ISHIDA

IWX-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.

Manual No. 0149A

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.

Diconnect 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.

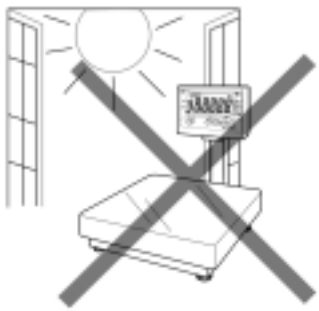
⚠ *CAUTION!* Precautions which must be followed to prevent the possibility of light or moderately severe injury to personnel or damage to the equipment.

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 wind, cold air, 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 for 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 electrical leakage and malfunction.

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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. 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 or dirty 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.

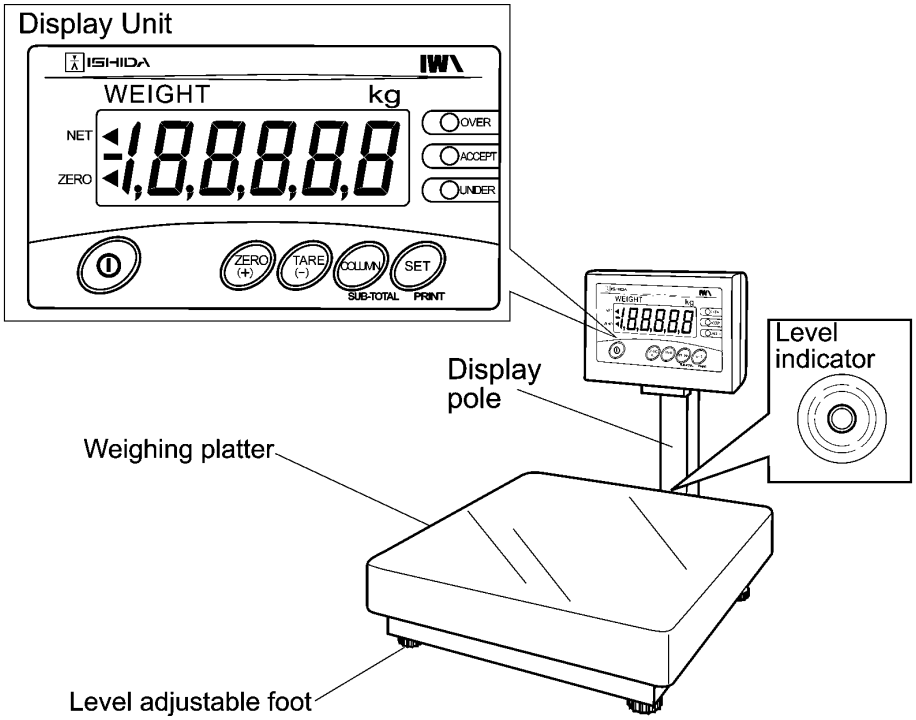
• When carrying the scale, be sure to hold it at the bottom.

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 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.

(1) Used for zero adjustment to reset weight indicator to zero.
(2) Used to switch numeric values to the positive side when registering and setting them.

(1) Used to set tare weight.
(2) Used to switch numeric values to the negative side when registering and setting them.

(1) Used to conform and display the tare weight.
(2) Used to print out the subtotal when a printer is connected.
(3) Used to shift the flashing digit during registration and setting.

(1) Used to print out the weight when a printer is connected.
(2) Used to conform and display the data being called in the preset mode.
(3) Used to call the registered tare weight and its upper and lower limits.

3. Preparing the Scale

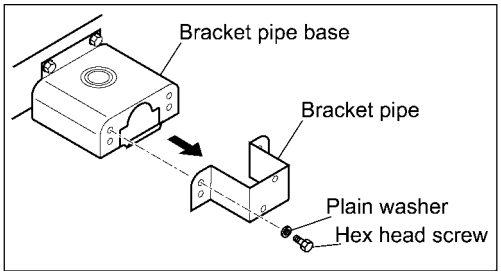
The following describes the procedure for preparing the scale before operation.

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.

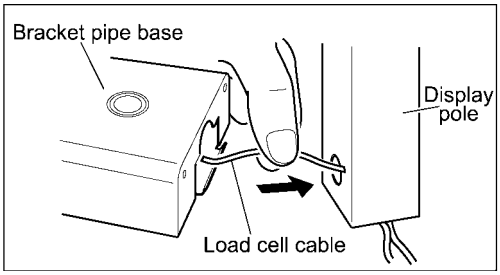
1. Remove the Bracket Pipe.

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.

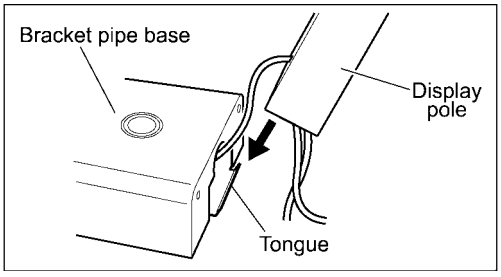


NOTE:

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.

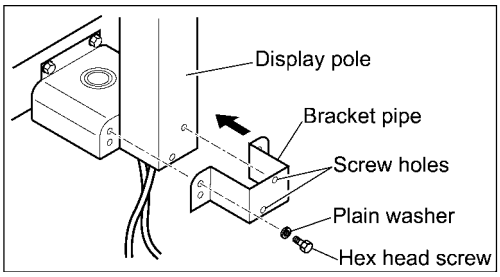
3. Stand the Display Pole against the Bracket Pipe Base.

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).

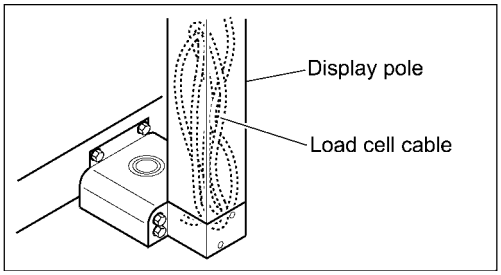


NOTE:

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.

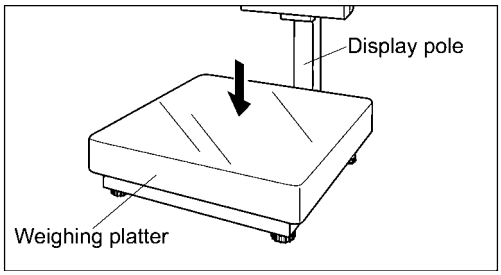
Fold up the extra length of load cell cable and store it inside the display pole.



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.

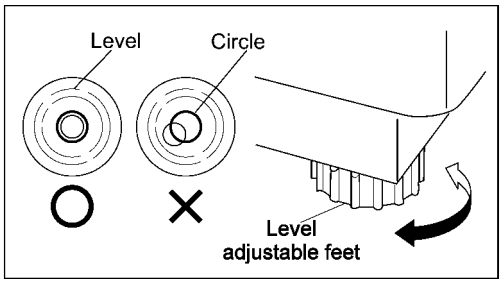


NOTE:

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

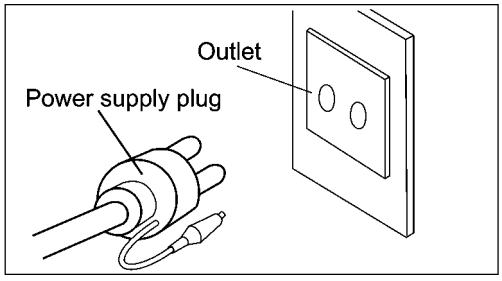
7. Level the Scale.

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. Ground the plug if the scale will be used in a place with a chance of electrical leakage or static electricity or in such an area exposed to electrical noise as the vicinity of an electric motor.



WARNING!

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

9. Turn on the Power Switch.

With nothing placed on the weighing platter, press the ⏻ key.

The display unit will turn on.

NOTE:

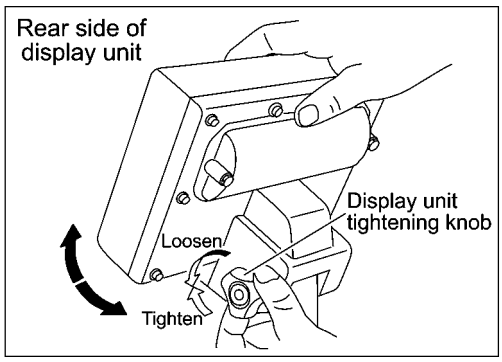
Make sure that display indicates all "0"s.

10. Adjust the Zero Point.

When no zero-point mark (◀) is displayed, press the ZERO (+) key.

3-2 Vertical Adjustment of the Display Unit

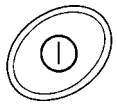
After loosening the display unit tightening knob, adjust the unit at an easy-to-see angle. Then, retighten the knob.



4. Weighing

1. Turn ON the Power Switch.

With nothing placed on the weighing platter, press the ⏻ key.



The display unit will turn on.

NOTE:

Make sure that the display indicates all "0"s.

2. Subtract the Tare.

After placing a tare container on the weighing platter, press the TARE (−) key.

NOTE:

The tare can also be subtracted by the following procedure.
- Call the preset value.
- Set the tare to the tare key-in mode.

3. Weigh an Item.

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

* When the upper and lower limit values have been set, the following will be displayed.

Weighing result	Weighing condition	Indication on scale (When the built-in buzzer is set to distinguish between the upper and lower limits)
Over	Weight > upper limit weight	(beep, beep, beep,---)
Accept	Lower limit weight ≤ weight ≤ upper limit weight	(beep-----)
Under	Weight < lower limit weight	(beep---, beep---, beep---)

5. Tare Key-in Mode

1. Switch to the Tare Key-in Mode.

After confirming the scale is in a stable condition with nothing on the platter, press the TARE (−) key for two seconds.

2. Set the Tare.

Move the flashing digit by pressing the COLUMN key, and press the ZERO (+) key or TARE (−) key to key in the tare.

- For a tare of 0.8 kg:

× 3

× 2

3. Press the (SET) Key.

The tare will be set.

6. Confirming the Tare

1. Confirm the Tare during Weighing Operation.

To confirm the preset tare, press the COLUMN key.

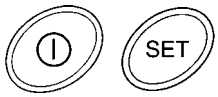
- For a tare of 0.08 kg:

7. Using the Preset Function

7-1 Presetting

1. With the Power Supply Turned OFF, Press the ⏻ Key.

Then Press the SET Key.



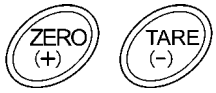
Preset No. 1 will be displayed.

NOTE:

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

2. Select the Preset No. to Set.

To select the preset No., press the ZERO (+) key or TARE (−) key.



Press the SET key.

The tare for weighing range A of the preset No. will be displayed.

NOTE:

Pressing the ZERO (+) key will increase the preset No., while pressing the TARE (−) key will decrease it.

3. Set the Tare for Weighing Range A.

Move the flashing digit by pressing the COLUMN key. Then key in the tare for weighing range A by pressing the ZERO (+) key or TARE (−) key.

- For a tare of 0.25 kg:

COLUMN × 3 ZERO (+) × 2

COLUMN × 1 ZERO (+) × 5

Press the SET key.

SET

4. Set the Tare for Weighing Range B.

Move the flashing digit by pressing the COLUMN key. Then key in the tare for weighing range B by pressing the ZERO (+) key or TARE (−) key.

- For a tare of 0.3 kg:

COLUMN × 4 ZERO (+) × 3

Press the SET key.

SET

NOTE:

The flashing digit will be displayed at the position where the SET key is pressed for setting the tare for weighing range A.

5. Set the Upper Limit Value.

Move the flashing digit by pressing the COLUMN key. Then key in the upper limit value by pressing the ZERO (+) key or TARE (−) key.

- For an upper limit value of 1 kg:

COLUMN × 4 ZERO (+) × 1

Press the SET key.

NOTE:

If the lower limit value has already been preset, only values equal to or larger than this limit value can be set.
The flashing digit is displayed at the position where the SET key is pressed for setting the tare in the weighing range B.

6. Set the Lower Limit Value.

Move the flashing digit by pressing the COLUMN key. Then key in the lower limit value by pressing the ZERO (+) key or TARE (−) key.

- For a lower limit value of 0.5 kg:

ZERO (+) × 5

Press the SET key.

SET

NOTE:

If the upper limit value has already been preset, 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.
The flashing digit is displayed at the position where the SET key is pressed for setting the upper limit value.

7. Set the Values for the Other Preset Numbers.

Return to step 3 in the above procedure.

8. Finish the Setting Procedures.

Press the COLUMN key.

7-2 Calling the Preset Value

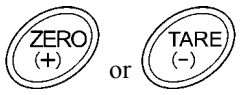
1. Press the SET Key for Two Seconds.

Preset No.1 will be displayed.

2. Select the Preset No.

Select the preset No. to be called by pressing the ZERO (+) key or TARE (–) key.

- For preset No. 2:



NOTE:

Pressing the ZERO (+) key will increase the preset No., while pressing the TARE (–) key will decrease it.

3. Press the (SET) Key.

The tare, upper limit value, and lower limit value will be displayed.

(Example) Tare weight : 0.25 kg

Upper limit value: 1.00 kg

Lower limit value: 0.50 kg

NOTE:

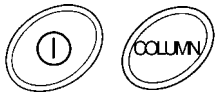
If no tare weight has been set, or if neither the upper limit value nor lower limit value has been set, the values before pressing the (SET) key will remain active.

8. Setting Mode

8-1 Setting Method

1. With the Power Supply Turned Off, Press the ⏻ Key.

Then Immediately Press the COLUMN Key.



The set value number of setting No. 1 is indicated.

NOTE:

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

2. Change the Set Value.

Change the set value by pressing the ZERO (+) key or TARE (-) key.

- To make the ON/OFF key ineffective:

3. Change the Incorrect Setting No.

Select the desired setting No. by pressing the SET key.

- To set the sounding condition of the built-in buzzer:

SET × 15

The currently set value for the built-in buzzer sound is indicated by the setting No. 16.
Return to the procedure 2.

4. Finish the Setting Procedure.

Press the COLUMN key.

COLUMN

For a description of the setting Nos. and the setting conditions of the setting value Nos., refer to the Set Values List.

8-2 Set Values List

Setting No.	Description of setting	Setting value No.	Setting condition
F01	Key selection function	00	All keys enabled
		01	⏻ key enabled (Scale is active at all times when power supply is ON.)
F02	Function to automatically call preset No.	00	No function provided
		01	Preset No. 1 is automatically called when power supply is ON.
F03	Switching digit (printer)	00	For 16 digit printer
		01	For 20 to 24 digit printer
F04	Printing date (printer)	00	Not provided
		01	Provided
F05	Printing preset No. (printer)	00	Not provided
		01	Provided
F06	Printing tare, upper limit, and lower limit (printer)	00	Not provided
		01	Provided
F07	Printing serial No. (printer)	00	Not provided (no subtotal printing function)
		01	Provided
F08	Continuous/single slip specification (printer)	00	Printing on individual slips (new paragraph on 8th line after printing, with heading on each slip)
		01	Printing on continuous slip (with no line space after printing)
F09	Baud rate (RS232)	00	1200bps
		01	2400bps
		02	4800bps
		03	9600bps
		04	19200bps (Only output is supported.)
		05	38400bps (Only output is supported.)
F10	Specification of serially output telegraphic message (RS232)	00	Format to be exclusively used for printer
		01	DAP-01 format
		02	IWQ1 format (expansion of DAP-01)
		03	MZ-7000 format
		04	IWQ2 format (expansion of MZ-7000)
		05	IWQ3 format (Indicated condition is output.)

Setting No.	Description of setting	Setting value No.	Setting condition
F11	Serial output system (RS232)	00	No output function provided
		01	Unconditional (synchronized with A/D conversion)
		02	Under output condition <F12>
		03	When data input is required (RS input)
F12	Serial output condition (RS232)	00	Automatic/within limit/stable state output (printing)
		01	Manual/within limit/ stable state output (printing)
		02	Automatic/within and without limit/ stable state output (printing)
		03	Manual/within and without limit/ stable state output (printing)
		04	Automatic/within limit/zero-return output (printing)
		05	Manual/within limit/zero-return output (printing)
		06	Automatic/within and without limit/zero-return output (printing)
		07	Manual/within and without limit/zero-return output (printing)
F13	Setting connector output signal (connector box)	00	1. Stable 2. Zero-point marking 3. OK 4. Over
		01	1. Stable 2. Zero indication 3. OK 4. Over
		02	1. Stable 2. Zero indication 3. OK 4. Outside limit
		03	1. Stable 2. Under 3. OK 4. Over
		04	1. Under tare subtraction 2. Under 3. OK 4. Over
F14	Setting connector input signal (connector box)	00	① key
		01	TARE key
		02	ZERO key
F15	Loud buzzer (only when installed optionally)	00	Buzzer ON simultaneously with built-in buzzer (normally OFF)
		01	Buzzer ON under "OVER" condition (normally OFF)
		02	Buzzer ON under "OK" condition (normally OFF)
		03	Buzzer ON under "UNDER" condition (normally OFF)
		04	Buzzer ON when weighing is stabilized (normally OFF)
		05	Buzzer ON when weighing is stabilized under "OVER" condition (normally OFF)
		06	Buzzer ON when weighing is stabilized under "OK" condition (normally OFF)

Setting No.	Description of setting	Setting value No.	Setting condition
F15	Loud buzzer (only when installed optionally)	07	Buzzer ON when weighing is stabilized outside limit (normally OFF)
		08	Buzzer OFF (normally ON) simultaneously with built-in buzzer
		09	Buzzer OFF under "OVER" condition (normally ON)
		10	Buzzer OFF under "OK" condition (normally ON)
		11	Buzzer OFF under "UNDER" condition (normally ON)
		12	Buzzer OFF when weighing is stabilized (normally ON)
		13	Buzzer OFF when weighing is stabilized under "OVER" condition (normally ON)
		14	Buzzer OFF when weighing is stabilized under "OK" condition (normally ON)
		15	Buzzer OFF when weighing is stabilized outside limit (normally ON)
F16	Buzzer sound setting	00	During stable weighing outside limit
		01	During stable weighing under "OK" condition
		02	During stable weighing under "OVER" condition
		03	No buzzer sound even in case of key input
		04	Sounding when key input is made and during stable weighing.
		05	Sounding only when key input is made
		06	Upper/lower limits discrimination function (during stable/unstable weighing)
F17	Setting automatic power-off time	00	No function provided
		01	10 minutes
		02	20 minutes
		03	30 minutes
		04	40 minutes
		05	50 minutes
		06	60 minutes

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	(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 ℃) for about 30 minutes, and then dry. • Be careful not to get scalded.
Weighing unit, display pole, and display unit (parts other than the weighing platter)	Wash the outer surface in water (normal temperature), and then dry. • 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.	(1) Check the power supply plug for full insertion into the outlet.
"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	IWX-150	IWX-30
Capacity/ Minimum Graduation	150 kg/50 g 60 kg/20 g (dual)	30 kg/10 g 15 kg/ 5 g (dual)
Display	Fluorescent	
Weight Check	over, accept, under	
Preset Function	Tare weight Upper limit weight Lower limit weight	
Weight	16.8 kg	9.4 kg
Waterproof Construction	IP-67	
Power Supply	AC 100V - 240 V +/-10%, 50/60 Hz	
Option	Output via RS232C	

ISHIDA

Design and specifications are subject to change without notice.

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