

TANITA®

Monitoring Your Health

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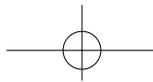
Professional Baby Scale

INSTRUCTION MANUAL

BD-815MA



Thank you for purchasing the TANITA digital baby scale. For optimum performance and safety, please read this manual carefully, and keep it handy for future reference.



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Applications

1. This equipment has been calibrated as a precision instrument and can be used to certify babies' weights and/or to certify business transactions.
2. It can also be used to obtain reference data during medical examinations, such as periodic checkups, and to supervise babies' growth.

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Safety Notes

Caution Symbols

Thank you for purchasing this precision crafted Tanita product. For optimum performance and safety, please familiarize yourself with the Caution Symbols below. These symbols are designed to alert the user to potential hazards when using this equipment. Ignoring these Caution Symbols may result in serious injury, or damage to the product.

Please be sure to review before proceeding with the INSTRUCTION MANUAL.



Warning

This symbol indicates the possibility of serious injury if the product is mishandled or instructions are ignored.



Caution

This symbol indicates the possibility of physical injury or equipment damage if instructions are ignored.



This symbol indicates general precautions that should be taken when using this product.



Warning

- **Inserting and Removing the AC adapter**
To reduce the risk of electric shock or product damage, never insert or remove the AC adapter with wet hands.
- **Do not under any circumstances dismantle or alter the device, as this could result in electric shock or injury as well as adversely affect the precision of measurements.**
- **To prevent fire hazard**
Use only a correctly wired (230V AC) outlet, and do not use a multiple outlet extension cable.
- **Ensure the baby is lying down in the basket with minimal movement, as any resultant fall or slip may cause serious injury.**
- **The baby basket is not designed to accommodate individuals weighing more than 15kg.**
- **As a safety precaution, infants must not be left unattended on the baby basket.**

Caution

- To prevent the spread of infections,
Always clean the weighing platform after use.
Sterilize the platform with an appropriate alcohol-based cleaning fluid before each use.
- Installation of the equipment
Ensure the weighing platform is placed on a level and stable surface. If the equipment is used when unstable, for example if not all feet are on a level surface, then there is a risk that scale will tip over and it will be impossible to obtain an accurate measurement.
- Measurement
Always take the utmost care when placing a baby in the Baby Basket. Ensure that there is no risk of the equipment tipping over.
To move the scale, hold it firmly by the main body.
- AC adapter
Only use the adapter supplied with this equipment (MODEL: A30930G). Other adapters may cause malfunctions. The circuit board incorporates a fuse (100mA, 125V) for electronic equipment. If devices other than the original AC adapter are used, or a large electrical current is applied, the fuse will be blown for safety purposes. As the fuse forms a fixed part of the unit and cannot be easily disassembled, please consult your nearest Tanita sales office or agent if the fuse needs to be replaced.
- Battery
When changing batteries, ensure that the new batteries are inserted with the correct polarity + and -.
If the polarity is incorrect, then the batteries may leak and damage the equipment.
- How to handle the equipment when moving it
When carrying the equipment, please do not lift it up by the Baby Basket
Please move the equipment by holding the main body firmly.
- To avoid any risk of injury or malfunction, keep your fingers, and other objects away from the space between the inner-plate and the scale.

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Maintenance

This is a precision manufactured and accurately calibrated product. Please observe the following instructions.

- Never disassemble or adjust the equipment, as this may cause malfunctions. The equipment should only be inspected in accordance with the regulations in each country.
- When not in use for a long time, unplug the AC Adapter from the wall socket.
- When not in use for a long time, remove the batteries before storing the equipment.
- Do not wipe the equipment with corrosive chemicals (benzine, cleaner, etc.). Please use a neutral detergent to clean the equipment.
- Avoid subjecting the equipment to excessive shocks or vibrations.
- If an unauthorised person attempts to disassemble or repair any part of the unit, the warranty will become invalid. If the unit malfunctions, please consult your nearest Tanita sales office or agent.
- Do not wash any part of the scale other than the basket with water.
- When disposing of this unit, please do so in accordance with the disposal standard of industrial waste in each country.

Safety Notes (continued)

⚠ Instructions for Measurement

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Please observe the following instructions for accurate measurement.

- Measurement may not be possible on a surface that is strongly vibrating. In such cases transfer the equipment to a stable surface with little or no vibration.
- If the scale is moved, and the new location has a temperature difference of more than +/- 20°C please allow at least 2 hours for the temperature to adjust before using.
- While taking measurements, do not use mobile phones, microwave therapy equipment or other types of transmitter near the scale as they may cause interference.

<Usage Conditions>

Temperature Range for Use : 5°C - 35°C
Relative Humidity : 30% - 80% (without condensation)

<Storage Conditions>

Temperature Range of Environment : -10°C - +50°C
Range of Relative Humidity : 10% - 90% (without condensation)
To avoid malfunctions, avoid storing the equipment where there is direct sunlight, significant temperature changes, the risk of dampness, a large amount of dust, in the vicinity of fires, or where there is the risk of receiving vibrations or shocks.

<AC Adapter>

Model	A30930G CLASS2 (centre minus)
Input Voltage	230VAC 50Hz 65mA
Output Voltage	9VDC ± 0.45VDC
Rated Current	300mA
No Load Voltage	12VDC ± 0.6VDC
Consumption Current	50mA
Power Consumption	0.5W max

<Batteries>

	Batteries (R6) × 4
Consumption Current	40mA
Power Consumption	0.3W max

Explanation of terminology

• Max (Maximum Capacity)

This shows the maximum weight that can be measured by the scale.

[Example]

In the case of Maximum capacity 15kg, it can measure up to 15kg.

* One exceeding the weighing capacity cannot be measured.

• e (Minimum Graduation)

This shows the amount of one scale mark. In the case of a digital display, this shows the interval of the numeric value to change.

[Example]

In the case of Minimum Graduation 2g (0 - 6kg) 5g (0 - 15kg) the display increases and decreases.

• Extend Minimum Graduation

This is the amount of the scale mark that can display more finely than the Minimum Graduation.

The display range is up to 1g unit (this cannot be used for actions of transaction certification).

• Tare

The container, towel, blanket, etc., used when measuring weight is called "tare".

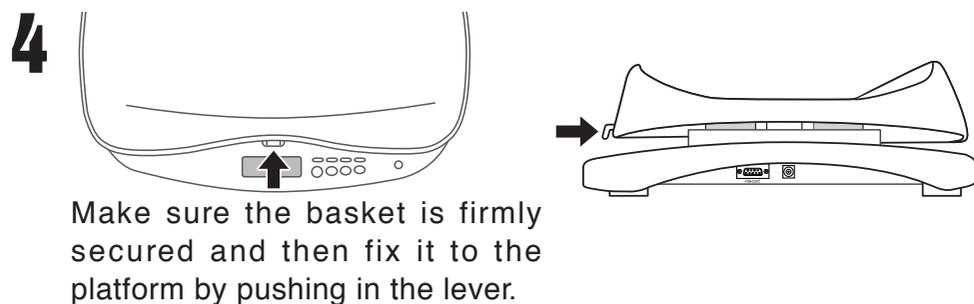
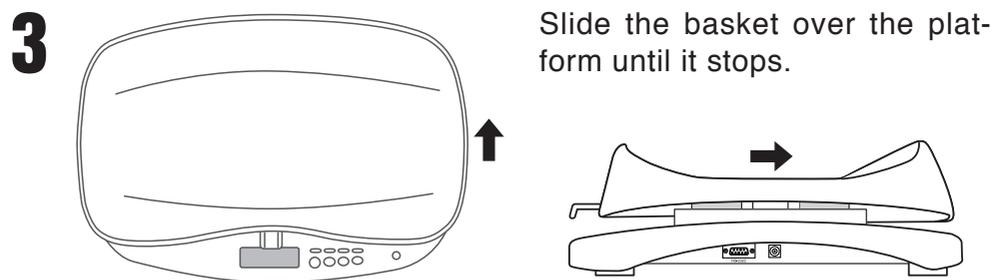
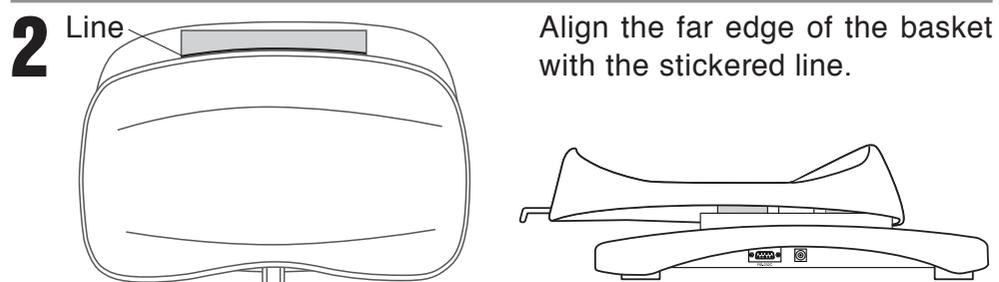
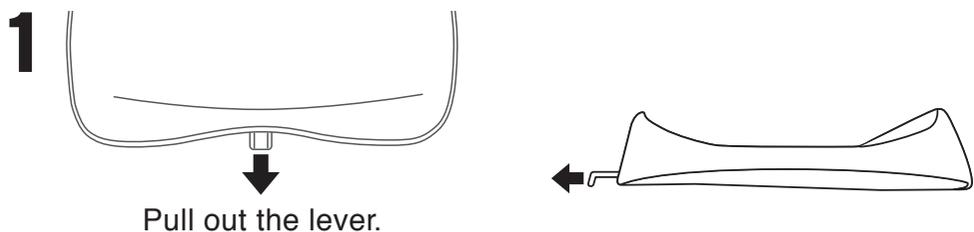
To measure the net-weight after subtracting the weight of the tare is called "tare weighing."

Baby Basket Attachment & Removal

A.Attachment

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The baby basket is not attached to the main unit when unpacked.



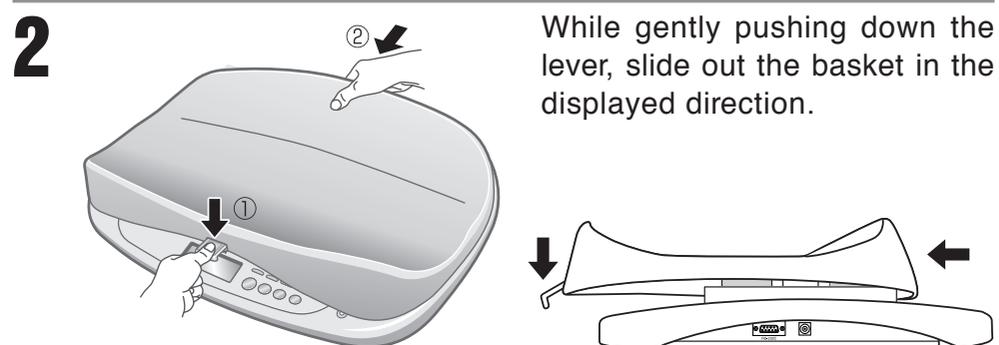
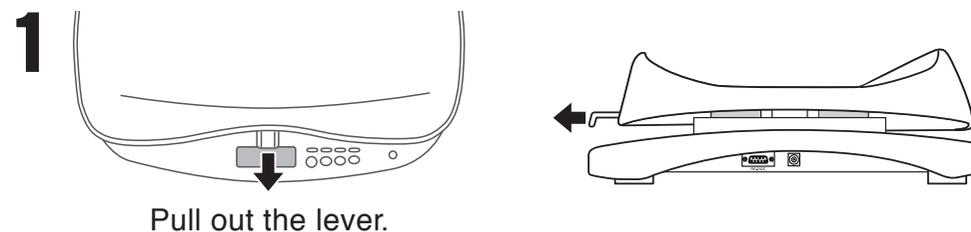
Caution Make sure the basket can't drop.

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B. Removal

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The baby basket can be removed and washed.



Caution Once the basket is removed, take care not to insert a finger or drop anything into the gap.

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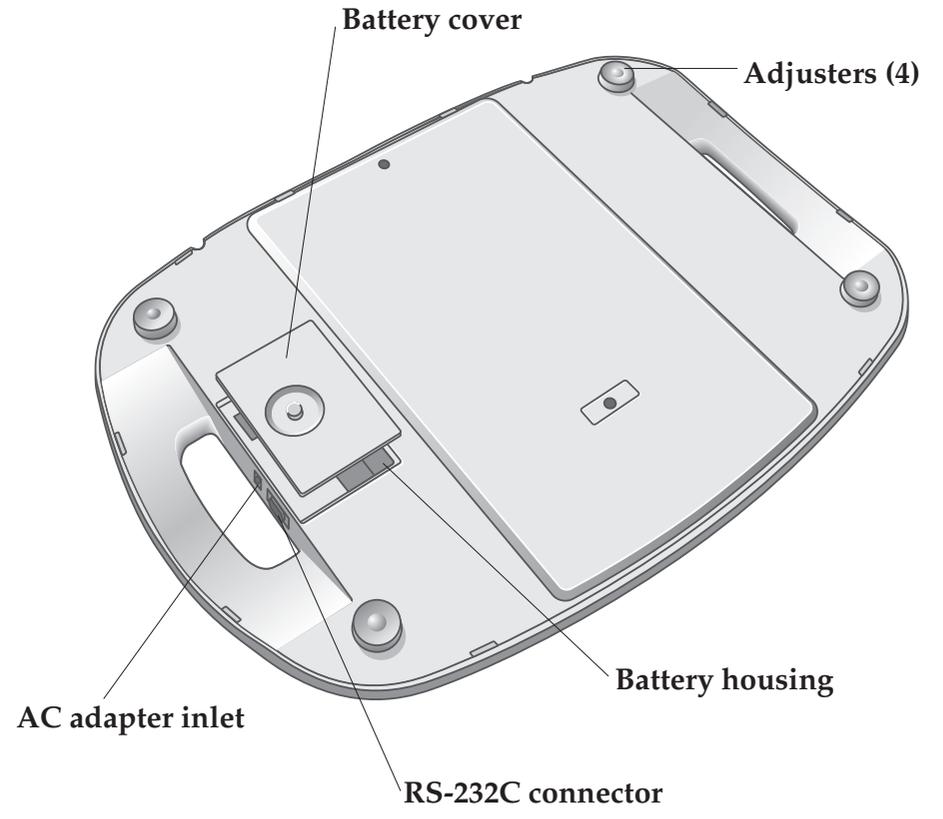
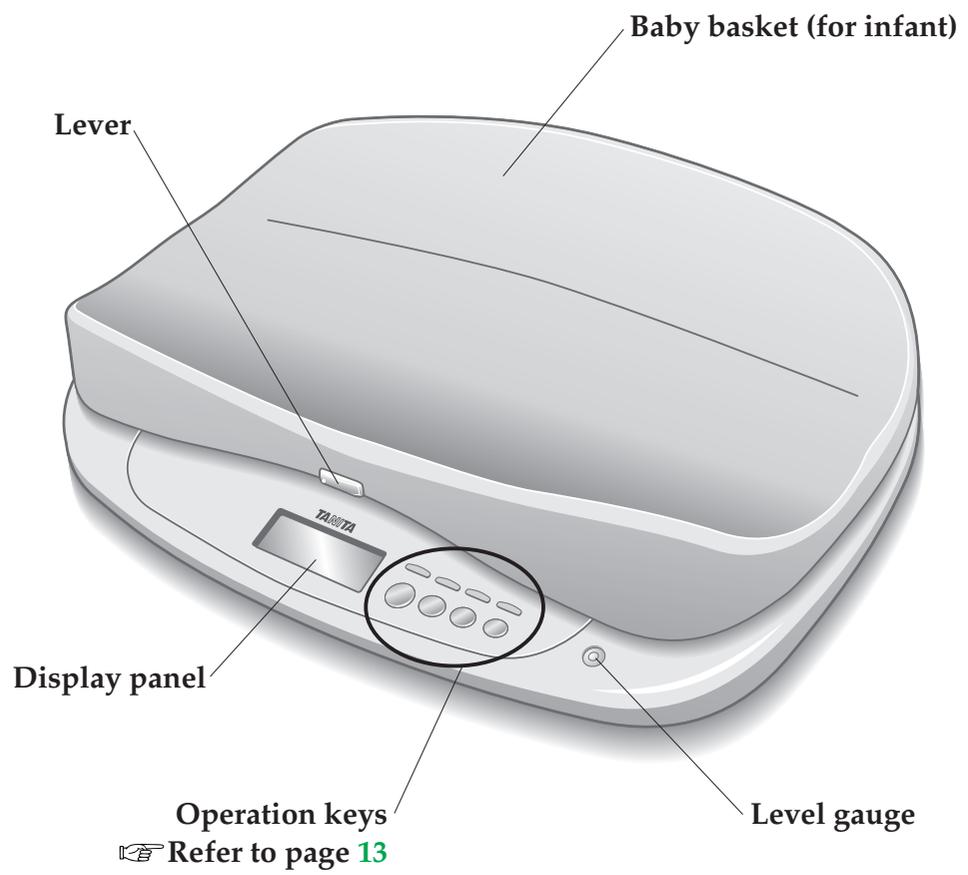
Part Names & Accessories

Front

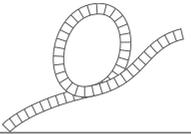
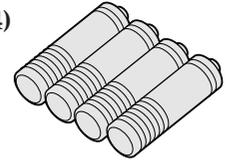
Back

GB

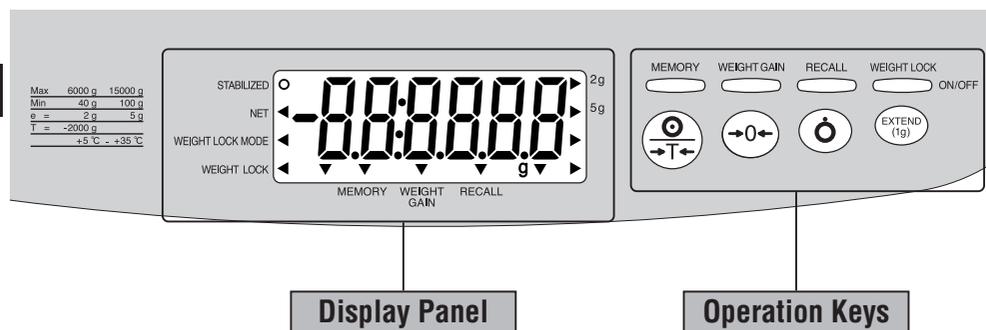
GB



Confirmation of accessories

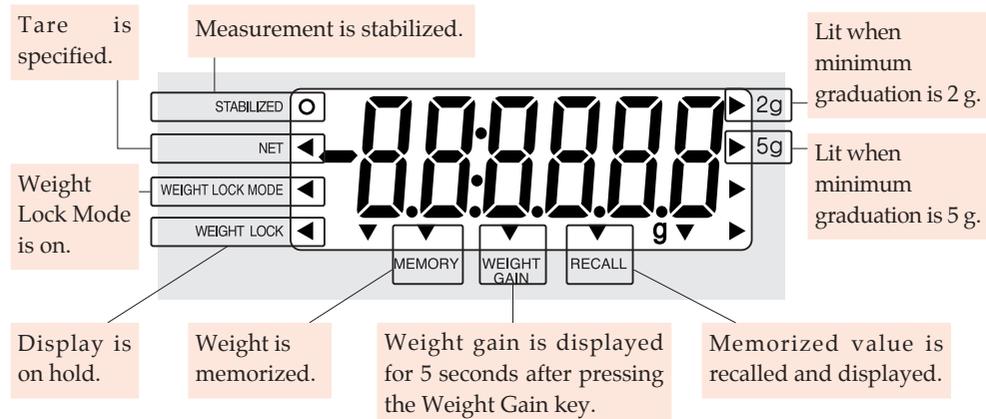
<input checked="" type="checkbox"/> Instruction manual (this book)	<input type="checkbox"/> AC adapter (Model : A30930G)	
<input type="checkbox"/> R6 batteries(4)	<input type="checkbox"/> Measure sticker	
		

Names and Functions of Display Panel



Display Panel

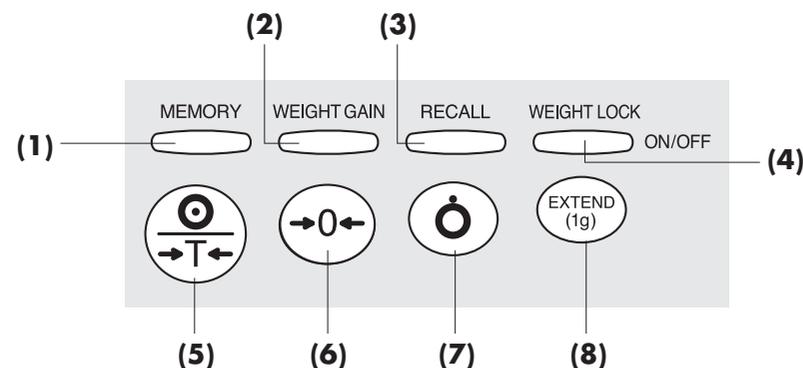
- * The pointers (black triangles) indicate active items.
- * The backlight is on only when the AC adapter is used.
- * The ► mark appears in the digital display next to each of the following operations, indicating which are in effect.



and Operation Keys

Operation Keys

* Each key makes a “beep” sound when pressed.



(1) MEMORY

- Sets the current weight in memory.
- In set mode – sets the “display hold” time.

(2) WEIGHT GAIN

- Indicate the weight difference between memory weight and current weight.
- Set auto power off time.

(3) RECALL

- Recalls previous reading.

(4) WEIGHT LOCK ON/OFF

- Sets the “weight lock mode” on or off.

(5) ON/TARE

- Turns the power on or sets the tare.

(6) ZERO

- Scale resets to zero.

(7) OFF

- Turns power off.

(8) EXTEND

- Pressing this button, displays graduation in units of 1g. **This is not** legal for transaction certification (NAWI). Only operates in “weight lock mode”.

Symbols and their Meanings

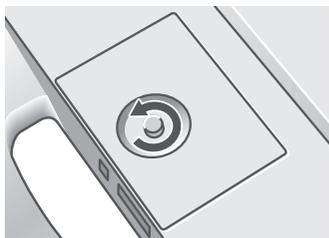
	Display Unit On.		Turn on the tare weighing function.
	Display Unit Off.		Zero reset
	Direct current		Output
	Class II Equipment		Caution. Refer to the attached notes.
	Type B applied part		Conformity with Medical Device Directive 93/42/EEC

Power Supply

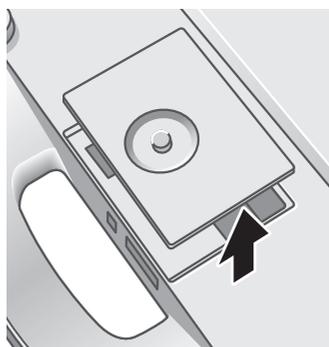
Using batteries

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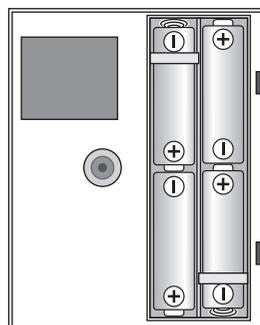
(1) Turn the scale upside-down, and turn the finger screw on the battery cover counter-clockwise (as indicated) to release the screw.



(2) Lift off the battery cover.



(3) Insert new batteries.



• When the batteries start to run low, **Lo** appears on the display panel as a warning.

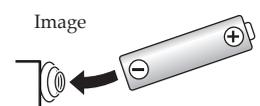
All (four) batteries should be immediately replaced with new ones at the same time.

Note) Do not use a combination of alkaline and manganese batteries, as such an arrangement may result in equipment failure.

Note) Rechargeable batteries are NOT recommended.

• A set of standard batteries should last about one year (assuming four readings a day).

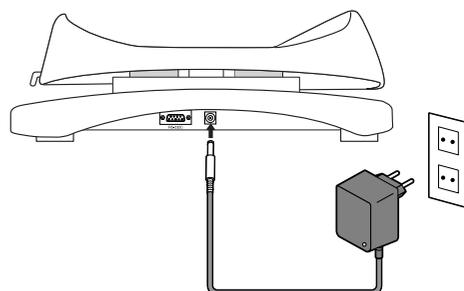
* Insert the batteries such that the negative terminals of the batteries are pushed up against the coils within the battery housing.



Using the AC adapter

(1) Insert the AC adapter jack into the AC adapter inlet on the right side of the main unit.

(2) Plug the AC adapter into the power outlet.



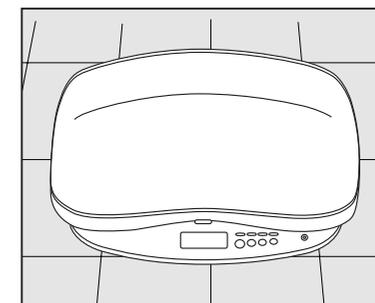
Caution

This equipment must be used with the included AC adapter (Model : A30930G).

How to Set Up Correctly

Use the scale in a firm, flat and stable location.

- Do not position it anywhere that is subject to direct sunlight, near heating equipment, or directly in the path of an air conditioner outlet.
- Do not use it anywhere that is subject to significant temperature change.
- Do not position it anywhere that is either damp or subject to high humidity.
- After positioning the scale, gently lift the baby basket from both sides to confirm that it is locked into place.
- Ensure that the lever is pushed in.



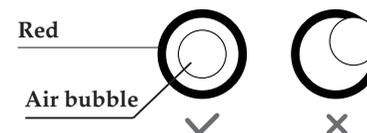
Level gauge Check

- Place the scale on a flat surface to ensure accurate measurement.
- Turn the four adjusters such that the air bubble in the level guide is positioned exactly in the centre. Confirm that all four adjusters are in contact with the surface.



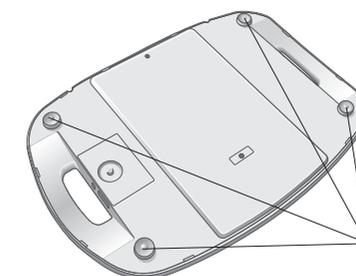
Level gauge

<View from above>



Red

Air bubble



Adjusters (4)

How to Use the Scale

When tare is not specified

1 Press the  key to turn on the power. (Beep sound)

After flashing the display,  g is displayed.



2 Press the  ON/OFF key to set the "Weight Lock Mode". "Weight Lock Mode (◀)" is shown.



3 Place the baby on the baby basket. Once the scale stabilizes and the weight is confirmed, "STABILIZED (○)" and "WEIGHT LOCK (◀)" is shown. (Beep sound)



⚠ Measurement instructions

- A warning sound beeps if a baby is placed on the basket before  g is displayed. If it happens, remove the baby from the basket.



4 After measurement, remove the baby from the baby basket.

If the "Hold Time" has been set, the measurement remains on display for the set time (see P.22). The display can be reset to  g at any time by pressing the  ON/OFF key.



Note

- When the load exceeds 6000 g the pointer besides the "5 g" mark appears.

Extended Display Function

When the  key is pressed while the display is on hold, the weight is displayed 1g units for as long as the key remains pressed.

* The extended display function cannot be used if "Weight Lock Mode" is off, or if the "RECALL" or "WEIGHT GAIN" is displayed.

By releasing the  key simultaneously return to the previous display.



 Keep pressing



 Release



⚠ Caution

- The value displayed is for information only. The scale cannot be used to certify weight. For this reason, values cannot be output to the RS interface.

Tare weighing function

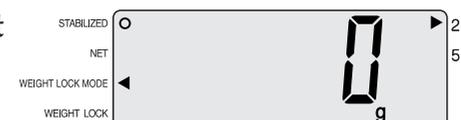
After turning on the power, the bath towel, diaper/nappy, blanket etc. is deducted by pressing  key. Then, the baby's actual (i.e. net) weight (excluding the weight of the towel, diaper, etc.) can be measured.

1 Press the  key to turn on the power. (Beep sound)

After flashing the display,  g is displayed.



2 Press the  ON/OFF key to set the "Weight Lock Mode". "Weight Lock Mode (◀)" is shown.



How to Use the Scale (continued)

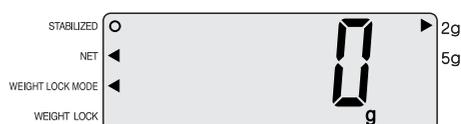
3 Place the bath towel or blanket on the scale.

The weight of the bath towel is displayed and "STABILIZED (○)" is shown.



4 Press the key. (Beep sound)

0g is displayed, and the pointer beside "NET" is shown.



5 Place the baby on the baby basket.

The net weight of the baby (excluding the weight of the bath towel, etc.) is displayed. (Beep sound)



6 End of measurement. Remove the baby from the baby basket.

When "Hold Time" is set, the measurement is retained for the set time, after which the display resets to 0g.



Note

- Press the  key to cancel measurements or turn off the display.
- When "Weight Lock Mode" is off, the pointer besides the "WEIGHT LOCK MODE" is not shown.

Canceling the tare function

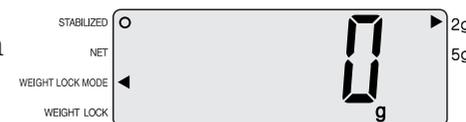
A When Minimum Graduation is 2 g (when measuring weights under 6000 g)

1 Remove the tare item(s) from the basket.



2 Press the key with nothing on the basket.

(Beep sound)



The tare function is canceled and 0g is displayed.

B When Minimum Graduation is 5 g (when measuring weights over 6000 g)

1 Remove the tare from the basket.

The tare function is automatically cancelled when the displayed load becomes 0g.



The scale switches to Minimum Graduation 2 g.

Note

- When the weight of loads over 6000 g is measured, the scale will operate with Minimum Graduation 5 g as long as the load does not become "0". Therefore, please note that if the weight of a second baby is measured after the weight of a baby weighing over 6000 g has been measured, the scale will operate with Minimum Graduation 5 g, even if the weight of the second baby is under 6000 g. If you want to revert to Minimum Graduation 2 g, please remove the tare.

Memory Function for Measured Values

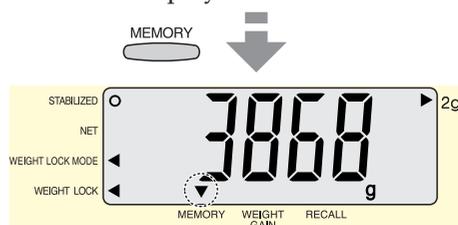
Memory Function

GB When the **MEMORY** key is pressed while the display is on hold, the displayed value is memorized.

1 -Press the **MEMORY** key.
(Beep sound)



< Display is on hold >



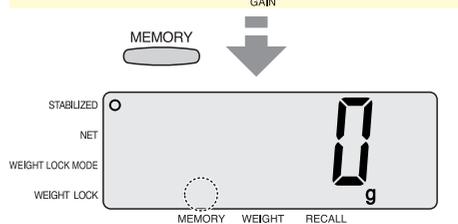
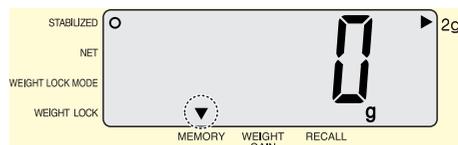
* When the previous reading is memorized, the "MEMORY" pointer is shown.

Pressing the **MEMORY** key overwrites the existing record with the currently displayed value as the new memorized value while the display is on hold.

Memory cancellation

1 Press the **MEMORY** key while **0g** is displayed.

The memorized value is deleted, and the "MEMORY" pointer disappears.



Note

- This function is valid only when the "Weight Lock Mode" is set.

Memory Value "Recall" Method

This function is used to check the value memorized previously.

1 Press the **RECALL** key.
(Beep sound)

The value memorized previously is shown for 5 seconds.

* This key is valid only when this scale has a memorized weight.



5 seconds



Display Weight Gain

Compares a second reading with the first reading - eg touse after feeding.
The increase or decrease is calculated automatically by pressing weight gain.

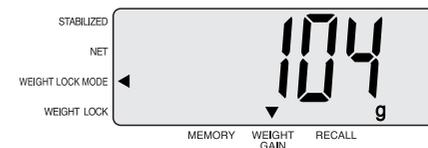
1 Place baby on the baby basket, for a second time.
(Beep sound)



2 Press the **WEIGHT GAIN** key. (Beep sound)

"The currently displayed value - memorized value" is displayed as the weight gain for 5 seconds.

* If the new reading is less than the memorized value, a minus sign (-) is displayed.



Note

- When checking the weight gain for another baby, be sure to memorize his/her weight before measuring the weight gain. Each baby's weight must be recorded.

Various Setting Methods

Two types of setting, namely "Display Hold Time" and "Auto Power Off Time" can be used on this scale.

1 Press  key. (Beep sound)



2 Press  key while the screen is flashing. (Beep sound)



Display Hold Time

You can set the length of time the weight is displayed after removing the baby from the scale.

3 Press  key. (Beep sound)

The hold time is shown (the default is 10 seconds), and the display changed by pressing this key.

* The hold times that can be set are 10 seconds, 20 seconds, 30 seconds, or -- (None).
-- (None) means the hold function is deactivated.



4 To complete the setting, press

 again.
(Beep sound)



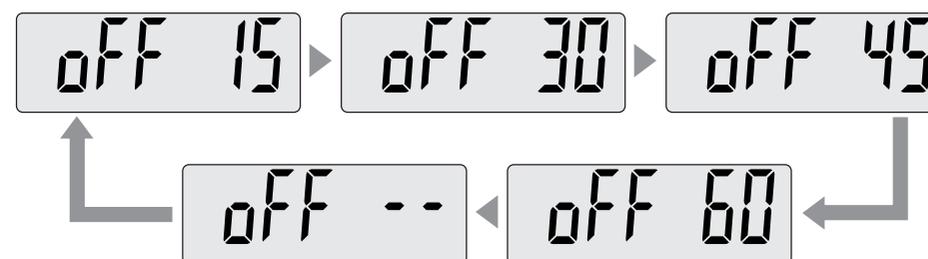
Auto Power Off Time

The "Auto Power Off Time" setting automatically turns off the power when the scale is unused for the specified length of time.

3 Press  key. (Beep sound)

The auto power off time is shown (the default is 15 minutes), and changed by, pressing this key.

* The auto power off times can be set are 15 minutes, 30 minutes, 45 minutes, 60 minutes, or -- (None).
--(None) means that the auto power off function is deactivated.



4 To complete to set the auto power off time, press  again.

(Beep sound)

To save and complete that setting.



Output Data Format

Explanation for RS-232C-compliant output

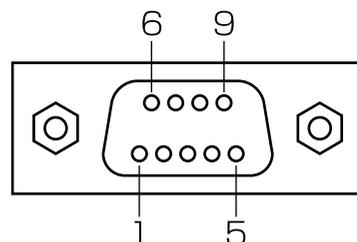
GB This explanation is for the interface to output the readings from the Digital Baby-Scale BD-815MA to external equipment (e.g. PC) as a RS-232C-compliant signal.

Specifications

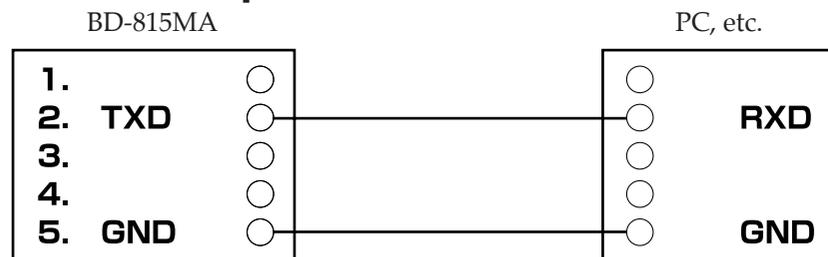
Communication standard	EIA RS-232C
Communication method	Asynchronous
Signal speed	9,600bps
Data bit length	8bit
Parity	NONE
Stop bit	1bit
Terminator	CR+LF
Flow control	None

Signal line name and connection method

Terminal no.	Signal name
1	
2	TXD
3	
4	
5	GND
6	
7	
8	
9	



Connection example



Transmission data

GB Transmission data is output immediately after measurement regardless of the status of the reception side (e.g. PC). Therefore, the reception side must always be ready to receive data before any measurements are taken.

A. When the display is held

Item	Header	Output data (ASCII code)	Details
Control data	{0	Fixed at 16	
Control data	0	Fixed at 1	
Model No.	MO	"XXXXXX"	8-byte fixed length ("BD-815")
Body weight	Wg	XXXXX	3~5 bytes variable length (unit: g)

```

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
{ 0 , 1 6 , 0 , 1 , M O , " B D - 8 1 5 " , W g , 3
28 29 30 31 32
9 7 2 CR LF
    
```

B. When the Weight Gain key is pressed

Item	Header	Output data (ASCII code)	Details
Weight gain	Gg	XXXXXX	1~6 bytes variable length (unit: g)
Memorized weight	Rg	XXXXX	3~5 bytes variable length (unit: g)

```

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
G g , 1 0 4 , R g , 3 8 6 8 CR LF
    
```

C. When the Recall key is pressed

Item	Header	Output data (ASCII code)	Details
Memorized weight	Rg	XXXXX	3~5 bytes variable length (unit: g)

```

1 2 3 4 5 6 7 8 9
R g , 3 8 6 8 CR LF
    
```

Note

- Commas (,) are used to separate data.
- Terminator (end of data) is CR (ASCII code: 0DH), LF (ASCII code: 0AH).

Troubleshooting

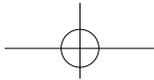
If you are concerned that the scale may not be functioning correctly, please check the following points before requesting repairs.

GB

Problem	Check points	Page
Nothing is displayed when the  key is pressed.	<ul style="list-style-type: none"> Have the batteries been removed, or has the AC adapter been unplugged? Are the batteries running low? Is anything stuck to the terminals of the batteries? 	P.14
 is displayed.	<ul style="list-style-type: none"> The batteries are running out. Please replace them immediately or use the AC adapter. 	P.14
After the power is turned on,  is displayed, and an alarm sounds.	<ul style="list-style-type: none"> Is any pressure being applied to the baby basket when the power is turned on? Has basket been removed? 	P.16
 is shown during measurement.	<ul style="list-style-type: none"> The maximum measurable weight capacity for the scale 15 kg is exceeded. 	P.7

Specifications

Model	BD-815MA
Power Source	AC Adapter Centre minus MODEL A30930G CLASS2 Input Voltage : 230VAC 50Hz 65mA Output Voltage : 9VDC ± 0.45VDC Rated Current :300mA No Load Voltage :12VDC ± 0.6VDC Batteries (R6) × 4 (Included) (6VDC)
Consumption Current	50mA (using the AC Adapter) 40mA (using the batteries)
Power Consumption	0.5W max (using the AC Adapter) 0.3W max (using the batteries)
Measurement System	Electrical resistance method
Maximum Capacity	6kg , 15kg
Minimum Graduation	6kg : 2g 15kg : 5g *Multiple range instrument
Accuracy at first calibration	6kg : ±4g 15kg : ±10g
Weighing Range	40g - 6kg 100g - 15kg
Maximum tare effect	2kg
Display	panel Backlit LCD (Backlight is on only when the AC adapter is used)
Temperature Range of Usage	+5°C / +35°C
Relative Humidity	30 - 80% (without condensation)
Size	D409×W600×H157mm
Weight	Approx. 4.6kg
Main material	ABS resin
Made in	Japan



CE 0123

This product meets the following requirements ;

1. Medical Device Directory Standard (93/42/EEC)

Safety Standard : EN60601-1:1990, AM No.1:1993, AM No.2:1995

IEC60601-1:1988, AM No.1:1991, AM No.2:1995

EMC Standard : EN60601-1-2:2001

IEC60601-1-2:2001

2. Non-Automatic weight Instruments (90/384/EEC)

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