HGM SERIES
(UPGRADE VERSION)

ELECTRONIC WEIGHING SCALE

OPERATION MANUAL

PLEASE READ THIS MANUAL VERY CAREFULLY BEFORE
ATTEMPT TO OPERATE THE SCALE

JANUARY 2004 REV 1

Specifications subject to change without prior notice

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CAUTIONS

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1. This unit is legal for trade only when it is sealed (and/or stamped) and bearing a serial number. Do not attempt to break the seal (or stamp) affixed to this scale or remove the serial number. Contact your dealer for more information and after sales service.

2. For most accurate weighing result, do not use this scale in where or when the environment condition falls beyond as those listed on **SPECIFICATIONS**.

3. Do not attempt to open this unit or conduct any trouble shootings other than those listed on **TROUBLE SHOOTING**.

4. Do not use this scale for chemical substances or in any environment that contains chemical vapor.

5. Precision measuring instrument, handle with care.

6. Do not attempt to open scale.

1. INSTALLATION

1.1 Check and make sure that the following accessories are included:
   Operation Manual x 1
   Scale x 1
   Plastic platter x 1
   Power adaptor x 1
   Dust Cover x 1
Contact your dealer if any item is missing.

1.2 Place the plastic platter on top of the scale gently and make sure it is inserted properly.

1.3 Power on the scale
   a. Before charging the scale or power on with the adaptor supplied. Please make sure the input voltage listed on the back of the adaptor matches with the local voltage. If not, do not use it and contact your dealer immediately.
   b. Before first time use, charge the scale for at least 8 hours to ensure the best performance.
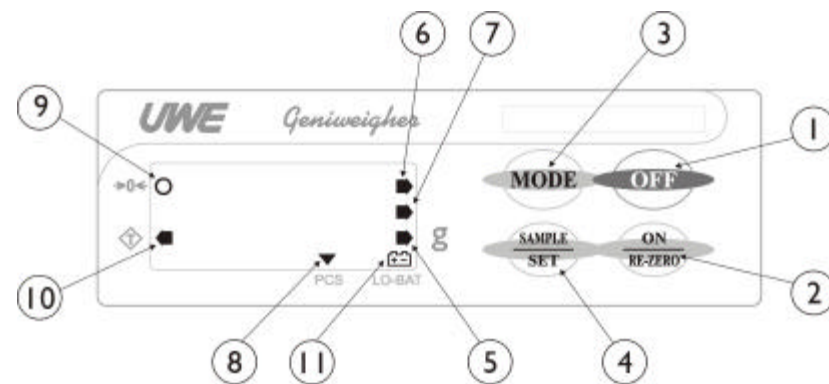
2. SPECIFICATIONS

Model No.	Capacity (Max)	Readability (e)	Accuracy
HGM-2000	2kg/4.4lb	0.1g/0.0002lb	1/20000
HGM-4000	4kg/8.8lb	0.2g/0.0005lb	1/20000
HGM-10K	10kg/22lb	0.5g/0.001lb	1/20000
HGM-20K	20kg/44lb	1g/0.002lb	1/20000
Tare Range	Full Tare Range		
Power-on Zero Range	¡10% Max		
Zero Range	¡2% Max		
Power Source	By Built-in Rechargeable Battery or AD/DC Power Adaptor		
Operating Environment	0°~40°C (32°~104°F), Non-condensed. R.H.¡ 85%		

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NOTE:

Display resolutions of avoirdupois weight units (lb/lb

and lb/oz) are also available in high resolution mode

3. KEYBOARD LAYOUT AND DESCRIPTION

1. OFF KEY

Press this key to turn scale off

2. ON/RE-ZERO KEY

Press this key to turn scale on or set weight to zero

3. MODE KEY

Press this key to shift among different weight units and/or turn backlight on/off

4. SAMPLE SET KEY

Press this key to select/confirm sample size and trigger the counting mode

5. METRIC UNIT INDICATOR

This indicator appears to indicate the weighing unit currently engaged is in metric unit (kg or g)

6. AVOIRDUPOIS UNIT INDICATOR

This indicator appears to indicate the weight unit currently engaged is in avoirdupois (pound)

7. AVOIRDUPOIS UNIT INDICATOR

This indicator appears to indicate the weight unit currently engaged is in avoirdupois (pound/ounce, e.g. 2.15.1 means 2 lb and 15.1 ounce)

8. COUNTING INDICATOR

This indicator appears to indicate the scale is in counting mode and the value shown in the display is in piece

9. ZERO INDICATOR

This indicator appears to indicate a zero weight status

10. TARE INDICATOR

This indicator appears to indicate the tare function is in operation and weight displayed is net weight

11. LO-BAT INDICATOR

When this indicator appears, recharge the scale immediately. Failure to do so may cause unrecoverable damage to the rechargeable battery inside scale

4. INITIAL SETUP

4.1 PLACING THE SCALE

In order to obtain an accurate weighing result, the scale must be placed on a strong and level surface.

If required, adjust the adjustable feet underneath scale to obtain a level position. Refer to the bubble indicator for leveling condition.

4.2 INTERNAL SETTING

4.2.1 Display Segment Check

User can enter this function to check to see if the display and backlight (if purchased) are functioning properly.

a. Scale is off

b. Press and hold **SAMPLE SET**, then press **ON/RE-ZERO**

c. Scale displays **F.1**

d. Press **SAMPLE SET** once

e. Scale displays **F.2**

f. Press **MODE** and all segments will light up to allow user to check the condition of display

g. Press **SAMPLE SET** for next function setup or **ON/RE-ZERO** to restart the scale

4.2.2 Select Auto Power Off Setting

The scale is equipped with **Auto Power Off Function**. The scale will power off automatically if it is not used for 4 minutes. Follow the below steps to enable/disable **Auto Power Off Function.**

a. Scale is off

b. Press and hold **SAMPLE SET**, then press **ON/RE-ZERO**

c. Scale displays **F.1**

d. Press **SAMPLE SET** three times

e. Scale displays **F.4**

f. Press **MODE** to shift between **0._OFF** and **4._OFF**

   -To enable **Auto Power Off Function**, press **SAMPLE SET** when **4._OFF** appears

   -To disable **Auto Power Off Function**, press **SAMPLE SET** when **0._OFF** appears

g. Press **SAMPLE SET** for next function setup or **ON/RE-ZERO** to restart the scale

4.2.3 Select RS-232 Baud Rate & Protocol

This scale is equipped with 3 RS232C output baud rate and 2 transmission protocol settings for user to select.

a. Scale is off

b. Press and hold **SAMPLE SET**, then press **ON/RE-ZERO**

c. Scale displays **F.1**

c. Press **SAMPLE SET** four times

d. Scale displays **F.5**

e. Press **MODE** to select baud rate of 4800, 9600 and 19200

f. Press and hold **MODE** for 2 seconds to enter transmission protocol setup

g. Press **MODE** to select protocol of N81 or E71

h. When the preferred transmission protocol shows on display, press **ON/RE-ZERO** to confirm and restart the scale or **SAMPLE SET** for next function setup

NOTE:

The default data output format of the scale is

Baud Rate = 9600

Data Bit = 8

Stop Bit = 1

Parity = None

4.2.4 Select Data Transmission Mode

This scale provides 2 types of transmission mode depending on the requirement and environment.

a. Scale is off

b. Press and hold **SAMPLE SET**, then press **ON/RE-ZERO**

c. Scale displays **F.1**

d. Press **SAMPLE SET** five times

e. Scale displays **F.7**

f. Press **MODE** to select transmission mode ¡§trAn1¡¨ o ¡§trAn2

g. When the preferred data transmission mode shows on display, press **ON/RE-ZERO** to confirm and restart the scale or **SAMPLE SET** for next function setup

NOTE:

¡**trAn1**¡¨ is to transmit data continuously after reading is stabled

¡**trAn2**¡¨ is to transmit single data only after reading is stabled. However, scale will not send any data if weight detected is less than the minimum load.

4.2.5 Select Auto Tare Function

This scale is equipped with auto tare function which tares off the initial weight automatically when this function is engaged. The tare weight is automatically cleared when everything is removed from platter.

a. Scale is off

b. Press and hold **SAMPLE SET**, then press **ON/RE-ZERO**

c. Scale displays **F.1**

d. Press **SAMPLE SET** six times

e. Scale displays **F.9**

f. Press **MODE** to select between ¡Tr_on¡¨ or TroFF¡

   -To enable **Auto Tare Function**, press **SAMPLE SET** when
   Tr_on appears

   -To disable **Auto Tare Function**, press **SAMPLE SET**
   when **TroFF** appears

g. Press **ON/RE-ZERO** to confirm and restart the scale
   or **SAMPLE SET** for next function setup

5. INSTRUCTION FOR USE

5.1 BEFORE WEIGHING

Make sure that:

a. The plastic platter is placed correctly on top of
   load receptor and the stainless steel platter cover
   (if purchased) is placed on the plastic platter

b. The scale is placed on a level and strong surface

c. The scale is turned on

d. The **ZERO INDICATOR** is on. If not, press **ON/RE-ZERO**
   to set display to zero

5.2 WEIGHING

a. Always place an object onto the platter gently.
   Excessive force applied to platter may cause damages
   to sensor inside scale

b. The weight of the object would be displayed
   automatically

c. It is a good practice to remove all loads from platter
   after weighing. It would prolong the lifetime of
   scale

5.3 SELECT WEIGHT UNIT

Press **MODE** to shift between metric or avoirdupois weight units. The weight unit used before power off would be employed when the scale is turned on again.

NOTE:

To comply with the law of certain countries and certain approval requirements, the avoirdupois weight units may be disabled. Contact your dealer for more information.

5.4 SET BACKLIGHT

Follow the below steps to turn on and off backlight (if purchased).

a. Scale is on

b. Press and hold **ON/RE-ZERO** until backlight is activated; or press **MODE** to shift between metric and avoirdupois weight to turn on and off backlight

5.5 SMART POWER SAVING FUNCTION

The backlight function will turn off when constant/zero weight is detected and remains stable for about 20/10 seconds.

Backlight will be automatically turned on again when a new weight is detected.

5.6 SET DISPLAYED VALUE TO ZERO WHEN UNLOADED

By pressing **ON/RE-ZERO,** a positive or negative weight displayed will be set to zero and **ZERO INDICATOR** appears.

Refer to **SPECIFICATIONS** for maximum zero range.

5.7 TARE OFF THE WEIGHT OF A CONTAINER

When a container is used, follow the below steps to manually tare off the weight of container and get the net weight.

a. Remove all loads away from platter

b. Make sure that the **ZERO INDICATOR** is on

c. Place the container on the platter

d. Press **ON/RE-ZERO**

After **ON/RE-ZERO** is pressed, the **TARE INDICATOR** would appear.

Refer to **5.2** for weighing procedures. Weight displayed under is the net weight of the subject matter. Refer to **SPECIFICATIONS** for maximum tare range.

5.8 CLEAR THE TARE FUNCTION

a. Remove all loads from platter

b. The tare effect will be cancelled:

   -Automatically if automatic tare function is employed, or

   -By pressing **ON/RE-ZERO**

c. After **ON/RE-ZERO** is pressed, the **TARE INDICATOR** would disappear

5.9 COUNTING FUNCTION

This scale equipped with simple counting function, with the convenience in just a press away.

5.9.1 Sampling

Sampling function can be activated at anytime regardless the weight unit that scale is currently engaging.

a. Remove everything off from the platter and press **SAMPLE SET**, display will show ¡**S=20**¡

b. Press **SAMPLE SET** again to select for more preset sample counts (20, 50, 100, 200 PCS) until the desire quantity is reached. The sample count selected will remain on display for 6 seconds allowing user to load the corresponding quantities on platter in order for the scale to calculate the unit piece weight

NOTE:

If no weight is placed on the platter during sampling, scale will return to normal operation after 6 seconds

c. When corresponding quantity is placed on the platter, press **SAMPLE SET** to execute the average function. Scale will automatically calculate the unit piece weight and engage counting function. The value shown in the display is in PCS and in indicator will point at PCS sign on the overlay

d. The average unit piece weight is stored to cache memory in the scale and will be erased upon a new input has been executed or scale is turned off

e. Place any quantities on the scale, it will base on the unit piece weight stored in the memory to calculate and display the number of items place on the platter

f. To count a different subject, remove everything from platter and repeat the above steps from **a** to **d**

5.10 RECHARGE THE SCALE

The scale is equipped with a built-in rechargeable battery. When the **LO-BAT INDICATOR** appears, recharge the scale immediately. Failure to do so may cause unrecoverable damage to the rechargeable battery.

NOTE:

The charging indicator is located on the left side of
scale and it will only light up when charging.
Red color: Recharging battery
Green color: Charging completed

6. TROUBLE SHOOTING

Syndrome **Scale cannot be turned on**
Check: Is the scale charged?
Action: Recharge the scale for at least 8 hours
              before first time use or plug in the power
              adaptor before power on the scale.
Check   Is the power adaptor inserted properly into
              both the electricity outlet and the DC inlet
              of scale.
Action: Secure both ends of the power adaptor and
              try again.

Syndrome **Scale turned off automatically**
Check   Is **Auto Power Off Function** employed?
Action   Refer to **4.2.2** to disable **Auto Power Off
              Function**.
Check   Is the **LO-BAT INDICATOR** on?
Action   Apply the power adaptor.

Syndrome **Rated capacity cannot be reached**
Check   Is the **TARE INDICATOR** on?
Action: Turn the scale off. Remove all loads from
              platter and turn on again.

Check	Is there anything obstructing the platter?
Action	Remove all obstacles.

Syndrome	**Weighing result is not accurate**
Check	Is the scale placed in a level condition?
Action	Adjust the adjustable feet to a level condition.
Check	Is the scale affected by airflow, vibration or RFI?
Action:	Place the scale away from all disturbances.
Check	Is the scale calibrated correctly?
Action	Contact your dealer.
Check	Is the correct weight unit employed?
Action	Refer to **5.3** for weight unit setting and usage.

Syndrome	**Display shows 00000 after counting down**
Check	Is the load applied to platter excess the rated capacity of scale?
Action	Remove all loads from platter and try again.

7. DAILY CARE AND MAINTENANCE

7.1 Clean the scale with a soft and damp cloth. If necessary, apply a mild detergent.

7.2 Do not use any harsh, abrasive material, acetone, volatile solvent, thinner or alcohol for cleaning.

7.3 Verify the accuracy of scale periodically. Re-calibrate the scale if necessary.

NOTE: In some countries, calibration requires authorized/qualified agent. Contact your dealer for more information.

7.4 It is a good practice to apply the dust cover when operating the scale.

7.5 The scale must be placed horizontally during transportation or long time storage.

7.6 Remove platter from scale before transportation or long time storage.

7.7 Store scale in a dry and clean place.