LABORATORY WEIGHING SOLUTION™

XE SERIES

Micro weighing scale

www.globalcas.com

OWNER'S MANUAL

CAS

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1. Introduction

The balances are very simple to use and are applicable for general weighing. The user can also use the parts counting and percent weighing functions for special applications. Special functions are available for weighing in up to 10 different units of weight.
For safe and dependable operation of this scale, please comply with the following safety precautions:

- Verify that the input voltage printed on the AC Adapter and the plug type matches the local AC power supply.
- Make sure that the power cord does not pose a potential obstacle or tripping hazard.
- Disconnect the scale from the power supply when cleaning the scale.
- Do not operate the scale in hazardous or unstable environments.
- Do not immerse the scale in water or other liquids.
- Do not drop loads on the platform.
- Use only approved accessories and peripherals, as available.
- Operate the scale only under ambient conditions specified in these instructions.
- Service should be performed by authorized personnel only.
- It must not be bumped against by other items or overloaded with excessively heavy weights.
- Give a warm-up for 30mins before using the scale.

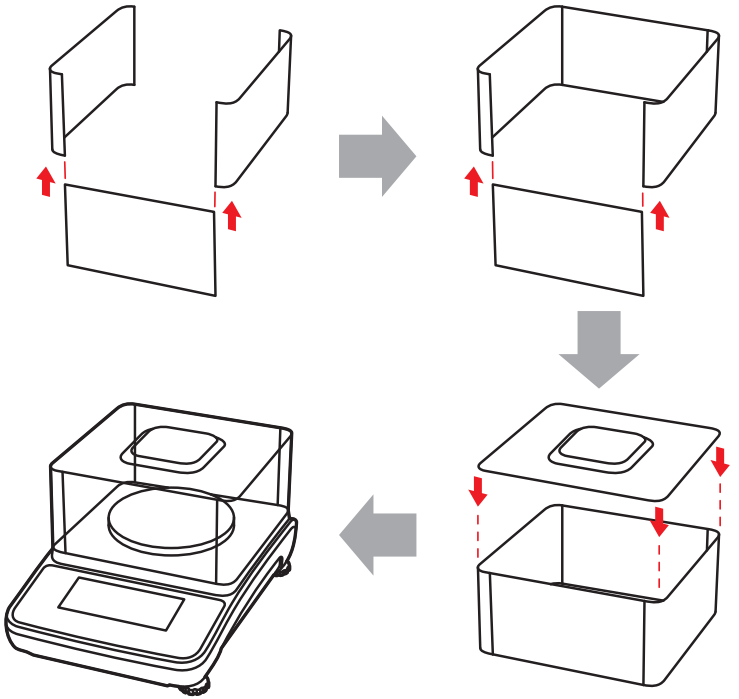
2. Installation

2.1 Unpacking

Unpack and verify that the following components have been included:

- Scale
- Steel pan
- Instruction manual
- AC Adapter
- RS232, USB Cable
- Five pieces of wind shield

2.1 Illustration of the installation for plastic shield

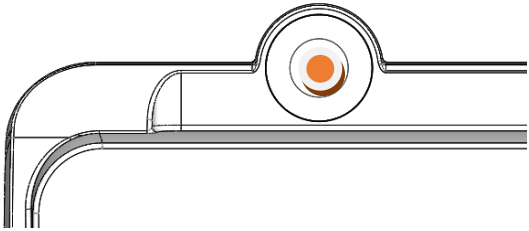


2.3 Selecting the location

Operate the balance on a firm and level surface. Avoid locations with rapid temperature changes, excessive dust, moisture, air currents, vibrations, electromagnetic fields, heat or direct sunlight.

2.4 Leveling the scale

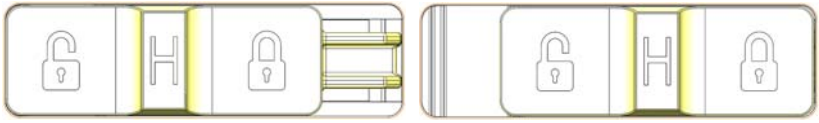
Adjust the leveling feet until the bubble is centered in the circle of the level indicator



Note:
Ensure that the balance is level each time its location is changed.

2.5 Loadcell Protection

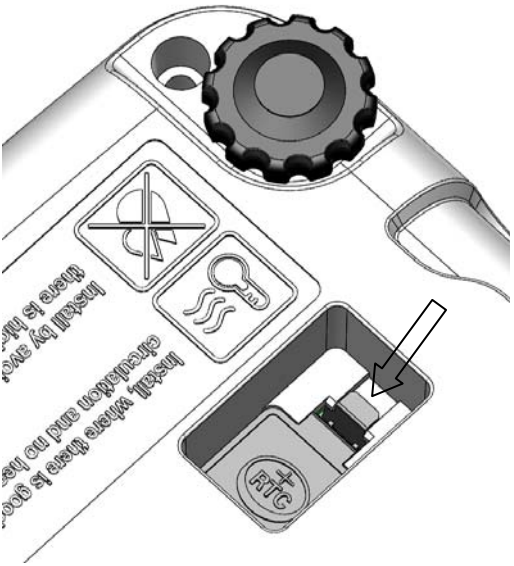
First check a lock at the bottom of a scale
Before using the scale, release the lock



Unlock Lock

2.6 Replacement Mercury battery (RTC battery - CR1220)

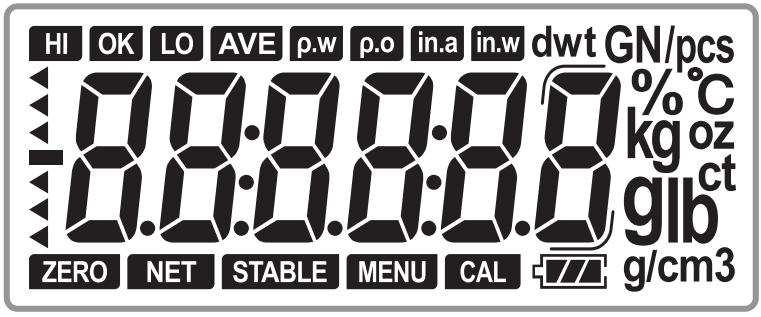
After making a purchase, take out the Mercury battery(CR1220) sealed in the plastic bag. Using a tool with a sharp point, pull the cover out in the direction described in the image below. Place the battery inside and use it.



3. Overview of Display Indicators and Keypad

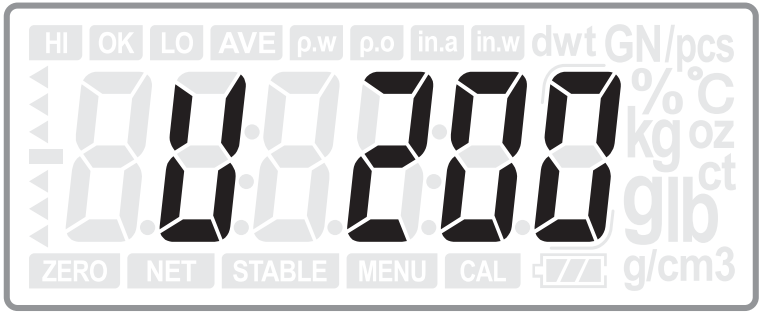
XE model series balance is a self-indicating weighing scale of Class II with single weighing range, an external AC mains adapter, and an internal battery optional (Dry battery or rechargeable battery optional).
The balance consists of analogue to digital conversion, microprocessor control, power supply, keyboard, and a weight display contained within a single enclosure.

3.1 Display



The approval XE model is equipped with auxiliary display (for 600g and 6000g products) or extended display (for other mode).
Note: When XE connecting with a remote display use in commercial transaction, neither the auxiliary display nor the extended display function is permitted (control by CAL mode)

Display after power on
The display first shows “CAS XE” to indicate its model when power on.
Then it shows the software version.



Then the balance displays NON-RC or RC to distinguish the scale is applied to use the dry cell or rechargeable battery.
Then it starts to count down for self-testing and return to zero.

3.2 Keypad design

Keypad description

KEYS	FUNCTIONS
ON/OFF	**ON/OFF:** To power on or off the scale.
MENU Clear	**MODE/MEMU-CLEAR:** To switch the application mode to be weighing mode, counting mode, percentage weighing mode or density measuring mode; Long press to enter into User Menu setting To clear the inputted numeric values.
UNIT SAMPLE Back	**UNIT/SAMPLE-BACK:** To switch the available units. To take sample in counting or percentage weighing mode; To back to last step during parameters setting.
▶	**ZERO/▶-F1:** To return the display to zero. To move the digit to the right; IR function (Zero)
▲	**TARE/▲-F2:** To subtract the tare weight; To decrease the number or move to last choice. IR function (Tare)
A 1d/10d ▼	**A/1d/10d-▼:** To average the unstable weight readings and get one reading as the displayed value (3 seconds) Long press to extend or auxiliary the display. To increase the number or move to next choice.
ENTER	**PRINT/ENTER-F3:** To print the data; To confirm the choice in setting; Long press to switch the backlight mode. IR function (Print)

4. Operations

4.1 Zero the display

Zero-setting range: ±2% of Max
Zero-setting is only available when the load receptor is not in motion (The display is stable).

Semi-automatic zero-setting

When there is a minor weight displayed (without load on the pan), press ▸0◂ key to return to the display to zero, then the ▸0◂ symbol appears which indicates that the display now is at the zero point.

Initial zero-setting

Initial zero-setting range: 20% (±10) of Max

Note:
If the zero point is beyond the range, the display can't return to zero and show the weight value (-------)

4.2 Tare

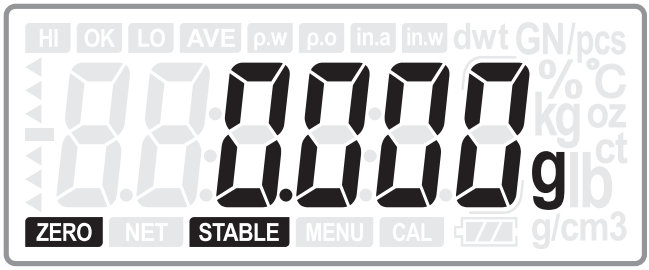
Semi-automatic tare

Press ▸T◂ key to subtract the current displayed weight value as the tare weight value. The display will show a net weight of the object to be weighted (with NET).

Note:
1. The tare range reaches the max capacity.
2. When the balance is unstable, the tare function is unavailable.

4.3 Weighing operation

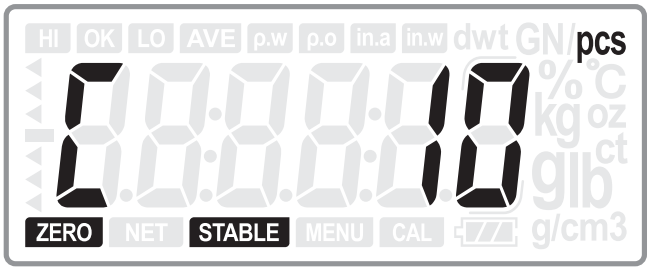
Press ⏻ **ON/OFF** key to power on and enter into normal weighing mode, it displays as below:



4.4 Counting operation

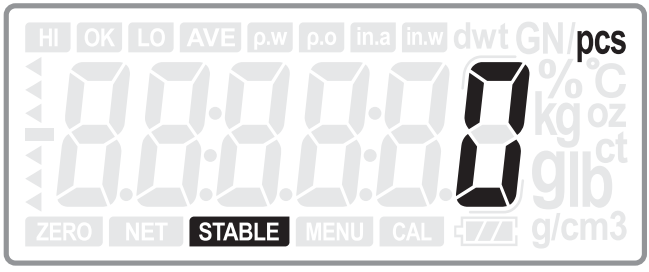
Press Ⓜ key to switch to counting mode, it shows as below:

1. If there is no sample data stored



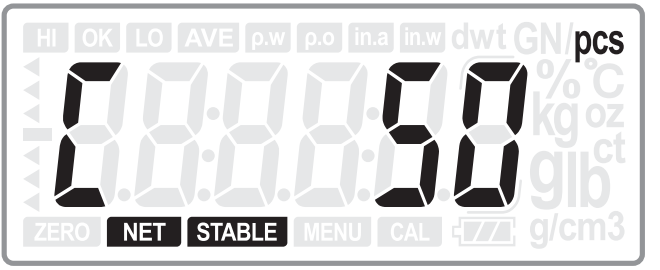
Use ▸T◂ or A key to switch the sample number: 10, 20, 50, 100, 200, 500 or 1000. Put corresponding number of sample and then press SAMPLE/Back key to take sample.
The digits will flicker for one second and then it shows the number. The sampling procedure is finished.

2. If there is sample data stored



Put corresponding object on the pan, the display will show its number (the unit weight is stored).

If a new unit weight is needed, press SAMPLE/Back **Back** key to return to sampling procedure, the display will show the sample number which is used at last time.



(Last time the user used 50pcs sample to perform the sample procedure)

Then take sample for the new object sample, and the unit weight will be stored for next use.

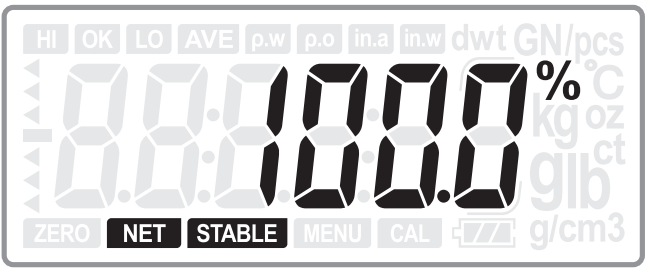
Note:

When the unit weight is less than 0.2d, the scale will sound beeps and the display show an error:

4.5 Percentage weighing

Press Ⓜ key to switch to percentage weighing mode:

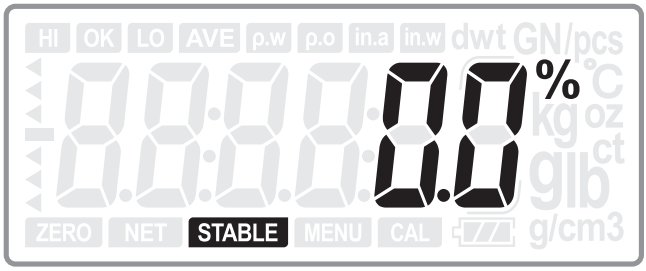
1. If there is no sample data stored



Put corresponding sample and press SAMPLE/Back key to take sample.

The digits will flicker for one second and then show the percentage. The sampling procedure is finished.

2. If there is sample data stored

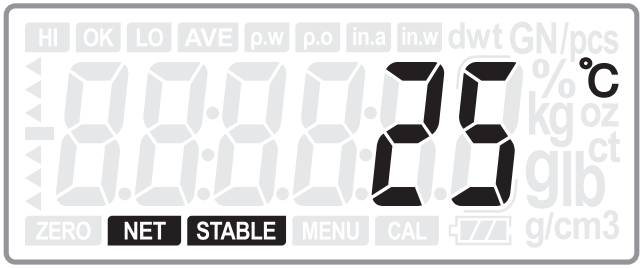


If the sampling data can be used for current object, just put corresponding object to obtain its weighing result. If a sampling data is needed, press SAMPLE / Back **Back** key to return to 100% and take sample.

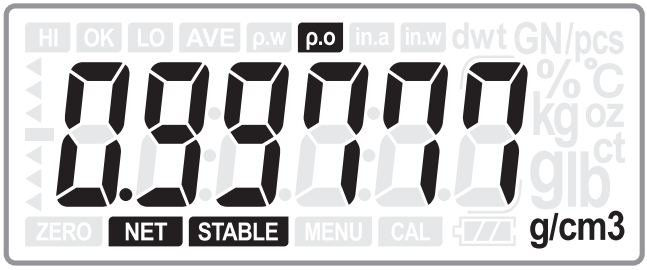
4.6 Density measuring

This measuring method is just applied to measure the object which has a larger density than water.

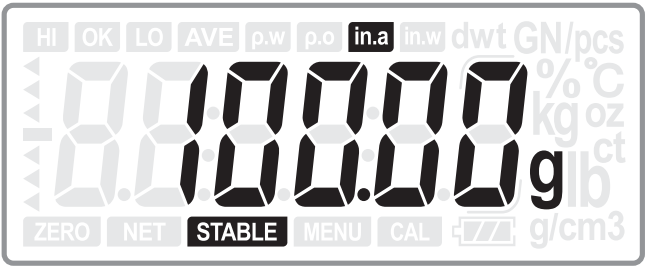
Press Ⓜ key to switch to density measuring mode, it shows as below:



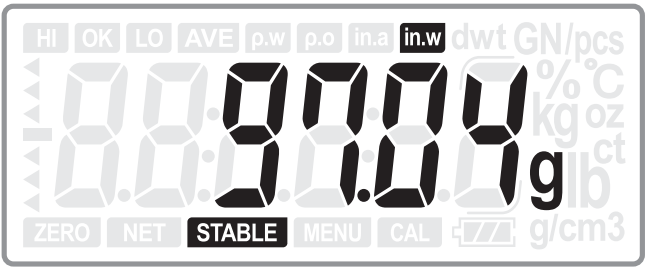
Press ▸T◂ or A key to select the current temperature, and then press **ENTER** key to display the water density at current temperature



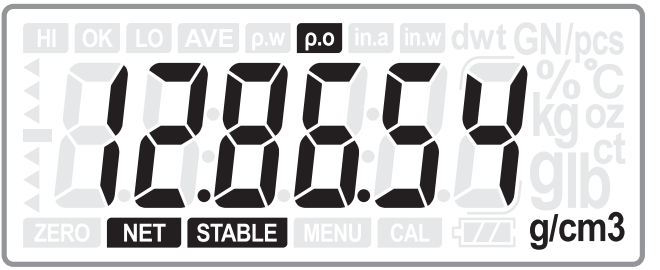
Put the object to be measured on the pan, and press **ENTER** key to display its weight.



The use the hook under the bottom of the balance to hang the object, and put it in the water, then press **ENTER** key to display its weight in the water.



Then press **ENTER** key to get its density.



Note:

1. The density unit is g/cm3, so if the weighing unit is not “g” when entering into this mode, it will automatically be changed to “g”. And when exiting from this mode, the weighing unit will be back to the original one.
2. Press (M) key to exit from this mode at any time.
3. Zeroing, Tarring and cancelling tare functions are available in this mode.
4. Density calculation formula:

$$\rho\text{-O} = \frac{\text{in.a}}{(\text{in.a} - \text{in.w})} \times \rho\text{-w}$$

ρ-O------Density of the sample ρ-w-------Density of the water

in.a-------Sample weight in air in.w-------Sample weight in water

5. Water’s density in different temperature

Tem. (℃)	Den. (g/cm3)	Tem. (℃)	Den. (g/cm3)	Tem. (℃)	Den. (g/cm3)	Tem. (℃)	Den. (g/cm3)
0	0.99984						
1	0.99990	11	0.99961	21	0.99799	31	0.99534
2	0.99994	12	0.99950	22	0.99777	32	0.99503
3	0.99996	13	0.99938	23	0.99754	33	0.99471
4	0.99997	14	0.99925	24	0.99730	34	0.99438
5	0.99996	15	0.99910	25	0.99705	35	0.99404
6	0.99994	16	0.99894	26	0.99679	36	0.99369
7	0.99990	17	0.99878	27	0.99652	37	0.99333
8	0.99985	18	0.99860	28	0.99624	38	0.99297
9	0.99978	19	0.99841	29	0.99595	39	0.99260
10	0.99970	20	0.99821	30	0.99565	40	0.99222

4.7 Hold function

4.7.1 In normal weighing mode, press **A** key to average the unstable weight readings, and get a value to display for 3 seconds.

The AVG. character flickers for 2 seconds and then it displays the weight. (The weight is an average weight value)
The weight value will be kept for 3 seconds and return to normal weighing mode.

4.7.2 Long press to extend or auxiliary the display. (Approval Ver. only)
To increase the number or move to next choice.

Auxiliary indicating device (600 g , 6000 g)
The balance with verification scale interval e= $1x10^k$ g are equipped with an auxiliary indicating device having a display view d = 0.1 e.

Balances with auxiliary indicating device and and ct((metric carat) enabled as a selectable weighing unit are to be regarded as dual-range instruments with manual changeover, and they must be marked with Max, Min e=, d= and T = in both g (gram) and ct (metric carat).

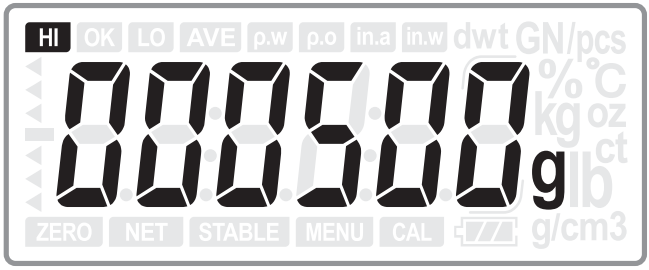
Extended indicating device (300 g, 1500 g , 3000 g)

The balances with verification scale interval e≠$1x10^k$ g are equipped with an

Extended indicating device, which displays the weight with d = 0.1 e for 5 seconds, when activated.

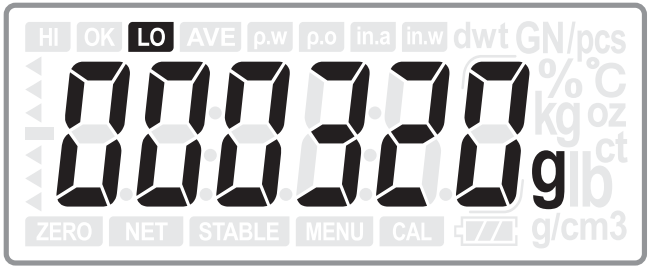
4.8 Check function

In normal mode, press A and **ENTER** key at the same time to enter into check limits setting.



(HI limits setting)

Use ▸T◂ or A key to increase the number, use ▸0◂ key to move the digit, and then press **ENTER** key to confirm and move to LO limits setting.



(LO limits setting)

Use ▸T◂ or A key to increase the number, use ▸0◂ key to move the digit, and then press **ENTER** key to confirm and return to normal mode.

To erase the limits, press MENU/Clear **Clear** key to set both two limits to be zero and press **ENTER** key to confirm.

Note:

1. For quantity check and percentage weight check, just press A and **ENTER** key at the same time to enter into quantity check or percentage weight limits setting.
2. When the LO limits is set larger than the HI limits, E4 will appear and new value needs to be set.

4.9 Units available

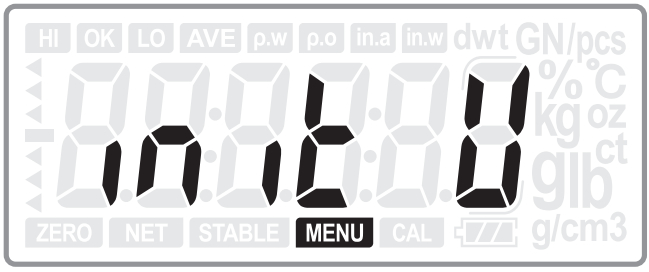
In normal weighing mode, press **UNIT** key to switch the available units (g, lb, GN, dwt, oz, ozt, ct, t, GSM and Bori)

Model / Unit	XE150	XE300	XE600	XE1500	XE3000	XE6000
g	150	300	600	1500	3000	6000
ct	750	1500	3000	7500	15000	30000
lb	0.3	0.6	1.2	3	6	12
oz	5.2	10.5	21	52	105	210
GN	2300	4600	9200	23000	46000	92000
ozt	4.8	9.6	19	48	96	190
dwt	96	190	380	960	1900	3800
t	12	25	51	120	250	510
GSM	1.5	3	6	15	30	60
Bori	12:13:4.6	25:11:3.1	51:7:0.2			

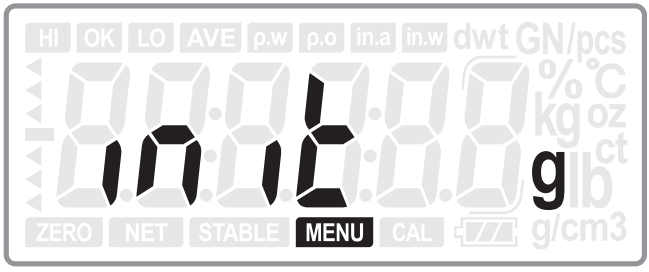
5. User Menu Setting (OIML Approval ver.)

Give a long press of MENU/Clear key in normal mode to enter into User Menu setting.

5.1 Initial Unit

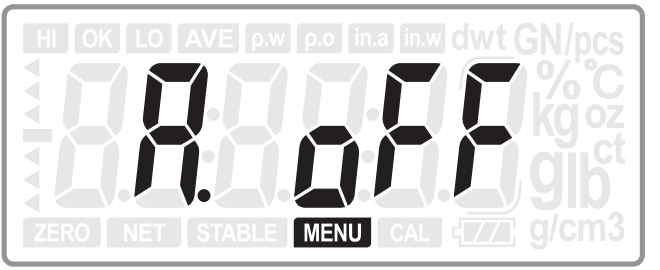


Press **ENTER** key to enter into the initial unit selection:

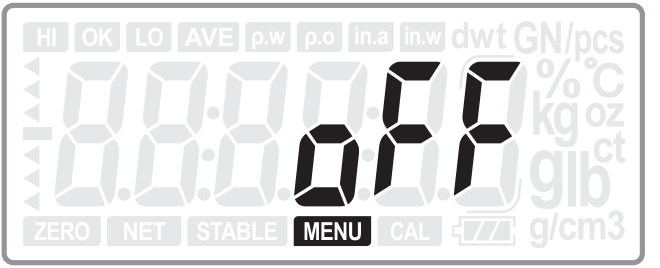


Press ▸T◂ or A key to choose the initial unit from: g, ct (Default: g)
Press **ENTER** key to confirm the choice and move to next setting: Unit: Unit; or press SAMPLE/Back **Back** key to return to last step.
Press A key to move to next setting menu when not change the current setting.

5.2 Auto shut off time



Press **ENTER** key to enter into the shut off time setting:

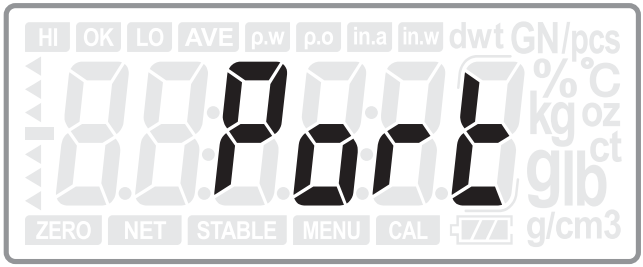


Press ▸T◂ or A key to select the time: No, 2, 5 or 8. (Default: No)

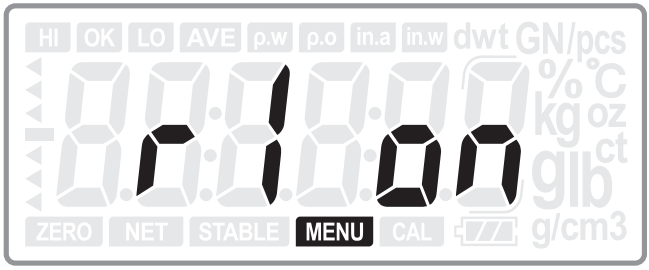
Press **ENTER** key to confirm the choice and move to next setting: Port; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

5.3 Serial port setting



Press **ENTER** key to enter into the serial port setting:



Press ▸T◂ or A key to choose the serial ports: R1, R2 or USB; press ▸0◂ key to choose the ports to be on or off. (R1-RS232C1 for CD-300 remote display; R2-RS232C2 for PC and printer)

Press **ENTER** key to confirm the choice and move to next setting: RS2.tRN; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

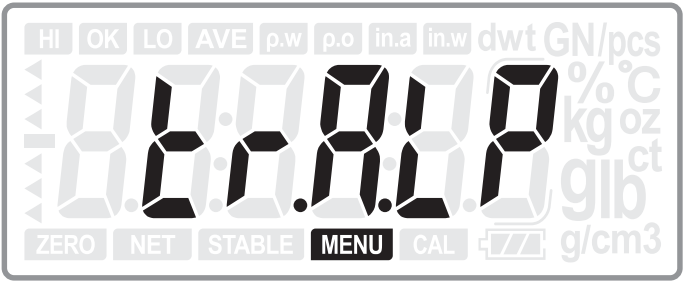
Note:

Once the R2 and USB are set to be off, there are no settings as 5.5 and 5.6.

5.4 Data Transmitting mode (For RS232C2)

Only when R2 has been chosen to be on, the setting is available.

Press **ENTER** key to enter into the transmitting mode selection:



Press ▸T◂ or A key to choose the transmitting mode:

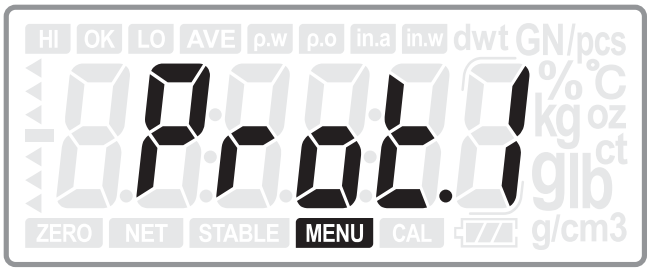
TR.A.LP : Transmitting data for DLP50 printer (Automatically)
TR..A.DT : Transmitting data for BP DT-4 printer (Automatically)
TR.A.P : Transmitting data for PC or Micro-printer (Automatically)
TR.m.DT : Transmitting data for BP DT-4 printer (Manually)
TR.m.P : Transmitting data for PC or Micro-printer (Manually)
TR.m.LP : Transmitting data for DLP50 printer (Manually)
TR.SER : Transmitting data continuously
(Default: TR. m. LP)

Press **ENTER** key to confirm the choice and move to next setting: Prot or FORM00; or press SAMPLE/Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

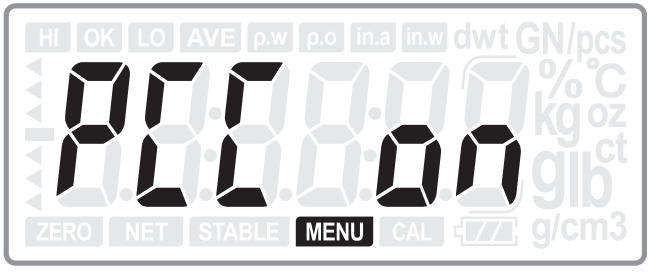
5.4.1 Data transmitting protocols (only for PC or micro-printer)

Only when TR. A. P or TR. m. P TR . SER has been chosen, this setting will be available.



Press ▸T◂ or A key to choose the available protocols: Prot1 (MWP), Prot2 (22byte) or Prot3 (MW-II)
Press **ENTER** key to confirm the choice and move to next setting: USB tRN; press SAMPLE / Back **Back** key to return to last step.

Note:
Once Prot3 has been chosen, press **ENTER** key to move to PCC (Printing control code) setting:

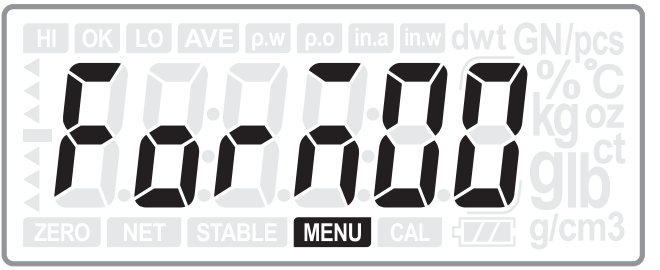


Press ▸T◂ or A key to choose it to be on or off. (Default: off).

Press **ENTER** key to confirm the choice and move to next setting: USB tRN; press SAMPLE / Back **Back** key to return to last step.

5.4.2 Label format (only for LP50 and DT BP-4)

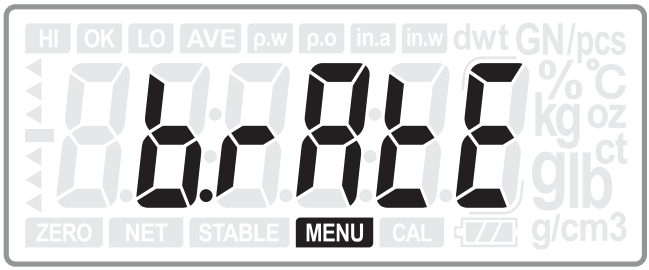
Only when TR. A. LP, TR. m. LP, TR. m. DT, TR. a. DT have been chosen, this setting will be available.



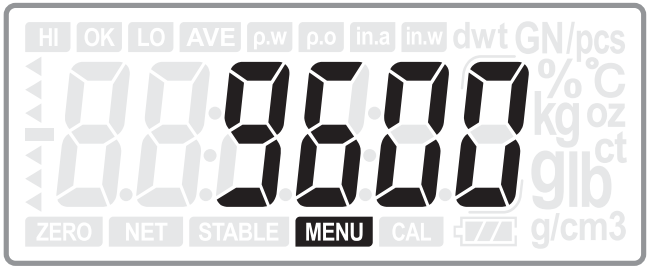
Press ▸T◂ or A key to increase or decrease the number; press ▸0◂ key to move the digits: FORM00-FORM99. (Default: FORM00)

Press **ENTER** key to confirm the choice and move to next setting: USB TRN; press SAMPLE / Back **Back** key to return to last step.

5.5 Baud rate (for RS232-2 only)



Press **ENTER** key to enter into baud rate selection:



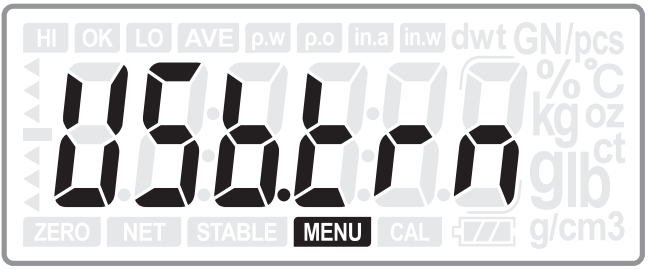
Press ▸T◂ or A key to select the baud rate: 2400, 4800, 9600 or 19200. (Default: 9600).

Press **ENTER** key to confirm the choice and move to next setting: A.C; or press SAMPLE Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

5.6 Data transmitting mode (for USB)

Only when USB has been chosen to be on, the setting is available.



Press **ENTER** key to enter into USB data transmitting:

Press ▸T◂ or **A** key to choose the transmitting mode:

tr.a.p: Transmitting the data to PC or mic-printer (Automatically)

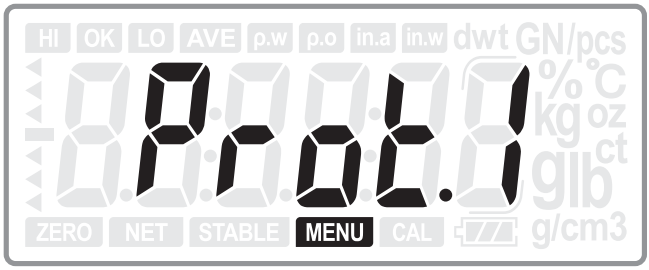
tr.m.p: Transmitting the data to PC or mic-printer (Manually)

tr.ser: Transmitting the data continuously

(Default: tr.ser)

Press **ENTER** key to confirm the choice and move to next setting: Prot; or press SAMPLE/Back **Back** key to return to last step.

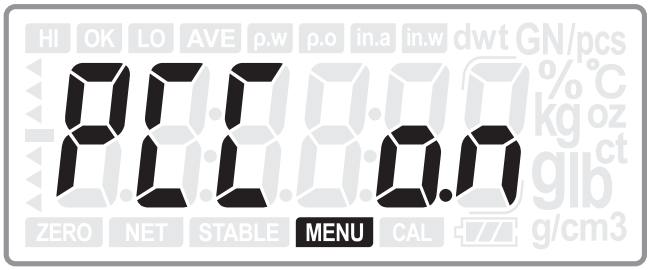
Press **A** key to move to next setting menu when not change the current setting.



Press ▸T◂ or A key to choose the available protocols: Prot1 (MWP), Prot2 (22byte) or Prot3 (MW-II)

Press **ENTER** key to confirm the choice and move to next setting: Baud rate; press SAMPLE Back **Back** key to return to last step.

Note:
Once Prot3 has been chosen, press **ENTER** key to move to PCC (Printing control code) setting:

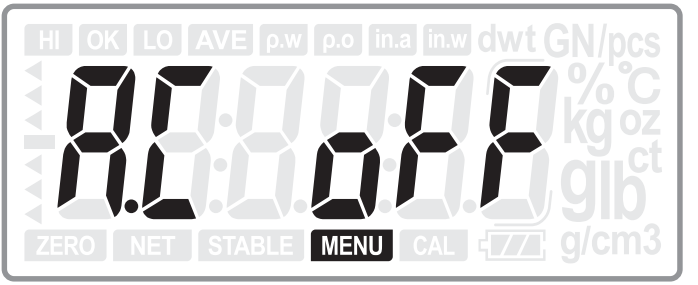


Press ▸T◂ or A key to choose it to be on or off. (Default: off).

Press **ENTER** key to confirm the choice and move to next setting: Baud rate; press SAMPLE Back **Back** key to return to last step.

5.7 Unit Weight re-computing

Press **ENTER** key to enter into unit.w re-computing setting:

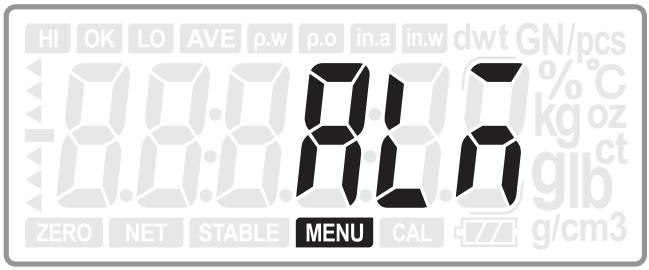


Press ▸T◂ or A key to set the function to be ON or OFF. (Default: OFF)

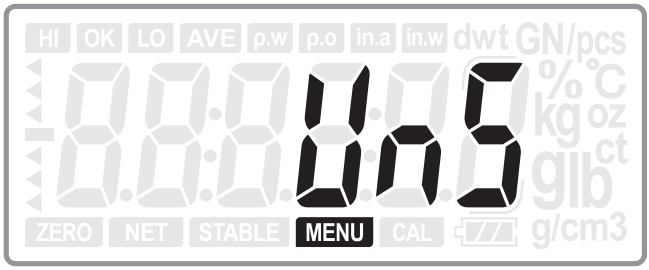
Press **ENTER** key to confirm the choice and move to next setting: AL.m; or press SAMPLE/Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

5.8 Check alarm mode



Press **ENTER** key to enter into alarm mode setting:



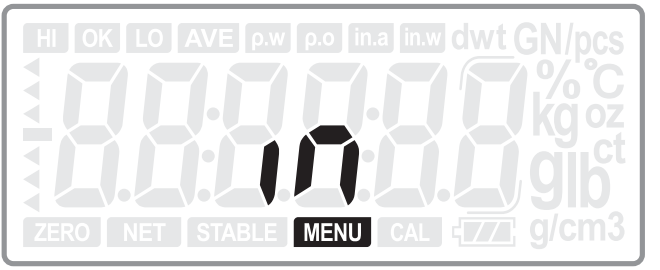
Press ▸T◂ or A key to set the alarm mode: Unstable (UNS) or Stable (ST). (Default: ST)

Press **ENTER** key to confirm the choice and move to next setting: AL.t; or press SAMPLE/Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

5.9 Check alarm type

Press **ENTER** key to enter into alarm type setting:

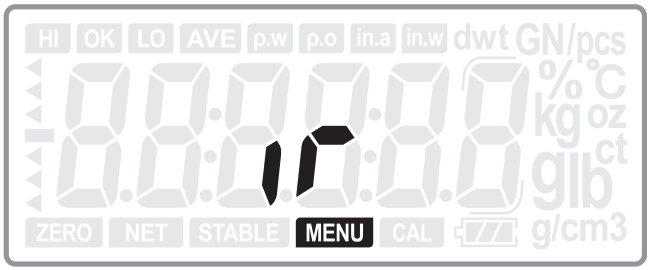


Press ▸T◂ or A key to set the alarm type: IN or OUT. (Default: OUT)

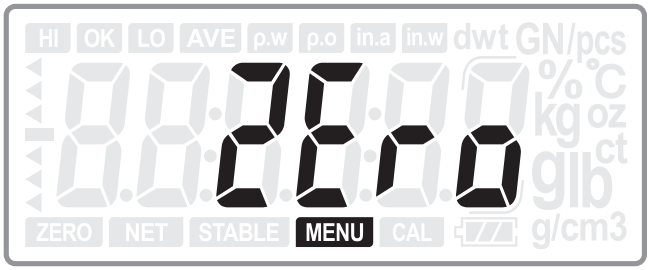
Press **ENTER** key to confirm the choice and move to next setting: Ir; or press SAMPLE Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

5.10 IR key function



Press **ENTER** key to enter into IR key function selection:



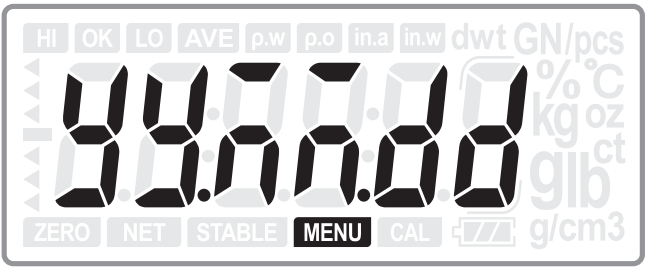
Press ▸T◂ or A key to select the IR key function: ZERO, TARE, PRINT or Off. (Default: ZERO)

Press **ENTER** key to confirm the choice and move to next setting: DD tt; or press SAMPLE/Back **Back** key to return to last step.

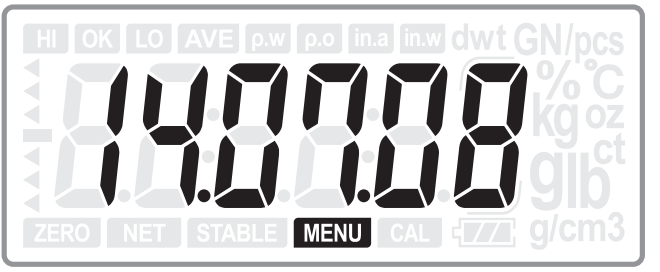
Press A key to move to next setting menu when not change the current setting.

5.11 Date and Time setting

Press **ENTER** key to display the date mode for setting (flickering for 3 seconds)

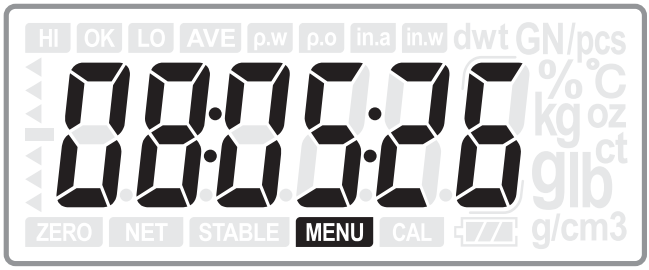


Then the display enters into date setting:



Press ▸T◂ or A key to increase or decrease the number (yy:01-99; MM: 01-12; dd: 01-31); press ▸0◂ key to move the digit.

Press **ENTER** key to confirm the date and move to time setting:

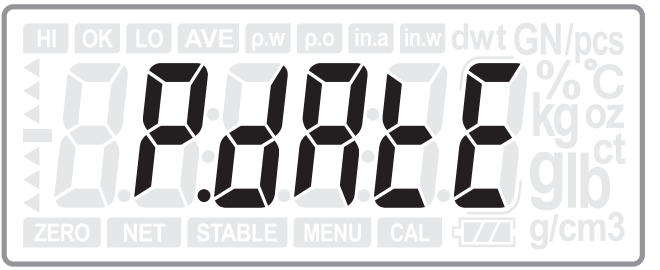


Press ▸T◂ or A key to increase or decrease the number (hh:00-23; mm: 00-60; ss: 00-60); press ▸0◂ key to move the digit.

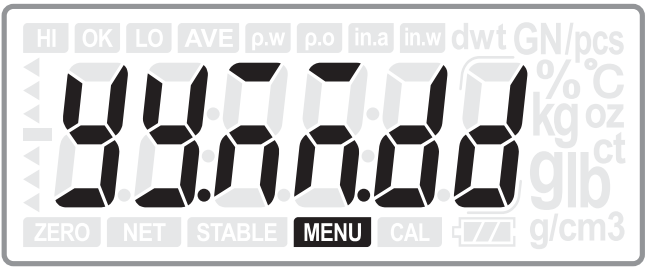
Press **ENTER** key to confirm the choice and move to next setting: P.date; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

5.12 Printed date format setting



Press **ENTER** key to enter into printed date format chosen:



Press ▸T◂ or A key to select printed date format:

yy.MM.dd: 2014/07/08 (Default)

MM.dd.yy: 07/08/2014

dd.MM.yy: 08/07/2014

Mmm.dd.y: July /08/2014

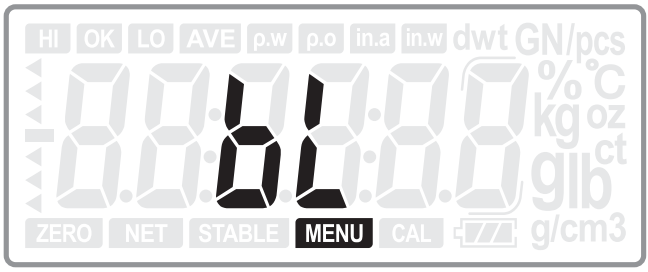
dd.Mmm.y: 08/July/2014

OFF: The date and time will not be printed.

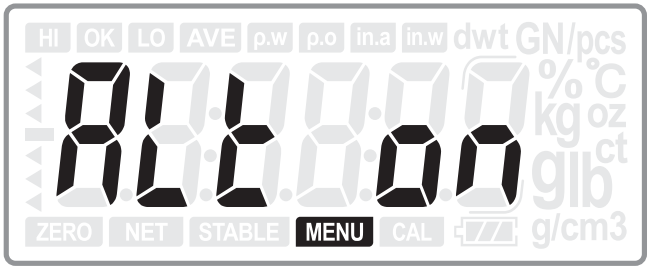
Press **ENTER** key to confirm the choice and move to next setting: Bl; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

5.13 Backlight



Press **ENTER** key to enter into backlight mode setting:



Press ▸T◂ or A key to select the backlight mode: ALL ON, OFF, AUTO-3, AUTO-5, and AUTO-10. (Default: ALL ON)

ALL ON: The backlight will always be on.

OFF: The backlight will always be off.

AUTO-3/5/10: The backlight will be on when a sample placed on the pan and it is off in 3/5/10 seconds after the weight is stable.

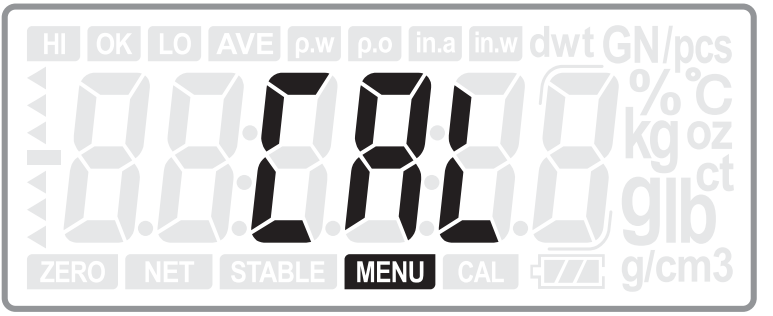
Press **ENTER** key to confirm the choice and return to normal weighing mode; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6. User Menu Setting (N, H type only)

Give a long press of MENU Clear key in normal mode to enter into User Menu setting.

6.1 Span Calibration



Press **ENTER** key to enter into calibration.

Use ▸0◂ key to move the digit; use ▸T◂ or A key to increase or decrease the number.

Press **ENTER** key to confirm the inputted value and start calibration.

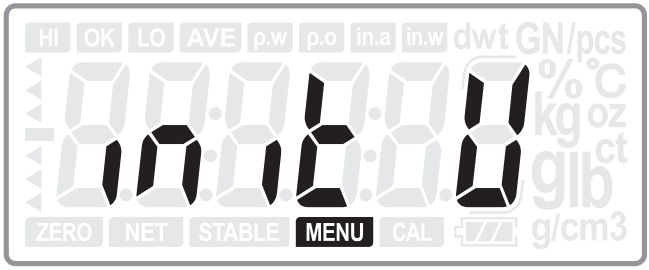
After the CAL character flickering, it returns to normal mode.

Note:

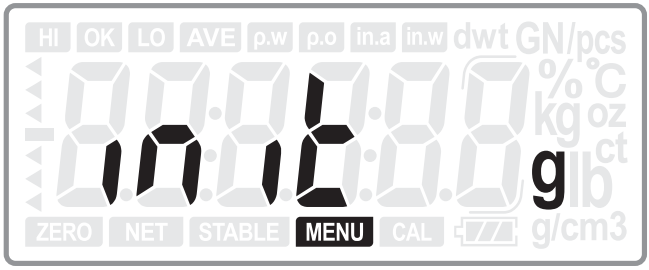
1 For approval model products, the calibration will be recorded.

2 After the span calibration, please enter into the menu again. When the display shows “CAL”, press ▸T◂ or A key to move the setting menu.

6.2 Initial Unit



Press **ENTER** key to enter into the initial unit selection:

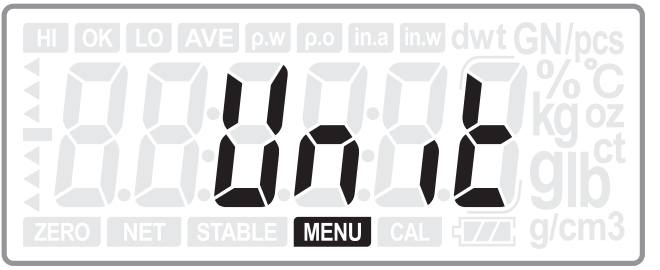


Press ▸T◂ or A key to choose the initial unit from: g, ct (Default: g)

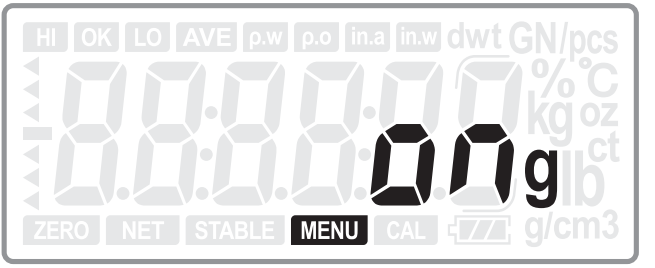
Press **ENTER** key to confirm the choice and move to next setting: Unit: Unit; or press SAMPLE/Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.3 Units available



Press **ENTER** key to enter into the unit selection:

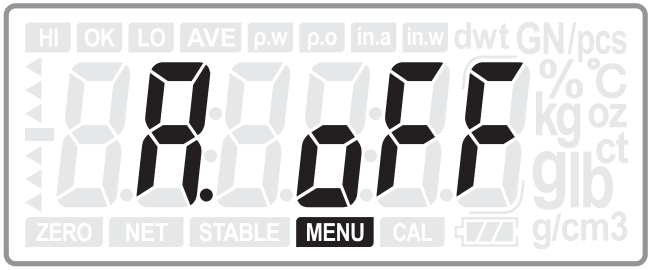


Press ▸T◂ or A key to select the unit; press ▸0◂ key to set it to be on or off.

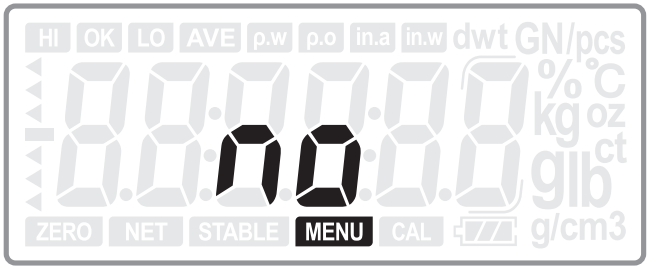
Press **ENTER** key to confirm the choice and move to next setting: A.OFF; or press SAMPLE/Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.4 Auto shut off time



Press **ENTER** key to enter into the shut off time setting:



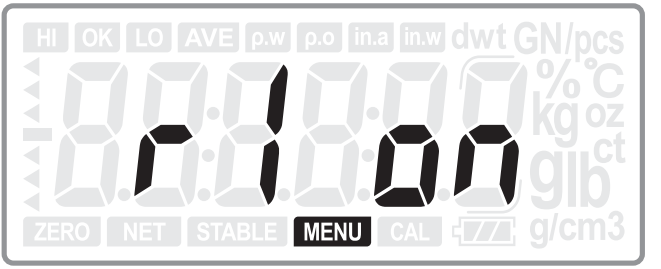
Press ▸T◂ or A key to select the time: NO, 2, 5 or 8. (Default: Off)

Press **ENTER** key to confirm the choice and move to next setting: Port; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.5 Serial port setting

Press **ENTER** key to enter into the serial port setting:



Press ▸T◂ or A key to choose the serial ports: R1, R2 or USB; press ▸0◂ key to choose the ports to be on or off. (R1-RS232C1 for CD-300 remote display; R2-RS232C2 for PC and printer)

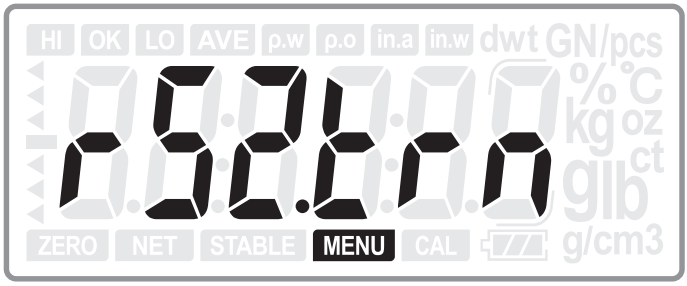
Press **ENTER** key to confirm the choice and move to next setting: RS2.tRN; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

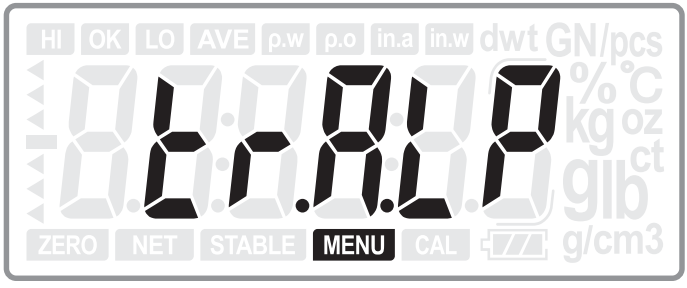
Note:
Once the R2 and USB are set to be off, there are no settings as 6.6 and 6.7.

6.6 Data Transmitting mode (For RS232C2)

Only when R2 has been chosen to be on, the setting is available.



Press **ENTER** key to enter into the transmitting mode selection:



Press ▸T◂ or A key to choose the transmitting mode:

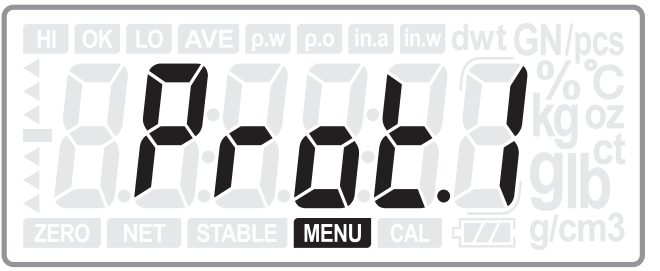
TR.A.LP : Transmitting data for DLP50 printer (Automatically)
TR..A.DT : Transmitting data for BP DT-4 printer (Automatically)
TR.A.P : Transmitting data for PC or Micro-printer (Automatically)
TR.m.DT : Transmitting data for BP DT-4 printer (Manually)
TR.m.P : Transmitting data for PC or Micro-printer (Manually)
TR.m.LP : Transmitting data for DLP50 printer (Manually)
TR.SER : Transmitting data continuously
(Default: TR. m. LP)

Press **ENTER** key to confirm the choice and move to next setting: Prot or FORm00; or press SAMPLE/Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.6.1 Data transmitting protocols (only for PC or micro-printer)

Only when TR. A. P or TR. m. P TR . SER has been chosen, this setting will be available.



Press ▸T◂ or A key to choose the available protocols: Prot1 (MWP), Prot2 (22byte) or Prot3 (MW-II)
Press **ENTER** key to confirm the choice and move to next setting: USB tRN; press SAMPLE Back **Back** key to return to last step.

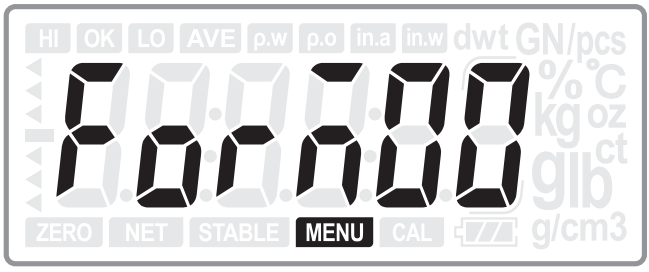
Note:
Once Prot3 has been chosen, press **ENTER** key to move to PCC (Printing control code) setting:

Press ▸T◂ or A key to choose it to be on or off. (Default: off).

Press **ENTER** key to confirm the choice and move to next setting: USB tRN; press SAMPLE Back **Back** key to return to last step.

6.6.2 Label format (only for LP50 and DT BP-4)

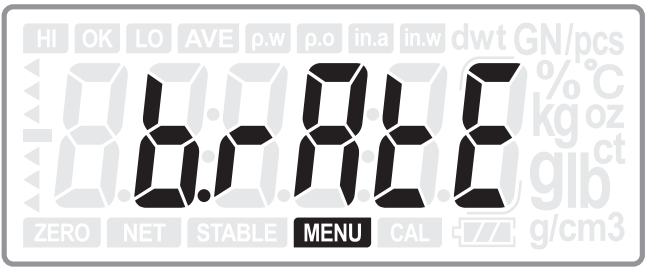
Only when TR. A. LP, TR. m. LP, TR. m. DT, TR. a. dt have been chosen, this setting will be available.



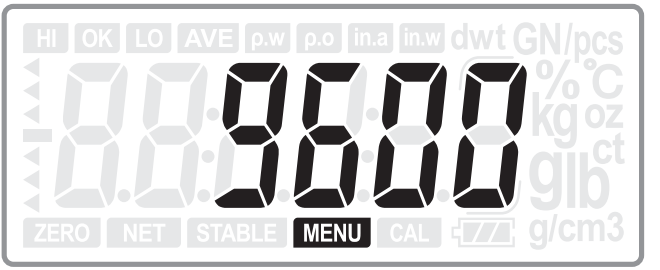
Press ▸T◂ or A key to increase or decrease the number; press ▸0◂ key to move the digits: FORM00-FORM99. (Default: FORM00)

Press **ENTER** key to confirm the choice and move to next setting: USB TRN; press SAMPLE / Back **Back** key to return to last step.

6.7 Baud rate (for RS232-2 only)



Press **ENTER** key to enter into baud rate selection:



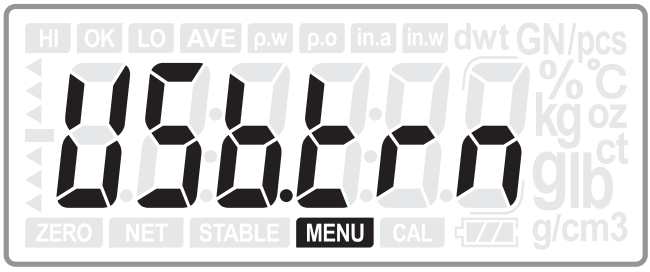
Press ▸T◂ or A key to select the baud rate: 2400, 4800, 9600 or 19200. (Default: 9600).

Press **ENTER** key to confirm the choice and move to next setting: A.C; or press SAMPLE/Back **Back** key to return to last step.

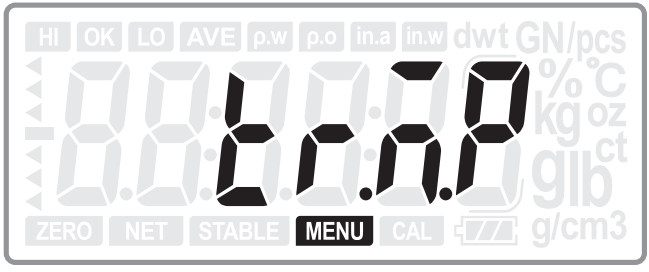
Press A key to move to next setting menu when not change the current setting.

6.8 Data transmitting mode (for USB)

Only when USB has been chosen to be on, the setting is available.



Press **ENTER** key to enter into USB data transmitting:



Press ▸T◂ or A key to choose the transmitting mode:

tr.a.p: Transmitting the data to PC or mic-printer (Automatically)

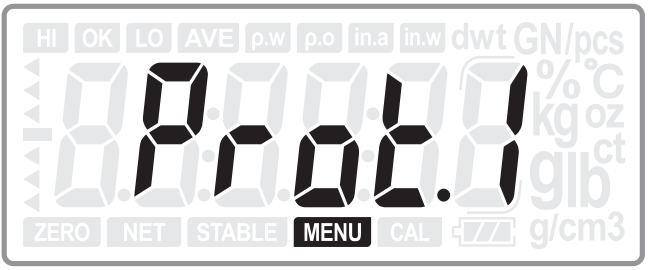
tr.m.p: Transmitting the data to PC or mic-printer (Manually)

tr.ser: Transmitting the data continuously

(Default: tr.ser)

Press **ENTER** key to confirm the choice and move to next setting: Prot; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.



Press ▸T◂ or A key to choose the available protocols: Prot1 (MWP), Prot2 (22byte) or Prot3 (MW-II)

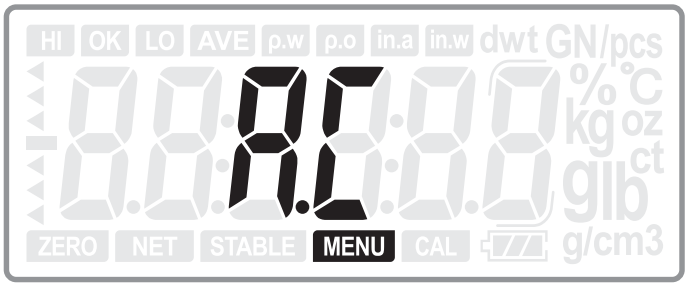
Press **ENTER** key to confirm the choice and move to next setting: BaUd rate; press SAMPLE/Back **Back** key to return to last step.

Note:
Once Prot3 has been chosen, press **ENTER** key to move to PCC (Printing control code) setting:

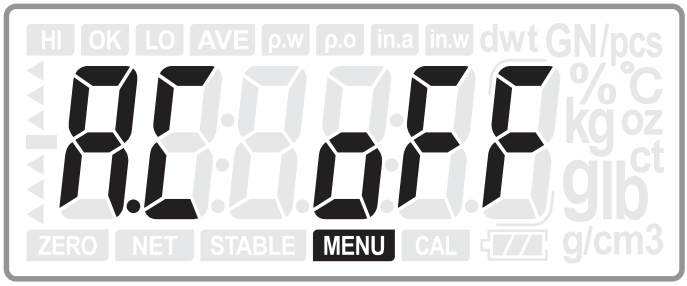
Press ▸T◂ or A key to choose it to be on or off. (Default: off).

Press **ENTER** key to confirm the choice and move to next setting: BaUd rate; press SAMPLE/Back **Back** key to return to last step.

6.9 Unit Weight re-computing



Press **ENTER** key to enter into unit.w re-computing setting:

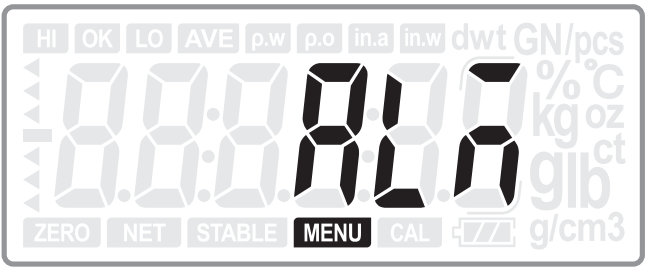


Press ▸T◂ or A key to set the function to be ON or OFF. (Default: OFF)

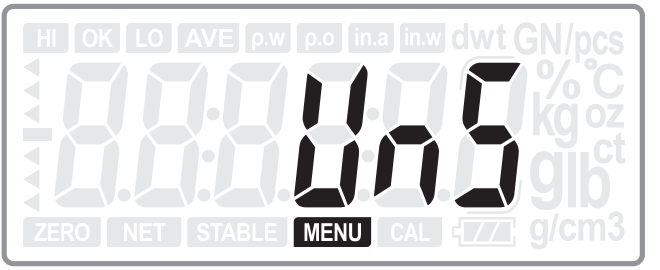
Press **ENTER** key to confirm the choice and move to next setting: AL.m; or press SAMPLE Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.10 Check alarm mode



Press **ENTER** key to enter into alarm mode setting:

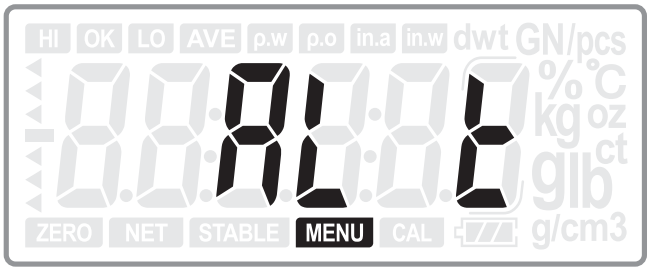


Press ▸T◂ or A key to set the alarm mode: Unstable (UNS) or Stable (ST). (Default: ST)

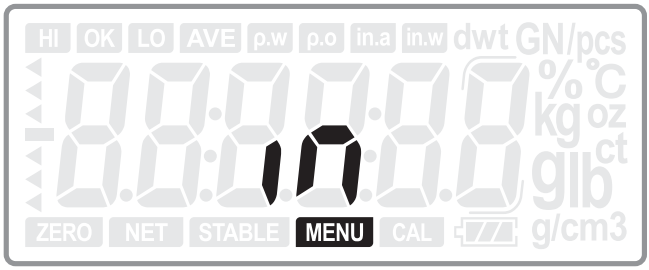
Press **ENTER** key to confirm the choice and move to next setting: AL.t; or press SAMPLE/Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.11 Check alarm type



Press **ENTER** key to enter into alarm type setting:

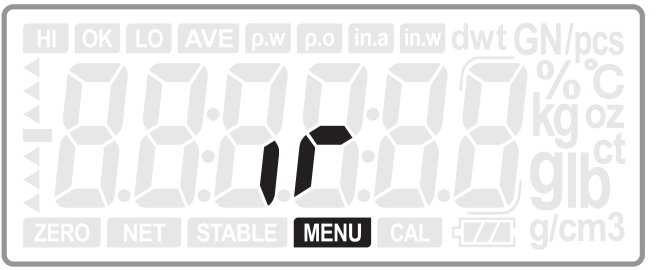


Press ▸T◂ or A key to set the alarm type: IN or OUT. (Default: OUT)

Press **ENTER** key to confirm the choice and move to next setting: Ir; or press SAMPLE Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.12 IR key function



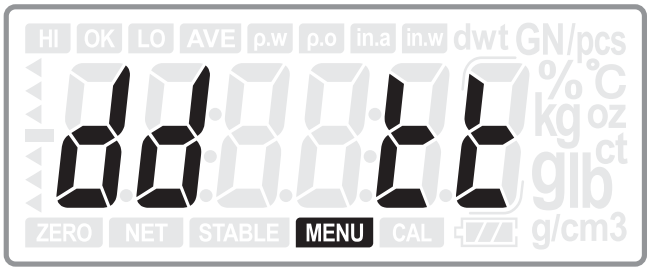
Press **ENTER** key to enter into IR key function selection:

Press ▸T◂ or A key to select the IR key function: ZERO, TARE, PRINT or Off. (Default: ZERO)

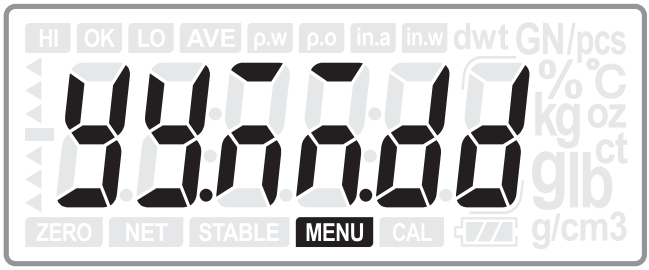
Press **ENTER** key to confirm the choice and move to next setting: DD tt; or press SAMPLE/Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

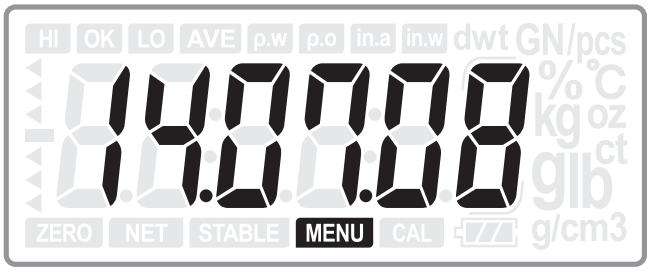
6.13 Date and Time setting



Press **ENTER** key to display the date mode for setting (flickering for 3 seconds)

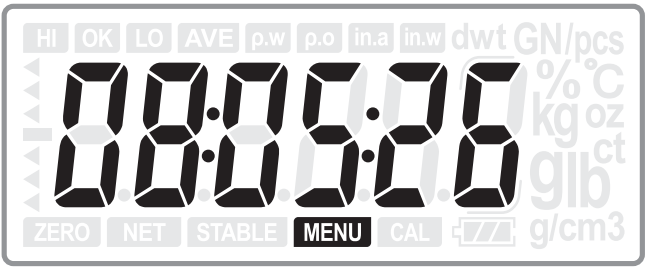


Then the display enters into date setting:



Press ▸T◂ or A key to increase or decrease the number (yy:01-99; MM: 01-12; dd: 01-31); press ▸0◂ key to move the digit.

Press **ENTER** key to confirm the date and move to time setting:

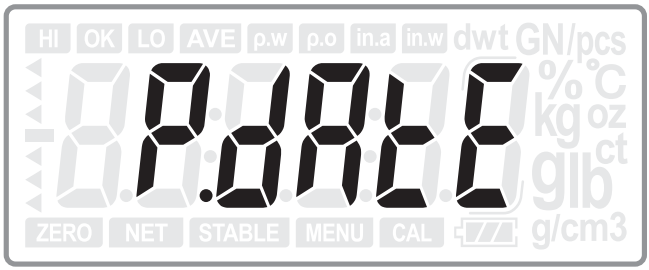


Press ▸T◂ or A key to increase or decrease the number (hh:00-23; mm: 00-60; ss: 00-60); press ▸0◂ key to move the digit.

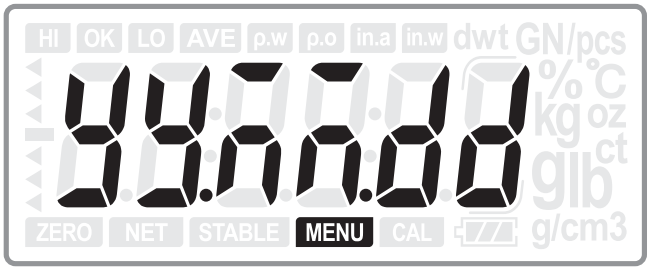
Press **ENTER** key to confirm the choice and move to next setting: P.date; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.14 Printed date format setting



Press **ENTER** key to enter into printed date format chosen:



Press ▸T◂ or A key to select printed date format:

yy.MM.dd: 2014/07/08 (Default)

MM.dd.yy: 07/08/2014

dd.MM.yy: 08/07/2014

Mmm.dd.y: July /08/2014

dd.Mmm.y: 08/July/2014

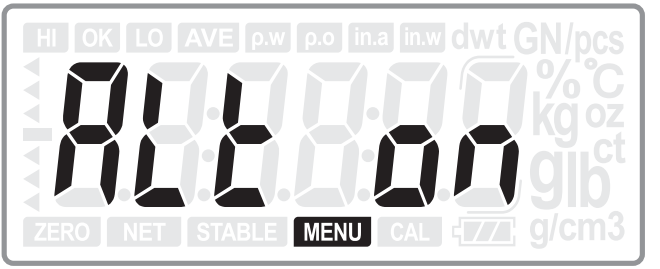
OFF: The date and time will not be printed.

Press **ENTER** key to confirm the choice and move to next setting: Bl; or press SAMPLE Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.15 Backlight

Press **ENTER** key to enter into backlight mode setting:



Press ▸T◂ or A key to select the backlight mode: ALL ON, OFF, AUTO-3, AUTO-5, and AUTO-10. (Default: ALL ON)

ALL ON: The backlight will always be on.

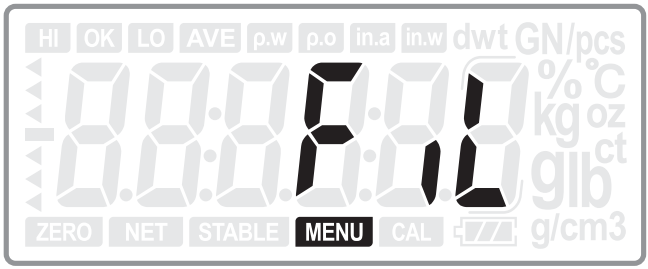
OFF: The backlight will always be off.

AUTO-3/5/10: The backlight will be on when a sample placed on the pan and it is off in 3/5/10 seconds after the weight is stable.

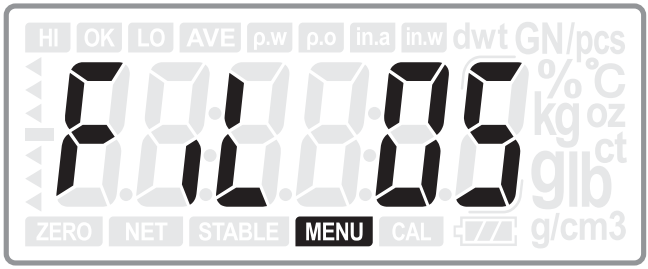
Press **ENTER** key to confirm the choice and return to normal weighing mode; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.16 Stable class range



Press **ENTER** key to enter into stable class range selection:



Press ▸T◂ or A key to select the range of stability from 1 to 15. (The larger the number selected, the shorter time for stable state) (Default: 05)

Press **ENTER** key to confirm the choice and move to next setting: Zero; or press SAMPLE / Back **Back** key to return to last step.

Press A key to move to next setting menu when not change the current setting.

6.17 Zero display range

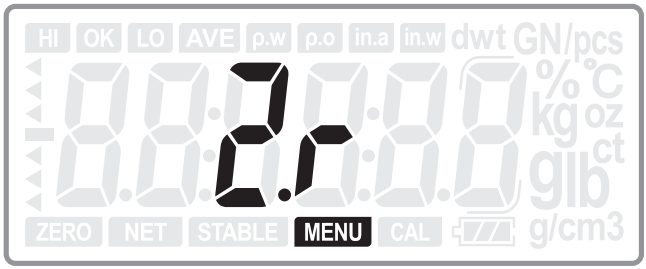
Press **ENTER** key to enter into zero display range selection:

Press ▸T◂ or A key to select the range of zero display from 0 to 3. (The larger the number selected, the shorter time for zero display) (Default: 1)

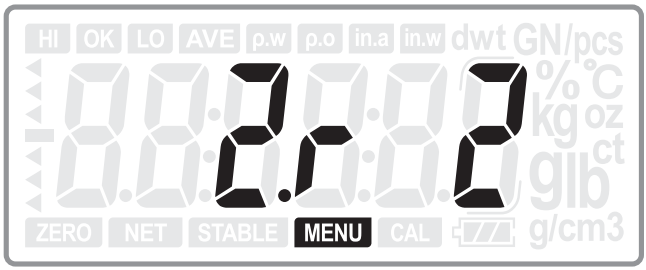
Press **ENTER** key to confirm the choice and move to next setting: Z.r; or press SAMPLE Back **Back** key to return to last step

Press A key to move to next setting menu when not change the current setting.

6.18 Zero return range



Press **ENTER** key to enter into zero return range selection:



Press ▸T◂ or **A** key to select the range of zero return range from 0 to 3. (The larger the number selected, the shorter time for zero return) (Default: 2)

Press **ENTER** key to confirm the choice and move to next setting: traC; or press SAMPLE / Back **Back** key to return to last step

Press **A** key to move to next setting menu when not change the current setting.

6.19 Zero tracking range

Press **ENTER** key to enter into zero tracking range selection:

Press ▸T◂ or A key to select the range of zero tracking range from 0 to 5.
(The larger the number selected, the lager of the tracking range: 0 = 1/3d;1=2/3d;2=1d;3=4/3d;4=5/4d;5=2d)

Press **ENTER** key to confirm the choice and return to normal weighing mode; or press SAMPLE / Back **Back** key to return to last step

Press A key to move to next setting menu when not change the current setting.

7. Power Supply

7.1 AC/DC Power

Verify that the intended AC power source matches the AC/DC adapter rating. Connect the supplied AC/DC adapter to the power input receptacle at the back of the scale. Plug the AC/DC adapter into a properly grounded power outlet.

7.2 Battery Power

The scale can be equipped with dry cell or rechargeable battery. (Optional)
Dry cell: 4pcs 1.5V
Rechargeable battery: 4pcs 1.2V/1300mA/h

The scale can distinguish the battery type and display during power on procedure (Non-RC for dry cell or RC for rechargeable battery).

The rechargeable battery can be recharged when the scale is connected with the AC power.

When the dry cells have been equipped, the scale can detect the heat generated by the AC power, and provide protection for the dry cell.

The dry cells and rechargeable batteries can supply the scale to be used for approximately 12h when the backlight is set to be off.
Insert the battery into the battery case after checking the battery polarity.

※ Warning

Open the cover and check the battery type.
If the battery is not the rechargeable battery (this is : Mn, Alkaline),
Never connect the AC adaptor jack in the back panel

Dispose of the battery according to local laws and regulations.

8. Data Transmitting

8.1 Interfaces

The balance has been equipped with two RS232C interfaces and one USB interface.

RS232C-1: Used for remote display CD-300 specially

RS232C-2: Used for connection with PC or printer (three protocols for this interface: MWP, MW-II and EC-II (CAS 22byte)

USB: Used for connection with PC (the data format is the same with RS232C-2)

8.2 Communication settings (For RS232C-2)

Baud rate: 2400, 4800, 9600, 19200bps
Data Bit: 8
Parity Bit: None
Stop Bit: 1
Flow Control: None

8.3 Date format

Protocol 1

ST, GS, 41.070 g
ST, NT, 20.35ct

Protocol2

ST, GS, , 45.080g
ST, NT, , 6.870g

Protocol 3

2014/11/04
20:56:47 W: 53.075g
2014/11/04
20:57:33 w: 53.075g

8.4 Variables (For LP-50 and BP DT-4 Printer)

No.	Variables		bytes	Application	Specification
	LP-50	DT			
1	**NWA**	**V 0**	9	W/C/%	Net Weight (“.”)
2	**NWB**	**V1**	8	W/C/%	Net Weight
3	**TWA**	**V2**	9	W/C/%	Tare Weight(“.”)
4	**TWB**	**V3**	8	W/C/%	Tare Weight
5	**GWA**	**V4**	9	W/C/%	Gross Weight (“.”)
6	**GWB**	**V5**	8	W/C /%	Gross Weight
7	**QUA**	**V6**	7	C/%	Quantity or percent (“.”)
8	**QUB**	**V7**	6	C/%	Quantity or percent
9	**UWA**	**V8**	7	C	Unit weight (“.”)
10	**UWB**	**V9**	6	C	Unit weight
11	**UNT**	**V10**	3	W/C/%	Weight Unit
12	**UNP**	**V11**	3	C/%	Units: pcs and %

9. Error Messages

When the balance powered up or during the operation, the display may show some Error messages as below:

E1: Calibration data lost

E2: The initial zero has been out of it range when power on.

E3: No signal inputted

E4: The low limit has been set larger than the high limit.

The messages may also be shown if the pan is not installed correctly or the operation environment is not suitable.
Contact your dealer for assistance.

10. Data sheet

Capacity	300 × 0.05g	600 × 0.1g	1500 × 0.2g	3000 × 0.5g	6000 × 1g
Resolution	1/6,000	1/6,000	1/7,500	1/6,000	1/6,000
Tare range	Full capacity				
Zero range	≤±2% of full capacity				
Weighing Units	g, ct, (t, GSM and Bori, lb, GN, dwt, oz, ozt)				
Application Modes	Weighing, Counting , percentage (%) and Density				
Display	6 and half digits LCD with backlight				
Stabilization time	≤2 seconds				
Operating Temperature	5 to 40℃ / 41 to 104℉				
Humidity Range	≤90% relative humidity, non-condensing				
Power	AC/DC Adapter 12V/1000mA & Rechargeable battery or dry cell				
Interface	RS-232 and USB output				
Pan Size	Square 155*144mm/ Round ø128mm				
Scale Dimensions	272*160*80mm				

MEMO

XE SERIES

Micro weighing scale

CAS BLDG., **#1315**, **YANGJAE-DAERO**,
GANGDONG-GU, SEOUL, KOREA
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FAX_ 82 2 475 4668
www.globalcas.com

Specifications are subject to change for improvement without prior notice.

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