Thank you for using LEV Level Master Wireless (LVM-WL). Please handle it as a measuring instrument and utilize it for long time. Please be sure to read this manual before using the device and also keep it in a location where all the operators may consult it in case of necessity.

INDEX

1. SPECIFICATIONS .......................................................... P 1
2. NAMES OF PARTS AND FUNCTIONS ............................. P 1~P 2
3. HOW TO INSTALL THE BATTERIES ............................ P 2
4. BEFORE USING THE DEVICE
   4-1. Environmental settings ........................................... P 3
   4-2. How to execute the zero adjustment ......................... P 3~P 6
5. OPERATIONS
   5-1. Levelling operation ............................................. P 7~P 8
   5-2. How to turn on/off the buzzer .............................. P 8
   5-3. How to reset the device to its default values ............ P 8
6. SAFETY NOTES ............................................................ P 9
7. WARRANTY ................................................................. P10
8. EMC INFORMATION .................................................... P10
1. SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specifications</th>
<th>LVM-WL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
</tr>
<tr>
<td>Minimum readable value</td>
<td>0.01mm/1m</td>
</tr>
<tr>
<td>Wireless system</td>
<td>2.4GHz</td>
</tr>
<tr>
<td>Power supply</td>
<td>Body</td>
</tr>
<tr>
<td></td>
<td>Receiver</td>
</tr>
<tr>
<td>Power life</td>
<td>Body</td>
</tr>
<tr>
<td></td>
<td>Receiver</td>
</tr>
<tr>
<td>Auto-power OFF</td>
<td>Body</td>
</tr>
<tr>
<td></td>
<td>Receiver</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0°C ~ 40°C</td>
</tr>
<tr>
<td>Dimentions</td>
<td>Body</td>
</tr>
<tr>
<td></td>
<td>Receiver</td>
</tr>
<tr>
<td>Weight</td>
<td>Body</td>
</tr>
<tr>
<td></td>
<td>Receiver</td>
</tr>
<tr>
<td>Included items</td>
<td></td>
</tr>
</tbody>
</table>

- **LED indicators**
  - **LOW mode**
    - Blinking LED (red): Inclination exceeding 0.8mm/1m
    - Continuous LED (red): Inclination of 0.8mm/1m or less
    - Continuous LED (orange): Inclination of 0.6mm/1m or less
    - Continuous LED (yellow): Inclination of 0.4mm/1m or less
    - Continuous LED (green): Inclination of 0.2mm/1m or less
    - Continuous LED (blue): Inclination of 0.1mm/1m or less
  - **HIGH mode**
    - Blinking LED (red): Inclination exceeding 0.08mm/1m
    - Continuous LED (red): Inclination of 0.8mm/1m or less
    - Continuous LED (orange): Inclination of 0.6mm/1m or less
    - Continuous LED (yellow): Inclination of 0.4mm/1m or less
    - Continuous LED (green): Inclination of 0.2mm/1m or less
    - Continuous LED (blue): Inclination of 0.1mm/1m or less

2. NAMES OF PARTS AND FUNCTIONS

- **Body**
  - POWER switch: Push the POWER switch to turn ON the power. Push it again to turn OFF the power.
  - Battery alarm LED: LED (orange) flickers to inform battery exchange time when voltage falls below the prescribed value.
  - Body case
  - Batteries box: It is the location where the batteries are installed (LR03: AAA x4).

7. WARRANTY

Warranty period: 1 year from the delivery

- If the device is subject to shocks or vibrations of 3G or more.
- If the device is intentionally disassembled.
- If damages and breakdowns are caused by unreasonable repairs or modifications or in case of utilization errors.
- If after the purchase, damages and breakdowns are caused by moving, transporting or dropping the product.
- In case of damages and breakdowns caused by fires, earthquakes, storms, floods, lightning, seawater or other natural disasters.

8. EMC INFORMATION

This is a group 1, class B product according to EN 55011. This means that this product does not generate and/or use intentionally radio-frequency energy, in the form of electromagnetic radiation, inductive and/or capacitive coupling, for the treatment of material or inspection / analysis purpose and that it is suitable for use in domestic establishments and in establishments directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.

Note: Since this product is battery operated, this product is not connected to this low voltage power supply network.

Manufacturer Name: BIG DAISHOWA SEIKI CO LTD
Address: Nishiishikiricho 3-3-39, Higashiosakashi, Osaka, JAPAN

EU Name: BIG KAISER PRECISION TOOLING LTD.
Address: Glattalstrasse 516, 8153 Rümlang, Switzerland
6. SAFETY NOTES

- Use a plate with good surface flatness to be sure to obtain a level within 0.01.
- Since the diameter of the LEVEL MASTER WIRELESS is φ109mm, if only 2μ of dirt get caught by the device, a distortion of 0.018mm for 1m will be generated.
- This device (Body/Receiver) is a precision instrument. Do not drop it or cause shocks to it. Also, after the use, always apply antitrust oil to its base and store it using the exclusive storage case.
- When storing the device (Body/Receiver), store it in an environment with a temperature between 0°C and 40°C.
- Since the device is a precision instrument, do not apply coolant to it. Also, after the use, do not leave it on the machine table, plate or installation jig.
- Since the device (Body/Receiver) is a precision instrument, do not disassemble or modify the device. Otherwise, its efficiency or lifespan may worsen and the warranty annulled.
- Remove the batteries if the device is not used for a long period.
- If accuracy problems or malfunctions occur, stop using the device and send it to using our distributors for inspections and repairs.

SPECIFICATIONS - NAMES OF PARTS AND FUNCTIONS
3. HOW TO INSTALL THE BATTERIES

**Body**

1. Loosen the screw of the cover of the batteries box.
2. Insert the 4 batteries included (LR03: AAA) in the base of the batteries box as indicated on the figure on the right.
3. After having installed the batteries, insert the projecting part of the cover into the recess of the batteries box. Then, secure the cover by tightening the screw.

**Caution**

Always check the polarity of the batteries. If the batteries are inserted with the polarity inverted, the device may not work and the internal electric circuit may get damaged making the device not utilizable.

**Receiver**

1. Remove the protective cover.
2. Slide to remove the cover of the battery box.
3. Insert 4 batteries (LR03: AAA) as indicated in the battery box.
4. Slide and fit the cover.

**Caution**

Always check the polarity of the batteries. If the batteries are inserted with the polarity inverted, the device may not work and the internal electric circuit may get damaged making the device not utilizable.

---

5-2. How to turn on/off the buzzer (Receiver)

When the inclination is within 0.01 (HIGH mode) or within 0.1 (LOW mode), the LED (blue) turns on and the buzzer emits a sound. It is possible to turn on/off the buzzer's sound by using the switch of the device.

5-3. How to reset the device to its default values (Receiver)

To reset the device to its default values (delivery condition), push the “SET” switch while turning ON the power. The internal data are cleared.
5. OPERATIONS

5-1. Levelling operation

1. Remove oil, dirt, notches and marks from the machine table’s surface and from the base of the device.

2. Place the device carefully on the reference surface parallel to the X and Y axes.

3. Push the POWER switch to turn ON the power of Body/Receiver.

4. When power of the receiver is turned ON, LOW mode (inclination: 0.1mm - 0.8mm) is selected. If the LED (red) in the 0.08. position blinks, inclination exceeds 0.8.

5. If adjustment of one of the axes is adjusted within 0.1, the LED (blue) turns on and the buzzer emits a sound [Beep, beep]. When the inclination of both axes is within 0.1, the LED (blue) turns on and the buzzer emits a sound [Beep-beep-beep].

6. Push the MODE switch to change to the HIGH mode.

7. When the inclination of both axes is within 0.1, the LED (blue) turns on and the buzzer emits a sound [Beep-beep-beep].

4. BEFORE USING THE DEVICE

4-1. Environmental settings

If there is a difference in the temperature between the storage location and the utilization location, leave the device for a certain amount of time in the utilization location to perform the average environmental settings (temperature, humidity).

(Example: If the difference in the temperature is 10°C, leave the device for 15~20 minutes.)

4-2. How to execute the zero adjustment

Position the Body on the reference surface. When placing the device, remove oil and dirt from its base and also remove notches, oil and dirt from the reference surface of the precision plate.

Use as reference the line markers on the base of the Body and mark 4 points in the X and Y directions on the reference surface.

Push the POWER switch to turn ON the power. (Body/Receiver)

Execute the zero adjustment and the levelling checks following the procedures below.

How to check the levelling value in LOW mode

Case 1

1. The levelling value of the X and Y axes is within 0.8 after switching to the LOW mode.

2. The levelling value of both axes is within 0.8 after turning the device by 180°.

Go to P5 → How to execute the zero adjustment in LOW mode.

Case 2

1. The levelling value of the X and Y axes is within 0.8 after switching to the LOW mode.

2. The levelling value of one of the axes exceeds 0.8 after turning the device by 180°.

Adjust the level of the reference surface in order to obtain a levelling value within 0.8 for both axes.

Go to P5 → How to execute the zero adjustment in LOW mode.
How to execute the zero adjustment in LOW mode

1. Push the "SET" switch after 10 seconds. The 4 external LEDs (red) start blinking.
2. Rotate the Body by 180° using as reference the markings on the reference surface.
3. Push again the "SET" switch after 10 seconds. The buzzer will emit a "Beep" to notify the completion of the "zero adjustment".
4. Adjust the level of the reference surface in order to obtain an inclination within 0.1 for both axes.

Caution
When executing the "zero adjustment" in the LOW mode, adjust the level in order to obtain an inclination of the reference surface within 0.8 and then execute the "zero adjustment". It is not possible to execute the "zero adjustment" if the inclination exceeds 0.8.

How to execute the zero adjustment in HIGH mode

1. Push the MODE switch to change to the HIGH mode.
2. The levelling value of the X and Y axes is within 0.08 after switching to the HIGH mode.
3. Push the "SET" switch after 10 seconds. The 4 external LEDs (red) start blinking.
4. Rotate the device by 180° using as reference the markings on the reference surface.
5. Adjust the level of the reference surface in order to obtain an inclination within 0.1 for both axes.

Caution
When executing the "zero adjustment" in the HIGH mode, adjust the level in order to obtain an inclination of the reference surface within 0.08 and then execute the "zero adjustment". It is not possible to execute the "zero adjustment" if the inclination exceeds 0.08.

In case of executing the "zero adjustment" in the LOW mode:
- When the level exceeds 0.8
In case of executing the "zero adjustment" in the HIGH mode:
- When the level exceeds 0.08
In case of pushing the "SET" switch, turning the device by 180° and pushing again the "SET" switch in the above situations, the 4 orange LEDs of 0.6 (for the LOW mode) / 0.06 (for the HIGH mode) blink 4 times and at the same time the buzzer emit a "be-be-be-be" sound to notify that it is not possible to execute the setting operation.

Go to P6 → How to execute the zero adjustment in HIGH mode

Execute the levelling operation.
How to execute the zero adjustment in LOW mode

1. Push the "SET" switch after 10 seconds. The 4 external LEDs (red) start blinking.

   - **Caution**: When executing the "zero adjustment" in the LOW mode, adjust the level in order to obtain an inclination of the reference surface within 0.8 and then execute the "zero adjustment". It is not possible to execute the "zero adjustment" if the inclination exceeds 0.8.

2. Rotate the Body by 180° using as reference the markings on the reference surface.

   - Errors in the "zero adjustment" may occur if the device is not rotated correctly by 180° or if it is not aligned with the markings.

3. Push again the "SET" switch after 10 seconds. The buzzer will emit a "Beep" to notify the completion of the "zero adjustment".

4. Rotate the Body by 180° using .

5. Adjust the level of the reference surface in order to obtain an inclination within 0.1 for both axes.

   - When the inclination of one of the axes is adjusted within 0.1, the LED (blue) turns on and the buzzer emits a sound [Beep, beep]. When the inclination of both axes is within 0.1, the LED (blue) turns on and the buzzer emits a sound [Beep-beep-beep].

   - Go to P6 → How to execute the zero adjustment in HIGH mode.

How to execute the zero adjustment in HIGH mode

1. Push the MODE switch to change to the HIGH mode.

2. The levelling value of the X and Y axes is within 0.08 after switching to the HIGH mode.

3. Push the "SET" switch after 10 seconds. The 4 external LEDs (red) start blinking.

   - **Caution**: When executing the "zero adjustment" in the HIGH mode, adjust the level in order to obtain an inclination of the reference surface within 0.08 and then execute the "zero adjustment". It is not possible to execute the "zero adjustment" if the inclination exceeds 0.08.

4. Rotate the device by 180° using as reference the markings on the reference surface.

   - Errors in the "zero adjustment" may occur if the device is not rotated correctly by 180° or if it is not aligned with the markings.

5. Push again the "SET" switch after 10 seconds. The buzzer will emit a "Beep" to notify the completion of the "zero adjustment".

   - Go to P6 → How to execute the zero adjustment in HIGH mode.

In case of executing the "zero adjustment" in the LOW mode:
- When the level exceeds 0.8
- When the level exceeds 0.08

In case of pushing the "SET" switch, turning the device by 180° and pushing again the "SET" switch in the above situations, the 4 orange LEDs of 0.6 (for the LOW mode) / 0.06 (for the HIGH mode) blink 4 times and at the same time the buzzer emit a "be-be-be-be" sound to notify that it is not possible to execute the setting operation.
5. OPERATIONS

5-1. Levelling operation

① Remove oil, dirt, notches and marks from the machine table’s surface and from the base of the device.

② Place the device carefully on the reference surface parallel to the X and Y axes.

③ Push the POWER switch to turn ON the power of Body/Receiver.

④ When power of the receiver is turned ON, LOW mode (inclination: 0.1mm - 0.8mm) is selected. If the LED (red) in the 0.08 position blinks, inclination exceeds 0.8.

⑤ Adjust the level in order to turn on the LED (blue) of the central position. When the LED (blue) turns on, the inclination is within 0.1. When the inclination of one of the axes is adjusted within 0.1, the LED (blue) turns on and the buzzer emits a sound [Beep, beep]. When the inclination of both axes is within 0.1, the LED (blue) turns on and the buzzer emits a sound [Beep-beep-beep].

⑥ Push the MODE switch to change to the HIGH mode.

⑦ Adjust the level in order to turn on the LED (blue) of the central position. When the inclination of one of the axes is adjusted within 0.01, the LED (blue) turns on and the buzzer emits a sound [Beep, beep]. When the inclination of both axes is within 0.01, the LED (blue) turns on and the buzzer emits a sound [Beep-beep-beep].

4. BEFORE USING THE DEVICE

4-1. Environmental settings

If there is a difference in the temperature between the storage location and the utilization location, leave the device for a certain amount of time in the utilization location to perform the average environmental settings (temperature, humidity).

(Example: If the difference in the temperature is 10℃, leave the device for 15~20 minutes.)

4-2. How to execute the zero adjustment

When the Level Master Wireless (Body/Receiver) is turned on, depending on the utilization environment and on the status of the reference surface measured, the level position may not be always the “0” position (continuous blue LED). Execute every time the reference settings by means of zero adjustment in accordance with the utilization environment.

① Position the Body on the reference surface. When placing the device, remove oil and dirt from its base and also remove notches, oil and dirt from the reference surface of the precision plate.

② Use as reference the line markers on the base of the Body and mark 4 points in the X and Y directions on the reference surface.

③ Push the POWER switch to turn ON the power. (Body/Receiver)

④ Execute the zero adjustment and the levelling checks following the procedures below.

How to check the levelling value in LOW mode

Case 1

① The levelling value of the X and Y axes is within 0.8 after switching to the LOW mode.

② The levelling value of both axes is within 0.8 after turning the device by 180°.

Go to P5 → How to execute the zero adjustment in LOW mode

Case 2

① The levelling value of the X and Y axes is within 0.8 after switching to the LOW mode.

② The levelling value of one of the axes exceeds 0.8 after turning the device by 180°.

Go to P5 → How to execute the zero adjustment in LOW mode

③ Adjust the level of the reference surface in order to obtain a levelling value within 0.8 for both axes.

Go to P5 → How to execute the zero adjustment in LOW mode
3. HOW TO INSTALL THE BATTERIES

Body

1. Loose the screw of the cover of the batteries box.
2. Insert the 4 batteries included (LR03: AAA) in the base of the batteries box as indicated on the figure on the right.
3. After have installed the batteries, insert the projecting part of the cover into the recess of the batteries box. Then, secure the cover by tightening the screw.

Caution

Always check the polarity of the batteries. If the batteries are inserted with the polarity inverted, the device may not work and the internal electric circuit may get damaged making the device not utilizable.

Receiver

1. Remove the protective cover.
2. Slide to remove the cover of the battery box.
3. Insert 4 batteries (LR03: AAA) as indicated in the battery box.
4. Slide and fit the cover.

5-2. How to turn on/off the buzzer (Receiver)

When the inclination is within 0.01 (HIGH mode) or within 0.1 (LOW mode), the LED (blue) turns on and the buzzer emits a sound. It is possible to turn on/off the buzzer’s sound by using the switch of the device.

5-3. How to reset the device to its default values (Receiver)

To reset the device to its default values (delivery condition), push the “SET” switch while turning ON the power. The internal data are cleared.
6. SAFETY NOTES

- Use a plate with good surface flatness to be sure to obtain a level within 0.01.
- Since the diameter of the LEVEL MASTER WIRELESS is φ109mm, if only 2μ of dirt get caught by the device, a distortion of 0.018mm for 1m will be generated.
- This device (Body/Receiver) is a precision instrument. Do not drop it or cause shocks to it. Also, after the use, always apply antirust oil to its base and store it using the exclusive storage case.
- When storing the device (Body/Receiver), store it in an environment with a temperature between 0°C and 40°C.
- Since the device is a precision instrument, do not apply coolant to it. Also, after the use, do not leave it on the machine table, plate or installation jig.
- Since the device (Body/Receiver) is a precision instrument, do not disassemble or modify the device. Otherwise, its efficiency or lifespan may worsen and the warranty annulled.
- Remove the batteries if the device is not used for a long period.
- If accuracy problems or malfunctions occur, stop using the device and send it to our distributors for inspections and repairs.
1. SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specifications</th>
<th>LVM-WL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>LVM-WL</td>
</tr>
<tr>
<td>Minimum readable value</td>
<td>0.01mm/1m</td>
</tr>
<tr>
<td>Wireless system</td>
<td>2.4GHz</td>
</tr>
<tr>
<td>Power supply Body</td>
<td>Alkaline dry battery</td>
</tr>
<tr>
<td>Receiver LR03 (AAA) x4</td>
<td></td>
</tr>
<tr>
<td>Battery life Body</td>
<td>30 hours</td>
</tr>
<tr>
<td>Receiver LR03 (AAA) x4</td>
<td></td>
</tr>
<tr>
<td>Auto-power OFF Body</td>
<td>30 minutes after power is turned on</td>
</tr>
<tr>
<td>Receiver LR03 (AAA) x4</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0°C ~ 40°C (Recommended 20°C ±5°C)</td>
</tr>
<tr>
<td>Dimention Body</td>
<td>ø109mm x H143mm</td>
</tr>
<tr>
<td>Receiver H143 x W81 x D43mm</td>
<td></td>
</tr>
<tr>
<td>Weight Body</td>
<td>0.99kg</td>
</tr>
<tr>
<td>Receiver 0.28kg</td>
<td></td>
</tr>
<tr>
<td>Included items</td>
<td>Operation manual</td>
</tr>
<tr>
<td></td>
<td>Aluminum storage box</td>
</tr>
<tr>
<td></td>
<td>Alkaline dry battery LR03 (AAA) x4</td>
</tr>
</tbody>
</table>

2. NAMES OF PARTS AND FUNCTIONS

- **Body**
  - **① POWER switch ON → OFF**
    - Push the POWER switch to turn ON the power.
    - Push it again to turn OFF the power.
  - **② Power LED**
    - LED (green) is lighted during the power is ON.
  - **③ Battery alarm LED**
    - LED (orange) flickers to inform battery exchange time when voltage falls below the prescribed value.
  - **④ RESET switch**
    -ush to reset the measurement in case abnormality occurs.
  - **⑤ Line markers**
    - They are used for determining the direction of the X and Y axes.
  - **⑥ Body base**
  - **⑦ Body case**
  - **⑧ Batteries box**
    - It is the location where the batteries are installed (LR03: AAA x4).

3. SPECIFICATIONS - NAMES OF PARTS AND FUNCTIONS

- **LED indicators**
  - **LOW mode**
    - Blinking LED (red) : Inclination exceeding 0.08mm/1m
    - Continuous LED (red): Inclination of 0.08mm/1m or less
    - Continuous LED (orange): Inclination of 0.06mm/1m or less
    - Continuous LED (yellow): Inclination of 0.04mm/1m or less
    - Continuous LED (green): Inclination of 0.02mm/1m or less
    - Continuous LED (blue): Inclination of 0.01mm/1m or less
  - **HIGH mode**
    - Blinking LED (red) : Inclination exceeding 0.8mm/1m
    - Continuous LED (red): Inclination of 0.8mm/1m or less
    - Continuous LED (orange): Inclination of 0.6mm/1m or less
    - Continuous LED (yellow): Inclination of 0.4mm/1m or less
    - Continuous LED (green): Inclination of 0.2mm/1m or less
    - Continuous LED (blue): Inclination of 0.1mm/1m or less

4. NAMES OF PARTS AND FUNCTIONS

- **① POWER switch ON → OFF**
  - Push the POWER switch to turn ON the power.
  - Push it again to turn OFF the power.
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- **④ RESET switch**
  - Push to reset the measurement in case abnormality occurs.
- **⑤ Line markers**
  - They are used for determining the direction of the X and Y axes.

5. WARRANTY

**Warranty period: 1 year from the delivery**

However, the below situations are excluded from the warranty.

- If the device is subject to shocks or vibrations of 3G or more.
- If the device is intentionally disassembled.
- If damages and breakdowns are caused by unreasonable repairs or modifications or in case of utilization errors.
- If after the purchase, damages and breakdowns are caused by moving, transporting or dropping the product.
- In case of damages and breakdowns caused by fires, earthquakes, storms, floods, lightning, seawater or other natural disasters.

6. EMC INFORMATION

Class and Group Description of EN 55011

This is a group 1, class B product according to EN 55011. This means that this product does not generate and/or use intentionally radio-frequency energy, in the form of electromagnetic radiation, inductive and/or capacitive coupling, for the treatment of material or inspection / analysis purpose and that it is suitable for use in domestic establishments and in establishments directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.

Note: Since this product is battery operated, this product is not connected to this low voltage power supply network.

Manufacturer Name: BIG DAISHOWA SEIKI CO LTD
Address: Nishishikiricho 3-3-39, Higashiosakashi, Osaka, JAPAN

EU Name: BIG KAISER PRECISION TOOLING LTD.
Address: Glattalstrasse 516, 8153 Rümlang, Switzerland
Thank you for using Level Master Wireless (LVM-WL). Please handle it as a measuring instrument and utilize it for long time. Please be sure to read this manual before using the device and also keep it in a location where all the operators may consult it in case of necessity.

INDEX

1. SPECIFICATIONS ......................................................... P 1
2. NAMES OF PARTS AND FUNCTIONS .............................. P 1~P 2
3. HOW TO INSTALL THE BATTERIES .............................. P 2
4. BEFORE USING THE DEVICE ......................................... P 3
   4-1. Environmental settings ......................................... P 3
   4-2. How to execute the zero adjustment ....................... P 3~P 6
5. OPERATIONS ........................................................................
   5-1. Levelling operation ............................................. P 7~P 8
   5-2. How to turn on/off the buzzer ................................. P 8
   5-3. How to reset the device to its default values .......... P 8
6. SAFETY NOTES ............................................................... P 9
7. WARRANTY ................................................................. P10
8. EMC INFORMATION ...................................................... P10

BIG DAISHOWA SEIKI CO., LTD.