LWB-XX00 Series (IR) Interactive Electronic Whiteboard

User's Manual (Version 3.0)

Labotrix Group Limited

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PART ONE

HARDWARE
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Chapter I  Introduction to LWB-XX00 Series (IR)

Interactive Electronic Whiteboard

1. Brief Introduction

LWB-XX00 series (IR) Interactive Electronic Whiteboard, a combined system of interactive whiteboard hardware and software, is an input device to enable Man-machine interaction. The working mechanism is as follows:

1) the infrared sensors embedded around the edges of the frame detect and capture the positioning and movement signals of a stylus or finger writing or operating on the projected area of the electronic whiteboard surface;
2) the signals are transformed into coordinate data;
3) coordinate data is transmitted to the computer connected with the whiteboard through USB cable. In this way, a complete interactive presentation system is formed.

Users of LWB-XX00 series (IR) interactive electronic whiteboard can use the stylus or finger to operate on the whiteboard surface to control the computer so as to realize functions such as MOVE, CLICK, DOUBLE-CLICK, DRAG and RIGHT CLICK. The utilization of supporting LWB-XX00 series software enables the users to write, erase, annotate, drag, zoom in/ out, screen shade, searchlight, capture and save screen, record and replay, input with on-screen keyboard, input text, hyperlink to video or web-page, insert content, etc.

LWB-XX00 series (IR) interactive electronic whiteboard can be widely used for teaching and training, conference presentation, and e-commerce, etc.

This user manual is designed for the installation of LWB-XX00 series, including LWB-XX00/XX10 series interactive electronic whiteboard. Instructions for the utilization of the supporting software can be found in the HELP file of the software or Part Two of this User’s Manual — — LABWE Interactive Electronic Whiteboard Software User Manual.

2. Minimum System Requirements

**Operating System:** Windows 2000, XP, Windows 2003, Vista, Windows 7, Linux, Mac

**CPU:** X86-based Processor, Pentium III above

**Memory:** 256 MB RAM (512 MB RAM recommended)

**Hard Disk:** 1GB Spare Space

**USB Interface:** At least one spare USB slot


Windows Vista; Windows 7

3. Certifications and Quality Warranty
LWB-XX00 series (IR) Interactive Electronic Whiteboard is in conformity with **FCC, CE** and **RoHS** standards.

Labotrix Group Limited has been certified to conform to the **Quality Management System ISO9001-2000** standard, and to the **Environmental Management System ISO14000-2004** standard.

The board structure of each interactive electronic whiteboard enjoys three years warranty and other accessories are entitled to one year guarantee. Man-made damage to the board may not fall into the warranty scope and any claim for defects of hardware and software shall contact our distributor.

### Chapter II Packing List

#### 1. Standard Components

<table>
<thead>
<tr>
<th>Items</th>
<th>Quantity</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrared Interactive Electronic Whiteboard</td>
<td>1</td>
<td><img src="image1.png" alt="Illustration" /></td>
</tr>
<tr>
<td>Normal Pen</td>
<td>2</td>
<td><img src="image2.png" alt="Illustration" /></td>
</tr>
<tr>
<td>USB cable (5M, Blue)</td>
<td>1</td>
<td><img src="image3.png" alt="Illustration" /></td>
</tr>
<tr>
<td>Installation Disk</td>
<td>1</td>
<td><img src="image4.png" alt="Illustration" /></td>
</tr>
<tr>
<td>User Manual</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Wall-mounting Pieces</td>
<td>2</td>
<td><img src="image5.png" alt="Illustration" /></td>
</tr>
<tr>
<td>Support Pieces</td>
<td>2</td>
<td><img src="image6.png" alt="Illustration" /></td>
</tr>
<tr>
<td>Name</td>
<td>Quantity</td>
<td>Illustrations</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------</td>
<td>---------------</td>
</tr>
<tr>
<td>Screw (TM4*6mm)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Expansion Screws (6*29mm)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Teaching Pointer</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

2. Optional Accessories

<table>
<thead>
<tr>
<th>Name</th>
<th>Quantity</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB Extension HUB Cable (5 meters)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Intelligent Pen Tray Holder</td>
<td>1 (Set)</td>
<td></td>
</tr>
<tr>
<td>Eraser</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Chapter III  Installation Procedures

1. Wall-mounting Installation

Wall-mounting accessories are listed as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Quantity (Unit: Piece)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall-mounting Pieces</td>
<td>2</td>
</tr>
<tr>
<td>Support Pieces</td>
<td>2</td>
</tr>
<tr>
<td>Screw (TM4*6mm)</td>
<td>4</td>
</tr>
<tr>
<td>Expansion Screws (6*70mm)</td>
<td>6</td>
</tr>
</tbody>
</table>
**Installing Steps:**

1) Wall-mounting Part installation: Locate the height and position of the electronic whiteboard to be installed, and mark the holes position of the wall-mounting pieces on the wall as shown in the picture below. (See Figure 3-1)

![Figure 3-1](image)

**Figure 3-1**

**Installing Tips:**

The length from the knob of the wall-mounting piece to the lower frame of the whiteboard is 95cm. The recommended height from the ground to the lower frame of the interactive electronic whiteboard shall be around 75-80 cm.

2) Drill holes in the four marked spots with a diameter of 8mm drill and fix two wall-mounting pieces by using 6*70 expansion screws;

3) Fix two pieces of supports onto the lower frame of the back of whiteboard, as shown below;

![Figure 3-2](image)

**Figure 3-2**

4) Fix the Link knob into the wall-mounting pieces, see attached picture above.

5) Mark the position of holes in the Support after successfully hanging the whiteboard on the wall, lay flat the whiteboard on the package carton, drill holes in the marked two spots with a diameter of 8mm drill and fix the support by using 6*70 expansion screws.

**Caution:** Set up this product on a level floor surface with a weight bearing capacity of 120 kg/m² or more, and which is made of floor materials that will not deform or become depressed due to movement by casters.
2. Cable Connection

A. Connection between Labwe Interactive Whiteboard and Computer

1) USB cable not only connects the interactive electronic whiteboard with the computer, but also supplies power for the running of the electronic whiteboard. Find the USB slot on the right lower corner of the whiteboard and insert the USB interface into the slot (See Figure 3-3).

2) Fix the USB cable on the back of the whiteboard with cable clip on the back of the whiteboard so as to ensure the stable connection of the USB plug to the USB slot. (See Figure 3-4);

3) Connect the other end of the USB plug into the spare USB slot of the computer.

B. Connection between Computer and Projector

1) Connect VGA IN interface of the projector with VGA interface of the computer;
2) Power on the projector, and adjust the projector so that the image is projected to the effective area which is 1 CM from each edge of the frame; next, adjust the horizontal and vertical positions of the image; and finally, apply keystone correction to the image and make it centered and rectangular.

3. Important Notice of Installation

1) Make sure that the cable connection between the interactive electronic whiteboard and the computer is properly made. Shielding cable wiring is recommended to avoid problems of the
cable connection;
2) Avoid touching the cable line in case the connection becomes unstable;
3) Avoid installing the interactive electronic whiteboard in damp or smog conditions so as to keep the board materials in shape and from aging;
4) The installed interactive electronic whiteboard should be tightly fixed.

**Chapter IV  Technical Specifications**

<table>
<thead>
<tr>
<th>Operating Principle</th>
<th>Infrared Induction Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positioning Accuracy</td>
<td>&lt; 2mm</td>
</tr>
<tr>
<td>Cursor Blink Rate</td>
<td>120 Dots/Second</td>
</tr>
<tr>
<td>Resolution</td>
<td>4096 × 4096</td>
</tr>
<tr>
<td>Response Time</td>
<td>&lt; 8ms in continuous writing practice</td>
</tr>
<tr>
<td>Induction Size</td>
<td>&gt; 3.0mm, Recommended Size:&gt; 5.0mm (Diameter)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>USB 5V 100mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10 °C to 45 °C / 14°F to 113°F</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>20% to 85%</td>
</tr>
</tbody>
</table>

**Chapter V  Maintenance and Transportation**

**Caution:**
Do not open the whiteboard frame structure or change the internal structure of the board. If maintenance or replacement needed, the whiteboard shall be inspected and repaired by the professional engineer from our authorized distributor. The replacement parts shall be our specified items or those with the same specifications as the original ones.

The interactive electronic whiteboard shall be handled with care. No heavy objects shall be put on the surface lest the whiteboard be deformed, broken or damaged. During transportation, the whiteboard shall be protected from excessive shock of impact, moisture, dust, smoke, steam, pressure or kept from working near a high-voltage line or power source, as well as water. Failure to comply may result in malfunction or/ and deformation of or damage to this product.

**Chapter VI  Troubleshooting**

Before assuming the product is broken, be sure to check adjustments, proper handling procedures, the possibility of faulty cable connections, etc.
1. **The pen tip deviates from the cursor.**

   1) Calibration should be performed. Right click on the Whiteboard Server on the right bottom corner of the screen, and choose Calibration. Calibration must be performed when the interactive electronic whiteboard is used for the first time. (For further information on calibration, please refer to **4.1 Interactive Electronic Whiteboard Calibration**.)

   2) Check the positioning of the projector and make sure that the lamp of the projector points at the center of the interactive electronic whiteboard.

2. **The interactive electronic whiteboard does not recognize input.**

   1) Software files may be broken or installation may not be complete correctly. Uninstall the software and re-install the drivers to solve the problem.

   2) USB cable connection is failed. Check the USB cable connection.

3. **The writing stroke is unable to be displayed on screen.**

   1) Pen color may be the same as the background. Try to select different pen color from the background.

   2) The way of writing may be incorrect. The whiteboard just supports single touch writing, therefore, writing tool (any opaque object such as finger, pointer) should be in vertical position to the whiteboard surface. To solve the problem, just remove the other article away than writing tool from the screen when writing.

4. **The USB cable along with the whiteboard is not long enough.**

   If the distance between the computer host and the whiteboard is more than the length of the USB cable (5 meters), a USB extension cable that supports the whiteboard should be used. Note that the connection sequence shall be that indicated in the following diagram, and that the order shall not be reversed.

![Diagram of USB cable connection](image)