable and cause unreliable weighing, or the core material may corrode and cause the scale to fail.

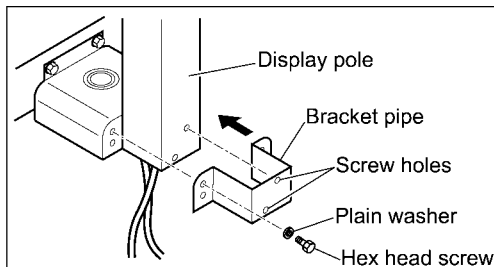
3. Stand the Display Pole against the Bracket Pipe Base.

Stand the display pole against the bracket pipe base by fitting it at its load cell cable side into the tongue of the bracket pipe base.



4. Fix the Display Pole with the Bracket Pipe.

After confirming the screw holes are aligned, fix the display pole to the scale body with the bracket pipe (at four points with plain washers and hex head screws).

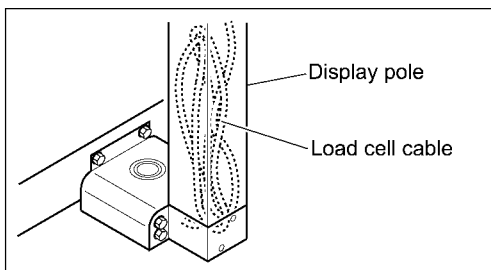


NOTE:

Fit the bracket pipe with its larger radius corners facing upward. Securely tighten the screws until the display pole becomes steady.

5. Store the Load Cell Cable inside the Display Pole.

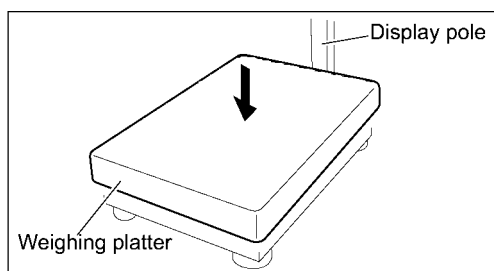
Fold up the extra length of load cell cable and store it inside the display pole.



NOTE:

Push the load cell cable deeply into the display pole at least 15 mm away from the pole end.

6. Install the Weighing Platter.

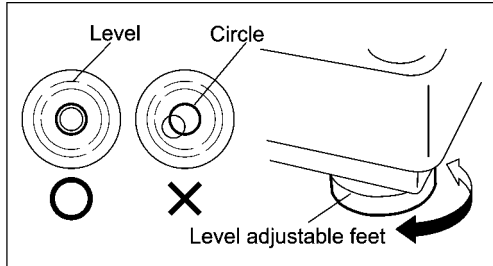


NOTE:

Make sure that nothing has been placed on the weighing platter.

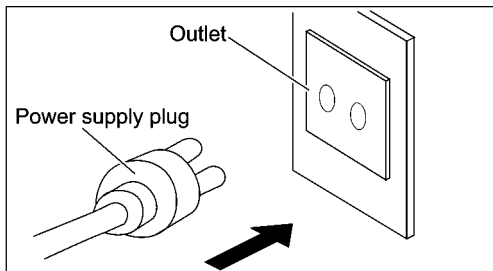
7. Level the Scale.

Adjust the level adjustable feet until the air bubble inside the level remains at the center of the circle.



8. Supply the Power.



Insert the power supply plug into the outlet. Grounding is recommended if the scale will be used in a place with a chance of electrical leakage.



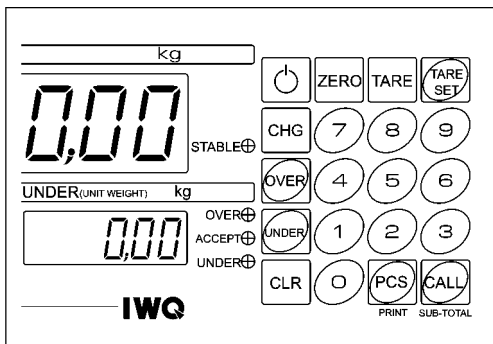
⚠ WARNING!

To disconnect the power supply, remove the electrical plug from the electrical outlet.

9. Turn on the Power Switch. (Display: for 150 kg version)

With nothing placed on the weighing platter, press the  key, and then the  key.

The display unit will turn on.

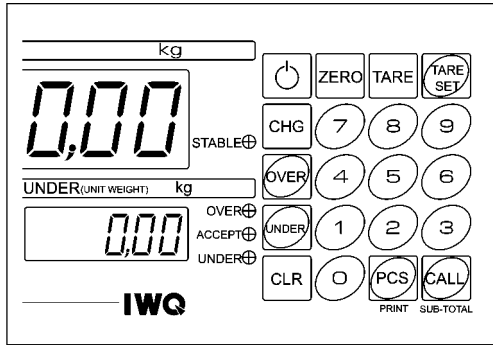


NOTE:

Make sure that display indicates all "0"s.

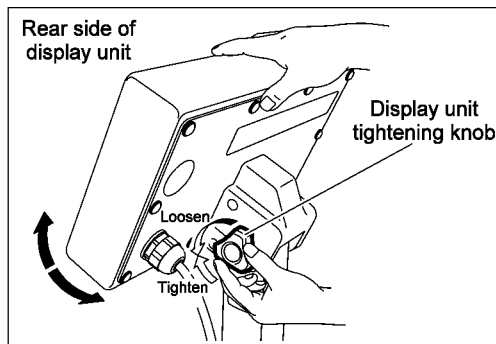
10. Adjust the Zero Point.

If the zero indicator does not light, press the **ZERO** key.



3-2 Vertical Adjustment of the Display Unit

After loosening the display unit tightening knob, adjust the unit at an easy-to-see angle. Then, retighten the knob.




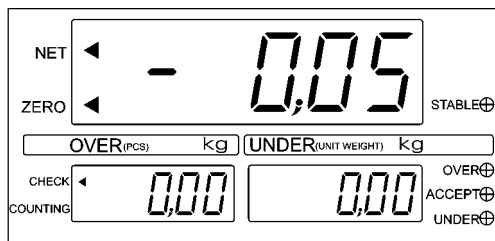
4. Weighing

Display: for 150 kg version


4-1 Operation

1. Subtract the Tare Weight. (if necessary)

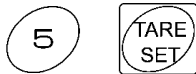
After keying in the tare weight, press the  key.




NOTE:

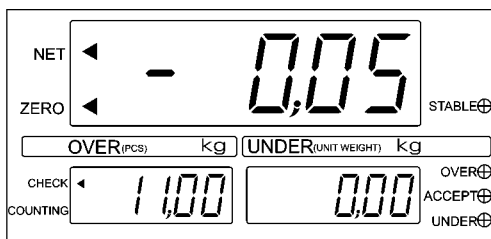
The tare weight can also be subtracted by pressing the  key after placing a tare weight on the weighing platter. Tare weight subtraction is also available by calling a preset weight. (Operation: Ref., 6-2 Calling a Preset Value)

- For a tare weight of 0.05 kg







2. Key in the Upper Limit Weight. (if necessary)

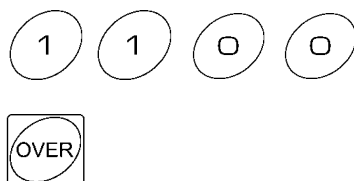
After keying in the upper limit weight, press the  key.




NOTE:

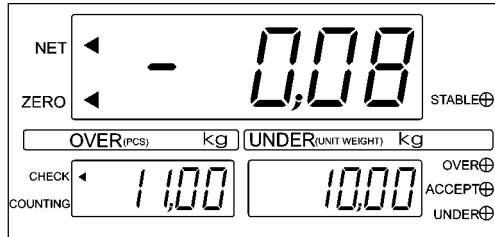
The upper and lower limit weights can also be set by calling preset values. To change a preset value temporarily, key in a new value and then press the  key or  key. To reset the input, enter "0" and then press the  or  key. (Operation: Ref., 6-2 Calling a Preset Value)

- For an upper limit weight of 11.00 kg







3. Key in the Lower Limit Weight. (if necessary)

After keying in the lower limit weight, press the  key.

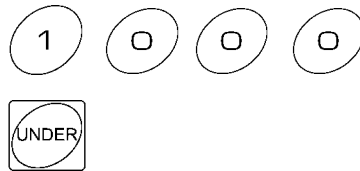


NOTE:

The upper and lower limit weights can also be set by calling preset values. To change a preset value temporarily, key in a new value and then press the  key or  key.

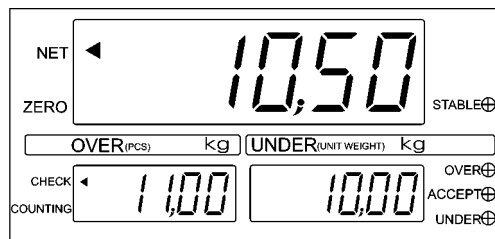
To reset the input, enter "0" and then press the  or  key. (Operation: Ref., 6-2 Calling a Preset Value)

- For a lower limit weight of 10.00 kg



4. Weigh an Item.

Place the item to be weighed on the weighing platter together with the tare weight.




- For a 10-kg bag of rice

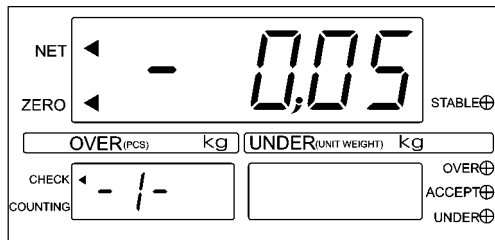
Weighing result	Weighing condition	Indication on scale	
Over	Weight > upper limit weight	Upper limit weight indicator flashes.	OVER indicator lamp (orange LED) lights.
Under	Weight < lower limit weight	Lower limit weight indicator flashes.	UNDER indicator lamp (red LED) lights.
ACCEPT	Lower limit weight ≤ weight ≤ upper limit weight	---	ACCEPT indicator lamp (green LED) lights.

5. Confirming the Preset Numbers

5-1 Operation

1. Confirm the Preset Number during Operation.



The preset number can be confirmed while pressing the  key (Example: Preset No. 1).

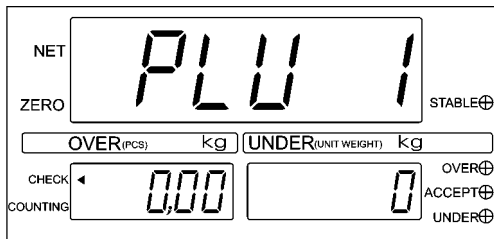



- For Preset No. 1

6. Using the Preset Function

6-1 Presetting

1. Power on by Pressing the  Key. Then, Press the  Key.



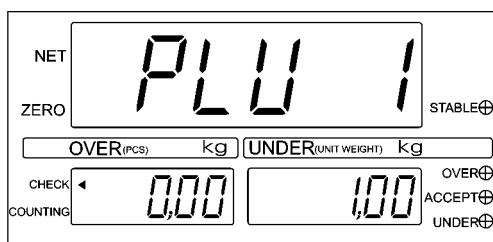
NOTE:
Press the  key while all displays are ON (while the buzzer is sounding).



The upper limit value for Preset No. 1 will be displayed.

2. Preset the Upper Limit Value.


Enter the upper limit value by using the ten-key pad.

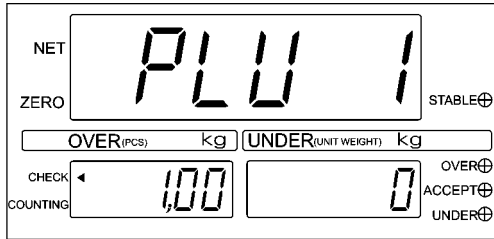


NOTE:
If the lower limit value has already been pre-set, only values equal to or larger than this limit value can be set.

• For an upper limit value of 1 kg



Press the  key.



"OVER" LED will illuminate.

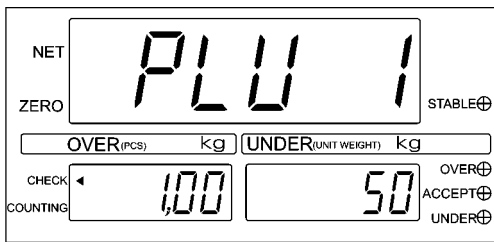


NOTE:

If the lower limit value has already been pre-set, only values equal to or larger than this limit value can be set.

3. Preset the Lower Limit Value.


Enter the lower limit value by using the ten-key pad.

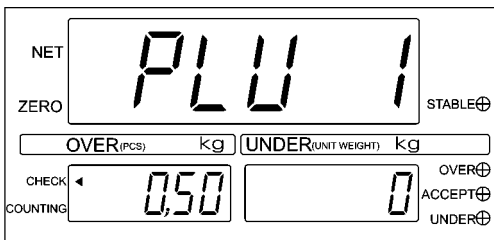


"UNDER" LED will illuminate.

- For a lower limit value of 0.5 kg



Press the  key.



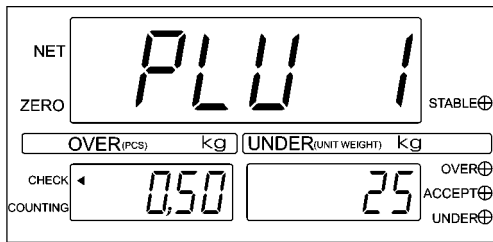
NOTE:

If the upper limit value has already been pre-set, only values equal to or less than this limit value can be set. If the upper limit value has been set to "0," then only the lower limit value can be set.



4. Set the Tare Weight.

Enter the tare weight by using the ten-key pad.



- For a tare weight of 0.25 kg

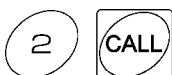
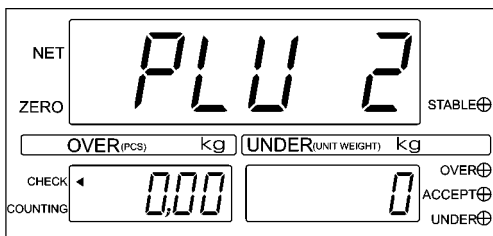


Press the **TARE** key.




5. Set the Values for the Other Preset Numbers.

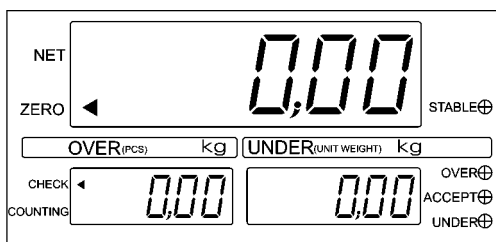
After entering a desired preset number, press the **CALL** key (Example: Preset number 2).



The upper limit value for Preset No. 2 will be displayed. Return to step 2 in the above procedure.

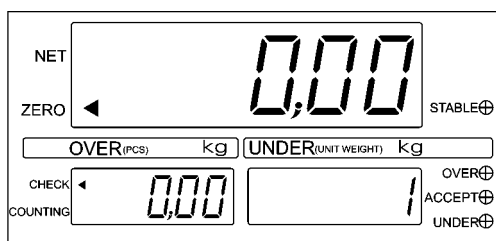
6. Finish the Setting Procedure.

Disconnect the power by pressing the  key.



6-2 Calling a Preset Value

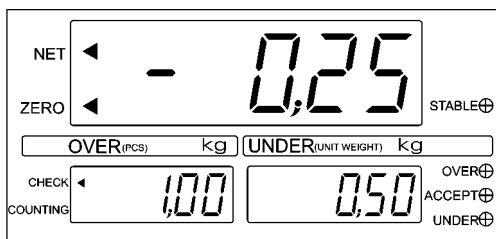
1. Enter a Preset Number by Using the Ten-Key Pad.



- For Preset No. 1


1

2. Press the Key.



(Example) Tare weight : 0.25 kg
Upper limit value: 1.00 kg
Lower limit value: 0.50 kg

NOTE:

If no tare weight has been set, or if neither the upper limit value nor lower limit value has been set, the values before pressing the  key will remain active.

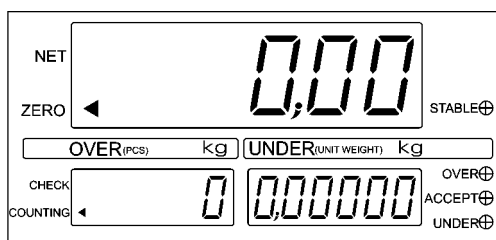
If Preset No. 0 (zero calling) is called, the tare weight, upper limit value, lower limit value, and preset numbers will be cleared.

7. Counting Function

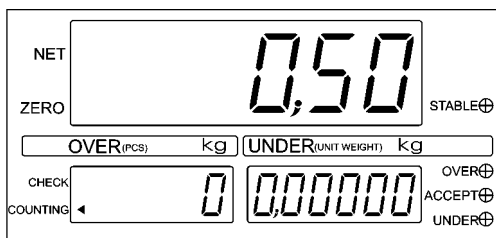
7-1 Normal Mode

7-1-1 Basic Procedure

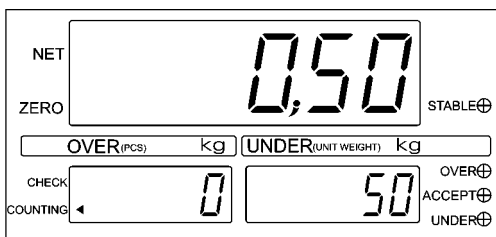
1. Press  Key to Switch to the Counting Mode.




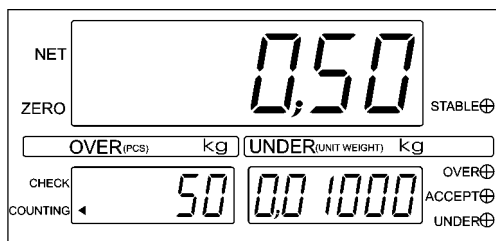
2. Place the Items to Be Weighed on the Weighing Platter (Sampling).



3. Enter the Quantity of Items to Be Weighed. (Example: 50)

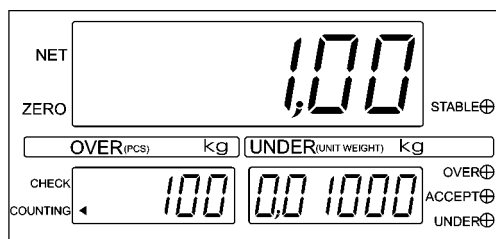


4. Press  Key. (Unit Weight Setting)





The indication will flash.

5. Place the Items to Be Weighed on the Weighing Platter to Count Their Quantity. (Example: 100)



The indication will flash.

7-1-2 For Setting the Upper and Lower Limit Values

1. After Entering the Upper Limit Quantity, Press  Key.
2. After Entering the Lower Limit Quantity, Press  Key.

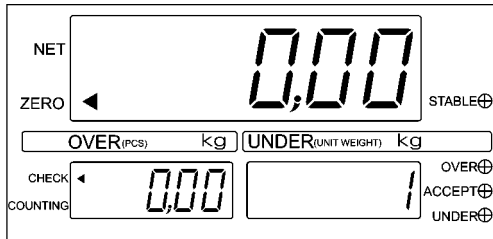
NOTE:

The unit weight, upper limit quantity, and lower limit quantity that have been entered can be cleared by entering "0" and pressing the associated key. Before starting the procedure, set unit weight.

7-1-3 For Calling Preset Value



1. Enter the Preset Number. (Example: 1)

1



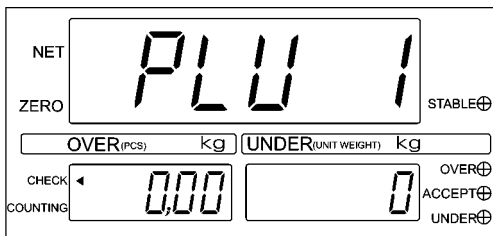
2. Press Key.

NOTE:


- * When the preset unit weight is called, the scale will be automatically switched to counting mode.
- * When the preset upper and lower limit weights are called, and  key is pressed to shift to the counting mode, the upper and lower limit weights will be treated as quantities.
- * The preset values thus called can be cleared by entering "0" and pressing  key.

7-2 Registration of Preset Value

1. Immediately after Pressing Key under "OFF" Condition, Press Key.

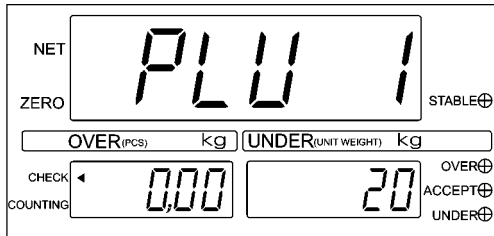


NOTE:

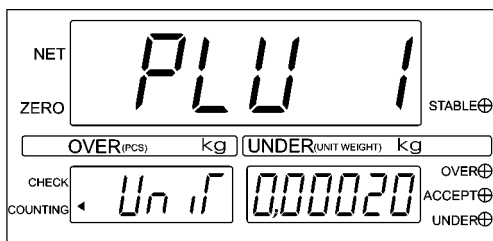
When a preset number has been specified, enter the preset number and then press  key.

2. Enter the Unit Weight. (Example: 20 g)


2 0



3. Press Key

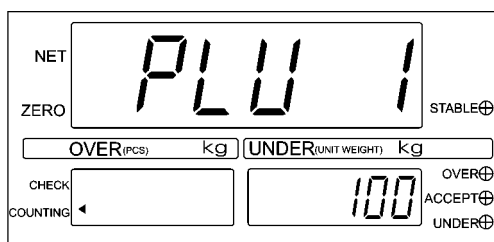


NOTE:

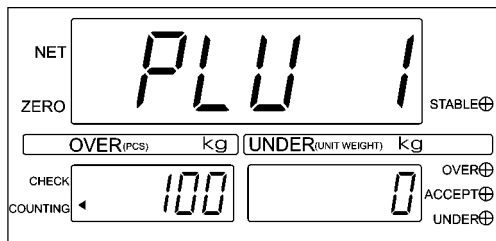
Press the  key to change to counting mode.

4. Enter the Upper Limit Quantity. (Example: 100)

1 0 0

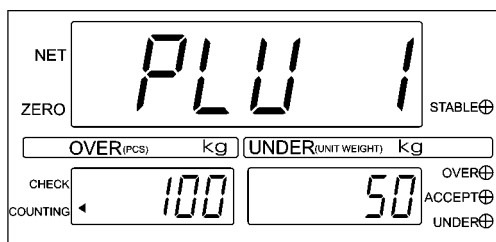
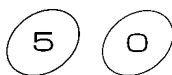


5. Press  Key.

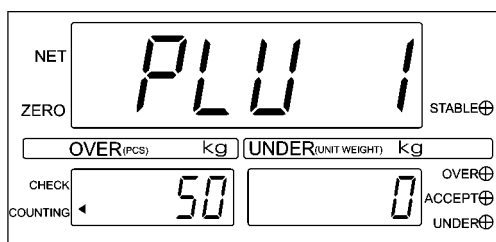


"OVER" LED will illuminate.

6. Enter the Lower Limit Quantity. (Example: 50)



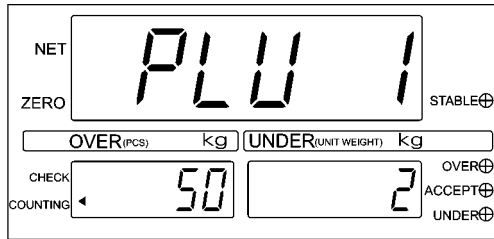
7. Press  Key.



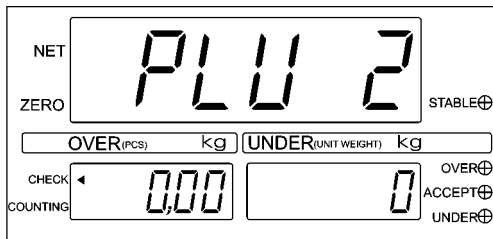
"UNDER" LED will illuminate.

8. Enter the Next Preset Number. (Example: No. 2)

2



9. Press  Key.



10. To Enter the Preset Value following the Above Procedure, Enter the Preset Number and Then Repeat Procedures 2 through 7.

11. Press  Key to Return to the Normal Mode, or Press





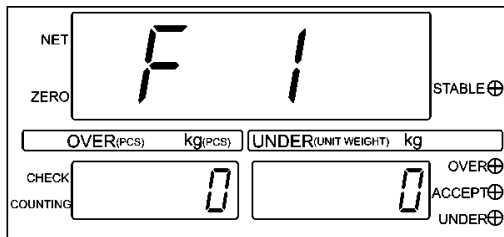
Key to Terminate the Operation.

8. Setting Mode

8-1 Setting Method

1. How to Start

On the scale OFF state, press the  key, and then (immediately while the buzzer is sounding) press the  key for a while.



NOTE:

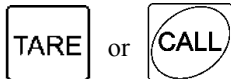
While all display segments are ON (while the buzzer is sounding), press the

 key.

2. Selecting Items F1 to F16

Select one of the three methods;

(1) Proceed in the right direction.




Changing successively in the “F1” “F2” “F3” ... order.

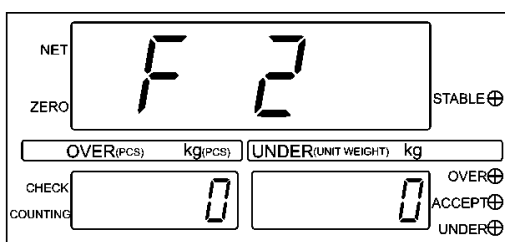
(2) Proceed in the reverse direction.




Changing successively in the “F1” “F16” “F15” ... order.

(3) Input item number and call up.


Input item number(s) , then press .

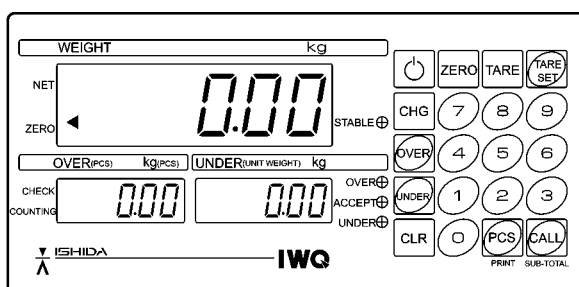


3. Setting Data


Input data and set using the  key.


4. End of Setup

Press the  key.






8-2 Set Values List


( key, PLU automatic call-up function, and concerns relating to the printer)

Set No.	Setup title	Set value	Functions
F01	 key available/ unavailable	00	Available
		01	Unavailable
F02	Call PLU1 when ON	00	No
		01	Yes
F03	Selecting number of digits	00	16 digits
		01	20 to 24 digits
F04	Date printing	00	No
		01	Yes
F05	Printing preset No.	00	No
		01	Yes
F06	Printing tare weight & upper/lower limits	00	No
		01	Yes
F07	Printing serial No.	00	No
		01	Yes

Set No.	Setup title	Set value	Functions
F08	Selecting chit type single/ consecutive	00	Single chit
		01	Consecutive chit
F09	Band rate	00	1200 bps
		01	2400 bps
		02	4800 bps
		03	9600 bps
		04	19200 bps
		05	38400 bps
F10	Selecting serial output format	00	Specifically designed for printer
		01	DAP-01 format
		02	IWQ1 format (DAP-01 expanded)
		03	MZ-7000 format
		04	IWQ2 format (MZ-7000 expanded)
F11	Serial output method	00	No output
		01	Send-out in discharge (synchronous to A/D)
		02	Output conditions (F12)
		03	As requested for DATA input (RS input) (contact input)
F12	Serial output conditions	00	Output when automatic/within range/re-stabilize
		01	Output when manual/within range/re-stabilize
		02	Output when automatic/range disregarded/re-stabilize
		03	Output when manual/range disregarded/re-stabilize
		04	Output when automatic/within range/zero return
		05	Output when manual/within range/zero return
		06	Output when automatic/range disregarded/zero return
		07	Output when manual/range disregarded/zero return
		<ul style="list-style-type: none"> - When “Send-out in discharge” is set, the O8 command is not available. - When manual printing is set, key input is determined to be error for a unstable state. 	

Set No.	Setup title	Set value	Functions			
F13	Setting contact output signal (contact box)		OUT1	OUT2	OUT3	OUT4
		00	Stable	Zero point marking	Accept	Over
		01	Stable	Zero display	Accept	Over
		02	Stable	Zero display	Accept	Under & Over
		03	Stable	Under	Accept	Over
		04	Tare deduction	Under	Accept	Over
F14	Selecting contact input	00	 key			
		01	 key			
		02	 key			
		03	Scale data output (same response as O8 command)			
F15	Loud buzzer - Buzzer may sound immediately after the power is turned ON due to unstable power characteristics for an initial second.	00	Same time as internal buzzer; Buzzer ON (normally OFF)			
		01	When conditioned as “Over”; Buzzer ON (normally OFF)			
		02	When conditioned as “Accept”; Buzzer ON (normally OFF)			
		03	When conditioned as “Under”; Buzzer ON (normally OFF)			
		04	When scale stable; Buzzer ON (normally OFF)			
		05	On “Over” condition; when scale stable; Buzzer ON (normally OFF)			
		06	On “Accept” condition; when scale stable; Buzzer ON (normally OFF)			
		07	Outside range; when scale stable; Buzzer ON (normally OFF)			
		08	Same time as internal buzzer; Buzzer OFF (normally ON)			
		09	When conditioned as “Over”; Buzzer OFF (normally ON)			
		10	When conditioned as “Accept”; Buzzer OFF (normally ON)			
		11	When conditioned as “Under”; Buzzer OFF (normally ON)			
		12	When scale stable; Buzzer OFF (normally ON)			
		13	Under “Over” condition; when scale stable; Buzzer OFF (normally ON)			
		14	Under “Accept” condition; when scale stable; Buzzer OFF (normally ON)			
15	Outside range; when scale stable; Buzzer OFF (normally ON)					

Set No.	Setup title	Set value	Functions
F16	Internal buzzer	00	When stable outside range; <Successive “Blips”>
		01	When stable under “Accept” condition; <Long continuous “Beeps”>
		02	When stable under “Over” condition; <Successive “Blips”>
		03	Buzzer OFF (neither key input sound)
		04	Only during key input or when stable
		05	Only during key input
		06	Upper/lower limits verification function; (regardless of being stable/unstable) UNDER : Successive “Blips” with an interval ACCEPT: Long continuous “Beeps” OVER : Successive “Blips”

Shaded areas  are factory default settings.

9. Routing Servicing and Cleaning

9-1 Routine Servicing

After cleaning the outer surface of the scale with a soft wet cloth, wipe it with a dry cloth.

9-2 Cleaning Methods

Part to be cleaned	Cleaning method
Weighing platter	<ol style="list-style-type: none">(1) Remove the weighing platter from the scale, and rub the platter surface gently with a soft brush or soft cloth soaked with water-diluted neutral detergent. Then wash the platter in water and dry.(2) Remove the weighing platter from the scale, dip it in hot water (70 to 90 °C) for about 30 minutes, and then dry.<ul style="list-style-type: none">• Be careful not to get scalded.
Weighing unit, display pole, and display unit (parts other than the weighing platter)	<p>Wash the outer surface in water (normal temperature), and then dry.</p> <ul style="list-style-type: none">• Do not use a detergent or chemicals other than those mentioned above.• Do not allow a brush, solid, or any rough material come in contact with the weighing unit after removing the weighing platter.

NOTE:

To ensure your personal safety, disconnect the electrical plug from the outlet before any servicing or cleaning.

10. Troubleshooting Guide

If an error occurs while using the scale, take appropriate measures according to instructions in the following table.

Error	Countermeasure
Display unit does not go on even if ON/OFF key is pressed.	Ensure that the electrical plug is securely inserted into an outlet which conforms to product specifications.
"0" does not appear after a display check when the ON/OFF key is pressed.	(1) Place scale on stable flat surface or table. (2) Confirm that there is nothing on the scale. (3) Check level adjustable feet for any floating condition. (4) Protect scale from strong winds.
Weight indication can not be stabilized.	(1) Place scale on stable flat surface or table. (2) Check level adjustable feet for any floating condition. (3) Protect scale from strong winds. (4) Keep items to be weighed away from the display pole.

* For symptoms other than those described above, contact the nearest ISHIDA regional representative where you purchased your scale.

11. Specifications

Models	IWQ-150	IWQ-30
Capacity/Minimum Graduation	150/60 kg (50/20 g)	30/15 kg (10/5 g)
Display	Fluorescent display	
Weight Check	over (orange), accept (green), under (red)	
Display Items	Upper/lower limit & tare presetting (5 digits each)	
Weight	18 kg	10 kg
Water-resistance	Conforms to IP- 67 (Console: IP-65)	
Power Supply	AC 100 V - 240 V +/-10%, 50/60 Hz	

 **ISHIDA**

Design and specifications are subject to change without notice.

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