IQBoard LT

User Manual

Important Statements

This manual is for IQBoard LT.

Use this product strictly according to detailed operation instruction in this manual so as to ensure proper use. Before you install this product, please read this manual carefully to save your time.

Opening the package means you have agreed to purchase this product, Returnstar will not accept returns of opened packages.

The product specification may be subject to change without prior notice. The sample pictures in this User Manual may differ from the real product.

Returnstar reserves all rights to charge the fee at anytime for product replacement, revision and update. The content in this manual will be regularly revised without prior notice, and the printed manual will be updated when new version is released. Returnstar will make no guarantee for this product, both explicit and implicit, including the salability and the adaptability to certain purpose, and will deny all guarantees alike.

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Environment Protection

When discarding this electronic device, please don't treat it as normal trash. To minimize the pollution and protect the environment, please recycle it.

Working Temperature and Humidity

Storage: Temperature: -40 degrees to 60 degrees; Humidity: 0% to 95%

Operation: Temperature: 0 degrees to 40 degrees; Humidity: 15% to 85%

Chapter 1 Product Introduction

IQBoard LT is a portable virtual whiteboard adopting infrared technology. When connecting with computer, IQBoard LT can transform the projection area (curtain, whiteboard or wall) into an interactive presenting screen. User can use light or electronic pointer to operate the computer directly on the projection area.

With IQBoard LT, marvelous interactive communicating effect can be achieved in various demonstrating and teaching situation, such as product exhibition, business conference, video communication, news broadcast, securities evaluation, military command, entertainment, medical consultation, engineering design, competition tactics analysis, weather analysis, etc.

IQBoard LT is provided with powerful IQBoard Software, which makes your operation on interactive whiteboard more convenient. Its powerful functions include writing, erasing, text editing, hand-writing recognition, on-screen keyboard, line, graph and table editing, graph recognition, video and sound playing, dimension and angle label, digital teaching tools, slide playing, operation review, dragging, revolving, hyperlink, reveal screen, spotlight, screen capture, screen record and replay, hand-writing saving in MS Office, page and file editing, printing and saving, etc.

IQBoard Software also includes 500M IQBoard Resource Library covering more than 30 subjects, such as math, physics, chemistry, biology, gymnasium, etc. User can customize the installation by selecting subjects. Also provide common line, shape, character, symbol, decoration graph, background template, Flash courseware, and other resources. Support importing various picture files and DOC, PPT, XLS files. The page and file created by IQBoard Software can be save as and freely converted to various picture files as well as DOC, PPT, XLS, PDF, HTML files, etc.

We provide continuous upgrading service for IQBoard Software. For more information and detailed operation about IQBoard Software, please refer to "IQBoard Software V4.3 User Manual" in the installation CD.

Chapter 2 Specification

Performance: Effective resolution: 9600×9600; Refresh rate: 60 frames; Signal tracking rate: 3m/s; Processing rate for writing or clicking: 240 dot/s. Provide 9 or 13 points precise orientation. Support 40-150 inch projection area in 4:3 or 16:9 aspect ratio.

PC Connection: Provide 10M USB cable for connecting IQBoard with PC. External power is not required. Provide optional 2M or 20M USB cable. Provide optional 2.4G radio frequency wireless module (Effective range: 10M).

Standard Configuration:

1 receiver
1 retractable electronic pointer (82CM, battery included)
1 light pen (battery included)
1 USB cable (10M)
1 hanging bracket
1 portable tripod
1 installation CD (include drivers, IQBoard Software and user manual)
1 carrying bag (optional)
The overall weight is less than 1.5kg.

> *Note: The retractable pointer body of the standard 82cm electronic pointer is 66cm. We also provide 121cm retractable pointer body.*

System requirement
Windows XP/2003/Vista operation system
Pentium166 CPU (PentiumII or higher recommended)
64 MB RAM (128 MB recommended)
1G free hard disk space (for full installation)
1 free USB port
1 projector (short focus or ultra-short focus projector recommended)

Chapter 3 Install Hardware

1. Retractable Electronic Pointer   2. Light Pen   3. Portable Tripod   4. 10M USB Cable
5. Receiver   6. Hanging Bracket   7. Extension Pole

3.1 Assemble Electronic Pointer

Connect the retractable body with holder and put 2 AAA batteries in the holder, you can use the electronic pointer to operate on the projection area. There is a button in the holder to achieve single click, double click and right click functions.

Battery cap   Holder   Button   Retractable body   Tip

Note: 1.Please do not bend the electronic pointer since it has precise electronic components inside.
2. Please don't tweak the button on the pointer; otherwise its performance may be affected.

3.2 Assemble Light Pen

Put in 2 AAA batteries and remove the pen cap, you can use the light pen to operate on the projection area.

| Battery cap | Pen body | Pen tip | Pen cap |

> 🔍 **Note:** *When using light pen, you can insert the pen cap beside the battery cap to avoid losing it.*

3.3 Signal Receiver

The signal receiver can receive infrared signal emitted by electronic pointer or light pen, thus determine its position, and sent the information to PC.

| Signal indicator | Receiving area | Power indicator | USB port | Screw hole |
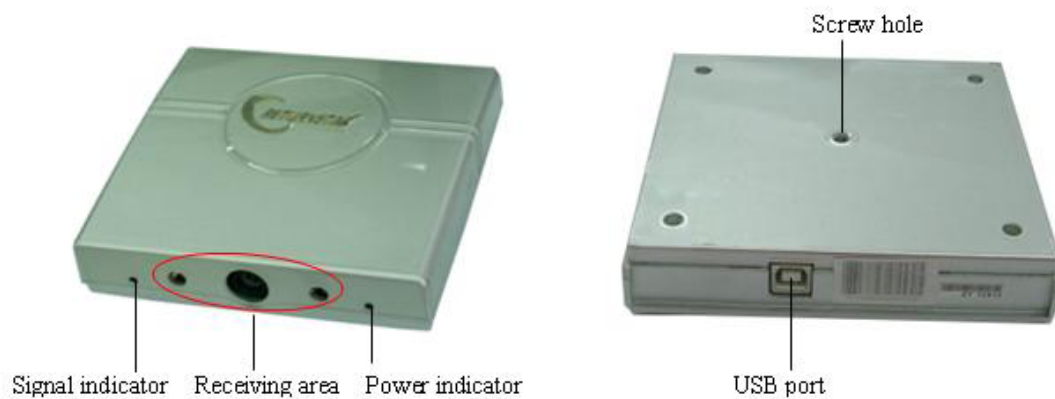
Signal indicator: When receiving infrared signal emitted by electronic pointer or light pen (or other devices), this indicator will turn green.

Receiving area: Receive infrared signal emitted by electronic pointer or light pen.

Power indicator: When the receiver is connected with PC, this indicator will turn red.

USB port: For connecting USB cable.

Screw hole: For connect portable tripod and hanging bracket.

3.4 Tripod mounting

For mobile use of the IQBoard LT, it is very convenient to adjust and fix the signal receiver by tripod, and put it on the desktop.
Step 1. Connect the portable tripod with receiver, and tighten the screw.

Step 2. Adjust the direction and angle of receiver, and fasten the knob.

> 🔍 **Note:** *When tightening the knob, please use proper torque to avoid damaging the tripod.*

3.5 Ceiling Mounting

In case the position of projector and receiver is not changed frequently, you could use suspending bracket to mount the receiver on the ceiling

Step 1. Connect the hanging bracket with receiver, and tighten the screw.

Step 2. According to the position of 3 fixing holes in hanging bracket, drill 3 holes in the ceiling, and insert 3 anchor bolts.

Step 3. Use 3 screws to fix the hanging bracket on the ceiling.

Step 4. Adjust the direction and angle of receiver, and fasten the knob.
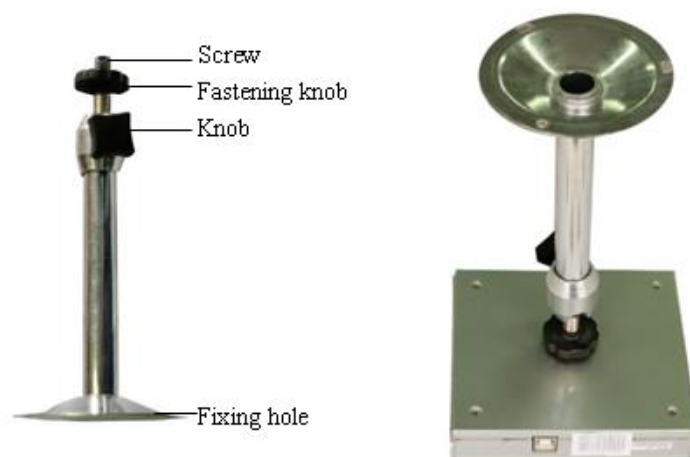
> 🔍 **Note:** *If the ceiling is too high, you can use the extension pole to prolong the hanging bracket.*

Chapter 4 Connecting with Computer and Projector

It is easy to connect IQBoard LT with computer only by a USB cable, and no additional power is needed. Connect the flat side or USB cable to the computer, and the quadrate side to receiver.

Flat USB port for connecting the computer	Quadrate USB port for connecting the receiver

IQBoard LT can work with whiteboard, projector and LCD TV. In case you want to use projector, open the projector after connection, and adjust it to make its projection image within the projection area and centered. Then use the trapezoid rectification function of the projector to make the projection image quadrate.

> **Note:** Please do not place the cable on the ground to avoid stumble. If you have to do so, please straighten and stick them on the ground with colored adhesive tape and wire.

Chapter 5 Install and uninstall drivers

5.1 Install: Run *"IQBoard LT Drivers"* in the installation CD to install the drivers and orientation program according to the prompt. The computer will automatically find a new hardware and install the drivers.

5.2 Uninstall: Select *"Start > Programs > IQBoard LT Drivers >Uninstall"* to uninstall. You also can open Control Panel, select *"Add/Remove Programs"*, and in the list of currently installed Programs, select *"IQBoard LT Drivers"*, then press the *"Remove"* button to remove the drivers.

Chapter 6 Orient

6.1 Start:

Select *"Start > Programs > IQBoard LT Drivers > Start",* or click the desktop shortcut of "IQBoard LT Drivers", a taskbar icon will appear on the right bottom of the screen.
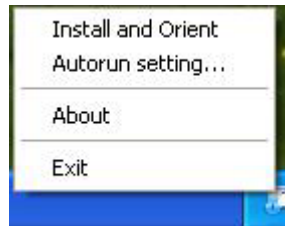
Install and Orient: Orient the IQBoard LT and confirm the installing position of the receiving box.

Autorun Setting: You can decide whether to run IQBoard LT Drivers automatically when the system is started.
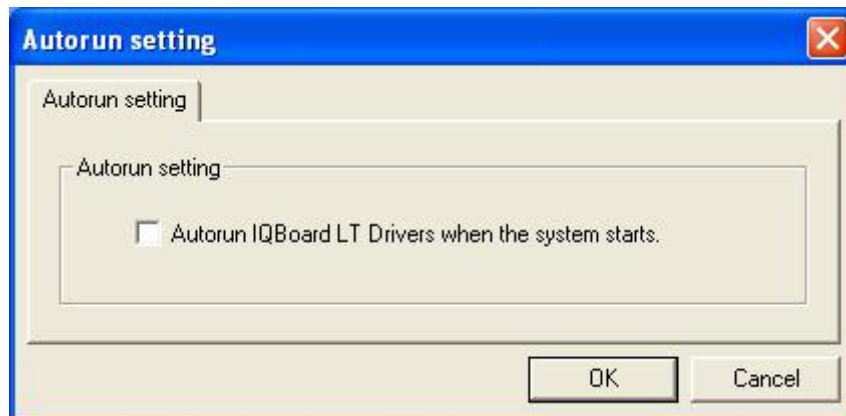

 Prompt:

After starting Projector Genius, if the taskbar icon is , it means the hardware has not been

found, if the taskbar icon is , it means the hardware is connected.

About: Click *"About"* to popup the information window of IQBoard LT.

**Exit:** Click *"Exit"* to quit IQBoard LT Drivers.

6.2 Orient:

In order to make the IQBoard LT work normally, you need to orient at the first time you use it. So the moving track of electronic pointer and light pen can match the cursor, and you don't need to re-orient at the same environment. After connect the receiver with computer, and start IQBoard LT Drivers, click the taskbar icon and select *"Install and Orient"*, then select installation method on the popup menu.
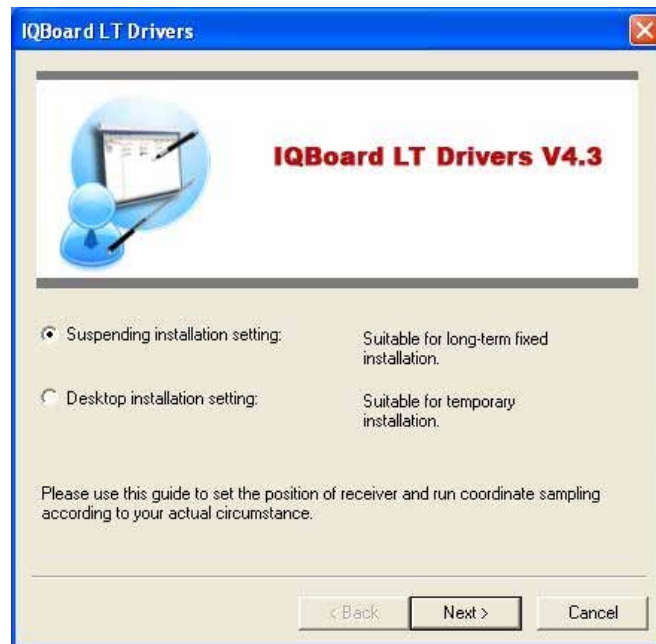
**6.2.1 Desktop Installation Setting**

If your receiver is placed on the desktop, please select "*Desktop Installation Setting*". Click "*Next*", there will be 2 red lasers emitted from the front-end of the receiver. Adjust the elevation of receiving head and the position of receiver, to ensure that the 2 lasers would be emitted on middle-left corner and middle-right corner of the screen separately, as the pictures below.
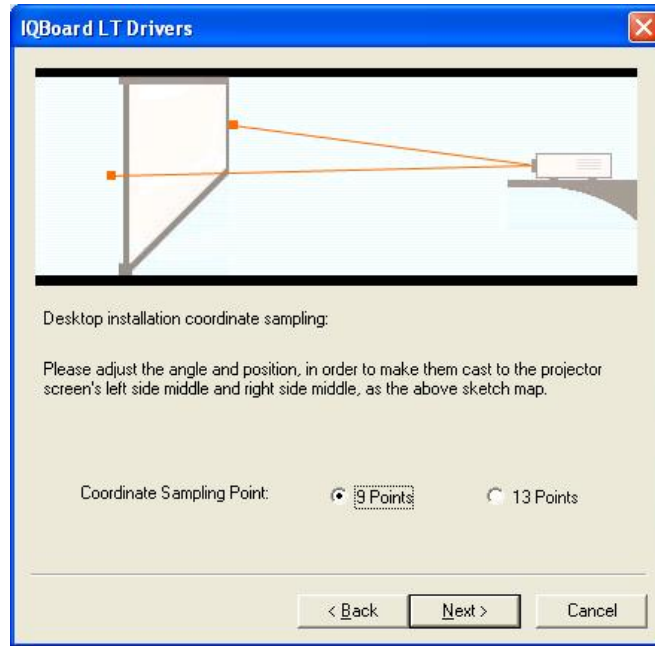
Select the number of coordinate sampling points, click "*Next*", the system will automatically close the laser emitter and enter coordinate sampling.

6.2.2 Suspended Installation Setting

If you want to suspend the receiving box, please select "*Suspend Installation Setting*", click *"Next"*, the below window will show up, and two red lasers will be emitted from the front box automatically.
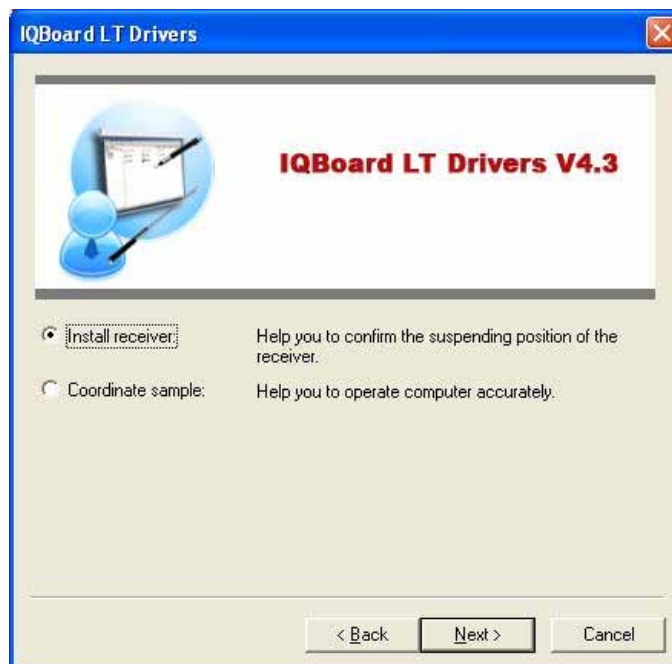

Step 1, Install receiver

During the Suspended Installation, you can select *"Install receiver"*, and click *"Next"* to help you confirm the installing position and angle. There will be 2 red lasers emitted from the front-end of the receiver. Adjust the elevation of receiving head and the position of receiving box, to ensure the 2 lasers shoot on the middle-left corner and middle-right corner of the screen separately, as follows:
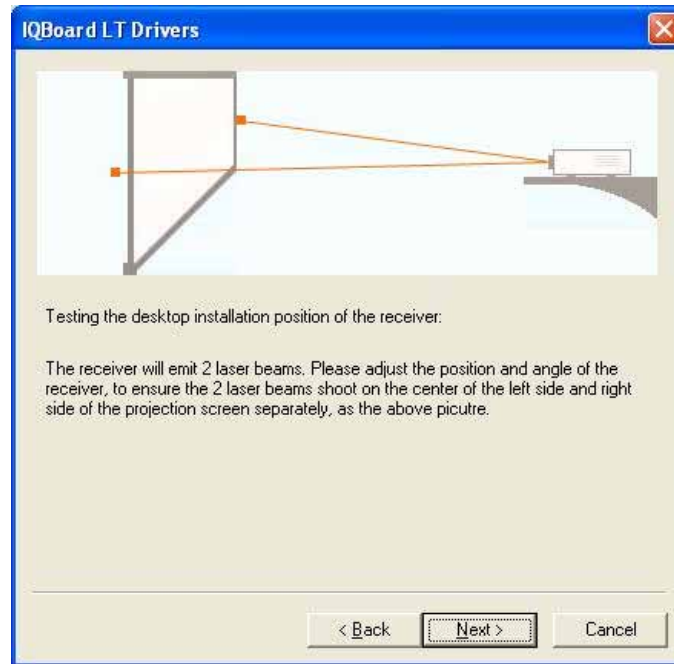
Click *"Next"* button to finish setting the installing position and angle of the receiver. As follows:
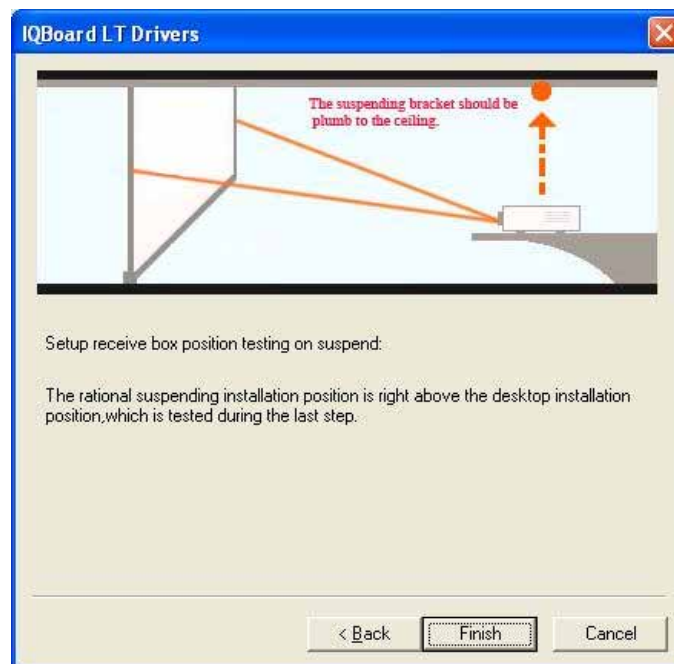
Step 2. Coordinate Sampling Setting.

Select *"Coordinate Sampling"* and click *"Next"* to enter the Coordinate Sampling Setting window. Adjust the elevation of receiving head and the position of receiving box, to ensure the 2 lasers shoot on the middle-left corner and middle-right corner of the screen separately (as follows).
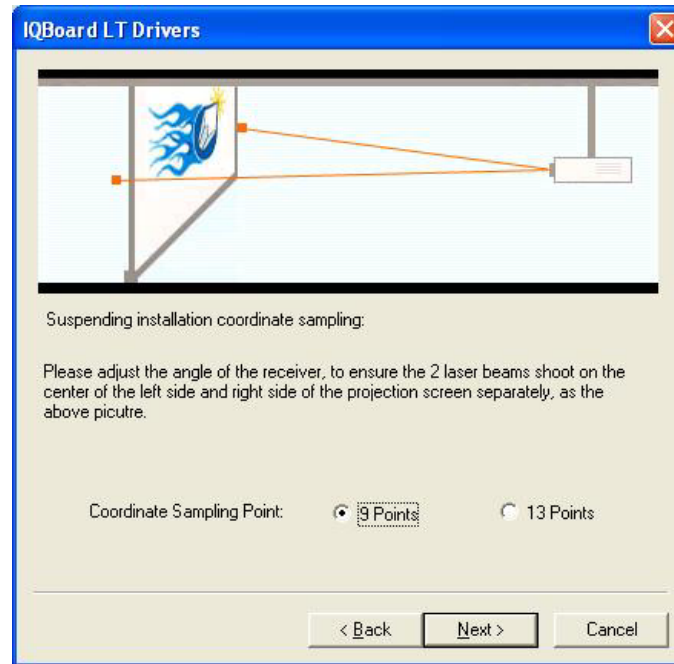

Select the number of coordinate sampling points, click "*Next"*, the system will automatically close the laser emitter and enter coordinate sampling.

6.2.3 Coordinate sampling

✳

We provide 9 and 13 coordinate sampling points. The more points, the higher precision it will be. The 9 points orientation is usually adopted. The course of orientation is very easy, you just need to use your light pen or electronic pointer (the button has to be pressed on) to click the 9 or 13 red crosses in sequence. After the process is finished, following prompt window will appear.

Click "*Ok*", then you could operate the virtual whiteboard properly by light pen or electronic pointer.

Prompt:

1. If the orientation cross doesn't move, especially in case of desktop installation, please check whether the light is blocked off by human body, signal pen or electronic pointer. You could simply just move yourself and try again.

2. If you don't precisely press the center of red cross by the light pen or electronic pointer, or press wrong place, or the next cross appeared without press, please press "ESC" on keyboard to exit, and re-orientate. Otherwise the light pen or electronic pointer could not match to the cursor properly.

3. In case the relative position of the receiver and projector is changed, or the drivers or the monitor resolution is altered, please re-orient.

In case you adopted Desktop Installation, after you restart IQBoard LT Drivers or re-plug the USB cable, following setting window will appear. If the position of receiver or projector has changed, you can select installation method and click *"Next"* to re-orientate; otherwise just click *"Cancel"* and continue to use IQBoard LT.

Chapter 8 Operation

Action	Tool	Operation
Single click	Light pen	Raise the pen tip about 1-2mm from the surface, then press the surface once at proper strength.
	Electronic pointer	Aim the pointer tip to the surface, then press the button on the pointer once and release.
Double click	Light pen	Raise the pen tip about 1-2mm from the surface, then press the surface twice at proper strength. The time interval should not be too long.
	Electronic pointer	Aim the pointer tip to the surface, then press the button on the pointer twice.
Drag	Light pen	Use the light pen to press on an item and drag it to the appointed position (during which the pen tip should not leave the surface).
	Electronic pointer	Aim the pointer tip to an item, press the button on the pointer and hold, drag the item to the appointed position, then release the button.
Write	Light pen	If you use IQBoard Software, switch into "Board" mode, select a writing tool, then you can use the light to directly write on the surface.
	Electronic pointer	If you use IQBoard Software, switch into "Board" mode, select a writing tool, then you can use the electronic pointer to directly write on the surface (press the button on pointer and hold when writing).
Orient	Light pen	In the coordinate sampling interface, use light pen to click the center of the red cross.
	Electronic pointer	In the coordinate sampling interface, aim the pointer tip to the center of the red cross, then press the button on the pointer.
Right click	Light pen	Press the light pen on the surface and hold for 2 seconds, right-key menu will appear.
	Electronic pointer	Press the button on the pointer and hold for 2 seconds, right-key menu will appear.
Remote control	Electronic pointer	When you use electronic pointer, the pointer tip doesn't need to contact the surface, you can operate in a certain distance. Operations are the same as above.

Chapter 8 FAQ

1. I can't use the light pen or electronic pointer to operate or write on the operating surface.

1. IQBoard LT Drivers has not been correctly installed. Please uninstall the drivers and re-install.

2. IQBoard LT Drivers has not been started, or IQBoard LT has not been oriented. Please start the drivers and orient IQBoard LT.

3. The light signal emitted by the light pen or electronic pointer is blocked from being received by receiver. Please do not block the light. Generally it will be fine so as the light from projector is not blocked.

4. The batteries of light pen or electronic pointer are low. Please replace the batteries.

5. IQBoard Software hasn't been started, please start IQBoard Software.

6. The receiver and computer is not well connected. Please check and re-connect.

2. I can use the light pen or electronic pointer to operate or write on part of the operating surface..

1. The orientation is not precise. Please re-orient.

3. When writing or operating by light pen or electronic pointer, the response is slow or inconsecutive.

1. The computer is not under normal running or the memory is occupied too much. Close some running applications or restart the computer.

2. The batteries of light pen or electronic pointer are low. Please replace the batteries.

3. The posture of holding light pen is not correct. Please keep the angle between light pen and operating surface 50 degrees, in order not to block the light signal from light pen.

4. The orientation point or cursor moves weirdly.

1. The projection area has trapezoid distortion, please use the trapezoid correction function of projector, or replace the projector.

2. Please use Exposure Time Setting Tool to reset the exposure time of receiver (see Chapter 10), and re-orient.

3. There is sunlight or other strong light in the room. Please pull down the curtain, and adjust the light intensity or just shut down the strong light. Avoid direct exposure to sunlight or other strong light in the room, especially for projector screen.

5. How to determine whether there is light interference?

1. When not operating with light pen or electronic pointer, if the signal indicator on the receiver is still green, it means there is light interference.

2. When orientating, if the red cross moves automatically, and after you cover the receiving area with you hand, the cross tops moving, it means there is light interference.

6. When orientating, some orientating points do not respond.

1. When selecting coordinate sampling points, the lasers emitted by receiver didn't emit at the correct place. Adjust the elevation of receiving head and the position of receiving box, to ensure that the 2 lasers would be emitted on middle-left corner and middle-right corner of the screen separately (3-5cm outside the 2 indicating arrows).

2. If the projection area is within 120-150 inch, please use Exposure Time Setting Tool to reset the exposure time of receiver above 300 (see Chapter 10), and re-orient.

3. The receiver and computer are not well connected. Please check and re-connect.

Other questions, please consult our service center or local dealer.

Chapter 9 Cautions and Maintenance

9.1 Receiver

1. Please do not use sharp or pointed objects to touch the signal receiving area in front of the receiver.

2. Please do not use wet cloth to clean the receiver or controller to avoid short circuit and other problems.

3. Please do not use and install IQBoard LT in dusty, foggy, wet and inclement environment. Keep it away from sharp object, heat source, corrosive chemicals, fire, and water.

9.2 USB Cable

Do not put the USB cables on the floor where it may stumble others. If you have to do so, straighten them and use insulated adhesive tape or cable with contrast color to tie them up. Please handle carefully and avoid over-bending. Exposing the USB cable outside for a long time may shorten its life-span and cause other unnecessary damages, so please keep it carefully. If you use the whiteboard in the meeting room or class room, please fix the cable according to the cable alley.

9.3 Projection

Face the whiteboard when operating and writing on the projected image, stand aside when you turn back to face the students. Please do not look at the projector directly to avoid its strong light damaging your eyesight. Instruct students how to use the whiteboard, tell them do not to face the projector directly.

9.4 Transport

Please handle with care, and do not put any weight on the receiver so as to avoid damaging the parts. In long distant transportation, it is suggested to repack the whiteboard with the original packing. If the original packing is unavailable, insert some protective padding between the components to protect them from intense vibration or crash. Avoid vibration, dampness, electricity, water and pressure in transportation.

9.5 Part Replacement

Please do not disassemble the device or modify its inner structure so as to prevent accident or trouble. For maintenance or part replacement, please resort to our authorized technician. Make sure that you use our designated part or the one with same specification when replacing.

Chapter 10 Appendix

How to use Exposure Time Setting Tool for IQBoard LT

The Exposure Time determines how long the sensitive chip of receiver is exposed to light at one time. The higher the value is, the move light signal will be received by sensitive chip, and the receiver will be more sensitive and less anti-interference. In order to get proper sensitivity and anti-interference performance, you need to adjust the Exposure Time. Normally the value is 250. In case of large projection area (within 120-150 inch), you need to set the value above 300. Detailed operations are as follows:

Start: Connect the receiving box through USB cable, then click *"Exposure Time Setting Tool for IQBoard LT"* to start the tool, as follows:

> ![icon] **Prompt:**
> *1. Before starting this tool, please quit the orientation program first.*
> *2. In case the receiving box hasn't been connected, the system will prompt "Device is disconnected!" Meanwhile, the "Set" and "View" buttons are unavailable.*

Set: If you want to adjust the Exposure Time of receiving box, you can input a new value (1-511) in the Exposure Time box, and shroud the Signal Receiving Area at the front side of receiving box, then click *"Set"*, the system will prompt the setting is successful, and the new Exposure Time will be displayed.

View: Click this button to view the current Exposure Time, as follows.

Exit: After you finish setting, click this button to exit.