XM SERIES

(UPGRADE VERSION: 3000 & 6000 divisions)

ELECTRONIC WEIGHING SCALE

OPERATION MANUAL

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

June 2007 Rev 4

Specifications subject to change without prior notice

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CAUTIONS

CAUTIONS

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 outside as those listed on **SPECIFICATIONS**.

3. Do not attempt to open this unit or conduct any trouble shooting other than those listed in **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 open scale. No user serviceable parts inside.

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
     Stainless steel cover x 1 (Optional)
     Power adaptor x 1
     Dust Cover x 1
Contact your dealer if any item is missing.

1.2 Place the stainless steel platter (if purchased) onto
     the plastic platter.

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
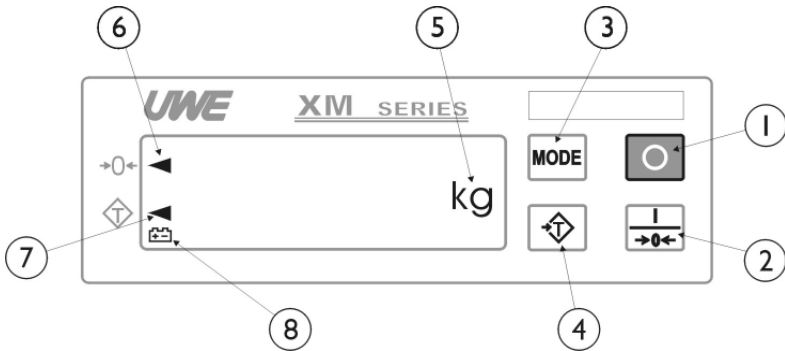   8 hours to ensure the best performance.

2. SPECIFICATIONS

Model No.	Capacity (Max)	Readability (e)	Display Resolution
XM-1500	1500g	0.5g	
XM-3000	3000g	1g	
XM-6000	6000g	2g	1/3000
XM-15K	15kg	5g	
XM-30K	30kg	10g	
XM-3000	3000g	0.5g	
XM-6000	6000g	1g	1/6000
XM-30K	30kg	5g	
XM-1500	1500g	0.2g	1/7500
XM-15K	15kg	2g	
Tare Range	Full Tare Range (Subtractive)		
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.$\leqq$ 85%		

Specifications subject to change without notice

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/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 (if supplied)on/off

4. TARE KEY

Press this key to tare off the weight of a container

5. WEIGHT UNIT INDICATOR

This indicator appears to indicate the weighing unit currently engaged, metric (kg/g) or avoirdupois (lb) weight units.

6. ZERO INDICATOR

This indicator appears to indicate a zero weight status

7. TARE INDICATOR

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

8. 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 Select Weight Unit

The scale is equipped with metric and avoirdupois weight units. Default setting = metric weight unit only. Follow the below steps to enable/disable the avoirdupois units.

a. Turn scale off

b. Press and hold **TARE**, then press **ON/ZERO**. Scale displays **F.1**

c. Press **TARE** twice

d. Scale displays **F.3**

e. Press **MODE** to select weight unit according to the **WEIGHT UNIT INDICATOR**

   -To enable the avoirdupois units, press **TARE** when "lb" sign appears

   -To disable the avoirdupois units, press **TARE** when "kg" or "g" appears

f. Press **ON/ZERO** to confirm and return to normal operation

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.

4.2.2 Select Auto Power Off Setting

The scale is equipped with **Auto Power Off Function**. The scale will turn off automatically if the value remains unchanged for 4 minutes. Follow the below steps to enable/disable **Auto Power Off Function**

a.   Turn scale off

b.   Press and hold **TARE**, then press **ON/ZERO**

c.   Scale displays **F.1**

d.   Press **TARE** 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 **TARE** when **4._OFF** appears.

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

g.   Press **ON/ZERO** to confirm and return to normal operation.

4.3 SELECT BAUD RATE & TRANSMISSION PROTOCOL

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

a.   Turn scale off

b.   Press and hold **TARE**, then press **ON/ZERO**

c.   Scale displays **F.1**

d.   Press **TARE** four times

e. Scale displays **F.5**

f. Press **MODE** to enter baud rate setup

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

h. Press & hold **MODE** to enter transmission protocol setup

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

j. Press **TARE** when complete the selection

k. Press **ON/ZERO** to return to normal operation

4.4 SELECT TRANSMISSION MODE

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

a. Turn scale off

b. Press and hold **TARE**, then press **ON/ZERO**

c. Scale displays **F.1**

d. Press **TARE** five times

e. Scale displays **F.7**

f. Press **MODE** to enter and select transmission mode "Trans.1" or "Trans.2"

g. Press **TARE** to confirm and press **ON/ZERO** to return normal operation

NOTE 1:

"**Trans.1**" is to transmit data continuously after reading is stable

"**Trans.2**" is to transmit single data only after reading is stable, can also be used for linking to printers. Scale must **return to Zero before the printer will print again**

NOTE 2:

No transmission will be activated if weight detected is less than 20e.

The default data output format of the scale is

Baud Rate = 9600

Data Bit = 8

Stop Bit = 1

Parity = None

4.5 COMPUTER DATA RS232C OUTPUT (Optional)

There are two methods to test to see if the setup for RS232 output is done properly, for DOS and WINDOWS.

4.5.1 To Use With DOS

a. Create BASICA computer program file as below by using EDIT command to enable the computer to receive data sent by scale.

```
10   OPEN "COM*:9600, N,8,2,CS,DS,CD" AS#1
       *: Input 1 if the input port of computer is COM 1,
       or input 2 for COM 2 ...etc.
20   LINE INPUT #1, A$
30   PRINT A$
40   GOTO 20
50   END
```

b. Save the above program file and type the command "run" following by the Enter key.

4.5.2 To Use With Microsoft Windows®

In Windows, there is a built-in software program called Hyper Terminal, which can be accessed by:

Start -> All Programs -> Accessories -> Communication -> Hyper Terminal.

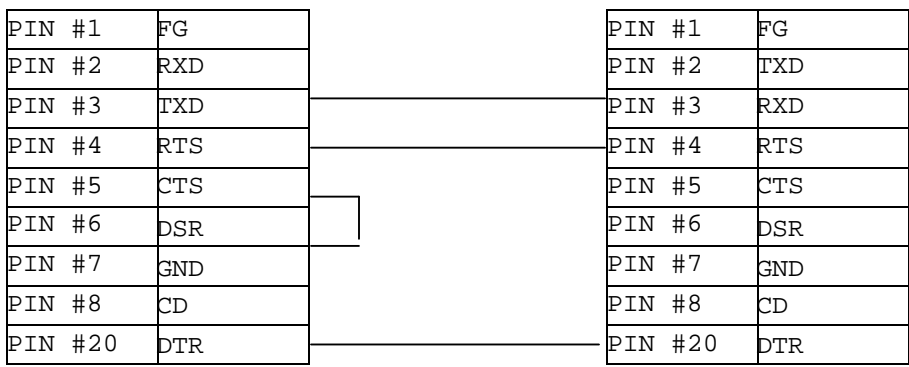Note! Microsoft Windows® is a registered trademark of Microsoft Inc.

To load data directly into other Microsoft Windows® programs such as Word® or Excel®, use **Wedgelink**® software available from your dealer or **Intelligent Weighing Technology, Inc.**

4.6 How to Connect RS232

PIN ASSIGNMENT

SCALE(25PIN D-SUB,FEMALE)   PC(25PIN D-SUB,MALE)

PIN #1	FG		PIN #1	FG
PIN #2	RXD		PIN #2	TXD
PIN #3	TXD		PIN #3	RXD
PIN #4	RTS		PIN #4	RTS
PIN #5	CTS		PIN #5	CTS
PIN #6	DSR		PIN #6	DSR
PIN #7	GND		PIN #7	GND
PIN #8	CD		PIN #8	CD
PIN #20	DTR		PIN #20	DTR

** RTS & CTS have been shorted internally.

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 supplied)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/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 damage to sensor inside scale.

b. The weight of the object will 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. Refer to **4.2.1** for internal setting procedures.

The weight unit used before power off will be employed when
the scale is turned on again.

5.4 SMART POWER SAVING FUNCTION

When this function is enabled, the backlight if supplied
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.

5.5 SET DISPLAYED VALUE TO ZERO WHEN UNLOADED

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

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

5.6 TARE OFF THE WEIGHT OF A CONTAINER

When a container is used, follow the steps below to tare
off the weight of the container and get the net weight.
a. Remove all loads from platter
b. Make sure that the **ZERO INDICATOR** is on
c. Place the container on the platter
d. Press **TARE**

After pressing **TARE**, the **TARE INDICATOR** will 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.

5.7 CLEAR THE TARE FUNCTION

Remove all loads from platter then press **TARE**. After pressing **TARE**, the **TARE INDICATOR** will disappear.

5.8 AUTO TARE FUNCTION

This scale is equipped with auto tare function which tares off the weight of a container automatically when this function is engaged. The tare weight is also automatically cleared when container is removed from platter.

a. To enable the function, clear everything off platter before switch on scale

b. Under zero weight status, press and hold **TARE** until "**Tr_on**" shows on display

c. To disable the function, press and hold **TARE** until **"TroFF"** shows on display

5.9 EXTENDED DISPLAY

This scale is equipped with extended display function for reference purpose only. To activate the function, press and hold **MODE** for 2 seconds and display will flash the extended digit for 5 seconds before return to normal.

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.

The **IN-CHARGE INDICATOR** is located at the side of scale next to the DC jack.

Red color: Recharging in process

Yellow/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 **4.2.1** and **5.3** for weight unit setting and usage.
Syndrome	**Blank display with only "kg" or "lb"**
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.