

Digital Counting Scale

HAIC-N Series

User's Manual

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BEFORE USING THE SCALE

Thank you for purchasing High Precision Electronic Counting Scale. In order to use the scale properly, please read this User Manual carefully before use. If you have any problem with scale, please contact your supplier.


INSTRUCTION FOR USE

- 1) Please keep the scale in a cool dry place. Do not store it at high temperature.
- 2) Do not allow any liquids to come into contact with the scale. If necessary wipe the scale with a dry soft cloth.
- 3) Avoid objects impacting with the scale. Do not drop loads onto the scale or subject the weighing pan to any strong shock loads.
- 4) The load placed on the weigh pan must not exceed the maximum weighing capacity of the scale.
- 5) If the scale is not going to be used for some time, please clean it and store it in a plastic bag in dry conditions. A desiccant sachet may be included to prevent any moisture build up.

PREPARING TO USE THE SCALE

1. Locate the scale on a firm level surface free from vibrations for accurate weight readings.
2. Adjust the four leveling feet (if fitted) to set the scale pan level using the spirit level bubble located at the front of the scale.
3. Avoid operating the scale in direct sunlight or drafts of any kind.
4. If possible avoid connecting the scale to ac power outlet sockets which are adjacent to other appliances to minimize the possibility of interference affecting the performance of the scale.
5. Remove any weight that might be on the weigh pan before the scale is switched on and avoid leaving weight on the pan for long periods of time
6. All goods weighed should be placed in the center of the weigh pan for accurate weighing. The overall dimensions of the goods being weighed should not exceed the dimension of the weigh pan.
7. Once the scale has been powered on, it will go through an LCD display test and it is ready for use when the display shows zero.
8. The scale requires 15~20 minutes warm up before operation to ensure best accuracy.

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9. Please note when the display shows ( **BAT** **LO**) , it's means the battery need to be charged.

CHAPTER I INTRODUCTION

1.1 FEATURES AND SPECIFICATION

Features:

- Internal resolution: 1/1,000,000
- LCD display (digit height 7mm x 16mm) with LED backlight
- Kilogram (kg), gram (g), weighing modes
- Application programs include: piece counting, piece checking alarm, accumulation, and Preset (99 sets)
- Auto calibration; Full range tare; Auto-zero tracking; Unit weight average function
- Low power indication and auto power off

Specifications:

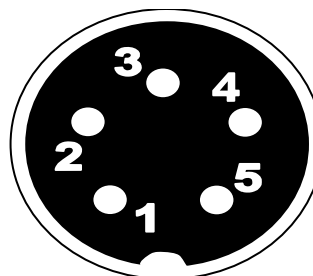
Load Cells	Minimum 120 ohm load cells Maximum 1200 ohm
	(Up to 4 load cells of 350 ohm)
Readability	Selectable, 0.00
Tare Function	Full
Units of measure	Kg, g, Lb

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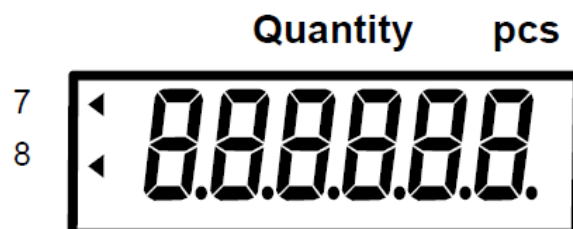
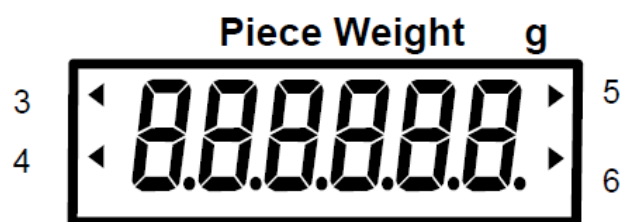
Power supply	Rechargeable battery or AC adaptor DC 9V
Connector	5 pin d socket

Loadcell connection:

Pin 1: +E Load cell excitation positive
Pin 2: -E Load cell excitation positive
Pin 3: +S Load cell excitation positive
Pin 4: -S Load cell excitation positive
Pin 5: GND Load cell cable shield



1.2 DISPLAY



- 1 [ZERO] : When displayed, the scale is at the centre of its zero band
- 2 [TARE]: Tare value, Weight of the container
- 3 [INSUFFICIENT UNIT WEIGHT] : The sample weight should be heavier then the minimum capacity of the scale(20d), otherwise the arrow pointing to the insufficient unit weight symbol will be on
- 4 [INSUFFICIENT SAMPLING] : The weight of a sample should be heavier than 1d (d=division), otherwise the arrow pointing to the insufficient sampling symbol will be on

- When the insufficient unit weight icon or insufficient sampling icon are indicated the scale is still operational but the count may contain errors

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- 5** [APW MODE] : When the scale is in APW mode, this arrow will on
- 6** [SMPL MODE] : When the scale is in SMPL mode, this arrow will on
- 7** [ACCUMULATION MODE] : When the scale is in accumulation mode, this arrow will on
- 8** [STABLE] : When the scale is stable, this arrow will on
- 9** [-----] **BAT** **LO** : When this symbol is on, it means the power of scale is low need to change the battery or plug-in the adaptor to recharge the battery. After plug-in the adaptor, the indicator will be off and the LED charge light is in red or orange color.

NOTE:

The sample weight must be at least 40d; Unit weight must be at least 1d

1.3 KEYBOARD FUNCTION

7	8	9	SMPL	PRESET CHECK
4	5	6	APW	PRESET APW
1	2	3	ZERO UNIT	<u>M +</u> MR
0	.	C	TARE	MC

C : During editing, clears the blinking entry

ZERO/UNIT : Zeros the display (Long press to UNIT Kg/g/Lb)

TARE : Tares the weight on the pan or accepts the keypad tare entries

SMPL : Inputs the indicated sample size and weight to calculate APW

APW : Inputs the indicated unit weight value entered via the numeric keypad

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M+/MR: Adds the indicated weight or piece count value into

accumulation memory

MC: Clears the memories of the accumulation

PRESET CHECK: To setup the Count Pre-set (Check-weighing) function
key

PRESET APW: Inputs the indicated value entered via the numeric
keypad as a Pre-set value

1.4 OPERATING THE SCALE

1.4.1 Power On

1.1) After switch on the scale, LCD Shows → **C 0 1** **v 1.05** **6000**

1.2) Auto count down: From **999999** **999999** **999999** ~ **000000** **000000** **000000**

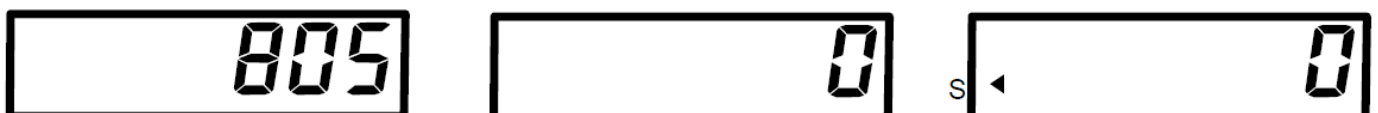
1.3) After return to zero and being stable, scale will enter into counting mode

Weighing:

2.1) Let the scale return to zero and stable

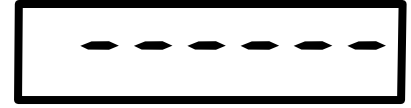
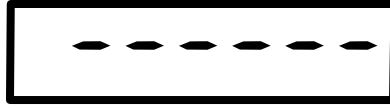
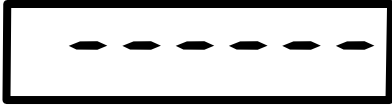


2.2) Place the object on weighing pan and wait the scale stable; to read the actual weight value of the object



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2.3) The max. weighing range of the scale is - The max. weighing range of the scale plus 9d, if the object on the pan is over then the max. weighing range, the display shows as ff. then the beeper sounds, please remove the object to be able to continue operate the scale

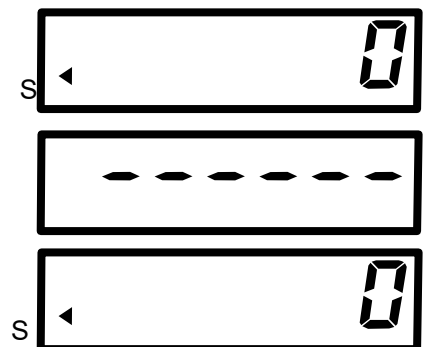
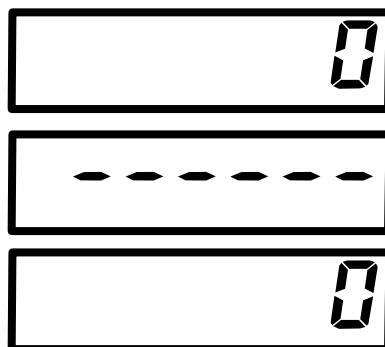
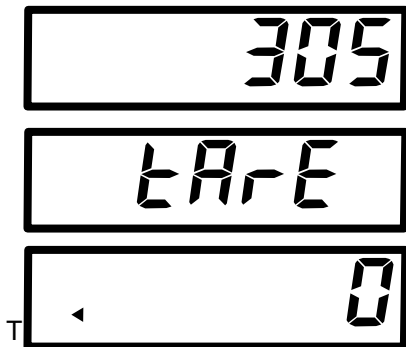


1.4.2 Zeroing the Display

When the weigh pan is empty (free of load) and the display is not showing zero (Slight variation happens in weight window), press the **ZERO** key to zero the scale., At zero, the zero indication is on

1.4.3 Manual Tare Operation

Place the container on the weighing pan (ex. 305g), then press **TARE** key then the tare indicator is on



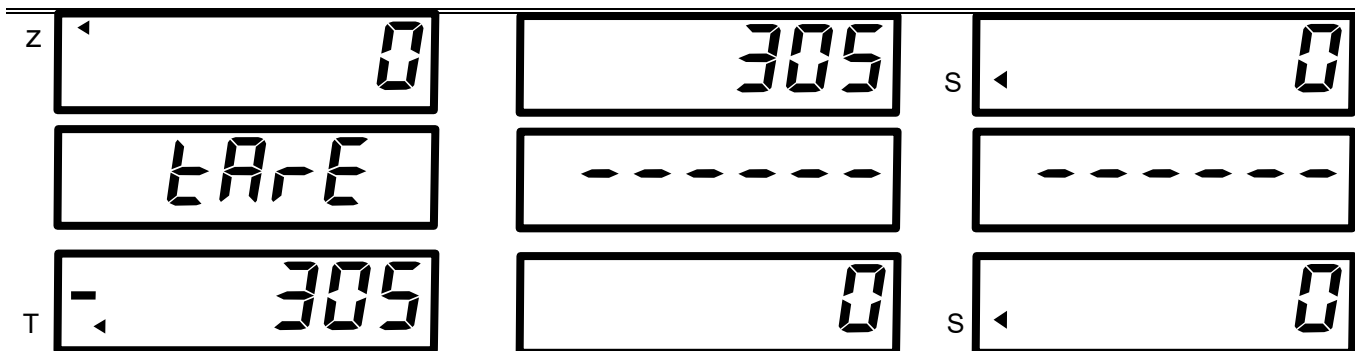
- To clear the tare value, press **TARE** key with the pan empty. The weight window will back to zero and the tare indicator is off

1.4.4 Pre-set Tare

1.4.4.1 With an empty pan:

Enter a numeric value (ex. 305g), then press **TARE** key. The pre-set tare value will be displayed as a negative value (no weight on the pan)

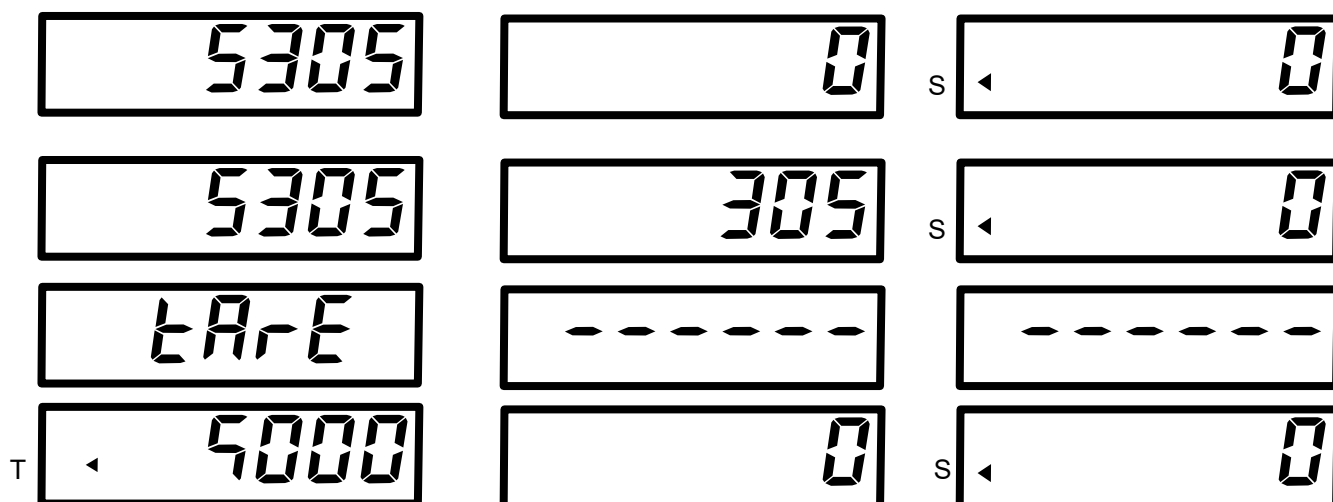
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- To clear the tare value, press **TARE** key with the pan empty. The weight window will back to zero and the tare indicator is off

1.4.4.2 With an existing weight on the pan (ex. 5305g):

Enter a numeric value (ex. 305g), then press **TARE** key. The net weight will be displayed. When the weight is removed from the pan, the negative weight displayed is the pre-set tare value



- To clear the tare value, press **TARE** key with the pan empty. The weight window will back to zero and the tare indicator is off

1.4.5 Entering a Know Piece Weight

1.4.5.1 Enter the value of a known piece weight via the numeric keypad (ex. 15g / pcs.), then press **APW** key (with a weight on the pan, the piece count is automatically calculated and displayed).

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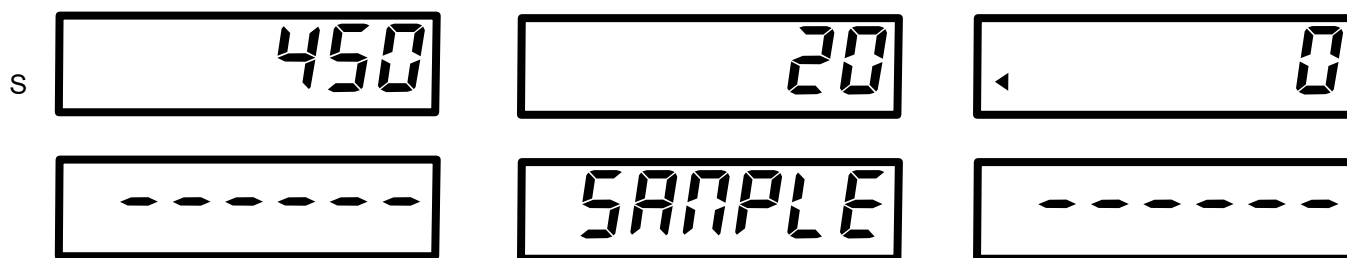
1.4.5.2 Place the sampling object to count the quantity



- To exit APW mode, press **Clear** key. The piece weight window will back to zero and the APW indicator is off

1.4.6 Sampling, Calculating Average Piece Weight (APW)

1.4.6.1 Place the desired sample onto the weighing pan. Enter the sample size (ex. 20) via the numeric keypad then press **SMPL** key



1.4.6.2 After scale becomes stable (SMPL indicator on)



1.4.6.3 Place again various same objects (the quantity should lesser than first time), the scale will auto-sampling (calculate the more accurate piece weight) then the scale becomes stable



Note: The scale has auto-sampling function, when the objects' weight is lesser than last time and the average weight is in the tolerance, the software will auto-count the average weight again, this function helps lessen the inaccuracy in counting the quantity, but if the auto-sampling function is disable, the scale will not auto-sampling

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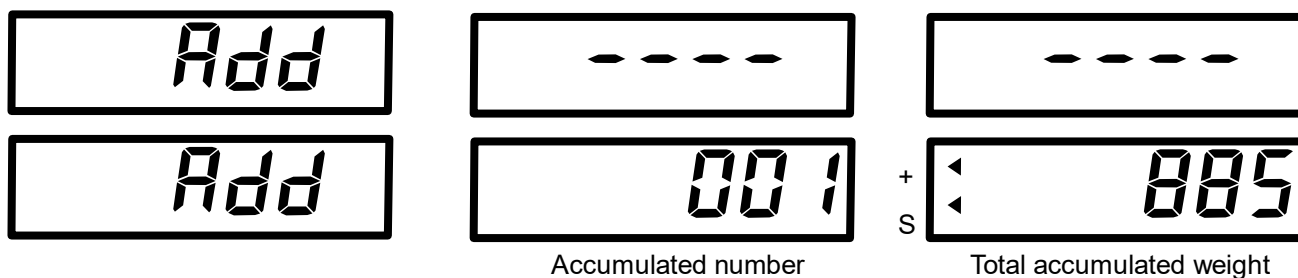
- To exit SMPL mode, press **Clear** key. The piece weight window will back to zero and the SMPL indicator is off

1.4.7 Accumulation: Weight

1.4.7.1 Place object on the weighing pan (ex. 885g)



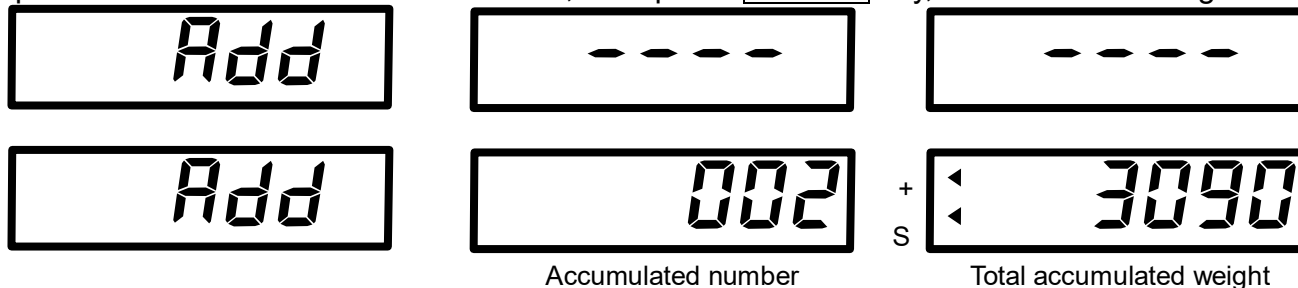
1.4.7.2 Wait until scale becomes stable, and then press **M+/MR** key, (Accumulation indicator is on)



1.4.7.3 Display will show above data around 3 seconds then back to weight accumulation mode



1.4.7.4 Remove the object, and wait the scale back to zero and stable, then place next object on the pan and wait the scale becomes stable, then press **M+/MR** key, to accumulate weight



1.4.7.5 Display will show above data around 3 seconds then back to weight accumulation mode



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1.4.7.6 Please repeat [1.4.7.4~1.4.7.5] if there are various objects to be accumulate

1.4.7.7 If the total accumulated weight is over the max. display weight (99999.9), the display will show as ff.



- Press **MC** key to clear the accumulated memories and the ACCUMULATION indicator is off

1.4.8 Recalling Accumulated Memory: Weight

1.4.8.1 In the accumulation mode; remove all objects from the weighing pan and wait the scale back to zero and stable, press **M+/MR** key, display shows as ff.(total memories)



Total accumulated numbers

Total accumulated weight

1.4.8.2 Press **PRESET CHECK** key to read the last memory, and display will shows as ff.



Accumulated number

Accumulated weight

1.4.8.3 Then press **PRESET CHECK** key again to read the next memory, and display will shows as ff.



Accumulated number

Accumulated weight

1.4.8.4 Repeating press **PRESET CHECK** key can read the last 9 memories, if there is no next data, the display will shows total accumulated weight [Please refer to 1.4.8.1]



Total accumulated numbers

Total accumulated weight

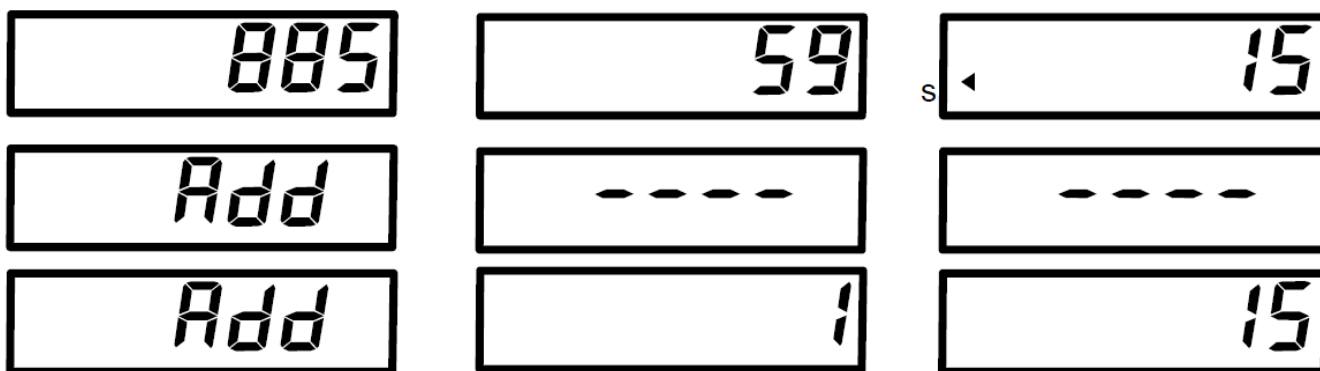
1.4.8.5 During operating the recalling memories, user can press **M+/MR** key to go back accumulation mode and the data is still stored in the memory and to accumulate the weight

- Press **MC** key to clear the accumulated memories and the ACCUMULATION indicator is off

1.4.9 Accumulation: Quantity

The scale should be in the APW or SMPL mode before the user can accumulate the quantity, please refer sec. 1.4.5 and 1.4.6

1.4.9.1 Place objects on the weighing pan [ex. 885g;15pcs], and wait the scale becomes stable, then press **M+/MR** key, display shows as ff.



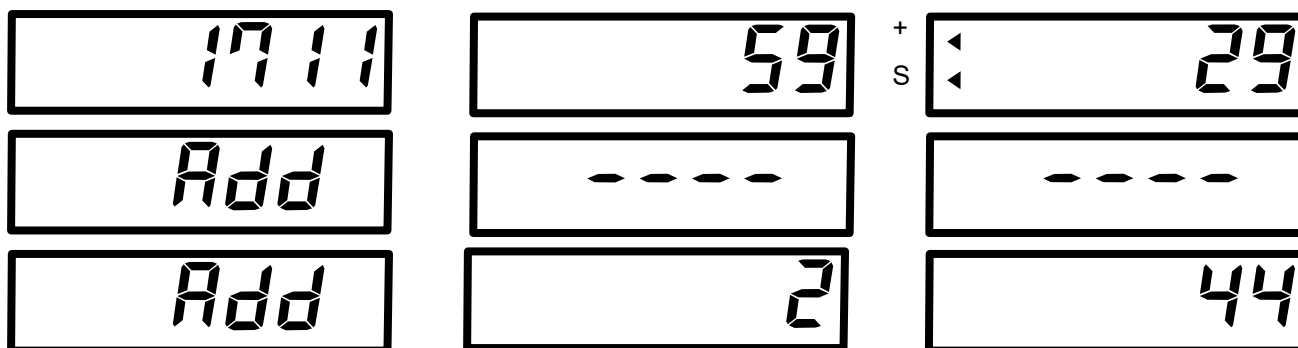
Accumulated number

Total accumulated quantity

1.4.9.2 Display will show above data around 3 seconds then back to quantity accumulation mode



1.4.9.3 Remove the object, and wait the scale back to zero and stable, then place next object on the pan and wait the scale becomes stable, then press **M+/MR** key, to accumulate quantity



Accumulated number

Total accumulated quantity

1.4.9.4 Display will show above data around 3 seconds then back to accumulation mode

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1.4.9.5 Please repeat [1.4.7.4~1.4.7.5] if there are various objects to be accumulate

1.4.9.6 If the total accumulated weight or quantity is over the max. display weight (99999.9) or the max. display quantity (999999), the display will show as ff.



● Press **MC** key to clear the accumulated memories and the accumulation indicator is off

1.4.10 Recalling Accumulated Memory: Quantity

1.4.10.1 In the accumulation mode; remove all objects from the weighing pan and wait the scale back to zero and stable, press **M+/MR** key, display shows as ff.(total memories)



Total accumulated numbers

Total accumulated weight

Total accumulated quantity

1.4.10.2 Press **PRESET CHECK** key to read the last memory, and display will shows as ff.



Accumulated numbers

Accumulated weight

Accumulated quantity

1.4.10.3 Then press **PRESET CHECK** key again to read the next memory, and display will shows as ff.

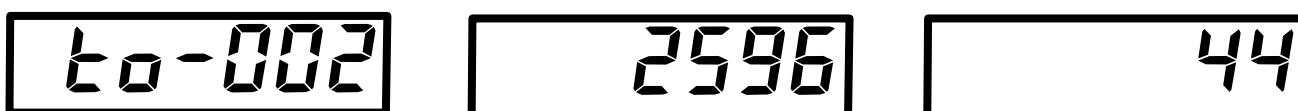


Accumulated numbers

Accumulated weight

Accumulated quantity

1.4.10.4 Repeating press **PRESET CHECK** key can read the last 9 memories, if there is no next data, the display will shows total accumulated weight and quantity [Please refer to 1.4.10.1]



Total accumulated numbers

Total accumulated weight

Total accumulated quantity

1.4.10.5 During operating the recalling memories, user can press **M+/MR** key to go back accumulation mode and the data is still stored in the memory and to accumulate the weight

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- Press **MC** key to clear the accumulated memories and the accumulation indicator is off

1.4.11 Storing Piece Weight into Memory

1.4.11.1 The scale should be in the APW or SMPL mode before the user can storing the piece weight into memory, please refer sec. 1.4.5 and 1.4.6

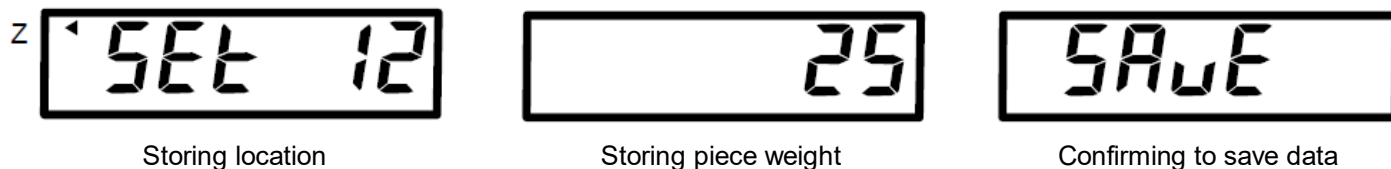


1.4.11.2 Enter the location of the preset piece weight will be stored via numeric key (ex. Location 12)

(There is 99 sets can be stored in the memory, from 01 ~ 99)



1.4.11.3 Press **PRESET APW** key to confirm the location, then display will shows as ff.



1.4.11.4 Press **PRESET APW** key to save the piece weight into memory, then back to APW or SMPL mode.

1.4.11.5 Press **Clear** key to cancel the save process, then back to APW or SMPL mode.

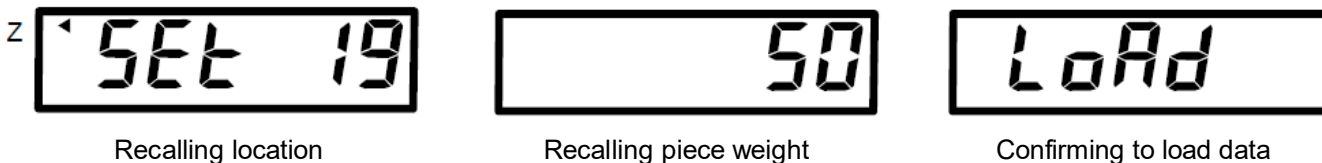
Note: If the location chosen has the previous data, the new data will over write the old one

1.4.12 Recalling the Preset Piece Weight

1.4.12.1 The scale should be in the normal weighing mode before the user can recall the piece weight from memory, enter the location via numeric key which will be recalled (ex. 19)



1.4.12.2 Then press **PRESET APW** key to recall the piece weight, display will shows as ff.



1.4.12.3 Press **PRESET APW** key to load the piece weight from memory, then back to APW or SMPL mode.

1.4.12.4 Press **Clear** key to cancel the load process, then back to normal weighing mode.

Note: If the location chosen has the previous data, the new data will over write the old one

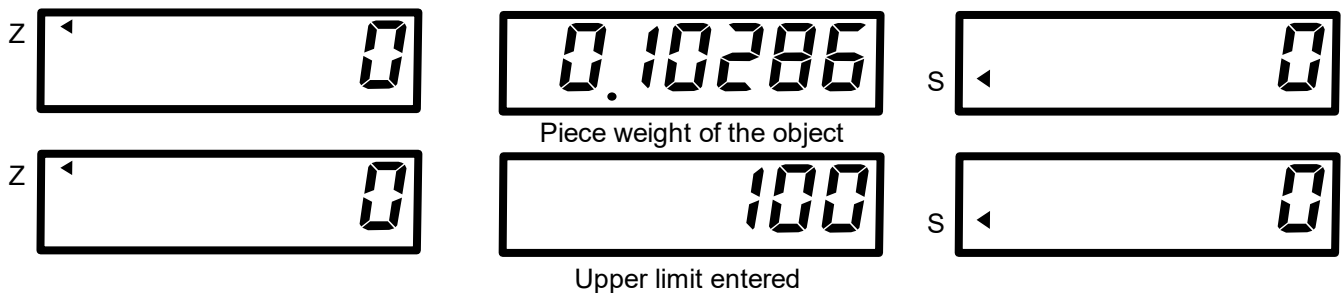
1.4.12.5 If the location chosen has no data, display will shows as ff. for 3 seconds then back to normal weighing mode



1.4.13 Preset Check : Quantity

It's available to pre-set the upper limit of quantity under APW or SMPL mode. If the counts are over the limit, the beeper makes warning sounds, and the weight window displays **-0.qty-** flashing

1.4.13.1 Upper limit of pre-setting quantity, in the APW or SMPL mode whether there is object on weighing pan or not, enter the upper limit intended



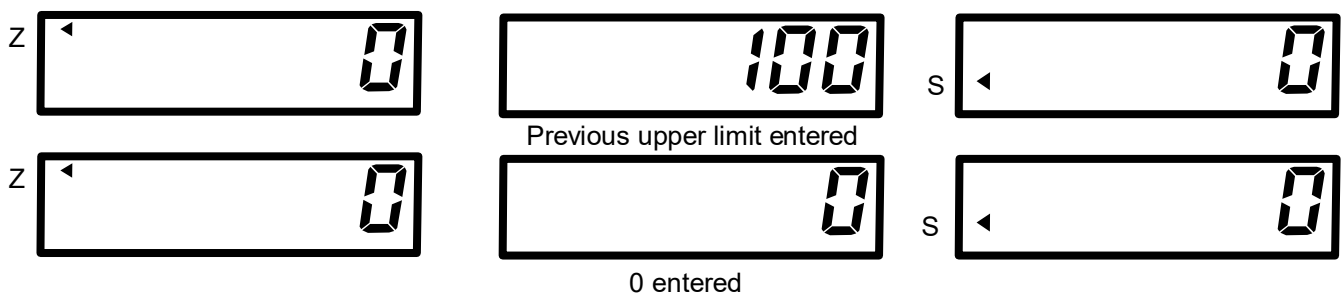
1.4.13.2 Press **PRESET CHECK** key to confirm, then the scale back to APW or SMPL mode



If intended to enter the new upper limit quantity, follow the steps mentioned above, the old one will be replaced by the new upper limit quantity

- To check the entered upper limit quantity, press **PRESET CHECK** key with out entering any numeric numbers, the display will shows the entered upper limit around 3 seconds, then back to APW or SMPL mode.

1.4.13.3 To clear the entered upper limit quantity in the APW or SMPL mode whether there is object on weighing pan or not, enter "0"



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1.4.13.3 Press **PRESET CHECK** key to confirm, then the scale back to APW or SMPL mode

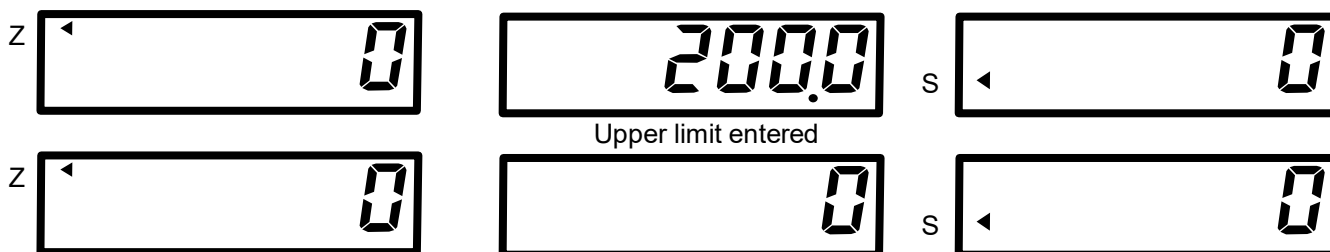


1.4.14 Preset Check : Weight

It's available to pre-set the upper limit of weight under normal weighing mode. If the weight is over the limit, the beeper makes warning sounds, and the quantity window displays **-o.wt-** flashing

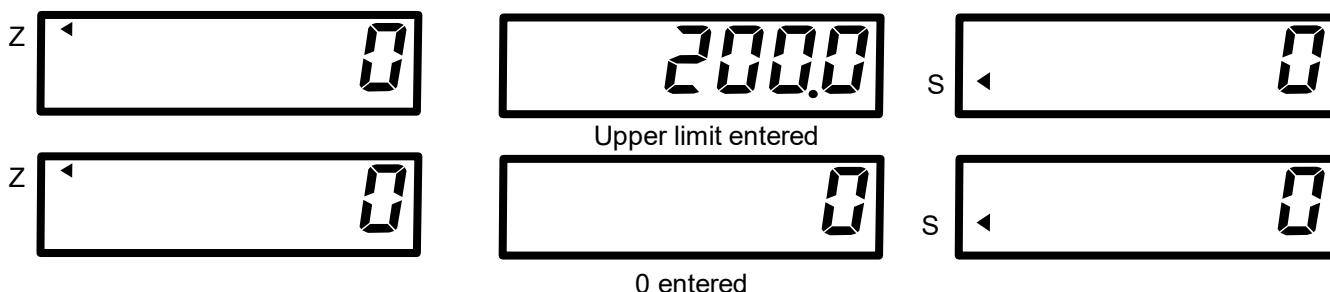
1.4.14.1 Upper limit of pre-setting weight, in normal weighing mode whether there is object on weighing pan or not, enter the upper limit intended

- The entered upper limit of pre-setting weight, the "UNIT" and "DECIMAL POINT" should be exact same with the weight window



- If intended to enter the new upper limit weight, follow the steps mentioned above, the old one will be replaced by the new upper limit weight
- To check the entered upper limit weight, press **PRESET CHECK** key with out entering any numeric numbers, the display will shows the entered upper limit around 3 seconds, then back to normal weighing mode.

1.4.14.2 To clear the entered upper limit weight in the normal weighing mode whether there is object on weighing pan or not, enter "0"



1.4.14.3 Press **PRESET CHECK** key to confirm, then the scale back to normal weighing mode

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1.5 POWER SUPPLY



POWER SELECTION

1. 6V4Ah rechargeable battery
2. 110V/220V AC adaptor DC 9V

POWER CONSUMPTION

1. Approximately DC 43mA (Scale) Usage time approximately 100 hours
2. Approximately DC 80mA (Scale + Display backlight) Usage time approximately 80 hours

LOW BATTERY WARNING

Please note when the ( **BAT** **LO**) symbol keeps on the display, the batteries should be charged. If the scale did not charged when the ( **BAT** **LO**) symbol flashed, after one hour(five minutes for using the backlight), the scale will shut off automatically.

2.1 C101_Calibration

A. Setting up division, decimal point, max. capacity and calibration

Press and hold “**M+/MR**” key, then turn on the scale, to enter division setting: In kg for the calibration unit, do not accept other units)

1. Division Setting: (unit is in kg)

LCD shows [?] [d] [SEt] then press “**ZERO**” key to select 1、2、5、10, and then press “**M+/MR**” key to confirm, and enter the decimal point setting.

Ex. When display shows [1] [d] [SEt], Press “**M+/MR**” key, the division set as 1, then enter the decimal point setting.

2. Decimal point setting:

LCD shows [?] [P] [SEt] then press “**ZERO**” key to select 0、0.0、0.00、0.000、0.0000, 0.00000, and then press “**M+/MR**” key to confirm, and enter the maximum capacity setting. Ex. When display shows [0.0000] [P] [SEt], Press “**M+/MR**” key, the division set as 0.0000, then enter the maximum capacity setting.

3. Maximum capacity setting:

LCD shows [03.0000] [FULL] [SEt] According to the decimal point set, decimal point position has been fixed. Direct press [0 - 9] key enter the correct Numbers (shift fill 0), and then press “**M+/MR**” key to confirm, and enter the Zero point calibration.

Ex. LCD shows [03.0000] [FULL] [SEt], Press “**M+/MR**” key, the biggest weighing is set to 3 kg, then enter the Zero point calibration.

4. Zero point calibration:

LCD shows [CAL 0] [0] [1234] (The sensor zero code)

Do not put any objects on the pan when display shows this, then scale will move to next calibration setting.

5. Second point calibration: (unit is in kg)

LCD shows [00.0000] [0] [1234] the decimal point was set as 4 digits. (this depends on what user sets in the last moves). Directly placed weight on the scale and press [0 - 9] enter the required number and weight weight values are equal, when stability symbols show, then press

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“M+/MR” key to confirm, scale will move into the weighing mode automatically after calibration. Ex. LCD shows [01.0000] [FULL] [SET] , Press “M+/MR” key, the weight value is set to 1 kg, End of the calibration, 1 kg weight bar display.

APPENDIX : LCD Word Table

0	1	2	3	4
5	6	7	8	9
A	B	C	D	E
F	G	H	I	J
K	L	M	N	O
P	Q	R	S	T
U	V	W	X	Y

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Z	?/Others	-		
