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UFM SERIES
ELECTRONIC WEIGHING SCALE

OPERATION MANUAL

PLEASE READ THIS MANUAL VERY CAREFULLY BEFORE ATTEMPTING TO OPERATE THIS SCALE

March 2004

Specifications subject to change without prior notice

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1. INSTALLATION

Because of metrological legislation, the setting of some metrological parameters only able to be accessed by authorized personnel. Do not attempt to change any of the built-in parameters. Contact your dealer for installation and technical assistance.

CAUTION:

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.

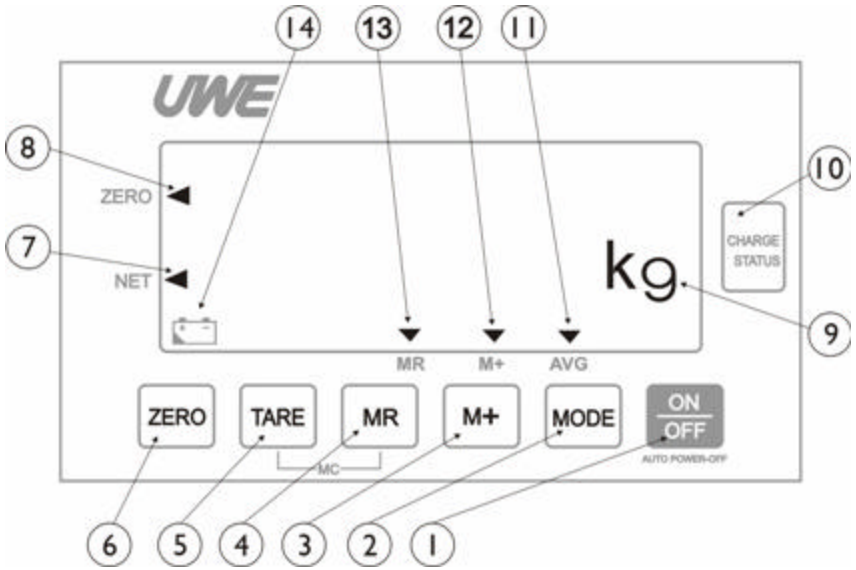
For the most accurate weighing results, do not use the scale when the environmental conditions fall outside those listed in **SPECIFICATIONS**.

Do not attempt to open this unit or conduct any trouble shooting other than those listed in **TROUBLE SHOOTING**.

2. SPECIFICATION

Model No.	Capacity (Max)	Readability (e)
UFM-B30H	30kg/60lb	0.005kg/0.01lb
UFM-B60H	60kg/120lb	0.01kg/0.02lb
UFM-B120H	120kg/300lb	0.02kg/0.05lb
UFM-F30H	30kg/60lb	0.005kg/0.01lb
UFM-F60H	60kg/120lb	0.01kg/0.02lb
UFM-F120H	120kg/300lb	0.02kg/0.05lb
UFM-F300H	300kg/600lb	0.05kg/0.1lb
UFM-L60H	60kg/120lb	0.01kg/0.02lb
UFM-L120H	120kg/300lb	0.02kg/0.05lb
UFM-L300H	300kg/600lb	0.05kg/0.1lb
UFM-L600H	600kg/1200lb	0.1kg/0.2lb
UFM-B30	30kg/60lb	0.01kg/0.02lb
UFM-B60	60kg/150lb	0.02kg/0.05lb
UFM-B150	150kg/300lb	0.05kg/0.1lb
UFM-F30	30kg/60lb	0.01kg/0.02lb
UFM-F60	60kg/150lb	0.02kg/0.05lb
UFM-F150	150kg/300lb	0.05kg/0.1lb
UFM-F300	300kg/600lb	0.1kg/0.2lb
UFM-L60	60kg/150lb	0.02kg/0.05lb
UFM-L150	150kg/300lb	0.05kg/0.1lb
UFM-L300	300kg/600lb	0.1kg/0.2lb
UFM-L600	600kg/1500lb	0.2kg/0.5lb
Tare Range	Full Tare Range (Subtractive)	
Power-on Zero Range	±10% Max.	
Zero Range	±2% Max.	
Min. Load	20e	
Power Voltage Requirements	By external power adaptor or rechargeable battery	
Operation Environment	0^{o}~40^{o}C Non-condensed. R.H.?85%	

3. KEYBOARD LAYOUT AND DESCRIPTION



1. ON/OFF KEY

Press this key to turn SCALE on and off.

2. MODE KEY

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

3. M+ KEY

Press this key to accumulate current weight to memory.

4. MR KEY

Press this key to recall the total accumulated weight from memory.

5. TARE KEY

Press this key to tare off the weight of a container.

6. ZERO KEY

Press this key to set weight displayed to zero.

7. NET INDICATOR

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

8. ZERO INDICATOR

This indicator appears to indicate zero weight status.

9. WEIGHT UNIT INDICATOR

"kg" indicates the metric unit is being displayed.

"lb" indicates the avoirdupois unit is being displayed.

10. IN-CHARGE INDICATOR

Red: Recharging in process

Green: Charging completed

11. AVERAGE INDICATOR

This indicator flashes to indicate the digital motion filtering function is being employed.

12. M+ INDICATOR

This indicator illuminates to indicate the memory contains stored data.

13. MR INDICATOR

This indicator illuminates to indicate the value shown is the total accumulated weight stored.

14. LO-BAT INDICATOR

This indicator appears when the input voltage is below the lowest input limit. Check the power supplied to the indicator.

4. INITIAL SETUP

4.1 PLACING THE SCALE

In order to obtain an accurate weighing result, the complete weighing instrument, (***hereinafter referred as scale***) must be placed on a strong and level surface.

4.2 INTERNAL SETTING

4.2.1 Display Segment Check

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

a. Scale is off
b. Press and hold **TARE**, then press **ON/OFF**
c. Scale displays **F.1**
d. Press **TARE** until **F.2** is displayed
e. Press **MODE** and all segments will light up to allow user to check the condition of display
f. Press any key to exit and **TARE** for next function setup or **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 **TARE**, then press **ON/OFF**
c. Scale displays **F.1**
d. Press **TARE** until **F.4** is displayed
e. Press **MODE** to shift between **0._OFF** or **4._OFF**
   -To enable **Auto Power Off Function**, press **TARE** when **4._OFF** appears
   -To disable **Auto Power Off Function**, press **TARE** when **0._OFF** appears
f. Press **ZERO** to restart the scale or **TARE** for next function setup

4.2.3 Select RS-232 (Optional) Baud Rate & Protocol

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

a. Scale is off
b. Press and hold **TARE**, then press **ON/OFF**
c. Scale displays **F.1**
d. Press **TARE** until **F.5** is displayed
e. Press **MODE** to enter
f. Press **M+** to select baud rate of 4800, 9600 or 19200
g. Press **MODE** again to enter transmission protocol setup
h. Press **M+** to select protocol of P=N81 or P=E71
i. When the preferred transmission protocol shows on display, press **TARE** to confirm and proceed to the next selection or **ZERO** to restart the scale.

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 Digital Motion Filtering Function

This scale equipped with animal weighing function that enables user to select when the scale is using for weighing livestock.

a. Scale is off
b. Press and hold **TARE**, then press **ON/OFF**
c. Scale displays **F.1**
d. Press **TARE** until **F.6** is displayed
e. Press **MODE** to shift between Filt.0 or Filt.1
   - To enable **Animal Weighing Function**, press **TARE** when display shows **Filt.1**
   - To disable **Animal Weighing Function**, press **TARE** when display shows **Filt.0**
f. After **TARE** is pressed, scale display **F.7**

g. Press **MODE** to enter next set up or **ZERO** to restart the scale

4.2.5 Select Serial Output Mode

There are two selectable transmission formats to choose according to end user preference. For which FORMAT 1 is continuous transmission when weight is stabilized and FORMAT 2 sends data in table form when press **M+**.

a. Scale is off
b. Press and hold **TARE**, then press **ON/OFF**
c. Scale displays **F.1**
d. Press **TARE** until **F.7** is displayed
e. Press **MODE** to shift between Ser.0 or Ser.1
   - For continuous sending, press **TARE** when display shows **Ser. 1**
   - For manual sending, press **TARE** when display shows **Ser. 2**
f. After **TARE** is pressed, scale display **F.8**
g. Press **MODE** to enter next set up or **ZERO** to restart the scale

4.2.6. Select Printer Output (Optional) Mode

There are two selectable printout formats to choose according to end user preference. FORMAT 1 will print in table form when press **M+** and FORMAT 2 will only print when stable weight is detected and when **M+** is pressed.

a. Scale is off
b. Press and hold **TARE**, then press **ON/OFF**
c. Scale displays **F.1**
d. Press **TARE** until **F.8** is displayed
e. Press **MODE** to shift between Prnt.0 or Prnt.1
   - For detail printout result, press **TARE** when display shows **Prnt.1**
   - For simple printout result, press **TARE** when display shows **Prnt.2**
f. After **TARE** is pressed, scale display **F.9**
g. Press **MODE** to enter next set up or **ZERO** to restart the scale

4.2.7 Select Auto Tare Function (If equipped)

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 **TARE**, then press **ON/OFF**
c. Scale displays **F.1**
d. Press **TARE** until **F.9** is displayed
f. Press **MODE** to select between Tr_on or TroFF

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

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

g. After **TARE** is pressed, scale display **F.1**

h. Press **MODE** to enter next set up or **ZERO** to restart the scale

5. INSTRUCTION FOR USE

5.1 BEFORE WEIGHING

Make sure that:

a. The load cell signal and power to the indicator are connected properly

b. Place the scale on a level and strong surface

c. The scale is turned on

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

5.2 WEIGHING

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

b. The weight of the object is displayed on the scale automatically

c. It is a good practice to remove all loads from scale after weighing. It will prolong the life of the weight sensor

5.3 SELECT WEIGHT UNIT

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

NOTE:

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

5.4 TURN BACKLIGHT (OPTIONAL) ON/OFF

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

a. Scale is on

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

Even though the backlight function is employed, backlight will be automatically turned off when a stable weight remains for 25 seconds or a zero weight is detected and remains stable for 10 seconds

Backlight will be automatically turned on again when a new weight is detected or when any key is pressed.

5.5 SET DISPLAYED VALUE TO ZERO WHEN UNLOADED

By pressing **ZERO,** weight displayed will be set to zero and **ZERO INDICATOR** appears.

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

NOTE:

- When scale is set at OIML and application is legal for trade. User only needs to press **ZERO** once when setting the value to zero. The re-zero function will take place when reading is stable
- When scale is set at Normal and application is not legal for trade. User can set the value to zero at anytime when pressing **ZERO**

5.6 TARE OFF THE WEIGHT OF A CONTAINER

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

a. Remove all loads from the platter

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

c. Place the container on the platter

d. Press **TARE**

After **TARE** is pressed, the **NET INDICATOR** will appear.

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

NOTE:

- When scale is set at OIML and application is legal for trade. User only needs to press **TARE** once when taring off a weight. The tare function will take place when the reading is stable
- When scale is set at Normal and application is not legal for trade. User can tare off the weight anytime when pressing **TARE**

5.7 CLEAR THE TARE FUNCTION

a. Remove all loads from the platter

b. The tare effect will be cancelled:
   -Automatically if automatic tare function is employed, or
   -By pressing **TARE**

c. After **TARE** is pressed, the **NET INDICATOR** will disappear

5.8 MEMORY FUNCTION

5.8.1 To Accumulate a Transaction To Memory

a. Refer to **5.2** for weighing procedures

b. Press **M+** to save and accumulate data of current transaction to memory.

NOTE:

Unstable weight will not be accumulated to memory. After **M+** is pressed, weight accumulation function will take place automatically when reading is stable

c. Scale displays "**P. X**" and **M+ INDICATOR** appears to indicate that memory contains stored data

NOTE: "**P. X**" means the total number of transactions accumulated to memory.

d. Scale returns to normal display status after 2 seconds

e. Repeat **a** to **c** for subsequent transactions

5.8.2 Memory Recall

Press **MR** to recall total accumulated weight from memory. After **MR** is pressed, scale displays **P. X** (**X** Means the number of transactions accumulated) follow by a value. The value is the total accumulated weight stored in memory.

When the total accumulated weight is being displayed, **MR INDICATOR** appears to indicate that the value being displayed is the total accumulated weight. Scale will return to normal display status after 3 seconds.

5.8.3 Memory Clear

All transactions stored in memory are cleared by pressing **MR** and **TARE** at the same time.

CAUTION: All data stored will be erased when the scale is turned/powered off.

5.9 RECHARGE 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.
Charging is completed when the color of the **IN-CHARGE INDICATOR** turns green.

6. TROUBLE SHOOTING

Symptom	**Scale cannot be turned on**
Check:	Is the scale powered properly?
Action:	Check power supply to scale.

Symptom	**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	Check power supply.

Symptom	**Rated capacity cannot be reached**
Check	Is the **NET INDICATOR** on?
Action:	Turn the scale off. Remove all loads and turn on again.
Check	Is there anything obstructing the scale?
Action	Remove all obstacles.

Symptom	**Blank display with only "kg" or "lb"**
Check	Is the load applied to scale excess the rated capacity?
Action	Remove all loads and try again.

Symptom	**Scale displays -----**
Check	Is the load cell signal cable connected to the indicator properly?
Action	Recheck signal cable connections.
Check	Is load cell working properly?
Action	Check load cell input/output.
Symptom	**Display shows 00000 after counting down**
Check	Is the load applied to platter in excess of the rated capacity of scale?
Action	Remove all loads from platter and try again.
Symptom	**Weighing result is not accurate**
Check	Is the scale placed in a level condition?
Action	Obtain 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.

7. DAILY CARE AND MAINTENANCE

7.1 Clean the scale with a soft, damp cloth. If necessary, use a mild detergent in water.

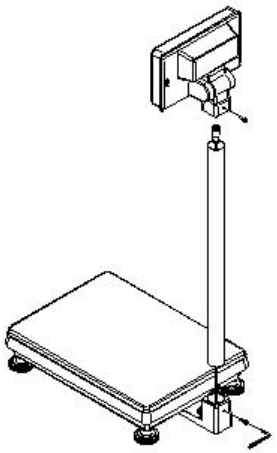
7.2 Do not use any harsh, abrasive material, acetone, volatile solvent, thinner or alcohol for cleaning.

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

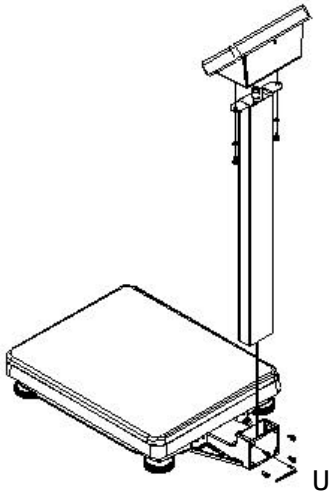
NOTE: In some countries, calibration requires authorized/qualified agent. Contact your dealer for more information.

7.4 Store scale in a dry and clean place.

8. **INSTALLATION DIAGRAM**



UFM-B Range



UFM-F and L Range