INTERACTIVE FUNCTION MANUAL
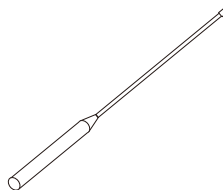
Contents of the Accessory Bag

Please make sure that following items are included in the Accessory Bag.
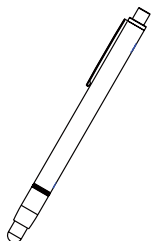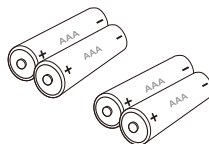If any items are missing, contact your dealer.
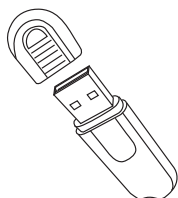
1. Accessory Bag
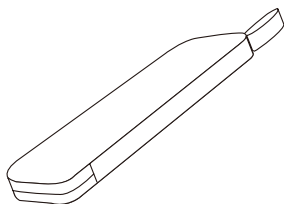
2. Pointer

3. Light Pen

4. Batteries (AAA)

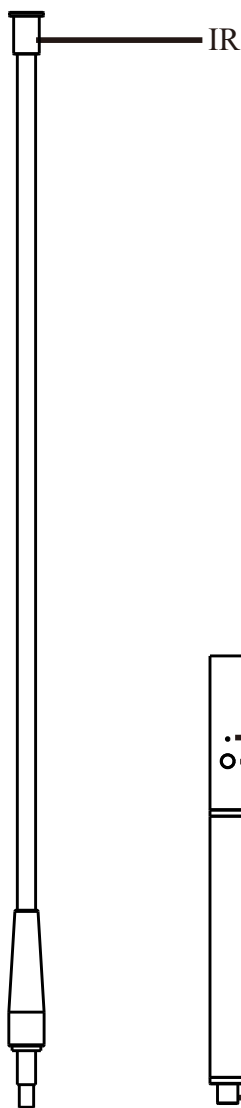## 5. USB Dongle

Function Key on the "Pointer Body"

IR

Before using the Pointer.
Screw the Rod part into the pointer body firmly please.

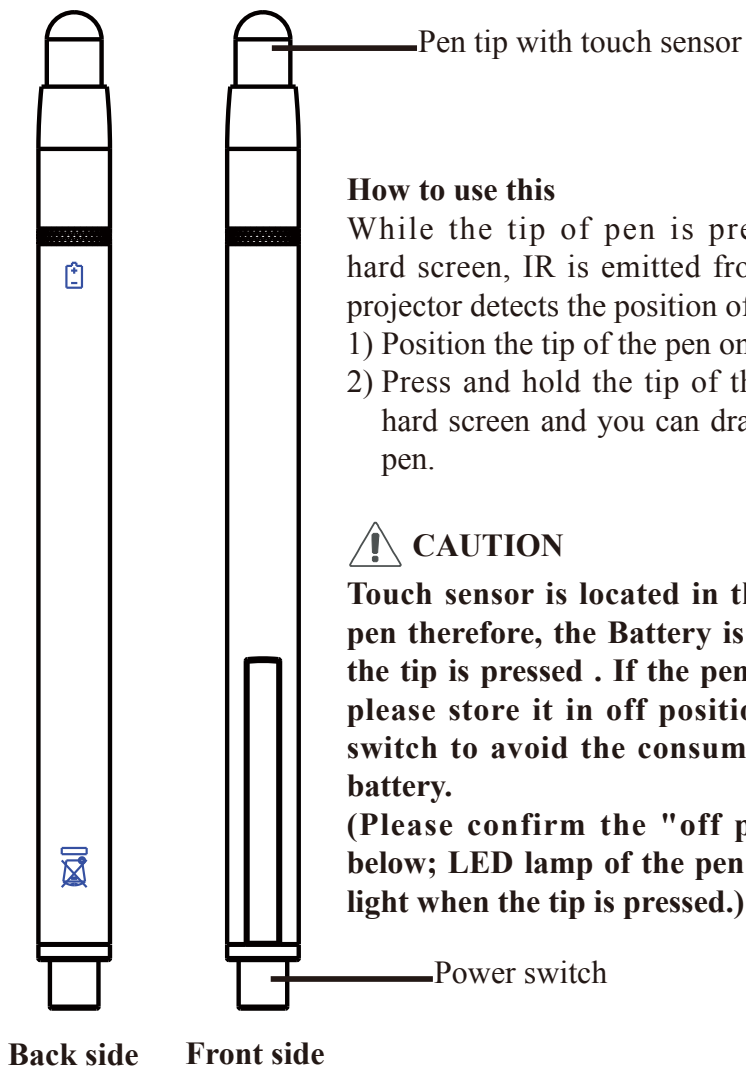**How to use this**
While pressing the button IR is emitted from the tip of the rod and the CMOS sensor in the projector detects the position of it. While the signal is emitted, the LED Lamp also lights green.

1) Position the tip of pointer on the screen.
2) Push the button to click the target as a mouse or push and hold the button to draw a line as a pen.

LED Lamp
Button: Mouse Left Key

Power switch

Function Key on the "Light Pen"

Pen tip with touch sensor

How to use this

While the tip of pen is pressed to the hard screen, IR is emitted from it and the projector detects the position of it.

1) Position the tip of the pen on the screen.
2) Press and hold the tip of the pen to the hard screen and you can draw a line as a pen.

⚠ CAUTION

Touch sensor is located in the tip of the pen therefore, the Battery is consumes if the tip is pressed . If the pen is not used, please store it in off position of Power switch to avoid the consumption of the battery.

(Please confirm the "off position" as below; LED lamp of the pen tip does not light when the tip is pressed.)

Power switch

Back side   **Front side**

Interactive function is provided by "LightPen3" software.

If "LightPen3" can not run smoothly in your computer, please use "LightPen3_Lite".

Please note there is a limit in the function of "LightPen3_Lite" and see the Comparison Table of "LightPen3" and "LightPen3_Lite" on page 2.

1. System Requirements

To ensure the interactive function work properly, please check your computer system to see if it meets the following conditions.

LightPen3

System Requirements	
OS Required	Microsoft Windows XP(SP2)(32bit) / Vista (32bit)/Windows 7 (32bit/64bit)
Processor Type	Intel® Core™2 Duo 2.0GHz or above (dedicated GPU is recommended)
RAM	2GB above
Min. Free disk space	100 MB

LightPen3_Lite

System Requirements	
OS Required	Microsoft Windows XP(SP2)(32bit) / Vista (32bit) /Windows 7 (32bit/64bit)
Processor Type	Intel Pentium-M 1.5GHz or above
RAM	2GB above
Min. Free disk space	100 MB

Comparison Table of LightPen3 and LightPen3_Lite

		Interactive software	LP3	LP3_Lite
Function List of Intaractive Software	1	Red pen	o	o
	2	Green pen	o	o
	3	Blue pen	o	o
	4	Marker pen	o	o
	5	Drawing tools	o	o
	6	Eraser	o	o
	7	Clear all	o	o
	8	Save screen	o	o
	9	Dual Pen	o	x
	10	White board	o	o
	11	Page-up	o	o
	12	Page-down	o	o
	13	Print out	o	o
	14	Redraw	o	x
	15	Redo	o	x
	16	Undo	o	one step
	17	Select object	o	x
	18	Rotate object	o	x
	19	Scale object	o	x
	20	Move object	o	x
	21	On Screen Key Board	o(exc/v)	o(exc/v)
	22	Writing on flash or movie	o	x
	23	Anti-alias	o	o
	24	Smooth	o	o
	25	Spotlight	o	x
	26	Curtain	o	x

Note: o :Include this function x :Not include this function o(exc/v) :Except Vista

* If you use Windows 7, it is available to use Ink Tools of Microsoft Office
  by using mouse function of LightPen3 and LightPen3_Lite.
 For detail, please refer Microsoft Office support.

2. Software Installation

2.1 Before Installation

Insert the USB Dongle to the USB-A type connector on the PC.

2.2 Driver Installation

Step 1. Insert the "Owner's Manual" CD-ROM into the CD drive.

Step 2. Open the "LightPen Software for Windows" folder in the CD-ROM.

Step 3.Double click " Setup.exe" by mouse.

And then the window will appear as below.


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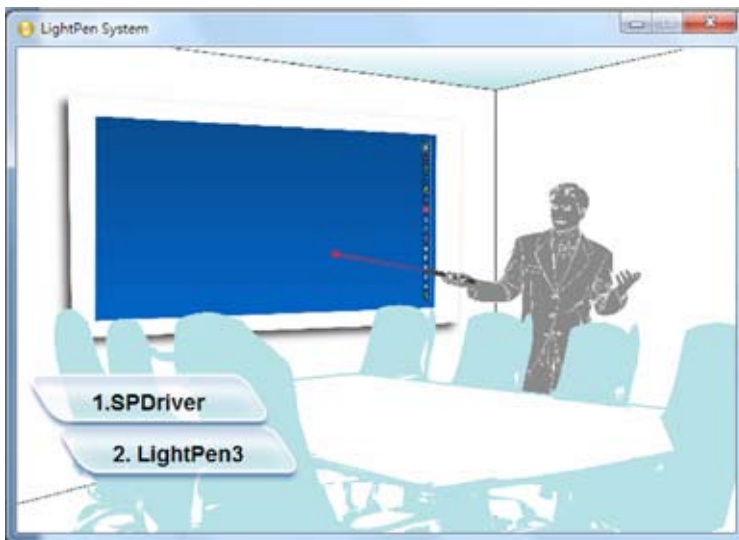
Step 4.
 (1) click " SPDriver" by mouse.
   And then "Setup Wizard" window will appear as below.
    Click "Next" to install.

 (2) You can choose to install folder depend on your requirements, or
     use the default folder. Then click "Next" to continue.
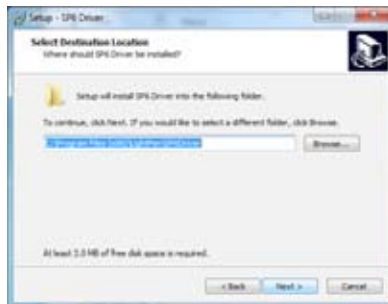
 (3)Please wait for a while for the installation.Installation is
     finished.

2.3 LightPen **Software Installation**

Step 1. Insert the "Owner's Manual" CD-ROM into the CD drive.
Step 2. Open the "LightPen Software for Windows" folder in the CD-ROM.
Step 3.Double click " Setup.exe" by mouse.
    And then the window will appear as below.
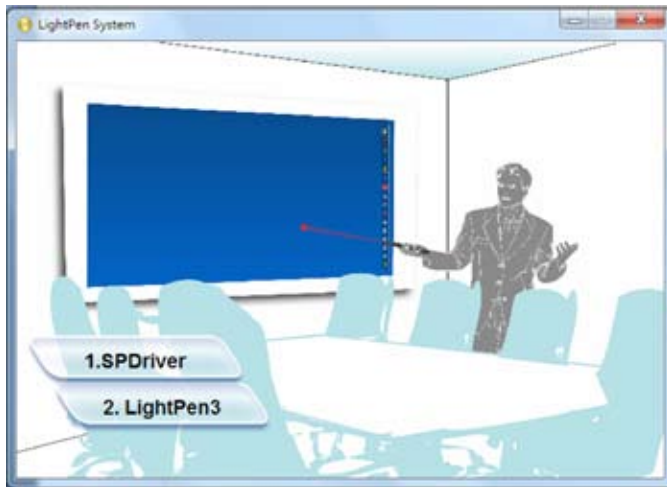
Step 4.
 (1) click " LightPen3" by mouse.
    And then "Setup Wizard" window will appear as below.
    Click "Next" to install.

(2) You can choose to install folder depend on your requirements, or use the default folder. Then click "Next" to continue.
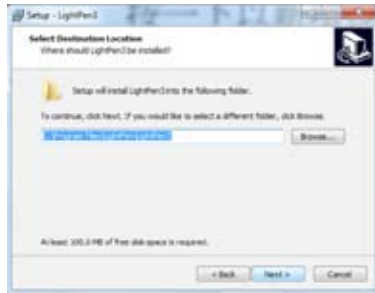
(3) Confirm the information listed and select "Install".
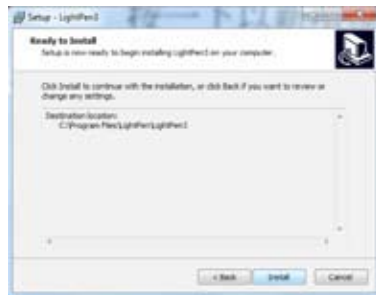
(4) Please wait for a while for the installation. Installation is finished.
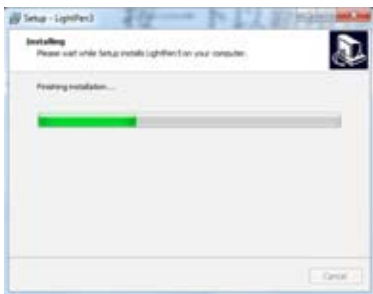
3. **Initial Setup for Interactive Function**

3.1 After SPDriver finished,from "Start Menu/LightPen/SPDriver/
     SPDriver" to execute it. Connect supplied USB cable between
     projector and your PC which show below icon.

(Windows 7/VISTA)

(Win XP)

3.2 Click the mouse left key on the icon in the task bar to show
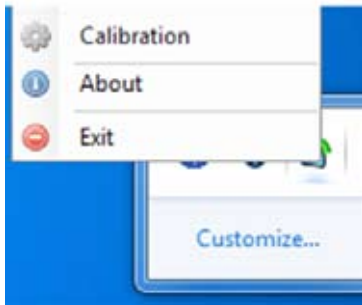
the menu.

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3.3 Select the "Calibration" to enter the calibration process. Use your pen or pointer to touch the circle shown on the screen. Then another circle appear, repeat this process until the 4th circle is fininshed.
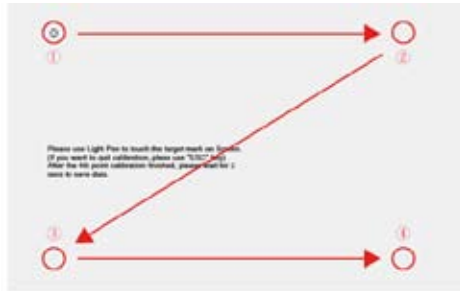
3.4 After calibration by 4 points on the screen, PC system will save data, as shown as below, please wait.
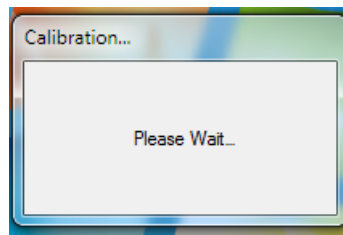
3.5 After you have finished calibration, you can use either pen or pointer as a mouse on the projection board or wall.

3.6 How to execute driver again

Execute the driver from "Start Menu / LightPen / SPDriver/ SPDriver".
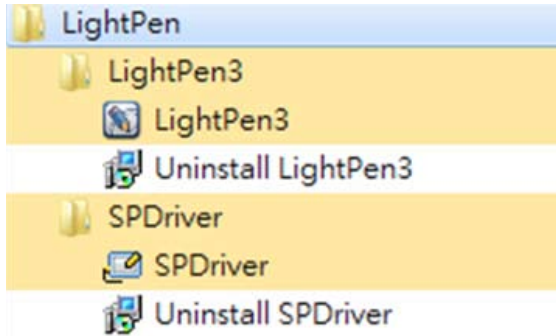
4. How To Use Interactive Function in LightPen3

4.1 LightPen3 Function

When you complete the installtion of LightPen3 and from "Start Menu/LightPen/LightPen3/LightPen3" to start it, you see the tool bar in the right side as shown below.

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4.2 Function of each icon in the Tool bar

Icon		Description
	Mouse	Change function to Computer Mouse.
	Red pen	Change function to red pen.
	Green pen	Change function to green pen.
	Blue pen	Change function to blue pen.
	Marker pen	Change function to marker pen.
	Drawing tool	Draw a circle, a square, a triangle or a straight line.
02	**Fineness and color of pen**	Select the fineness and color of pen.
	Eraser	Erase drawning.
	Clean all	Erase drawning on the screen all at once.
	Save file	Save the current page into file in computer.
	Dual Pen	<Full Screen Mode> / <Split Screen Mode> support two pens writing at the same time
	White Board	Change function to white board.
	Page up	Go to last page.
	Page down	Go to next page.
	Edit tool	Edit drawing.
	Keyboard	On screen keyboard.
	Exit	Exit the application.

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4.3 Advanced function in Tool bar

(1) Drawing Tool

Select , then Drawing Tool function menu will be shown on the screen as below. Plese select the icon you want to use.

(2) Dual Pen

Select , then Dual Pen Mode setting menu will be shown on the screen as below. Please choose the screen mode to use.

Icon	Description
	Use two pens at the same time on full screen by same setting
	Use two pens at the same time on two split screen by different setting

(2.1) <Full Screen Mode>

Use two pens at the same time on full screen by same setting.

<Split Screen Mode>

Use two pens at the same time on two split screen by different setting.

(2.2) The description of two pens function

Icon		Description
	Red pen	Change function to red pen.
	Green pen	Change function to green pen.
	Blue pen	Change function to blue pen.
	White pen	Change function to white pen.
	Thin round pen	Draw with a thin round script.
	Thick round pen	Draw with a thick round script.
	Thick angle pen	Draw with an angle script.
	Eraser	Erase drawning.
	Clean all	Erase drawning on the screen all at once.
	Insert Image	Insert an image as the background.
	Save file	Save the current page into file in computer.
	Exit	Exit the application.

(3) 🛏 **Whiteboard Mode**

Select 🛏 screen will change to white color background. Original Page up 🔼 and Page down 🔽 function icon on Toolbar also change to 🖼 import background icon and 🛏 import whiteboard icon.

i. Select 🖼, you can see the below interface. You can select any picture you want to be used on background.
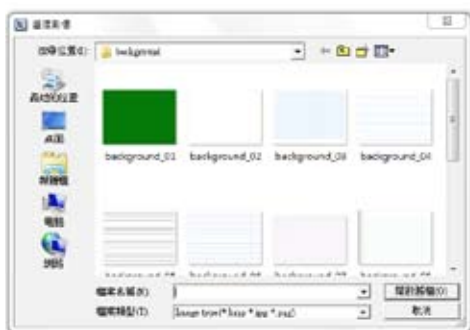
ii. Select 🛏, background will turn to White board mode.

If you want to exit White board mode, just click 🖳 again.

(4). ⚙ Edit Tool

Select ⚙, edit tool bar is shown as blow. Please select the function you want to use.

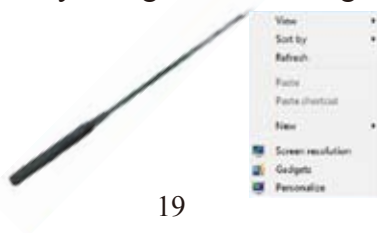| Icon	Description
◎	Select drawing line as an object. An object can enlarge, decrease, or move.
◎	Rotate the drawing object you choice.
🖨	Print the current page you are seeing.
↩	Undo the last operation.
↪	Redo the last operation.
🖼	Spotlight function.
⬇	Curtain function.
🔃	change the vertical toolbar to a horizontal toolbar.
⇄	switch the toolbar position to the right/ left side.

4.4 Mouse Mode

Mouse pointer can be replaced by the Pointer or LightPen.

The left click or double click can be done by pressing the button when using Pointer or the tip of the Light Pen on the screen.

If mouse pointer stays at the same position for 2-3 seconds, then it can be automatically changed to mouse right key function.

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4.5 Switch to Mouse or Pen mode

Mouse mode or Pen mode can be changed by clicking the tip of the Pointer or the Pen on the top or bottom edge slightly outside of the projected image.

In case of the Mouse mode, ⬭ icon is shown in the task bar.

In case of the Red Pen mode, 🖍 icon is shown in the task bar.

Menu icon with yellow square mark is shown in the tool bar therefore, it is convenience to confirm the present situation.

4.6 Change Toolbar Location

There is a quick way to change the position of the tool bar or hide/show it. Place the tip of "Pointer" or "Light Pen" on the left or right edge slightly outside the projected image, then press the button of the pointer or the tip of the pen to the screen.

4.7 How to execute LightPen3 software again

Execute the driver from "Start Menu / LightPen / LightPen3 / LightPen3".

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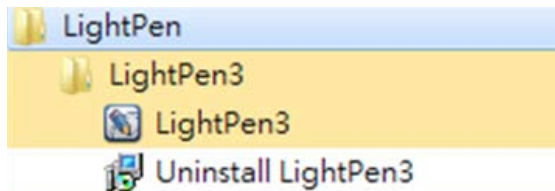
5. LightPen Software Installation

Before you begin installation of LightPen3_Lite, please uninstall LightPen3.

Step 1. Insert the "Owner's Manual" CD-ROM into the CD drive.

Step 2. Open the "LightPen Software for Windows" folder in the CD-ROM.

Step 3. Open the "Software" folder and choose the "LightPen3_Lite" folder.

Step 4.

(1) Double click " Setup_Lite.exe" by mouse.

And then "Setup Wizard" window will appear as below.
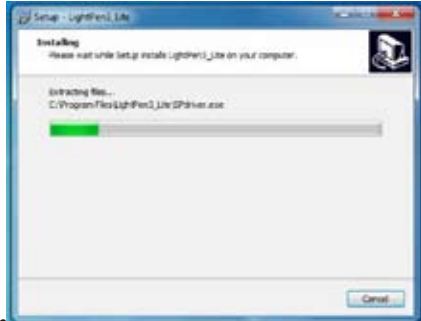
Click "Next" to install.

(2) You can choose to install folder depend on your requirements, or use the default folder. Then click "Next" to continue.

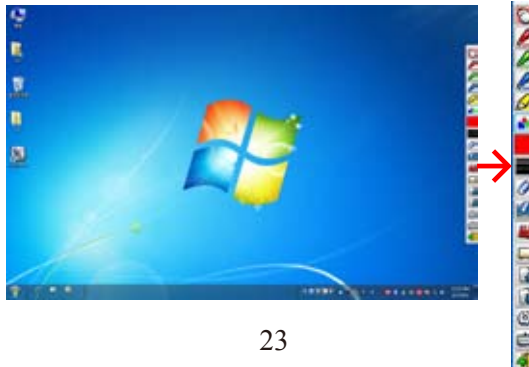
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(3)Please wait for a while for the installation

(4) Installation is finished. Click "Finish" to exit setup.

6. How To Use Interactive Function in Light Pen3_Lite

6.1 LightPen3_Lite Function

When you complete the installtion of LightPen3_Lite and start it, you see the tool bar in the right side as shown below.

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6.2 Function of each icon in the Tool bar

Icon		Description
	Mouse	Change function to Computer Mouse.
	Red pen	Change function to red pen.
	Green pen	Change function to green pen.
	Blue pen	Change function to blue pen.
	Marker pen	Change function to marker pen.
	Drawing tool	Draw a circle, a square, a triangle or a straight line.
	Color of Pen	Select the color of pen.
	Fineness of pen	Select the fineness of pen.
	Eraser	Erase drawing.
	Clean all	Erase drawing on the screen all at once.
	Save file	Save the current page into file in computer.
	White Board	Change function to white board.
	Page up	Go to last page.
	Page down	Go to next page.
	Edit tool	Edit drawing.
	Keyboard	On screen keyboard.
	Exit	Exit the application.

6.3 Advanced function in Tool bar

(1) 🔴 Drawing Tool

Select 🔴, then Drawing Tool function menu will be shown on the screen as below. Plese select the icon you want to use.

(2) 🔲 Whiteboard Mode

Select 🔲, screen will change to white color background. Original Page up 📘 and Page down 📗 function icon on Toolbar also change to 📥 import background icon and 📤 import whiteboard icon.

 i. Select 📥, you can see the below interface. You can select any picture you want to be used on background.

ii. Select 🖵 , background will turn to White board mode.

If you want to exit White board mode, just click 🖼 again.

(3). ⚙ Edit Tool

Select ⚙ , edit tool bar is shown as blow. Please select the function you want to use.

Icon	Description
↩	Undo the last operation.
🖨	Print the current page you are seeing.

6.4 Mouse Mode

Mouse pointer can be replaced by the Pointer or LightPen.

The left click or double click can be done by pressing the button when using Pointer or the tip of the Light Pen on the screen.

If mouse pointer stays at the same position for 2-3 seconds, then it can be automatically changed to mouse right key function.

View	▸
Sort by	▸
Refresh	
Paste	
Paste shortcut	
New	▸
🖼 Screen resolution	
📑 Gadgets	
🖌 Personalize	

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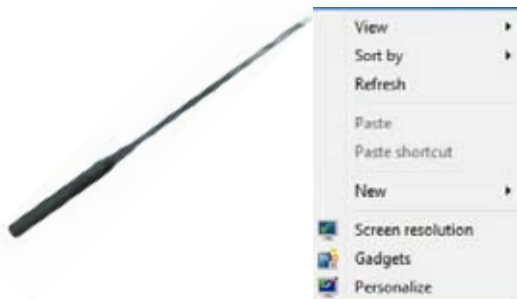
6.5 Switch to Mouse or Pen mode

Mouse mode or Pen mode can be changed by clicking the tip of the Pointer or the Pen on the top or bottom edge slightly outside of the projected image.

6.6 Change Toolbar Location

There is a quick way to change the position of the tool bar or hide/show it. Place the tip of "Pointer" or "Light Pen" on the left or right edge slightly outside the projected image, then press the button of the pointer or the tip of the pen to the screen.

6.7 How to execute LightPen3_Lite software again

If you exit LightPen3_Lite and you want to execute it again, you can start software from "Start Menu / LightPen3_Lite / LightPen3_Lite".

7. PowerPoint Tool

This function can be executed by LightPen3 and LightPen3_Lite.
The PowerPoint Tool does not support Microsoft Office PowerPoint 2002.
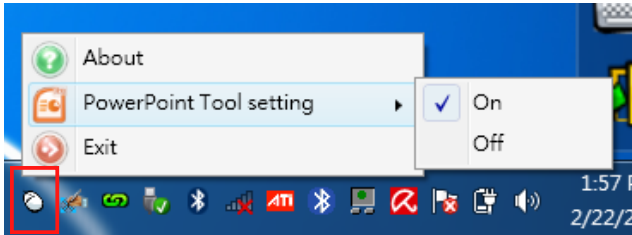
If you click mouse icon on the task bar and select "PowerPoint Tool setting" as "ON", when you use PowerPoint and show your PowerPoint file as "Presentation mode", PowerPoint tool will be shown in the right side of screen.
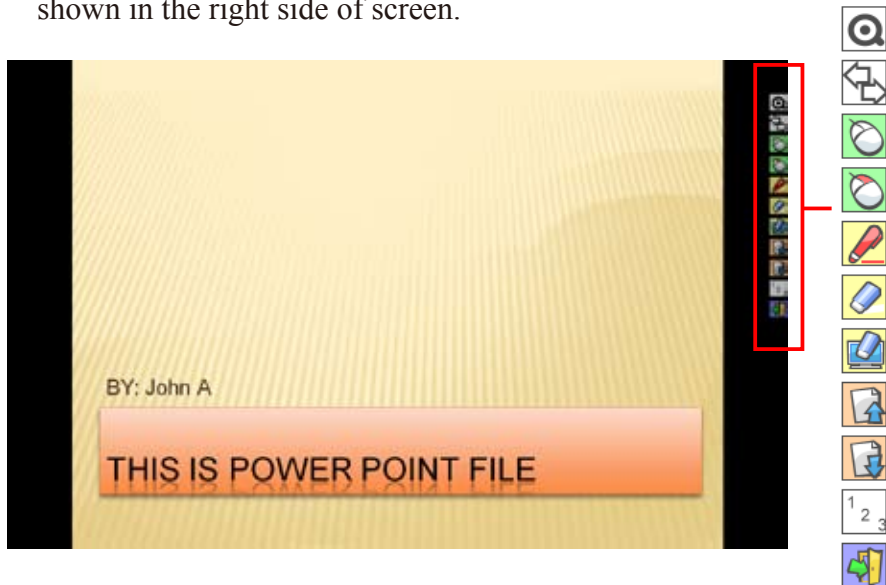
When you exit "Presentation mode", PowerPoint tool will be closed automatically.

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7.1 Function of each icon in PowerPoint Tool bar

Icon	Description
	Make toolbar as a small icon.
	Change PowerPoint Toolbar to another side.
	Change function to Computer Mouse.
	Change function to Computer Mouse Right Key.
	Change function to red pen.
	Erase drawning.
	Erase drawning on the screen all at once.
	Go to last page.
	Go to next page.
	Select page.
	Exit Presentation Mode.

Operation Guide for Mac

Interactive function is provided by "LightPen3" software

1. System Requirements

To ensure the interactive function work properly, please check your computer system to see if it meets the following conditions.

LightPen3

System Requirements	
OS Required	Mac OS X v10.5 above
Processor Type	Intel processeor
RAM	512 MB above
Min. Free disk space	100 MB

2. Software Installation
2.1 Driver Installation

※When you connect supplied USB cable between projector and your PC, the folder of SPDriver will pop-up. Please completed the installation process from step 3.

Step 1. Insert the "Owner's Manual" CD-ROM into the CD drive.
Step 2. Open the "LightPen Software for Mac" folder in the CD-ROM and copy"mac.zip" to the disk.
Step 3.Double click and move SPDriver ICON to computer screen and execute it.

2.2 LightPen Installation

Step 1. Insert the "Owner's Manual" CD-ROM into the CD drive.
Step 2. Open the "LightPen Software for Mac" folder in the CD-ROM and copy"LightPen3.zip" to the disk.
Step 3.Double click and move LightPen3 ICON to computer screen and execute it.

3. Initial Setup for Interactive Function

3.1 Connect supplied USB cable between projector and your PC which show below icon.

3.2 Click the mouse left key on the 🔲 icon in the task bar to show the menu.

3.3 Select the "Calibration" to enter the calibration process. Use your pen or pointer to touch the circle shown on the screen. Then another circle appear, repeat this process until the 4th circle is fininshed.

3.4 After you have finished calibration, you can use either pen or pointer as a mouse on the projection board or wall.

4. How To Use Interactive Function in LightPen3

4.1 LightPen3 Function

When you complete the installtion of LightPen3 and start it, you see the tool bar in the right side as shown below.

4.2 Function of each icon in the Tool bar

Icon		Description
	Mouse	Change function to Computer Mouse.
	Red pen	Change function to red pen.
	Green pen	Change function to green pen.
	Blue pen	Change function to blue pen.
	Marker pen	Change function to marker pen.
	Drawing tool	Draw a circle, a square, a triangle or a straight line.
	Fineness and color of pen	Select the fineness and color of pen.
	Eraser	Erase drawning.
	Clean all	Erase drawning on the screen all at once.
	Save file	Save the current page into file in computer.
	White Board	Change function to white board.
	Page up	Go to last page.
	Page down	Go to next page.
	Edit tool	Edit drawing.
	Keyboard	On screen keyboard.
	Exit	Exit the application.

4.3 Advanced function in Tool bar

(1) 🔺 Drawing Tool

Select 🔺, then Drawing Tool function menu will be shown on the screen as below. Plese select the icon you want to use.

(2) 🖵 Whiteboard Mode

Select 🖵, screen will change to white color background. Original Page up 🔼 and Page down 🔽 function icon on Toolbar also change to 🖼 import background icon and 🖵 import whiteboard icon.

i. Select 🖼, you can see the below interface. You can select any picture you want to be used on background.

ii. Select ⊟ , background will turn to White board mode.

If you want to exit White board mode, just click 🖼 again.

(3). ⚙ Edit Tool

Select ⚙, edit tool bar is shown as blow. Please select the function

you want to use.

Icon	Description
🎯	Select drawing line as an object. An object can enlarge, decrease, rotate, delete or move .
🎯	Rotate the drawing object you choice.
🖨	Print the current page you are seeing.
↩	Undo the last operation.
↪	Redo the last operation.

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4.5 Switch to Mouse or Pen mode

Mouse mode or Pen mode can be changed by clicking the tip of the Pointer or the Pen on the top or bottom edge slightly outside of the projected image.

In case of the Mouse mode, ⊘ icon is shown in the task bar.

In case of the Red Pen mode, 🖍 icon is shown in the task bar.

Menu icon with yellow square mark is shown in the tool bar therefore, it is convenience to confirm the present situation.

4.6 Change Toolbar Location

There is a quick way to change the position of the tool bar or hide/show it. Place the tip of "Pointer" or "Light Pen" on the left or right edge slightly outside the projected image, then press the button of the pointer or the tip of the pen to the screen.

Interactive function is provided by "SPDriver".

1. System Requirements

To ensure the interactive function work properly, please check your computer system to see if it meets the following conditions.

Driver

System Requirements	
OS Required	Linux OS Ubuntu 10.04,Debian 5.05, Suse 11.3
Processor Type	Intel Pentium-4 2.0GHz or above (dedicated GPU is recommended)
RAM	512 MB above
Min. Free disk space	100 MB

2. Driver Installation

※When you connect supplied USB cable between projector and your PC, the folder of SPDriver will pop-up. Please completed the installation process from step 3.

*Please login as root user before installation.

Step 1. Insert the "Owner's Manual" CD-ROM into the CD drive.

Step 2. Open "SPDriver for Linux" folder.

Step 3. Choose 1-setup and continue the installation process.

Step 4. Installation is complete.

3. Initial Setup for Interactive Function

3.1 Connect supplied USB cable between projector and your PC which show below icon.

3.2 Click the mouse left key on the ⬛ icon in the task bar to show the menu.

3.3 Select the "Calibration" to enter the calibration process. Use your pen or pointer to touch the circle shown on the screen. Then another circle appear, repeat this process until the 4th circle is fininshed.

3.4 After you have finished calibration, you can use either pen or pointer as a mouse on the projection board or wall.

1. Q: Why does it show "No LightPen found"?

A: Reasons for this might be:

(1) Check the icon in the notify system tray to make sure if SP6 Driver have been installed.

(1-1) If screen is shown as following images, it means you should connect the USB dongle to computer, then execute driver again, as figure (A).

(A)

(1-2) In case of Windows OS, if the following image (B) pop up, it indicates that USB dongle is not connected to computer or the USB port is out of order. If icon is shown as (C), it means you can use LightPen program.

(B)   **(C)**

(2) USB port on computer malfunctions. Please check if the USB port is functioning or not. If not, please consult with IT engineer.

2. Q: Why I cannot execute calibration on the circle targe mark?

A: (1) Please check if "Pointer" or "Light Pen" works:

(1-1) Please check if "Pointer" or "Pen" battery is low or battery cap is loose.

(1-2) When using "Pointer" or "LightPen", be sure to locate the tip of the "Pointer" or "LightPen" in the site of the CMOS sensor in front of the projector. If the sensor cannot see it, the Interactive system does not work.
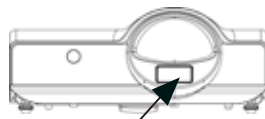
CMOS Sensor

The writing should be avoided in the shadows.

Using Light pen to maintain 25° or above with projection screen.

(2) The ambient light may be too strong. Take the light out of the site of the CMOS sensor.

Strong ambient light is usually caused by the following:

(2-1) Sunlight through the windows near the screen.

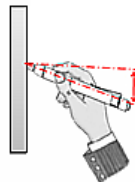(2-2) Light source working close to the sensor or the screen.

Please quit the SPDriver and execute again, if you see the window shown as Question5. Please take the light out until you can't see any light in Window.

3. Q: Why the cursor is not at the position that "Pointer" or "LightPen" pointed to?

A: Possible reasons for this are:
(1) The system is not calibrated well. Try to point to the "center" of circle target when you run calibration.(See Page 5~6 or 16~17)
(2) The position of the projector, screen or projection size has been changed.
(3) The image resolution has been changed.
Running the calibration procedure again will solve the problem.

4. Q: Why is the cursor jumping?

A: This may be caused by strong ambient light interference. Try to avoid strong ambient light interference, especially strong sun light directly projected on the screen. (Please refer to the Question 2-2.)

5. Q: Why does the window screen appear "Strong lighting in the environment may cause light pen to stop functioning normally." ?

A: If this window is shown automatically after you start LightPen software, it is because the ambient light is too strong. The light is shown white in the window. Please take off the light out of the sensor's site by moving the screen or turning off the light or using curtains etc..