User's Guide

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WSB-8000
Electronic Weighing Scale
# Servicing North America:

<table>
<thead>
<tr>
<th>Country</th>
<th>Address</th>
<th>Phone Numbers</th>
<th>Fax Numbers</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>One Omega Drive, P.O. Box 4047</td>
<td>(203) 359-1660</td>
<td>(203) 359-7700</td>
<td><a href="mailto:info@omega.com">info@omega.com</a></td>
</tr>
<tr>
<td></td>
<td>Stamford, CT 06907-0047</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>976 Bergar</td>
<td>(514) 856-6928</td>
<td>(514) 856-6886</td>
<td><a href="mailto:info@omega.ca">info@omega.ca</a></td>
</tr>
<tr>
<td></td>
<td>Laval (Quebec) H7L 5A1, Canada</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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## Servicing Europe:

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- **Tel:** +420 (0)59 6311899
- **Fax:** +420 (0)59 6311114
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- **Fax:** +49 (0)7056 9398-29
- **Toll Free in Germany:** 0800 639 7678
- **Email:** info@omega.de

**United Kingdom:**
- One Omega Drive, River Bend Technology Centre
- Northbank, Irlam, Manchester
- M44 5BD United Kingdom
- **Tel:** +44 (0)161 777 6611
- **Fax:** +44 (0)161 777 6622
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- pH, Conductivity & Dissolved Oxygen Instruments
USER MANUAL

ELECTRONIC WEIGHING SCALE

TABLE TOP SCALE SERIES

Item Number:
WSB - 8000
6 keys function
Thank you to purchase our OMEGA scale, please read this manual before try to operate the scale.

I. Before operation:

1. Place the scale on a stable surface.
2. Adjust four feet to center of the bubble on the scale.
3. Avoid hot sunshine directly on the scale or near the exhaust port of ventilating system.
4. Please prevent from getting wet and direct wash the scale, if gets wet please wipe it dry. Always keeps scale cleaning.
5. Keep it away from high temperatures and damp conditions.

II. DESCRIPTION OF POWER SUPPLY

A. Power switch. (located on scale bottom or indicator right bottom side.)
B. Charging instruction:
   - Power supplies: DC 6V 4.5A internal rechargeable battery.
   - Power consumption: about DC 20mA, with backlight about DC 40mA.
   - Low battery: there is a round lamp on left side of the screen. When the lamp flashing, the battery needs recharging.

Note:

1. The scale is available used lasting over 150 hours, in order to keep sufficient power please recharge it every day to prolong battery life.
2. When recharging, please don't share power with other equipment, and avoid electromagnetic interfering from other device.
3. If the machine will not be used for sometime, the scale must be recharged (the internal battery) every 3 months. When it used, please recharge scale before using.
4. When screen recharging lamp appears red, means in recharging.
5. When screen recharging lamp appears green, means recharging full.
III. Key pad function:

1. **ZERO** Press this key to return the display to a zero reading.

2. **TARE**
   1. Ensure that there is no weight on the weighing platform.
   2. Place an empty container on the scale platform.
   3. Press TARE key to deduct the weight of the empty container.
   4. Place a weight in the container to obtain the net weight of the item.
   5. To clear the tare function, simply press the TARE key again.
   6. The Tare indicator light is on when the tare function is activated.
   7. The tare range is from capacity 0kg to the scale's maximum capacity.
   8. To review net weight or gross weight, press NW/GW key to display gross weight, when press NW/GW key again to display Net weight.

3. **HI/LO**
   (1) Preset required high and low limited weight, when reaches the weight. There is a beep sound to warn the user.
   (Ex. To set high weight: 3.000kg, low weight: 1.200kg.)
   Press Hi/Lo key, when displays \textbf{L 0} Input 1.200
   Press Hi/Lo key, when displays \textbf{H 1} input 3.000
   Press Hi/Lo key again, finished.
   (You may use ZERO(+) to increase value or NW/GW key to move)

4. **NW/GW**
   1. While at tare mode, press NW/GW key to display net weight and gross weight value.
   2. press NW/GW key lasting 3 seconds, scale will go into LED brightness adjustment, use ZERO key to select brighter or darker, when press NW/GW key again to confirm setup.

5. **MODE**
   Unit weight conversion. (Kg or lb)
   ※Unit weight will be stored at next operation.

6. **ENTER**
   Prepare key.
   (When perform Rs232 function to use as confirm key to send weight data to computer)

Note: 1. **Hi/Lo** key : to be confirmed key or skip .
   2. **NW/GW** key: to be right movement key.
   3. **ZERO**: to be value increasing key.
IV. Available capacity and graduation:

<table>
<thead>
<tr>
<th>Item</th>
<th>Capacity</th>
<th>Graduation</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAT-8015</td>
<td>1.5kg</td>
<td>0.1g</td>
<td>1/15000</td>
</tr>
<tr>
<td>FAT-8030</td>
<td>3.0kg</td>
<td>0.2g</td>
<td>1/15000</td>
</tr>
<tr>
<td>FAT-8060</td>
<td>6.0kg</td>
<td>0.5g</td>
<td>1/12000</td>
</tr>
<tr>
<td>FAT-8150</td>
<td>15.0kg</td>
<td>1.0g</td>
<td>1/15000</td>
</tr>
</tbody>
</table>

V. Backlight function setting:

1. Press "TARE" lasting 3 seconds, when displays "0", release it. Backlight mode is off (Originate setting).

2. Press "HI/LO" lasting 3 seconds, when displays "1" release it. Backlight mode is Auto-backlight.

3. Press "MODE" lasting 3 seconds, when displays "2" release it. Scale have switched to backlight function automatically.

Note: The backlight status will be memorized. After the scale is off, the backlight mode will be remained sane as when turn on scale next time.
VI. Calibration procedure

Notice:
- Using calibration standard is not less than 1/6 of Scale's max. capacity.
- Using calibration standard weight is not over max. Of Capacity.
- Before calibration, please leave platform empty and turn off power.

Keypad function chart

**Confirmed key**  **Movement key**  **Number increasing key**

Example: 30kg scale use 5kg weighing standard to calibrate.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Keypad Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1&gt;</td>
<td>Turn off the power.</td>
<td>OFF ON</td>
</tr>
<tr>
<td>&lt;2&gt;</td>
<td>Press &quot;HI/LO&quot; key then turn on the power at same time.</td>
<td></td>
</tr>
<tr>
<td>&lt;3&gt;</td>
<td>Screen display &quot;1&quot;.</td>
<td>HI LO</td>
</tr>
<tr>
<td>&lt;4&gt;</td>
<td>Press &quot;ZERO&quot; key to display &quot;2&quot;.</td>
<td>ZERO</td>
</tr>
<tr>
<td>&lt;5&gt;</td>
<td>Press &quot;HI/LO&quot; key to display &quot;3&quot;.</td>
<td>HI LO</td>
</tr>
<tr>
<td>&lt;6&gt;</td>
<td>Press &quot;ZERO&quot; key to display &quot;123&quot;.</td>
<td>ZERO 123</td>
</tr>
<tr>
<td>&lt;7&gt;</td>
<td>Screen display &quot;P6&quot; then &quot;9999999&quot; figures backward decrease.</td>
<td>P6 999999</td>
</tr>
<tr>
<td>&lt;8&gt;</td>
<td>After 20 seconds will appear originate calibration capacity.</td>
<td>30000</td>
</tr>
<tr>
<td>&lt;9&gt;</td>
<td>Press &quot;ZERO&quot; key to change value from &quot;3&quot; to &quot;0&quot;.</td>
<td>ZERO 30000 0000</td>
</tr>
<tr>
<td>&lt;10&gt;</td>
<td>Press &quot;NW/GW&quot; to alter flash digits location.</td>
<td>NW GW</td>
</tr>
<tr>
<td>&lt;11&gt;</td>
<td>Press &quot;ZERO&quot; key to change value from &quot;0&quot; to &quot;5&quot;.</td>
<td>ZERO 05000</td>
</tr>
<tr>
<td>&lt;12&gt;</td>
<td>Place the weighing standard of 5kg on scale, press &quot;HI/LO&quot; key to display &quot;05.000&quot; on screen.</td>
<td>5kg HI LO 05000</td>
</tr>
</tbody>
</table>

Note: If displayed value and standard with difference, take away press "ZERO" key for turning to "0", repeat <12> till no difference.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;13&gt;</td>
<td>After above is done, turn off and on the scale to finish the calibration.</td>
</tr>
</tbody>
</table>

Below screen, red light means the function is being used, when erased the function, indication light put out.
RS-232
SERVICE MANUAL

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Installation parts:

C40-C41 capacitor=22uF16V

C44A capacitor=100uF16V

U21 =HIN232CP

J6=2.5mm3pin line

Rs232 socket female 9pin + 2.5mm 3pin line

Bi-direction communication software (Handshaking) description

<table>
<thead>
<tr>
<th>Computer, PLC...</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before sending command to ask ENQ to transmit</td>
<td>Receiving ENQ</td>
</tr>
<tr>
<td>Received scale response ACK+ENQ To be ready on scale for transmitting</td>
<td>Response ACK+ENQ To be ready for transmitting</td>
</tr>
<tr>
<td>Transmit command</td>
<td>Receive command [When over time didn't receive, will re-send ACK+ENQ]</td>
</tr>
<tr>
<td>Received message to be end</td>
<td>Send back received command</td>
</tr>
</tbody>
</table>

(When over time can not receive ACK+ENQ will re-send ENQ)

RS-232.exe
RS232 SOFTWARE INSTALLATION SPECIFICATION:

Insert CD-ROM, SET UP automatically:
(If couldn't install automatically, please execute CD of file "setup.exe")

1. Start install:

Screen as following:

2. Confirm if install or finish installation:

After confirmation, click [NEXT]

3. Select the installation route:

6. Installation successfully:

RS-232.exe
### [三] Screen specification:

![Screen specification screenshot](image)

<table>
<thead>
<tr>
<th>NAME</th>
<th>FUNCTION</th>
<th>NAME</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>① Receive</td>
<td>Start sending data</td>
<td>⑧ Data Output</td>
<td>Sending data to a file</td>
</tr>
<tr>
<td>② Stop</td>
<td>Stop sending data</td>
<td>⑨ Display alphabetic string</td>
<td>Output all alphabetic string</td>
</tr>
<tr>
<td>③ Clear</td>
<td>Clear all data</td>
<td>⑩ Txt.file setup rout</td>
<td></td>
</tr>
<tr>
<td>④ End</td>
<td>Finish</td>
<td>⑪ Protocol Set Up</td>
<td></td>
</tr>
<tr>
<td>⑤ Display weight</td>
<td>Display weight</td>
<td>⑫ Date</td>
<td></td>
</tr>
<tr>
<td>⑥ Protocol Set Up</td>
<td>Communication agreement</td>
<td>⑬ Time</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>Communication port</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baud</td>
<td>Baud rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parity</td>
<td>Parity bit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Bits</td>
<td>Data bit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stop Bits</td>
<td>Stop bit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>⑦ Data Format</td>
<td>Edit data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seq.No.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PU</td>
<td>Symbol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
[四] RS232 Communication agreement & Input signal length:

1. Communication agreement:
   - Baud Rate: 4800 or 9600
   - Parity Bit: EVEN, ODD, MARK, SPACE, NONE (normal use "None")
   - Data Bit: 7 or 8 (normal use 8)
   - Stop Bit: 1 or 2 (normal use 1)

2. Input signal length:
   Weight unit is kg, g, lb, tk. You can select transmitting string from "DATA FORMAT".

<table>
<thead>
<tr>
<th>Data Format</th>
<th>Alphabetic string length</th>
</tr>
</thead>
<tbody>
<tr>
<td>000.000kg</td>
<td>000.000kg</td>
</tr>
<tr>
<td>Sep.NO.</td>
<td>1,000.000kg</td>
</tr>
<tr>
<td>PU</td>
<td>000.000 kg</td>
</tr>
<tr>
<td>Date</td>
<td>000.000kg, 2007/3/26</td>
</tr>
<tr>
<td>Time</td>
<td>000.000kg, PM20:25:55</td>
</tr>
<tr>
<td>a+b+c+d+e</td>
<td>1,000.000kg, 2007/3/26, PM20:25:55</td>
</tr>
</tbody>
</table>
[五] Communication connection:

1. **Execute RS-232.exe**

   Click [RECEIVE].

2. **Start connection**:

2. **Setup data form [Data Output]**:

   1. Click [Data Format]
   2. 4. Select storage rout
   5. End connection and it will display (TxT) file automatically.
   6. Open TxT. File to see the data record.
[六] Data receiving screen show:

PU:

Data Format:

Date:

Seq.No.:

Time:
[七] **Trouble shooting**:

**No signal receiving**:

1. If the transmit cable connect to computer COM1 or COM2?
2. The setting of the inner baud rate of scale & baud rate of testing software are same or not?