IQBoard LT Series

User Manual

Statement

This manual is for IQBoard LT Series.

Use this product strictly according to detailed operation instruction in this manual so as to ensure proper use. Please read this manual carefully before you install this product.

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 information in this manual is subject to regular change without prior notice. Returnstar will make no warranties with respect to this product and disclaims any warranties, whether express or implied, of merchantability and fitness for a particular purpose.

Trademark Notice

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Recycling

Always return your used electronic products, batteries, and packaging materials to separate collection. This way you help prevent uncontrolled waste disposal and promote the recycling of materials.

Temperature and Humidity Requirements

Storage
Temperature: -40°C ~ 60 °C   Humidity: 0% ~ 95%
Operation
Temperature: 0°C ~ 40 °C   Humidity: 15% ~ 85%

Content

Chapter 1 Product Introduction

IQBoard LT Series are interactive whiteboard system adopting optical imaging and infrared capture technology. When connecting with computer, IQBoard LT Series can transform the projection area (curtain, whiteboard or wall) into an interactive presenting screen. User can use Light Pen or Electronic Wand like Mouse to operate the computer directly on the projection area. In addition, if you purchase IQBoard LT M2, two users can operate simultaneously on the interactive screen by entering Dual Mode in IQBoard Software.

With IQBoard LT Series, marvelous interactive communicating effects can be achieved in live demonstration, teaching, 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 Series is provided with powerful IQBoard Software, which makes your operation on interactive whiteboard more convenient. Through IQBoard Software, various interactive teaching and demonstrating functions can be achieved, such as write, erase, label (in character, line, dimension and angle), drag, zoom, reveal screen, spotlight, screen capture and save, screen record and playback, handwriting recognition, on-screen keyboard, text input, text to speech, hyperlink to video, sound and webpage, and remote conference by NetMeeting. IQBoard Software also has colorful object animation effects, page switching effects and interactive questions. Therefore, with IQBoard Software, users can make more interactive courseware by designing unique object animation, adding sound or hyper linking.

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. The software also provides common line, shape, character, symbol, decoration graph, background template, Flash courseware, and other resources. Moreover, the software supports importing various picture files and DOC(X), PPT(X), XLS(X), PDF files. The page and file created by IQBoard Software can be saved as and freely converted to various picture files as well as DOC(X), PPT(X), XLS(X), 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 User Manual in the installation CD.

Chapter 2 Specifications

2.1 Performance

Signal Receiver	
Digitalizing Technology	Optical imaging and infrared capture
Active Area (projection size)	60″ ~ 150″ diagonal (with aspect ratio of 4:3 or 16:9)
Resolution	9600×9600
Refresh Rate	80 fps
Signal Tracking Rate	8m/s
Signal Processing Rate	480 dots/s
PC Connection	Connect PC to IQBoard with 5m USB cable (which can be extended to 10m by purchasing USB amplifier), external power is not needed.
Orientation	9 or 20 points
Power Consumption	<1W
Retractable Electronic Wand	
Digitalizing Technology	Infrared
Control Buttons	1 button
Power	Battery AA x2
Working Current	40－50 mA
Length	83cm in total, with 70cm retractable wand body.
Light pen	
Digitalizing Technology	Infrared
Control Buttons	2 buttons
Power	Rechargeable with USB charging port
Working Current	40－50 mA
Length	16cm

2.2 System Requirement

Windows XP/2003/Vista/7
Intel C2.1 or higher
256 MB RAM or higher
1G free hard disk space (for full installation)
1 free USB port
1 projector (short focus or ultra-short focus projector recommended)

Chapter 3 Model Introduction

IQBoard　LT M1: Single Mode, only allow one user to operate with one Light Pen.
IQBoard LT M2: Support Dual Mode, two users (two light pens) can operate simultaneously on the interactive screen.

Chapter 4 How to Install Hardware

4.1 How to Install Electronic Wand

Step 1. Unscrew the battery cap by turning it counterclockwise.
Step 2. Insert 3A AA batteries with the plus (+) side up.
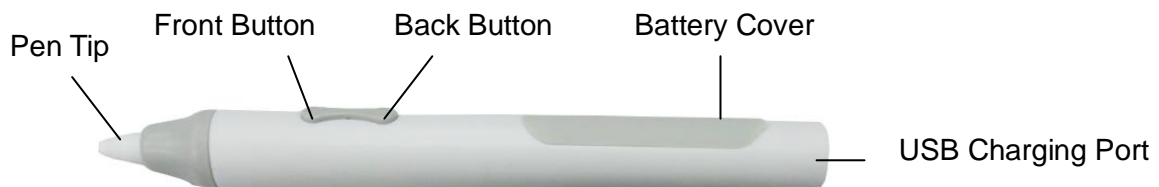Step 3. Screw the battery cap back by turning it clockwise
Step 4. Screw the retractable body clockwise into the holder.

Note:

1. You can press the interactive button on the holder to achieve single click, double click and right click functions.
2. .Please do not bend Electronic Wand since it has precise electronic components inside.

4.2 How to Install Light Pen

Replace pen tip: When pen tip is worn out, please unscrew the pen tip by turning it counterclockwise and replace the pen tip, then screw the pen tip back by turning it clockwise.
Replace battery: When battery is used out, please gently lift the battery cover to open it and insert a new battery with the plus (+) side up, then close the batter cover.

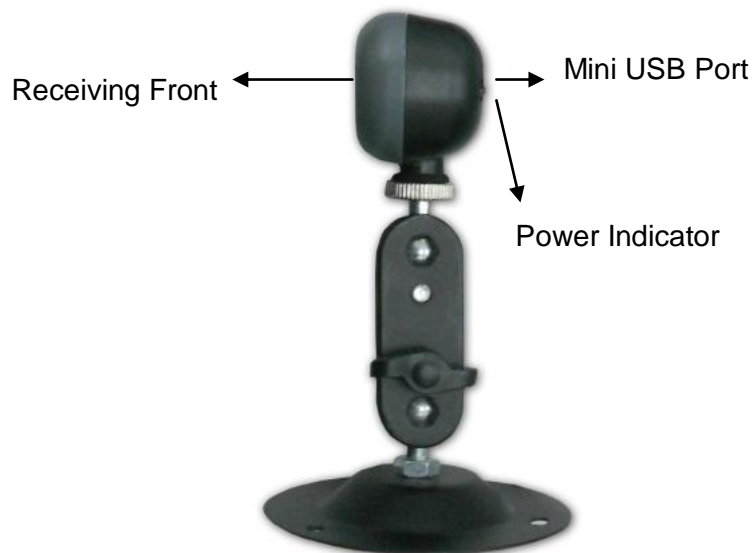**USB charging port:** Re-charge battery in Light Pen by connecting pen with computer through USB cable.

4.3 Signal Receiver

Signal Receiver can receive infrared signal emitted by Electronic Wand or Light Pen, thus determine its position, and sent the information to PC through the cable.

Receiving Front ← [image] → Mini USB Port

Power Indicator

Receiving Front: Receive infrared signal emitted by Electronic Wand or Light Pen. The effectvie distance between Receiving Front and screen is 0.8-2.05m.

Power Indicator: When connecting Signal Receiver with computer through USB Cable sucessfully, this indicator will turn red.

Mini USB Port: Connect Signal Receiver to computer with USB Cable.

4.4 How to Connect Signal Receiver with PC:

1. Connect Standard-A Plug to a free USB port on PC.

2. Connect Mini USB to Mini USB Port on Signal Receiver.

3. Connect VGA cable from projector to VGA port on PC.

USB Standard-A Plug for connecting computer	Mini USB port for connecting Signal Receiver

4.5 How to Install Projector

IQBoard LT Series can work with whiteboard, projector and computer, or work with computer and LCD TV, as the figure as follow. 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.

Chapter 5 Install and Uninstall Drivers

5.1 Install Drivers

Run *"IQBoard LT Series Universal Drivers V8.0"* in the installation CD, and install the drivers according to the prompt. The computer will automatically find a new hardware and install the drivers.

5.2 Uninstall Drivers

Select *"Start > Programs > IQBoard LT Series Universal Drivers V8.0 > Uninstall"* to uninstall. You can also open Control Panel, select *"Add/Remove Programs"*, and in the list of currently installed Programs, select *"IQBoard LT Series Universal Drivers V8.0"*, then press the *"Remove"* button to remove the drivers.

Chapter 6 Mount Signal Receiver

6.1 Desktop Mounting

For mobile use of IQBoard LT Series, you can simply mount Signal Receiver on the desktop.

1). Fix Signal Receiver with stand by clamp on it.

2). Place Signal Receiver on or next to the short-throw projector. Receiving Front should be faced to projection area. If your projector is not a short-throw one, please

check *Recommended Signal Receiver distance* about distance between receiver and projection area.

3). Connect one end of Mini USB cable to Mini USB Port on Signal Receiver, the other flat end to PC.

4). Adjust the position of receiver and the angle of Receiving Front to assure it can receive signal from the whole projection area. (*Hardware Calibration Program in the driver can help you adjust the angle of Receiving Front.*)

6.2 Ceiling Mounting

In case the position of the projector and receiver is not changed frequently, you could use velcro to fix the receiver on the short-throw projector.

1). Fix Signal Receiver with stand by clamp on it.
2). Stick one side of velcro on the base of stand, and the other side on projector.

3). Press velcro on the stand with the one on the projector tightly.

4). Connect one end of Mini USB cable to Mini USB Port on the Signal Receiver, the other flat end to PC.

5). Adjust the position of receiver and the angle of Receiving Front to assure it can receive signal from the whole projection area. (*Hardware Calibration Program* in the driver can help you adjust the angle of Receiving Front.)

6.3 Recommended Distance between Receiver and Screen

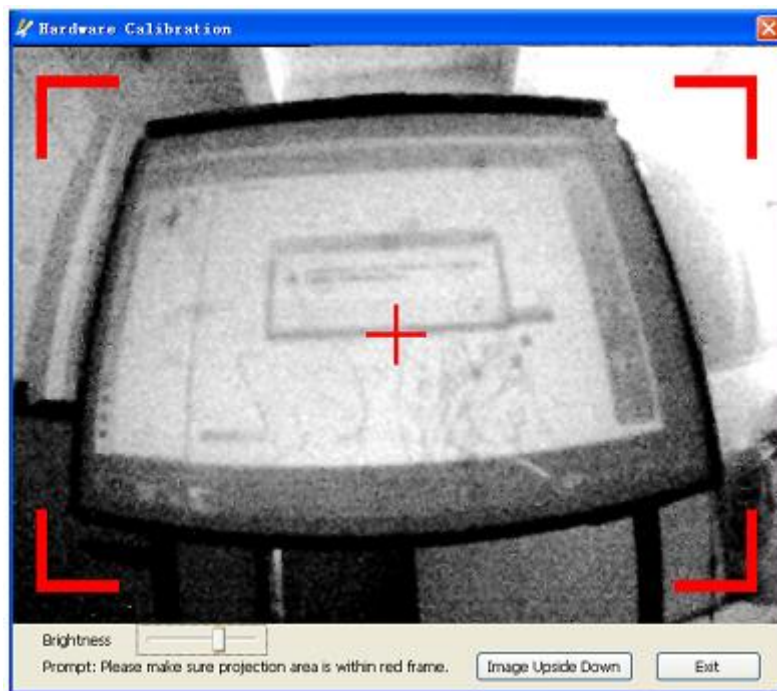| Recommended Distance	
Screen Size	**Distance between Receiver and Screen**
60″(4:3)	84cm~116cm
80″(4:3)	105cm~145cm
100″(16:9)	128cm~180cm
110″(16:9)	138cm~190cm
120″(16:9)	148cm~200cm
150″(16:9)	188cm~245cm

Chapter 7 How to Start and Orient IQBoard LT

7.1 Hardware Calibration

You need to do hardware calibration at the first time you use IQBoard LT Series to assure Signal Receiver is set on the correct positioin. You don't need to re-orient under the same environment.

To do hardware calibration:

1). Select *"Start > Programs > IQBoard LT Series Universal Drivers > Hardware Calibration"*.

2). Ajust position and angle of Signal Receiver to assure the whole projection area is inside the red frame. (see figure as follow)

Brightness : brightness of the screen is adjustable as above figure.
Image Upside Down: For Ceiling Mounting, the image projected on the screen is upside down, you can click "Image Upside Down" Button to flip the image.

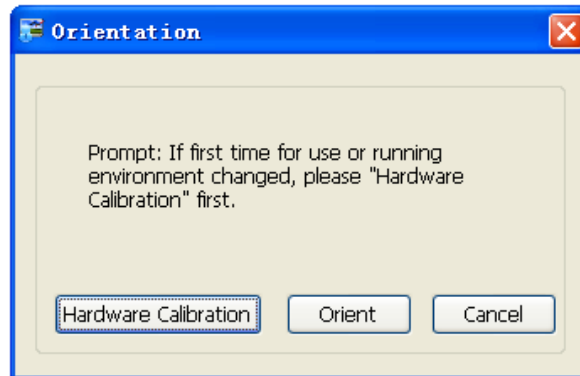3). Fix Signal Receiver, then you can start orientation next.

7.2 Orientation

In order to make IQBoard LT Series work normally, you need to orient at the first time
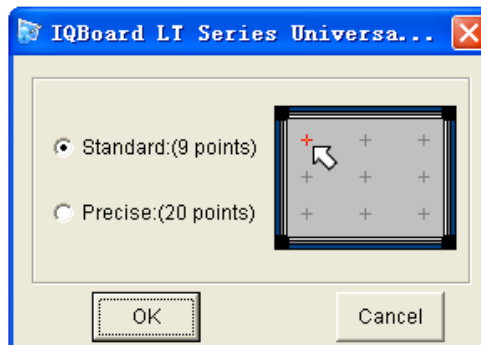
you use it. So the moving track of Electronic Wand and Light Pen can match the cursor, and you don't need to re-orient under the same environment.

1) Select "*Start > Programs > IQBoard LT Series Universal Drivers > Orient*", the Orient Window appears.
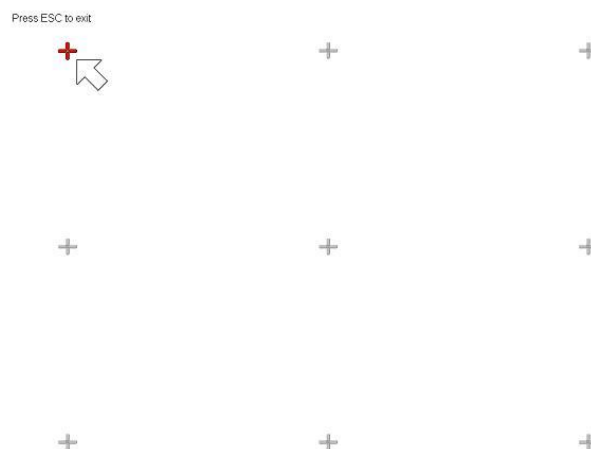
2) Select *"Orient"* from Orient Window if you have set Signal Receiver on the correct position, or please select *"Hardware Calibration"* to set Signal Receiver on the correct position firstly.

3) Then Select Orientation Precision window appears.

4) Select orientation precision and click *"OK"*. A red dot appears on the top left corner of the projection screen.

5) Do one of the followings:

If you use Light Pen, follow the on-screen instructions, press the center of each dot accurately with Pen Tip.

If you use Electronic Wand, follow the on-screen instructions, press the center of each dot accurately with the wand tip and press the button on the wand holder.

6) After orientation, interface of orientation will close automatically, and IQBoard LT is ready to use.

Note:

1. *You can press "ESC" on the keyboard to close the orient window and start it again if you make a mistake during orientation.*
2. *Make Light Pen or Wand upright to press when orienting.*
3. *You need to re-orient IQBoard LT when the distance among projector, screen and Signal Receiver is changed, resolution of display is adjusted, or the driver on PC is replaced.*

Chapter 8 How to Use Light Pen and Electronic Wand

8.1 Operation Skills for Light Pen and Electronic Wand

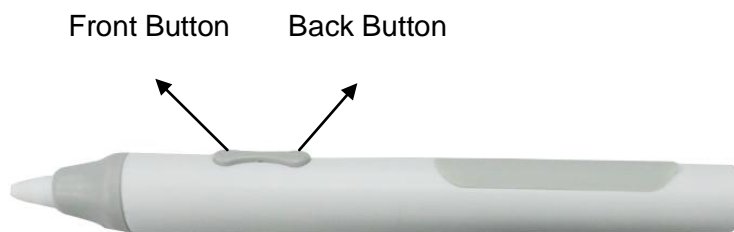| Action	Tool	Operation
Single Click	Light Pen	Raise Pen Tip about 1-2mm higher from the surface, then press the surface once.
	Electronic Wand	Aim the wand tip to the surface, and then press the button on the wand once and release.
Double Click	Light Pen	Raise Pen Tip about 1-2mm higher from the surface, then press the surface twice, or press the button on the pen body once. The time interval should not be too long.
	Electronic Wand	Aim the wand tip to the surface, and then press the button on the wand twice.
Right Click	Light Pen	Press the pen on the surface and hold for 2 seconds, right-key menu will appear.
	Electronic Wand	Press the button on the wand and hold for 2 seconds, right-key menu will appear.
Drag	Light Pen	Use the pen to press on an item and drag it to the appointed position (during which Pen Tip should not leave the surface).
	Electronic Wand	Aim the wand tip to an item, press the button on the wand 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 pen to directly write on the surface.
	Electronic Wand	If you use IQBoard Software, switch into "Board" mode, select a writing tool, then you can use Electronic Wand to directly write on the surface (press the button on the wand and hold when writing).
Remote Control	Electronic Wand	When you use Electronic Wand, the wand tip needn't touch the surface, you can operate in a certain distance. Operations are the same as above.

Note:

1. *Please take the battery out of Light Pen when you don't use it for a long time.*
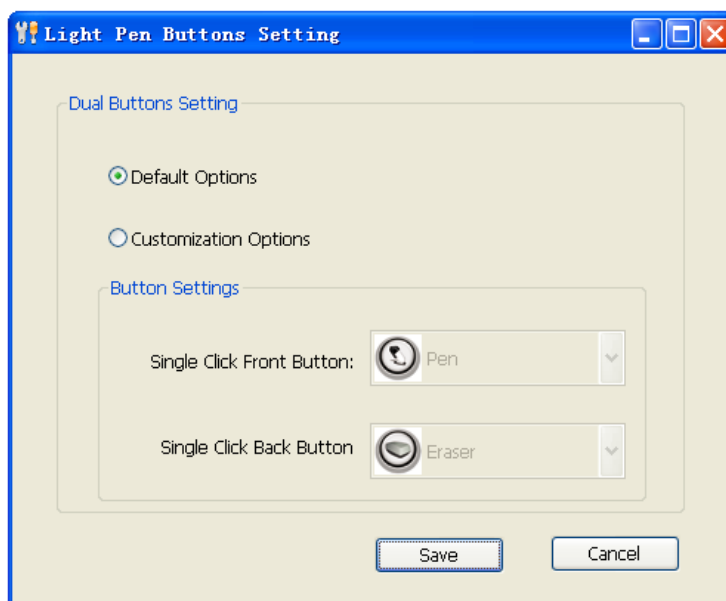2. *Hold the middle part of Light Pen and lean the pen at the angle of inclination of 50° when writing.*

8.2 How to Use Buttons on Light Pen

The Light Pen of IQBoard LT Series has 2 multi-functional interactive buttons. You can achieve dozens of functions by simply pressing the interactive buttons. Following are the operations of these interactive buttons. When using these buttons, please touch

the screen surface gently with Pen Tip. Do not press the surface tightly.

Front Button   Back Button

1) Select "*Start > Programs > IQBoard LT Series Universal Drivers > Light Pen Buttons Setting*" to set button functions. (See figure as follow)

2) Default Options

When in Windows Mode

Front Button:
To simulate Mouse double-click function.

Back Button:
Press the button once to execute right-click function of Mouse;

When in Board Mode, Annotating on Desktop, Status of Playing Page or Reviewing Operation

Front Button:
If the "Select" function is not activated, press the button once to use the "Select" function;

If the "Select" function is activated, press the button once to execute left-click function of Mouse, press twice to execute double-click and press to drag.

Back Button:

If no Freehand Drawing Tool is selected, press the button once to select a Freehand Drawing Tool;
If any Freehand Drawing Tool is selected, press the button once to select an Eraser;
If any Eraser is selected, press the button once to select a Freehand Drawing Tool.

2) Customization Options

When in Windows Mode

Front Button:
To simulate Mouse double-click function.

Back Button:
Press the button once to execute right-click function of Mouse.

When in Board Mode, Annotating on Desktop, Status of Playing Page or Reviewing Operation
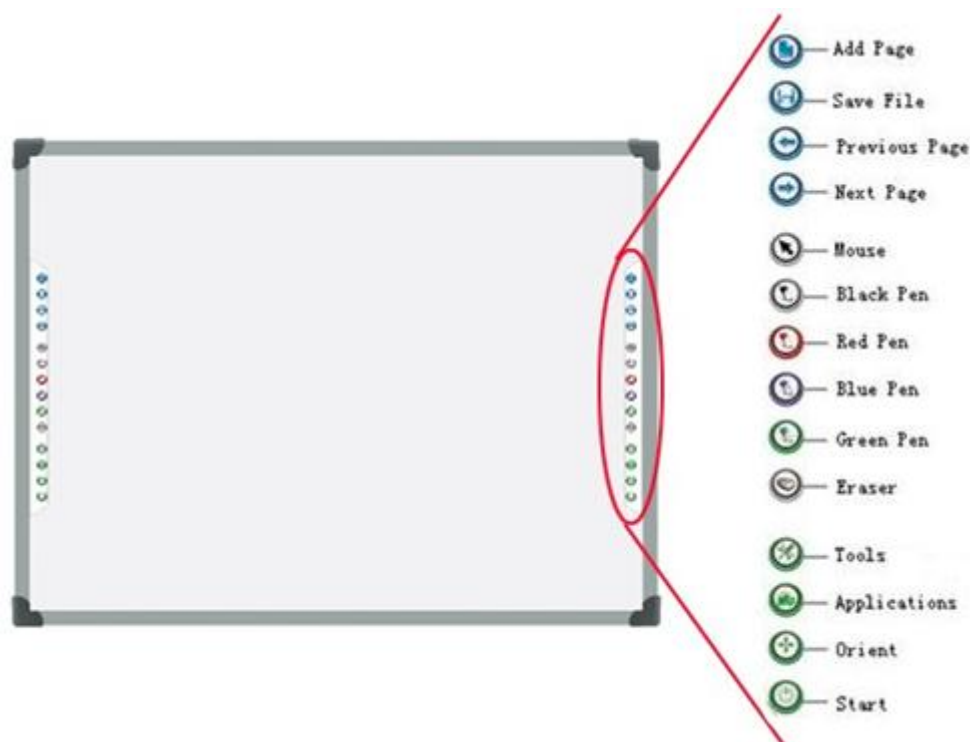
You can set the single-click function of Front Button and Back Button by yourself.

Note:

1. *Default eraser is Circle Eraser, and drawing tool is Pencil*
2. *Type of drawing tool and eraser used last time will be automatically remembered by the system. For example, if it's brush you used last time, when you press the button to switch to drawing tool, then it's still brush, so for eraser.*

8.3 How to Use Soft Hotkeys

Following is the introduction of frequently used soft hotkeys:

Add Page ⬡ **:** In Windows Mode, press this key to clear all annotations on screen. In Board Mode, press this key to add a new page in current .cdf file.

Save File ⬡ **:** In Windows Mode, press this key to save all annotations on screen to a page in current file. In Board Mode, press this key to save the current .cdf file.

Previous Page ⬡ **:** Press this key to go to the previous page.

Next Page ⬡ **:** Press this key to go to the next page.

Mouse ⬡ **:** Press this key, you can use electronic pen or writing pen (finger) to achieve click, double-click, and drag function. When using IQBoard Software, press this key to switch between Windows and Board Mode.

Pen ⬡⬡⬡⬡ **:** There are four "Pen" keys in different colors on the hotkey bar. Press one of these keys, you can write on the board in corresponding color. Press "Pen" twice to modify its properties.

Eraser ⬡ **:** Press this key, you can erase the writing content on board. In "Windows" mode, press this key twice to popup the "Shut Down Windows" window.

Tools ⬡ **:** Press this key to popup a quick access bar including shortcut icons for

frequently used tools in IQBoard Software. You can add up to 8 shortcut icons in this bar.

Applications : Press this key to popup a quick access bar including shortcut icons for frequently used applications. You can add up to 8 shortcut icons in this bar.

Start : Press this key to start the IQBoard Software.

Orient : Press this key to popup the orientation interface.

Note:
1. Except the "Start" and "Orient" keys, all hotkeys are functional only after IQBoard Software is started.
2. The functions of "Frequently Used Tools", "Frequently Used Applications" and "Orient" can be opened or closed by pressing the relevant hotkeys on the hotkey bar.
3. For IQBoard LT-D, when at Split-screen status in Dual-user Mode, the left hotkeys are for Teacher Pen, and the right for Student Pen. Teacher Pen can use the hotkeys including Mouse, 4 Freehand Drawing Tools, Eraser, Frequently Used Tools, Frequently Used Applications and Orient. Student Pen can use the hotkeys including Mouse, 4 Freehand Drawing Tools, Eraser, Frequently Used Tools and Frequently Used Applications. If it's not Split-screen status in Dual-user Mode, no difference between left and right hotkeys.

Chapter 9   FAQ

1. I can't use Light Pen or Electronic Wand to operate or write on the operating surface.

1) *IQBoard LT Series Universal Drivers* has not been correctly installed. Please uninstall the driver and re-install.

2) *IQBoard LT Series Universal Drivers* has not been started, or IQBoard LT has not been orientated. Please start the drivers and orient IQBoard LT.

3) The light signal emitted by Light Pen or Electronic Wand 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 power of Light Pen or Electronic Wand is weak. Please replace the batteries for Electronic Wand, or re-charge Light Pen.

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

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

2. I can use Light Pen or Electronic Wand to operate or write only on part of the operating surface..

1) You haven't done the orientation or the orientation failed. Please re-orient

2) Signal Receiver is not on the correct position. Please adjust Signal Receiver according to its mounting way.

3. When writing or operating by Light Pen or Electronic Wand, 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 power of Light Pen or Electronic Wand is weak. Please replace the batteries for Electronic Wand, or re-charge the Light Pen.

3) The posture of holding Light Pen is not correct. Please keep the angle between Light Pen and operating surface at 50 degree, 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) 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?

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

6. When orientating, some orientating points do not respond.
1) The distance between Receiver and screen is not appropriate, please readjust as per the recommended distance mentioned as above Chapter 6.
2) The receiver and computer are not well connected. Please check and re-connect.

For other questions, please consult our service center or local dealer.

Chapter 10 Cautions and Maintenance

10.1 Signal 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.

10.2 USB Cable and Extended Network Cable

Do not put the USB cable and Extended Network Cable on the floor where people might stumble over them. 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 and Extended Network Cable outside for a long time may shorten their life-span and cause other unnecessary damages, so please keep them carefully. If you use the whiteboard in the meeting room or class room, please fix the cables along the cable alley.

10.3 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.

10.4 Transport

Please handle with care, and do not put any weight on the receiver and adapter so as not to damage the parts. In long distance 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.

10.5 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.