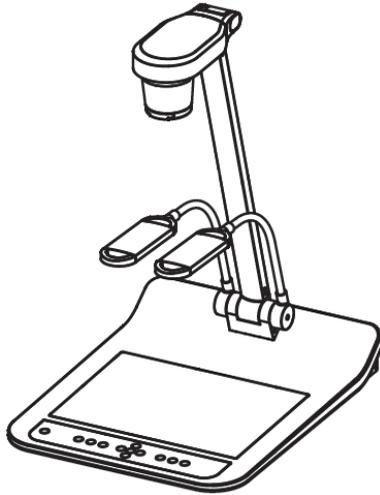# PS760
Document Camera

User Manual

[Important]

> **To download the latest version of Quick Start Guide, multilingual user manual, software, or driver, etc., please visit Lumens™**
> **http://www.Mylumens.com/goto.htm**

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Copyright Information

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Chapter 1   Safety Instructions

Always follow these safety instructions when setting up and using the Document Camera:

1. Do not place Document Camera in tilted position.
2. Do not place the Document Camera on an unstable trolley, stand or table.
3. Do not use the Document Camera near water or source of heat.
4. Use attachments only as recommended.
5. Use the type of power source indicated on the Document Camera. If you are not sure of the type of power available, consult your dealer or local electricity company for advice.
6. Place the Document Camera on a place that it can be unplugged easily.
7. Always take the following precautions when handling the plug. Failure to do so may result in sparks or fire.
   - Ensure the plug is free of dust before inserting it into a socket.
   - Ensure that the plug is inserted into the socket securely.
8. Do not overload wall sockets, extensions leads or multi-way plug boards as this may cause fire or electric shock.
9. Do not place the Document Camera where the cord can be stepped on as this may result in fraying or damage to the lead or the plug.
10. Unplug the projector from the wall socket before cleaning. Use a damp cloth for cleaning. Do not use liquid or aerosol cleaners.
11. Do not block the slots and openings in the projector case. They provide ventilation and prevent the Document Camera from overheating. Do not place the Document Camera on a sofa, rug or other soft surface or in a built-in installation unless proper ventilation is provided.
12. Never push objects of any kind through cabinet slots. Never allow liquid of any kind to spill into the Document Camera.
13. Except as specifically instructed in this User Manual, do not attempt to operate this product by yourself. Opening or removing covers may expose you to dangerous voltages and other hazards. Refer all servicing to licensed service personnel.
14. Unplug the Document Camera during thunderstorms or if it is not going to be used for an extended period. Do not place the Document Camera or remote control on top of heat-emitting equipment or heated objects such as a car, etc.
15. Unplug the Document Camera from the wall outlet and refer serving to licensed service personnel when the following situations happen:
   - If the power cable or plug becomes damaged or frayed.
   - If liquid is spilled into it or the Document Camera has been exposed to rain or water.

<Note> Using an incorrect battery type in the remote control may result in breakdown. Follow relevant instructions on how to dispose of used batteries.

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■ Precautions

Warning: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

This Document Camera has a 3-wire AC line Plug. This is a safety feature to ensure that the plug will fit into the power outlet. Do not try to disable this safety feature.

If the Document Camera will not be used for an extended time, unplug it from the power socket.

⚡	Note	⚡
	Risk of Electric Shock	
Note: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to licensed service Personnel only.		
⚡ This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock.	⚠	This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.

■ FCC Warning

This equipment has been tested and found to comply with the limits for a Class A or B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

■ EN55022 (CE Radiation) Warning

This product is intended for use in a commercial, industrial, or educational environment. It is not intended for residential use.

This is a Class A product. In a domestic environment it may cause radio interference, in which case the user may be required to take adequate measures. The typical use is in a conference room, meeting room or auditorium.

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Chapter 2   Package Contents

PS760	Quick Start Guide	4-Step Card (Note to Teacher)
	(For download of other language versions, please visit Lumens website)	

VGA Cable	USB Cable	Audio Cable
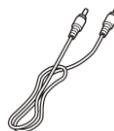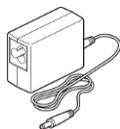
Power Adapter	Mini-DIN Adapter	Power Cord
		Appearance may vary depending on country/region

Microscope Adapter	Remote Control	Remote Control Holder

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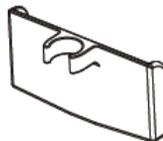
Chapter 3   Product Overview
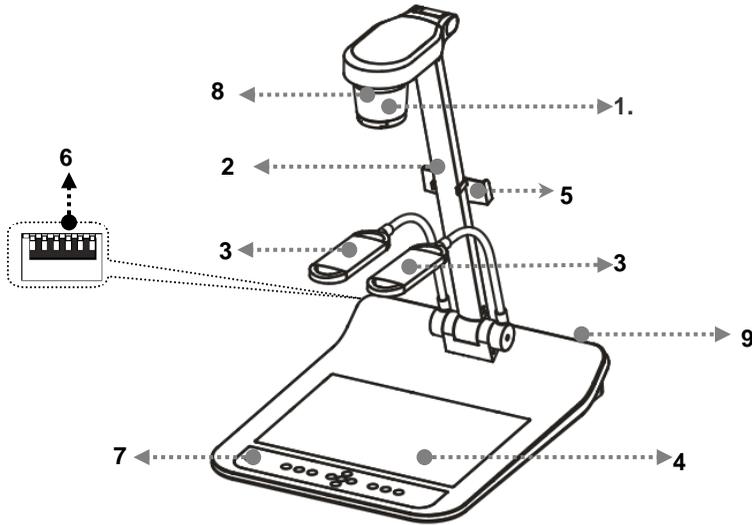
1. Lens
2. Camera arm
3. Auxiliary floodlight and lamp arm
4. Backlight
5. Remote Control Holder
6. DIP Switch
7. Control panel
8. Remote sensor
9. Input/output port

3.1 Relative position of the presenter and document

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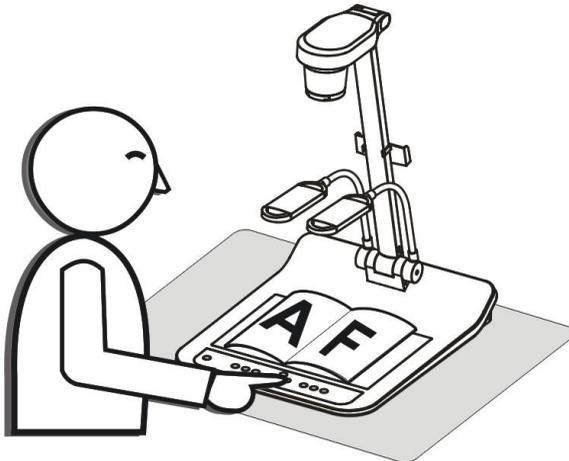
Chapter 4   Installation and Connections

4.1 System diagram

Computer (1)   Projector or monitor   COMPUTER or TV   Router or HUB   DVD   Computer

Computer (2)   Projector or monitor   LCD TV   TV   Computer (1) and Computer (2)   Earphone or speaker

4.2 Connecting to a projector or monitor

Power Adapter
VGA Cable
Power Cord
Monitor or Projector
AC Outlet

4.3 Connecting to a Computer and Use Lumens Software or an Interactive Whiteboard (IWB)

Power Adapter
Power Cord
Projector
USB Cable
IWB
VGA Cable
AC Outlet
USB Cable
Computer

● Software can be downloaded from Lumens website.

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4.4 Connecting to Internet
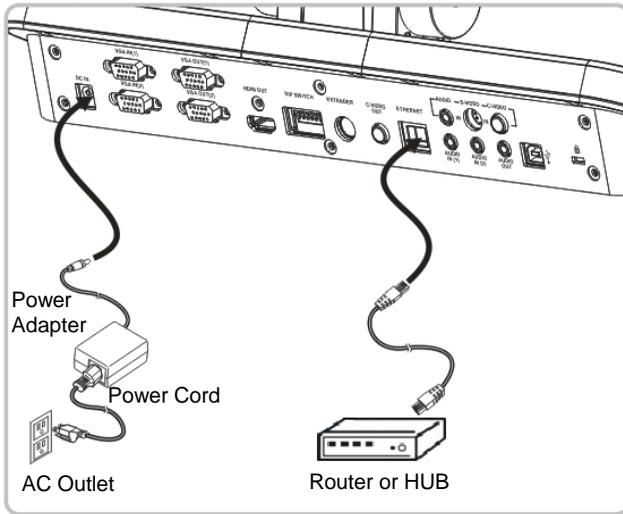
- For the related setting, please refer to **7.28 I would like to use the network remote control function**.

4.5 Connecting to a Projector, 2 PCs, and a Monitor at the Same Time
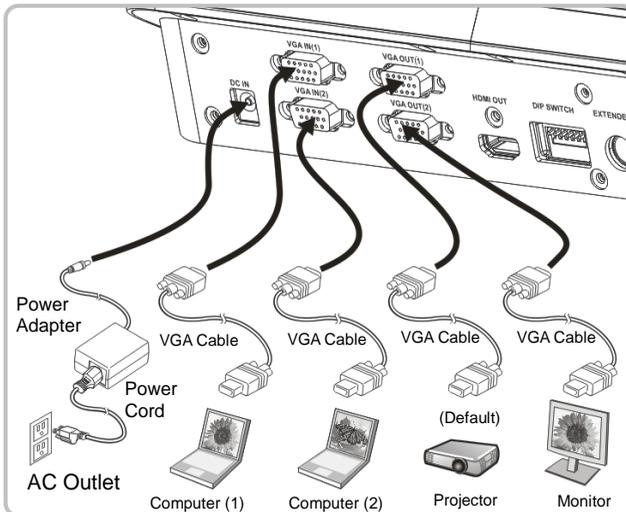
- Press 🔄 button to switch the image source.
- For VGA 1 setting, refer to **7.2 I would like to switch image sources**.
- For VGA 2 setting, refer to **7.3 I would like to set the image source of VGA OUT2**.

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4.6 Connecting to a TV (C-Video or S-Video)
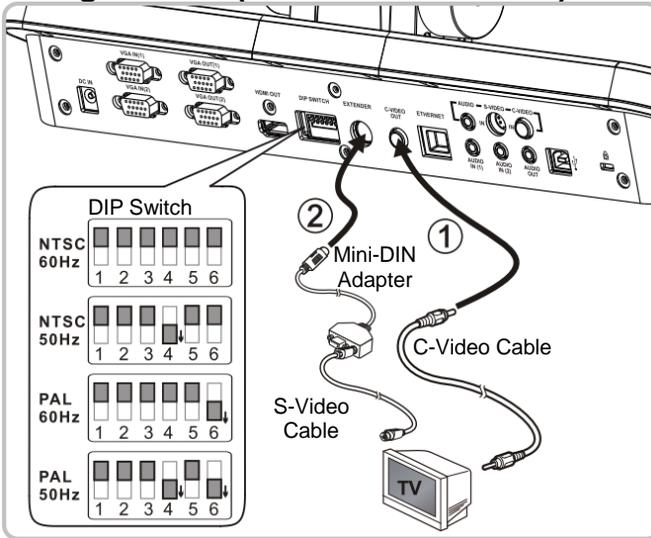
- NTSC: USA, Taiwan, Panama, Philippines, Canada, Chile, Japan, Korea, and Mexico.
- PAL: Countries/regions not listed above.
- Please adjust it to be suitable for the local voltage frequency of 50/60Hz. For the frequency in actual use, please refer to the manual. (Attachment 1)

<Note> You should unplug and reconnect the power cord, and then restart the machine for DIP Switch Settings to take effect.

4.7 Connecting to an HDTV

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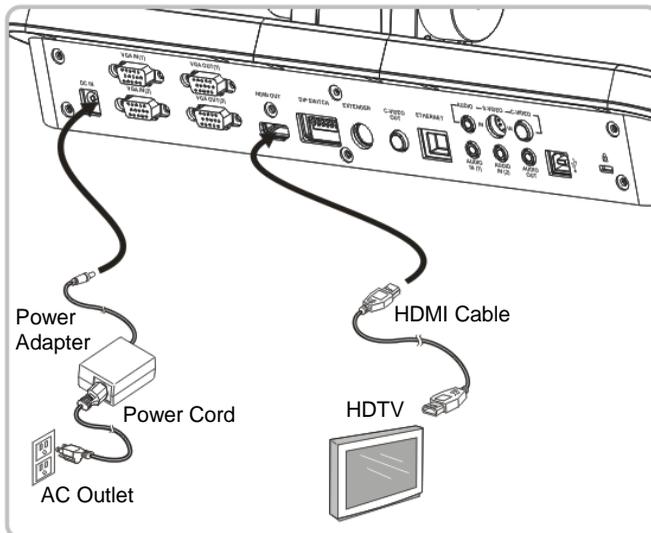
4.8 Connecting to DVD and display DVD images

- Press button to switch the image source.
- For VGA 1 setting, refer to **7.2 I would like to switch image sources**.
- For VGA 2 setting, refer to **7.3 I would like to set the image source of VGA OUT2**.

4.8.1 C-Video

4.8.2 S-Video

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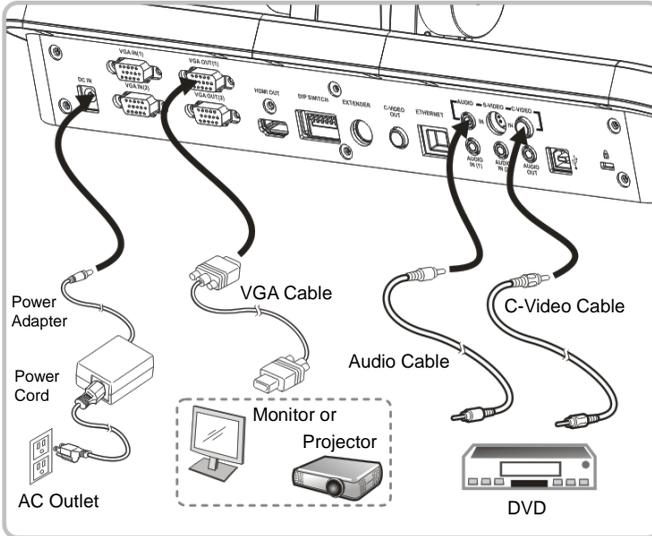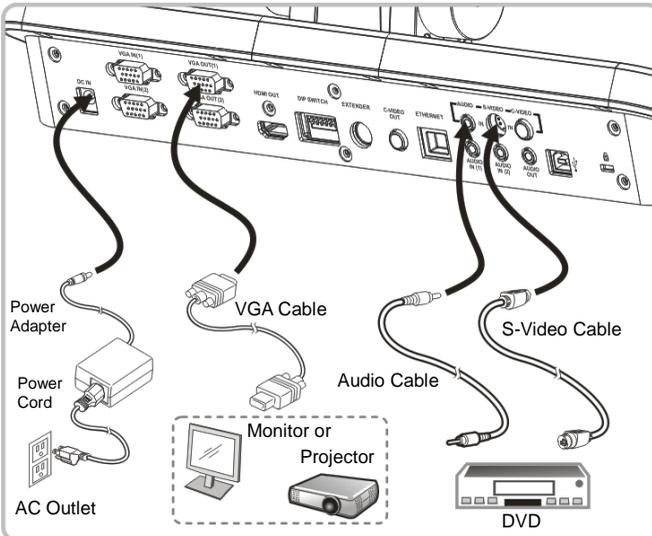
4.9 Connecting to a Computer with RS232

Power
Adapter

Power
Cord

AC Outlet

Computer

RS232 Cable

Mini-DIN Adapter
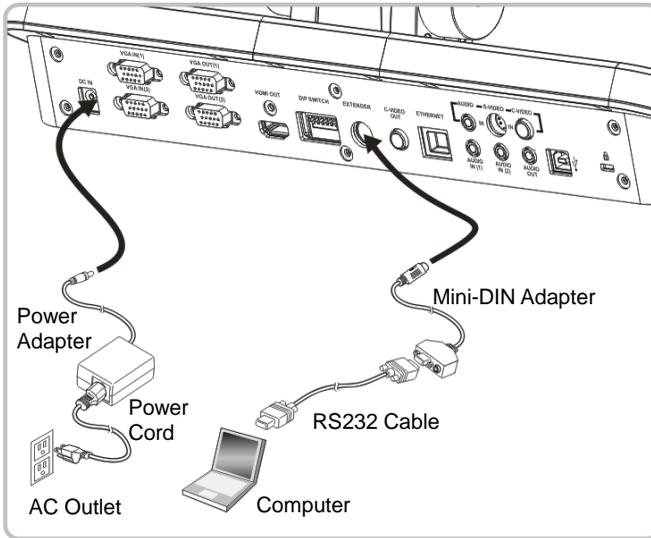
4.10 Connecting to Audio Input and Output

<Remark> The default of Audio Output is based on VGA OUT(1).

<Remark> Or connect to an additional amplifier before connecting to the speaker.

Power
Adapter

Power
Cord

AC Outlet

Audio Cable

TV or DVD

TV

Audio Cable

Computer (1)

Audio Cable

Computer (2)

Audio Cable

Speaker

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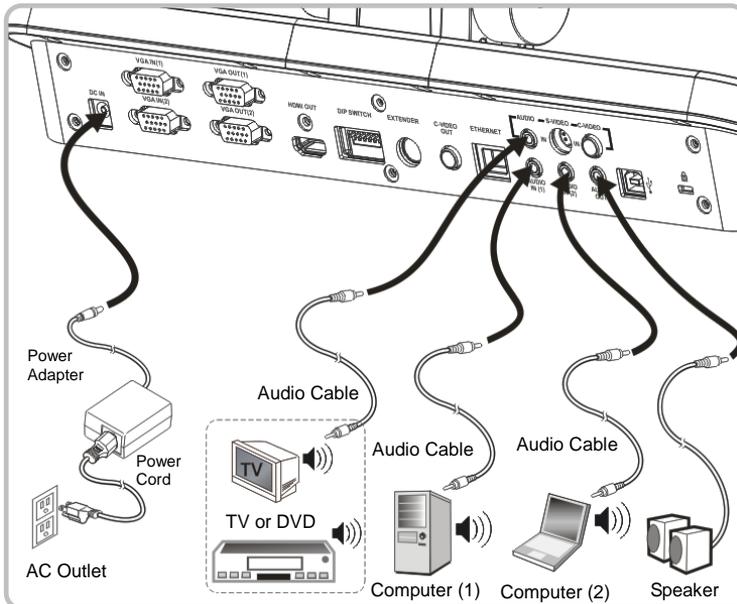
4.11 Installing application software

The application software installed on the computer enables you to:

➢ Control the PS760.

➢ Capture and record images.

➢ Annotate the image, highlight important details and save it.

➢ Support the full screen function.

<Note> Please refer to [Podium View™ software user manual](#) for installation steps and software operation.

Chapter 5 Start Using

1. Remove the lens cap.
2. Pull up the camera and the camera arm. The camera should aim at the center of the presenter.
3. Pull up the lamp arm to a proper position.
4. Place an object to be displayed under the camera.
5. Press [POWER] ⏻ button to turn on the power. **(Remark: Do not press [POWER] button until the red light stays lit)**
6. Press [AUTO TUNE] 🚗 button to optimize the image. You are ready to teach/present.

<Note>: According to your request, you can adjust the camera head slightly to aim at the center of the documents when the anchor of lens was reached.

- When using the remote control, aim at the remote sensor on the DC190, and press the power button.
- Once PS760 is turned on, the LED indicator on the control panel will light up red. Please contact your dealer if the LED is not on.

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Chapter 6   Control Panel/Remote Control and Setting Menu

6.1 Functions of control panel and remote control

<Remark> The below functions are listed alphabetically.

Name	Function Descriptions	Operation
⏻	Turn on and off the Document Camera.	**Remote control/ Control panel**
◄,►,▲,▼	Move up, down, left or right to select the needed function.	**Remote control/ Control panel**
AUTO TUNE	Automatically adjust the image to have the best brightness and focusing performance. Press and hold the button on the control panel for 2 seconds to lock/unlock keys (for control panel only).	**Remote control/ Control panel**
BRT+/-	Manually adjust the brightness of the image.	**Remote control/ Control panel**
CAPTURE	Capture images to the USB disk (priority) or internal memory.	**Remote control/ Control panel**
DELETE	Delete images from the USB disk (priority) or internal memory.	**Remote Control**
ENTER	Enter/Activate functions.	**Remote control/ Control panel**
FREEZE	Freeze the current image to temporarily stay on the screen. Press again to defreeze.	**Remote control/ Control panel**
LAMP	Turn on/off the lamp.	**Control panel**
MASK	Enter Mask/Spotlight mode.	**Remote Control**
MENU	Activate the setting menu/exits the menu.	**Remote control/ Control panel**

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PAN	Enable/Disable the Partial Enlarged mode.	**Remote Control**
PIP	Image comparison (compares live images with captured image files).	**Remote Control**
PLAYBACK	Read files stored in the USB disk (priority) or internal memory.	**Remote Control**
RECORD	Record motion images. Press [RECORD] to record images to USB disk (priority) or internal memory, and then press [RECORD] again to stop recording.	**Remote Control**
SLIDE SHOW	Show the photos or videos stored in the USB disk (priority) or internal memory in Slide mode.	**Remote Control**
VGA 1	Switch between different image sources of **VGA 1**. Visual Presenter/VGA IN(1)/VGA IN(2)/DVD.	**Remote control/ Control panel**
ZOOM +/-	Increase or decrease the image size.	**Remote control/ Control panel**

6.2 Setting Menu

6.2.1 Main Menu:

<Remark> Press **[Menu]** on the **remote control** or **control panel** to enter the **setting menu**; The **bold underlined** values in the following table are defaults.

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
Display	**Auto Tune**	**<u>Enter</u>**	Automatically adjust the image to have the best brightness and focusing performance.
	Auto Focus	**<u>Enter</u>**	Automatically adjust the focal length of image.
	Focus	0~**<u>A</u>**~Max	Use the left and right arrow keys to adjust focal length on an object.
	Brightness	0~**<u>A</u>**~Max	Use the left and right arrow keys to adjust the brightness.
	Rotate	1. **<u>0°</u>** 2. 90° 3. 180° 4. 270°	Rotate the image by 0°/90°/180°/270°.
	Mode	**<u>Normal</u>**/Slide/ Film/Microscope	Use the left and right arrow keys to select the image mode.
	Photo/Text	**<u>Photo</u>**/Text/Gray	Use the left and right arrow keys to select Photo/ Text/ Gray mode.
	Mask	**<u>Enter</u>**	Press [ENTER] to enter the MASK Mode. For details, please refer to 6.2.2 MASK Mode Setting Menu and 6.2.3 Spotlight Mode Setting Menu.
	Night Vision	On/**<u>Off</u>**	Use the left and right arrow keys to select. The night vision mode suits with darker environment.

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
Storage	**Slide Show**	**Enter**	Press [ENTER] to show the photos or videos stored in the USB disk (priority) or internal memory in Slide mode.
	Playback	**Enter**	Press [ENTER] to enter the thumbnail mode of image.
	Delay	1. 0.5 Sec 2. **1 Sec** 3. 3 Sec 4. 5 Sec 5. 10 Sec 6. Manual	Use the left and right arrow keys to select the delay time. Select manual mode to switch images manually.
	Capture Mode	**Photo**/Video	Use the left and right arrow keys to select CAPTURE setting.
	Image Quality	1. High 2. **Medium** 3. Low	Use the left and right arrow keys to select the image quality for the captured images and recorded videos.
	Copy To USB Disk	Yes/**No**	Press [ENTER] to immediately copy the data in internal memory to the USB Disk.
	Delete All	Yes/**No**	Use the left and right arrow keys to select, press [ENTER] to confirm the deletion of all images from the USB disk (priority) or internal memory.
	Format	Yes/**No**	Use the left and right arrow keys to select, and then press [ENTER] to format the USB disk (priority) or internal memory.
	Auto Erase	On/**Off**	Use the left and right arrow keys to turn on/off the auto erase function. When "On" is selected, the stored images will automatically be deleted when the system is turned off.

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1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
Setting	**Capture Action**	1. **Single** 2. Continuous Capture 3. Disable	Use the left and right arrow keys to select the capture mode. (Single/Continuous/Video/ Disable) **<Note> The image cannot be captured when the capture mode is set to [VIDEO].**
	Capture Time	1. **1 hr** 2. 2 hr 3. 4 hr 4. 8 hr 5. 24 hr 6. 48 hr 7. 72 hr	Use the left and right arrow keys to select the capture time. **<Note> It only works when the capture mode is set to [continuous].**
	Capture Interval	1. **5 Sec** 2. 10 Sec 3. 30 Sec 4. 1 min 5. 2 min 6. 5 min	Use the left and right arrow keys to select the capture interval. **<Note> It only works when the capture mode is set to [continuous].**
	Auto Exposure	**On/**Off	Regardless of outside environment, the machine will adjust the brightness to the optimal condition. Use the left and right arrow keys to select.
	White Balance	**Enter**	Regardless of outside light or color, the machine will adjust the color to the optimal condition; Press [ENTER] to activate.
	Volume	0~**A**~Max	Use the left and right arrow keys to adjust the volume.
	Projector Type	DLP/**LCD**	Use the left and right arrow keys to select the projector type and reduce image noise.
	Digital Zoom	On/**Off**	Use the left and right arrow keys to turn on/off **digital zoom**.
Advanced	**Key tone**	**On**/Off	Use the left and right arrow keys to turn the key tone on and off.

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
	Ethernet	**Enter**	Press [ENTER] to show the Ethernet window. For details, please refer to 6.2.5 Ethernet Setting Menu.
	Language	1. **English** 2. 繁體中文 3. 简体中文 4. Deutsch 5. Français 6. Español 7. Русский 8. Nederlands 9. Suomi 10. Polski 11. Italiano 12. Português 13. Svenska 14. dansk 15. ČESKY 16. العربية 17. 日本語 18. 한국의 19. ελληνικά	English Traditional Chinese Simplified Chinese German French Spanish Russian Dutch Finnish Polish Italian Portuguese Swedish Danish Czech Arabic Japanese Korean Greek Use the left and right arrow keys in the Language option to select the preferred language.
	VGA OUT(2)	1. **VGA OUT(1)** 2. VGA IN(1) 3. VGA IN(2) 4. DVD	Use the left and right arrow keys to select the images output from VGA OUT(2).
	Date & Time	**Enter**	Press [ENTER] to show the Date & Time window. For details, please refer to 6.2.4 Date & Time Setting Menu.
	Lock Down	On/**Off**	Use the left and right arrow keys to turn on/off the lock down function. You can set the password when [On] is selected.
	Preset Load	Yes/**No**	Read the value of the current image mode.Use the left and right arrow keys to select, and then confirm by pressing [ENTER].

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1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
	Preset Save	Yes/**No**	Store the value of the current image mode.Use the left and right arrow keys to select, and then confirm by pressing [ENTER].
	Factory Reset	Yes/**No**	Use the left and right arrow keys to select, and then confirm by pressing [ENTER] to restore the factory defaults.

6.2.2 MASK Mode Setting Menu

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
	Transparency	0~**4**~6	Adjust the transparency of the mask using left and right arrow keys.
	Step	Large/**Medium**/Small	Select the step distance of the mask using left and right arrow keys.
Mask Mode	**V Size**	0~**A**~Max	Adjust the vertical height of the mask using left and right arrow keys.
	H Size	0~**A**~Max	Adjust the horizontal length of the mask using left and right arrow keys.
	Spotlight	**Enter**	Press [ENTER] to enter the Spotlight mode.

6.2.3 Spotlight Mode Setting Menu

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
	Transparency	0~**4**~6	Adjust the transparency of the border in the Spotlight mode using left and right arrow keys.
Spotlight Mode	**Step**	Large/**Medium**/Small	Select the step distance of the spotlight zone using left and right arrow keys.
	V Size	0~**A**~Max	Adjust the height of the spotlight zone using left and right arrow keys.

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| | H Size | 0~**A**~Max | Adjust the width of the spotlight zone using left and right arrow keys. |
| | Live | **Enter** | Press [ENTER] to return to live image. |

6.2.4 Date & Time Setting Menu

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
Date & Time	Year	00~36	Press [ENTER] to modify the values using left and right arrow keys.
	Month	01~12	Press [ENTER] to modify the values using left and right arrow keys.
	Date	01~31	Press [ENTER] to modify the values using left and right arrow keys.
	Hour	00~23	Press [ENTER] to modify the values using left and right arrow keys.
	Minute	00~59	Press [ENTER] to modify the values using left and right arrow keys.

6.2.5 Ethernet Setting Menu

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment values	Function Descriptions
Ethernet	DHCP	**On**/Off	Enable/Disable **DHCP** using left and right arrow keys.
	IP Address	**192.168.100.150**	Press [ENTER] to modify the values using left and right arrow keys.
	Netmask	**255.255.255.0**	Press [ENTER] to modify the values using left and right arrow keys.
	Geteway	**192.168.100.254**	Press [ENTER] to modify the values using left and right arrow keys.

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6.2.6 Annotation Tools (Annotation)

After the mouse or Wacom writing pad is connected, right click the mouse to start the tools.
<Note> When the setting menu is activated, the tools cannot be used.
<Note> For the supported Wacom models, please visit our download center "The table model Lumens supports."

● **Icon of Annotation**

● **Main Menu**

● **Free-hand Drawing Tool menu**

Icon	Description
⩘ / ⩗	Expand/Collapse the Annotation menu
↖	Open/Close the Free-hand Drawing Tool menu
≡	Select the line width
🟨	Select pen color
📝	Clear all
✏	Free-hand drawing tool
╲	Draw a line
▢	Draw a rectangle
⬠	Draw a polygon
○	Draw an ellipse
◢	Eraser (Clear marks of free-hand drawing tool)

Chapter 7　Descriptions of major functions

7.1 I would like to automatically adjust the image to have best brightness and focusing performance (Auto Tune)

1. Press [AUTO TUNE] on the **remote control** or **control panel** to adjust automatically.

7.2 I would like to switch image sources

The default of image source is **Live Image**. Press **[VGA 1]** on the **remote control** or **control panel** to switch setting, and PS760 as well as audio output will switch among the following four modes in turn:

1. Live images (default)
2. VGA IN(1)
3. VGA IN(2)
4. DVD **(C-Video/S-Video)**

<Note> VGA IN mode will be switched to DVD mode automatically in turn when it is not connected to input equipment.
<Remark> This button is disabled in C-VIDEO Out mode.

7.3 I would like to set the image source of VGA OUT2

Press [MENU] on the **remote control** or **control panel** to enter the setting menu

1. Press [▶] or [◀] to the [Advanced] menu.
2. Press [▼] to enter [VGA OUT2].
3. Press [◀] or [▶] to select [VGA OUT(1)/VGA IN(1)/VGA IN(2)/DVD].
4. Press [MENU] to exit.

<Note> VGA IN mode will be switched to DVD mode automatically in turn when it is not connected to input equipment.
<Remark> If VGA OUT(1) is connected simultaneously, the audio output will be based on VGA OUT(1).

7.4 I would like to make text clearer and photos more colorful

7.4.1   Photo/Text mode descriptions

The default [Photo/Text] mode is in Photo **(Photo mode)**. To change this setting, please use the **remote control** or the **control panel** to enter the Options of the Setting Menu.

- [Photo] (default): for viewing photos or text with photos, making photos more colorful.
- [Text]: for viewing text files, making the text clearer.
- [Gray]: for viewing black & white photos which will make the grayscale differentiation distinct.

7.4.2   Setting Photo/Text mode

To change the settings, please use the **remote control** or the **control panel**:
1. Press [MENU] to enter the setting menu.
2. Press [►] or [◄] to select [Display].
3. Press [▼] to select [Photo/Text]. (Please refer to **7.4.1 Photo/Text mode descriptions** to make the best choice.)
4. Press [►] or [◄] to select the [Photo/Text/Gray].
5. Press [MENU] to exit.

7.5 I would like to zoom in/out images

1. Press [ZOOM+] on the **remote control** or **control panel** to zoom in images.
2. Press [ZOOM-] on the **remote control** or **control panel** to zoom out images.

7.6 I would like to adjust the focal length

7.6.1   Auto Tracking

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [►] or [◄] to the [Display] menu.
3. Press [▼] to [AF button].
4. Press [ENTER] to activate AF button.
5. Press [MENU] to exit.

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7.6.2 Manual Tracking

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [▶] or [◀] to the [Display] menu.
3. Press [▼] to the [Focus].
4. Press [▶] or [◀] to adjust focal length.
5. Press [MENU] to exit.

7.7 I would like to adjust the brightness

1. Use **Remote Control** or **Control Panel** and press [BRT+] to make it brighter.
2. Use **Remote Control** or **Control Panel** and press [BRT-] to make it darker.

7.8 I would like to turn on/off the lamp

The default of the lamp is ON. When using the control panel:

1. Press [LAMP] to switch ON/OFF. (in the sequence of arm lamp/backlight/OFF)

7.9 I would like to freeze images

1. Press [FREEZE] on the **remote control** or **control panel** to freeze the current image on the screen.

7.10 I would like to adjust the volume

<Note> Volume control is intended to control the external audio output equipment only.

7.10.1 Adjust Volume (OSD)

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [▶] or [◀] to the [Setting] menu.
3. Press [▼] to the [Volume].
4. Press [▶] or [◀] to adjust the volume.
5. Press [MENU] to exit.

7.10.2 Adjust the volume of the video

- **In PLAYBACK mode, Press [▲] or [▼] to adjust the volume of the video.**

7.11 I would like to capture images

7.11.1 Capturing and saving images

1. Press [CAPTURE] on the **remote control** or **control panel** to capture and save images.
- **You cannot capture images when the capture mode is set to [Disable]. If it is set to [Continuous], you can capture images continuously. Press [CAPTURE] to start capturing continuously, or press [CAPTURE] again to exit.**
- **To change the quality of captured images, please refer to 7.11.2 Setting the quality of captured images.**
- **To change the settings of captured images, please refer to 7.11.3 Setting continuous capture.**

7.11.2 Setting the quality of captured images

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [▶] or [◀] to the [Storage] menu.
3. Press [▼] to find [Image Quality].
4. Press [▶] or [◀] to select among [High/Medium/Low].
5. Press [MENU] to exit.

7.11.3 Setting continuous capture

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [▶] or [◀] to the [Setting] menu.
3. Press [▼] to find [Capture Action].
4. Press [▶] or [◀] to select [continuous].
5. Press [▼] to the [Capture Mode].
6. Press [▶] or [◀] to select [Photo].
7. Press [▼] to find [Capture Time]; Press [▶] or [◀] to select capture time.
8. Press [▼] to find [Capture Interval]; Press [▶] or [◀] to select interval time.
9. Press [MENU] to exit.

7.12 I would like to record videos

7.12.1 Recording motion images

<Note> You may not be able to capture or record images when [Capture Action] mode is set to [Disable].
Remote control:
1. Press [RECORD] to record videos.
2. Record sounds with the built-in microphone of the control panel.
3. Press [RECORD] again to stop recording.

Control panel:
1. Press [MENU] to enter the setting menu.
2. Press [▶] or [◀] to the [Setting] menu.
3. Press [▼] to the [Capture Mode].
4. Press [▶] or [◀] to select [Video].
5. Press [MENU] to exit.
6. Press [CAPTURE] to record videos.
7. Press [CAPTURE] again to stop recording.

7.12.2 Setting the image quality
1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [▶] or [◀] to the [Storage] menu.
3. Press [▼] to find [Image Quality].
4. Press [▶] or [◀] to select among [High/Medium/Low].
5. Press [MENU] to exit.

7.12.3 Playing videos
● **For playing videos, please refer to <u>7.13 I would like to view captured/recorded images</u>.**

7.13 I would like to view captured/recorded images
1. Press [PLAYBACK] on the **remote control** to show the thumbnails of all stored files.
2. Press [▲] or [▼] or [◀] or [▶] to select the thumbnail you want you browse.
3. Press [ENTER] for the full-screen display of the image.
4. Press [▶] or [◀] to select different video and audio files.
5. Press [▲] or [▼] to adjust the volume of the video.

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6. Press [MENU] to exit.

<Note> A better playback performance will be achieved when an external speaker is connected to AUDIO OUT.

7.14 I would like to delete the captured/recorded images

1. Use the **remote control** and press [PLAYBACK].
2. Press [▲] or [▼] or [◄] or [►] to select the file you want to delete.
3. Pressing [DELETE] will open a [Delete File] window.
4. Press [►] or [◄] to select [Yes] (The default value is No).
5. Press [ENTER] to delete the selected file.
6. Press [MENU] to exit.

7.15 I would like to automatically delete the stored images whenever it is turned off (Auto Erase)

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [►] or [◄] to the [Storage] menu.
3. Press [▲] or [▼] to [Auto Erase].
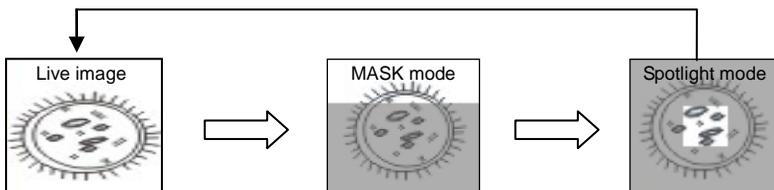4. Press [►] or [◄] to select [On].
5. Press [MENU] to exit.

<Remark> It will automatically delete all captured photos when it is turned off.

7.16 I would like to use the MASK and Spotlight function

7.16.1 I would like to use the MASK or Spotlight mode

Use **Remote control**:

1. Press [MASK] to enter the Mask mode, and press [▲], [▼], [◄], or [►] to move the mask position.
2. Press [MASK] again to enter the Spotlight mode, and press [▲], [▼], [◄], or [►] to move the zone position.
3. Press [MASK] again to exit and return to the live image screen.

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7.16.2 I would like to set the size of Mask/Spotlight function

In Mask/Spotlight mode, use the **remote control**:

1. Press [MENU] to enter the image OSD menu.
2. Press [▲] or [▼] to select the item to be modified [Transparency/Step/V Size/H Size]. **(For details, please refer to <u>6.2 Setting Menu</u>.)**
3. Press [◄] or [►] to perform the modification.
4. Press [MENU] to exit the image OSD menu and return to the Mask mode.

7.17 I would like to enlarge a part of the image (PAN)

Use **Remote control**:

1. Press [PAN] to enter the Partial Enlarged mode.
2. Press [▲], [▼], [◄], or [►] to move and view the partial enlarged images.
3. Press [PAN] to exit the partial enlarged mode.

7.18 I would like to play the slides (Slide Show)

7.18.1 Setting delay time

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [►] or [◄] to the [Storage] menu.
3. Press [▼] to find [Delay].
4. Press [►] or [◄]] to select image switch mode between [0.5 Sec/1 Sec/3 Sec/5 Sec/10 Sec/Manual].
5. Press [MENU] to exit.

7.18.2 Activating/Stopping the slide show

<Note> Upper Limit: The maximum size of single photo is 7 MB.
Remote control:

1. Press [SLIDE SHOW] to start playing.
2. Press [ENTER] to pause playing.
3. Press [ENTER] again to continue playing.
4. Press [SLIDE SHOW] again to stop playing.

Control panel:
1. Press [MENU] to enter the setting menu.
2. Press [▶] or [◀] to the [Storage] menu.
3. Press [▼] to find [Slide Show].
4. Press [ENTER] to play.
5. Press [ENTER] to pause playing.
6. Press [ENTER] again to continue playing.
7. To stop playing, repeat Steps 1 and 4.

7.19 I would like to view the X-ray film

1. Place an X-ray film to be displayed under the camera.
2. Press [Lamp] button on the control panel to switch on the *Backlight* (in the sequence of arm lamp/backlight/OFF)
3. Press [AUTO TUNE] button to optimize the image.

7.20 I would like to compare images (compare live images with stored images (PIP))

This function will compare and contrast a live image with a stored image.

Live image   Stored image
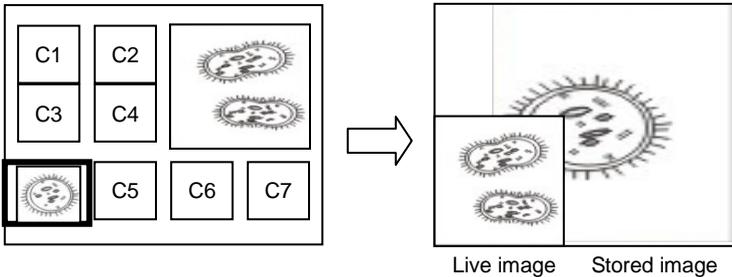
Remote control:
1. Press [PIP] to enter the photo selection screen.
2. Press [▲], [▼], [◀], or [▶] to select the file to be compared.
3. Press [ENTER] to activate image comparison.
4. Press [▲], [▼], [◀], or [▶] to move the live image.
5. Press [PLAYBACK] to return to image thumbnails and compare it with other images.
6. Press [MENU] to exit.

7.21 I would like to reduce the image noise (Projector Type)

1. This function enables Document Camera to automatically clear image noise. The noise is especially obvious when Document Camera is connected to a DLP projector. You can set the DLP projector to improve the image quality.
2. If there is special noise when VGA out is connected, please set DLP option to improve the image quality.
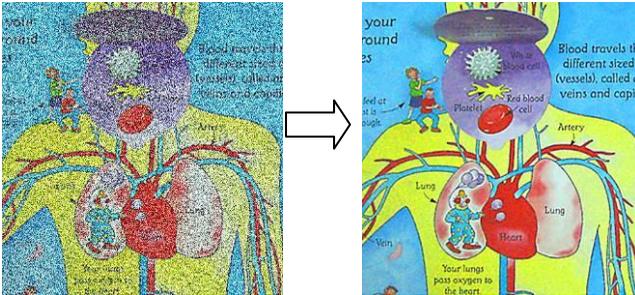
2.1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2.2. Press [▶] or [◀] to the [Setting] menu.
2.3. Press [▼] to enter [Projector Type].
2.4. Press [▶] or [◀] to select **[LCD/DLP]**.
2.5. Press [MENU] to exit.

7.22 I would like to set the time for PS760

7.22.1 If you use the remote control or the control panel

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu. **(Refer to 6.2.4 Date & Time Setting Menu of 6.2 Setting Menu.)**
2. Press [▶] or [◀] to select [Advanced] menu.
3. Press [▼] to the [Date & Time].
4. Press [ENTER] to open the date & time OSD menu.
5. Press [▲] or [▼] to the item to be set [Year/Month/Day/Hour/Minute].
6. Press [▲] or [▼] to modify the value.
7. Press [▶] or [◀] to move to the next item.
8. Press [MENU] to exit the item you have set.
9. Repeat steps 5 through 9 until you have completed the modifications.
10. Press [MENU] to exit OSD menu.

7.22.2 To use web remote control

<Remark> For more information about the website login page, please refer to
7.28.1 I would like to view the live image or use the control keys.
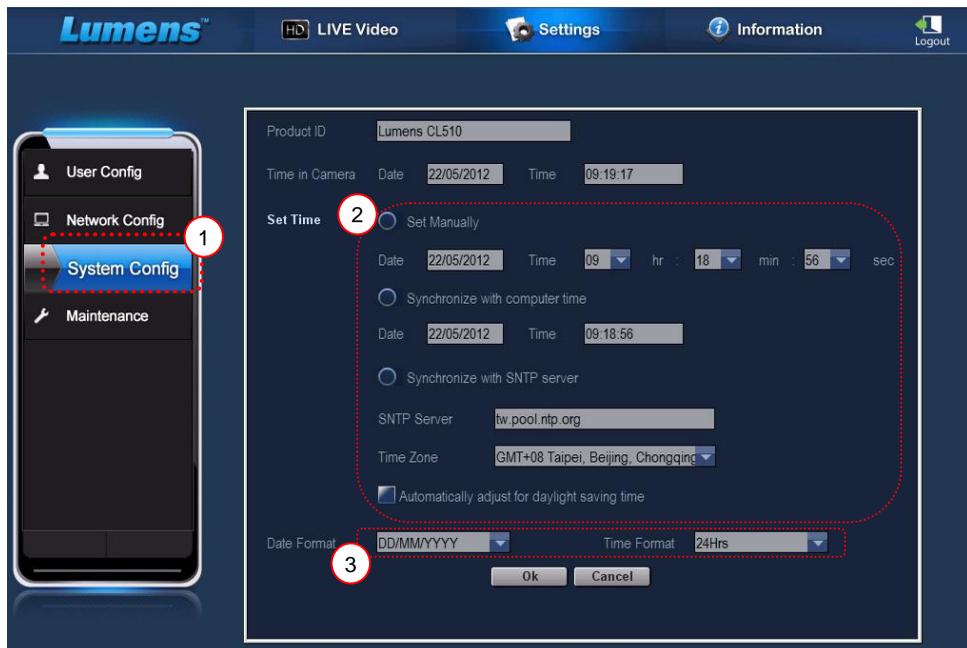
1. Click [Settings].
2. Click [System Config].
3. Set the date and time.

   <Remark> Set Manually: Set the date and time manually.

   > **Synchronize with Computer Time: Synchronize time with the PC.**
   > **Synchronize with SNTP Server: Synchronize time with SNTP server.**
   > **Synchronize Server: Check the SNTP Server.**
   > **Time Zone: Set the Time Zone.**

   Automatically adjust for daylight saving time: Automatically adjust for daylight saving time.

4. Select formats of date and time.
5. Click [OK] to submit.

7.23 I would like to lock/unlock keys

Press and hold [**AUTO TUNE**] on the control panel for 2 seconds to lock keys. To unlock keys, repeat the above procedure.

<Remark> When the keys are locked, the LED indicator of [ENTER] on the remote control will light up red.

<Remark> This function applies to the keys of the control panel only. The remote control can still be used. If you use the remote control to turn off the power, the keys will be unlocked automatically after reboot.

7.24 I would like to resume the factory default settings (Factory Reset)

7.24.1 Using OSD menu

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [▶] or [◀] to select [Advanced] menu.
3. Press [▼] to select [Factory Reset].
4. Press [▶] or [◀] to select [Yes].
5. Press [ENTER] to activate.

7.24.2 Use Compound Key

1. Use the **control panel**, and press **[ENTER + AUTO TUNE]** simultaneously to restore the initial value.

7.25 I would like to change the Start Video/Off Video

<Note> The file size of the Start Video/Off Video should be less than 5MB and the AVI file in H.264 compression format should be used.

7.25.1 Changing the Start Video

1. Press [ENTER] + [▲] on the **control panel** to enter *Service Menu*.

2. Press [▶] or[◀] to select [Pwr On] menu.

3. Press [▼] to [Image Select] and press [ENTER] to read the saved file.

4. Press [▲] or [▼] or [◀] or [▶] to select the picture file and press

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[ENTER] to apply the change.

5. Press [▼] to [Start Video Select] and press [▶] or [◀] to select [Default Video/ Customer Video].

6. Press [▼] to [Logo Show time] and press [▶] or [◀] to modify the playback time.

7. Press [MENU] to exit.

7.25.2 Changing the Off Video

1. Press [ENTER] + [▲] on the **control panel** to enter *Service Menu*.

2. Press [▶] or [◀] to select [Pwr Off] menu.

3. Press [▼] to [Image Select] and press [ENTER] to read the saved file.

4. Press [▲] or [▼] or [◀] or [▶] to select the picture file and press [ENTER] to apply the change.

5. Press [▼] to [Off Video Select] and press [▶] or [◀] to select [Default Video/ Customer Video].

6. Press [MENU] to exit.

7.26 I would like to use a USB disk

1. Insert the USB disk and a [Copy To USB Disk] dialog box will appear, and you are asked whether to copy files from PS760 to the USB disk.

   ➢ Press [▶] or [◀] on the **remote control** or **control panel** to select.

```
┌──────────────────────┐
│  Copy To USB Disk     │
├──────────┬───────────┤
│   Yes    │    No     │
└──────────┴───────────┘
```

7.27 Computer-related functions

Ensure that the USB cable is connected and the software and drivers are installed before using the computer-related functions. Refer to **Chapter 4 Installation and Connections 4.11 Installing application software** in this user manual.

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7.27.1 I would like to insert a photo in MS-Paint

<Remark> Support *Windows XP* Operation System only.

1. Click [File/From Scanner or Camera] in MS-Paint as shown in the bottom left figure.
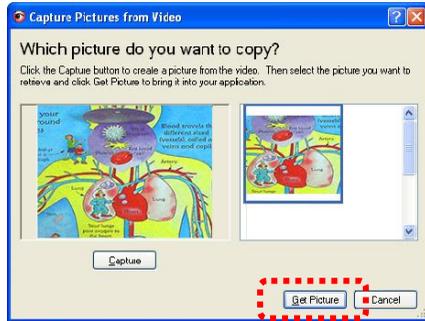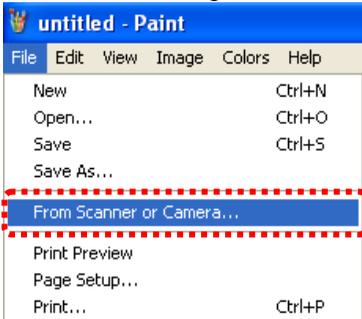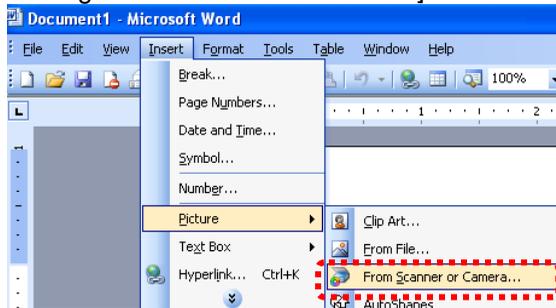

2. Click [Get Picture] will capture the photos of live images and insert the files in use shown as top right figure.

7.27.2 I would like to insert a photo in MS-Word

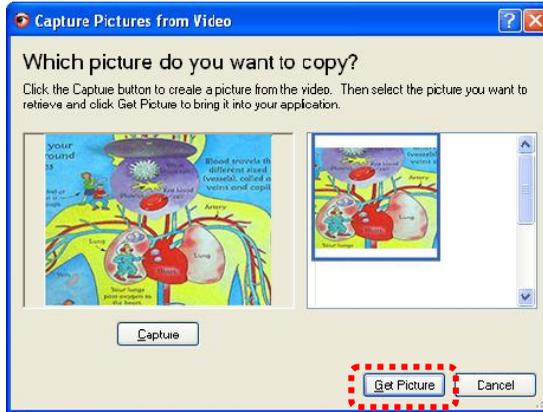**<Remark> Support *Windows XP* Operation System only.**

1. Click [Insert/Image/From Scanner or Camera] in *MS-Word*.
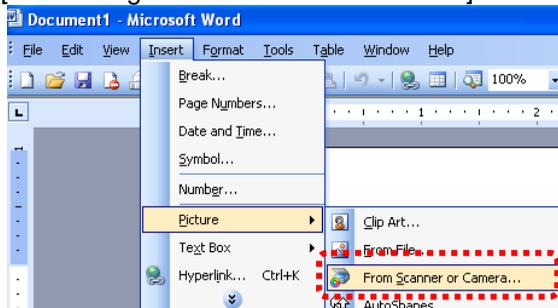

2. Select [USB Video Device] and click [Custom Insert].

3. Click [Get Picture]. It will capture the photo of live image.

7.27.3 I would like to change the setting of the PS760 and then
capture a photo in MS-Word

**<Remark> For *Windows Office 2003* or later versions, please use the
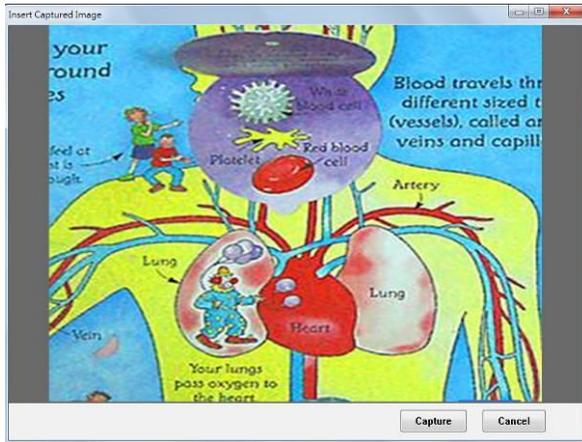function with *OneNote*.**

1. Click [Insert/Image/From Scanner or Camera] in *MS-Word*.

2. Select [Lumens Document Camera Twain] and click [Custom Insert].

3. A window showing a live image (see below) will be displayed.
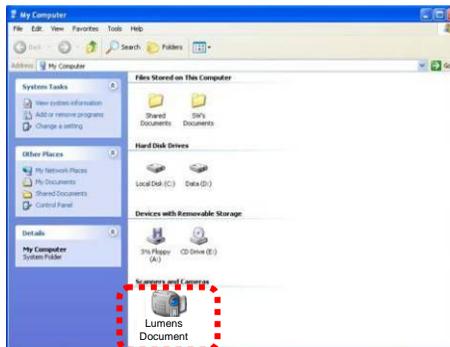

4. Press [Capture] to capture images in *MS-Word*.
5. Press [Cancel] to exit.

7.27.4 I would like to set the PS760 as a PC Camera

<Remark> For Windows XP, please set by system name (USB video device)

Open [My Computer] and click [Lumens Document] to open a live image.

7.28 I would like to use the network remote control function

➢ Network has a longer distance for controlling than USB and RS232 interface do. Each function of PS760 could be controlled and used by the browser (IE) on the computer for users.

7.28.1 I would like to view the live images or use the control keys
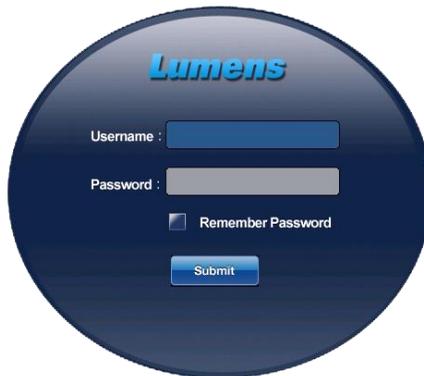
7.28.1.1 Login to the PS760 network control page

1. Open the web browser (Internet Explorer) and enter the **IP address : PORT number.**
   (Sample: http://192.168.100.150:80/)
   <Remark> To check IP address, please refer to <u>7.28.1.2 I would like to check the network settings</u>.
2. Enter the account [admin].
3. Enter the password (default password is [9999]), and then click [OK].

7.28.1.2 I would like to check the network settings

DHCP is enabled by default. Please follow the steps below to check the IP address.

1. Press [MENU] on the **remote control** or **control panel** to enter the setting menu.
2. Press [►] or [◄] to the [Advanced] menu.
3. Press [▲] or [▼] to the [Ethernet].
4. Press [ENTER] to open the Ethernet OSD menu.
5. Press [MENU] to exit OSD menu.

Ethernet	
DHCP	**ON**
IP address	192.168.100.150
Netmask	255.255.255.0
Getway	192.168.100.254

7.28.1.3 View the live image
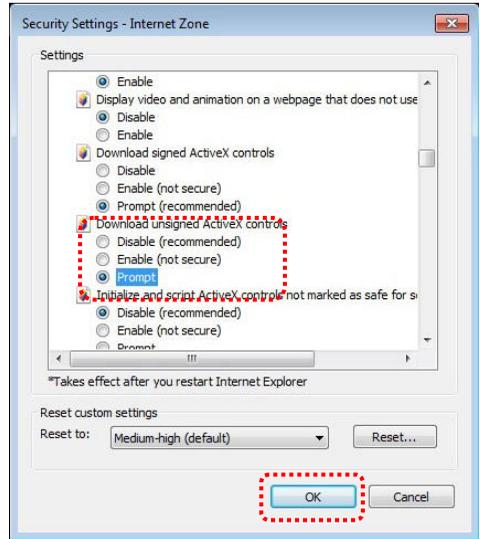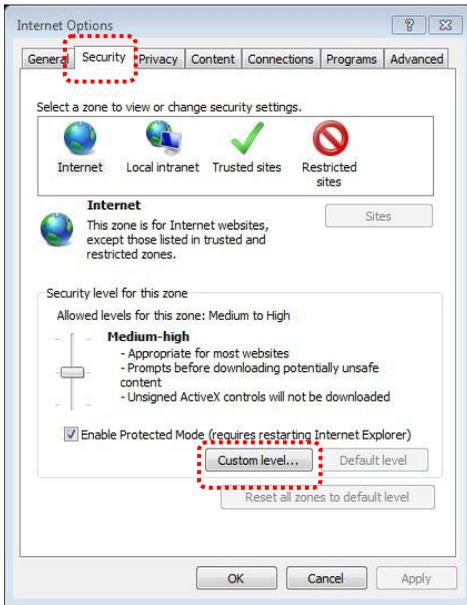
A. Use IE browser
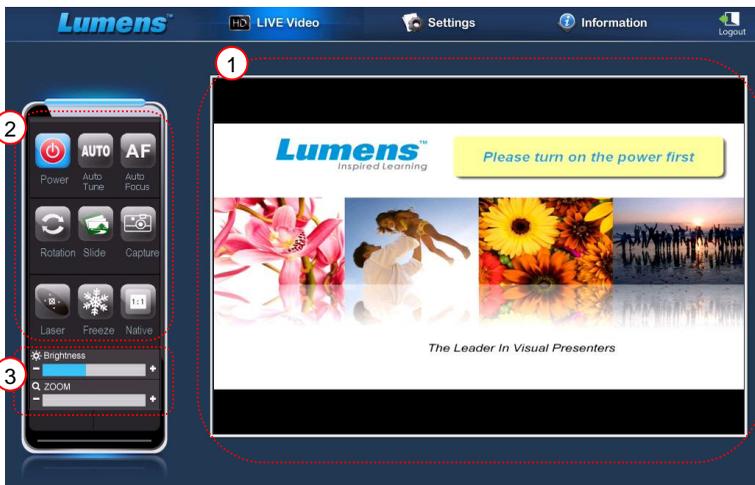
Please modify web page security setting and install ActiveX controls according to the instructions on the screen when using the system for the first time

1. Modify web page security settings:

● Open the web page → click [Tools] in function bar → [Internet Options] → [Security] → [Custom Level] → select [Download Unsigned ActiveX Controls] and set to [Prompt] → [OK]

- Restart your IE browser

2. Install ActiveX controls:

- Follow the instructions on the screen and click [Install ActiveX Controls]

Please install the ActiveX control according to the instruction on the screen before the first use

- Select "Install ActiveX control" by pressing the mouse button at the position indicated on the screen
- Accept the security alert and click [Install]
- Software security alert, click [Unblock]
- The installation is completed

3. View the live image.

4. The control method of control keys is the same as that of the remote control. The button will be gray and disabled for users whose permission is view-only.

5. Change the size and brightness of live image.

<Remark> For more information about user permissions, please refer to 7.28.2 I would like to add or modify the user account.

B. Using VLC

**<Remark> VLC is only provided for viewing. No control keys are available.**

1. Start the VLC player

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2. Select " media → Open Network Stream"

3. Input "rtsp://**A**:**B**@**IP**:8557/h264" at the "Please enter a network

    URL" of the Network page

- **A: Account name**
- **B: Account password**
- **IP: For the IP address of the Document Camera, please refer**

    to 7.28.1.2 "I would like to check the network settings"for

    method of checking the IP address.

- **Example:** rtsp://**admin**:**9999**@**192.168.100.150**:8557/h264

4. Press "Play" to preview.

C. Multicast

<Remark> Please select this setting when the number of users online to watch the live image simultaneously is more than 4. Besides, all users must be in the same domain.

1. Log in to PS760 web control screen
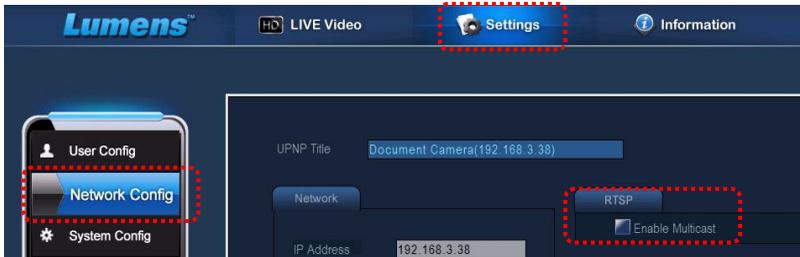
2. Click **[Settings]** on the top

3. Click **[Network Config]**

4. Select **[Enable Multicast]**

5. Press "Confirm"

6. Please click [**LIVE Video**] or turn on **VLC Player** to watch the live

    image.

<Remark> After the use, please reset to cancel [Enable Multicast].

7.28.2 I would like to add or modify the user account
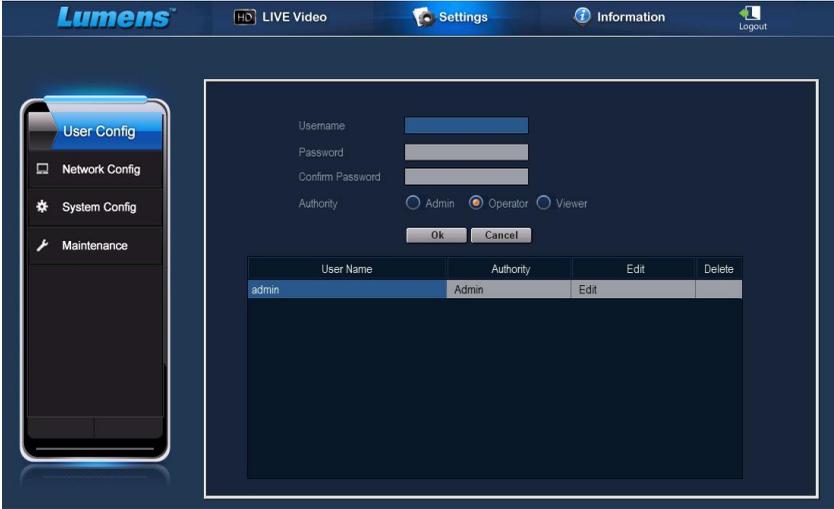
<Remark> Reference for User Permissions

User Type	Admin	Operator	Viewer
Applications	IE or VLC	IE or VLC	IE or VLC
Operation of LIVE Video	**Y**	**Y**	N
View images	**Y**	**Y**	**Y**
Settings	**Y**	N	N
File List management	**Y**	N	N

7.28.2.1 I would like to add the user account

1. Click [Settings].
2. Click [User Config].
3. Enter the username in the [User Name].
4. Enter the new password in the [Password].
5. Enter the password in the [Confirm Password] again.
6. Set the permissions in the [Authority].
7. Click [OK] to conform and submit.

7.28.2.2 I would like to delete the user account

1. Click Username.

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2. Click [Delete] field to delete the user.

7.28.2.3 I would like to modify the user password and permissions

1. Click Username.
2. Enter the new password in the [Password].
3. Enter the password in the [Confirm Password].
4. Set the permissions in the [Authority].
5. Click [OK] to submit.

7.28.3 I want to manage saved image files

1. Click [Information].

2. Click [File list].

7.28.3.1 View image files

1. Click the file name to open the saved image file.

7.28.3.2 Delete image files

1. Select the file to be deleted and click [Delete]. Press [YES] to confirm.

7.28.4 Firmware version

1. Product ID: Product Name

2. Software Version: Current Firmware Version

3. Video Player Version: Current Video Player Version

4. GUI Version: Current GUI version

7.28.5 Upgrade Firmware Version


<Remark> Please download the latest firmware version from the

[Lumens website].

1. Click [Settings].

2. Click [Maintenance].

3. Click "View" in the [Firmware upload] field, and select the firmware

   files to upgrade.

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4. Click [UPLOAD] to start upgrading.

5. When the firmware files are uploaded, all files in the built-in memory will be deleted. If you want to store the files, click "Cancel" to cancel upgrading. You should proceed upgrading only after the file back-up is completed. If the files don't need to be stored, click "Yes" to start upgrading.
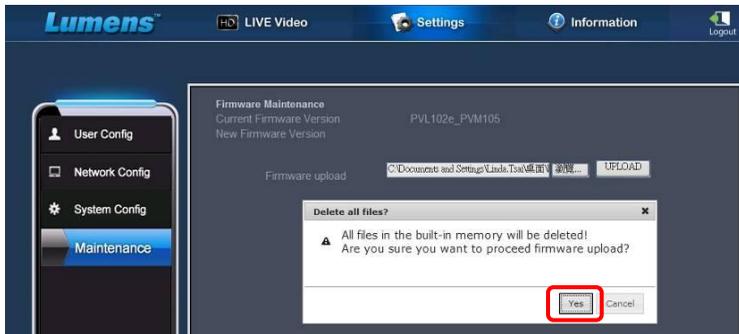

6. When the upgrading procedure processes to "Step 3/3", please follow the instruction on the screen to login the Administrator Account.

7. When the installation is completed, please close the IE Browser, and then open IE Browser again to start network connection.
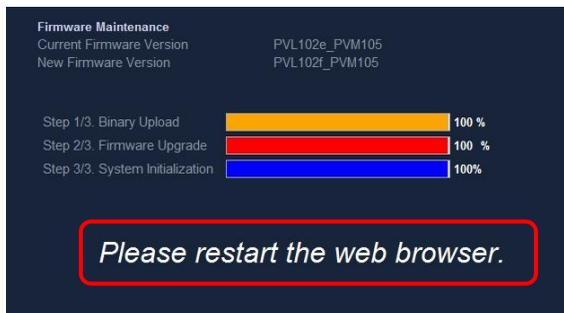
Chapter 8   Connecting to Microscope

1 Mount the **microscope adapter** (Optional) onto the microscope.
<Note> Please choose an appropriate microscope adapter. Microscope adapter accessories are applicable to eyepieces of Ø 28 mm, Ø 31 mm, Ø 33 mm, and Ø 34 mm.

2 The lens of PS760 connects with the **microscope adapter**

> If the eyepiece is **Ø 33 mm** or **Ø 34 mm**, only **one Lumens microscope adapter** is needed.
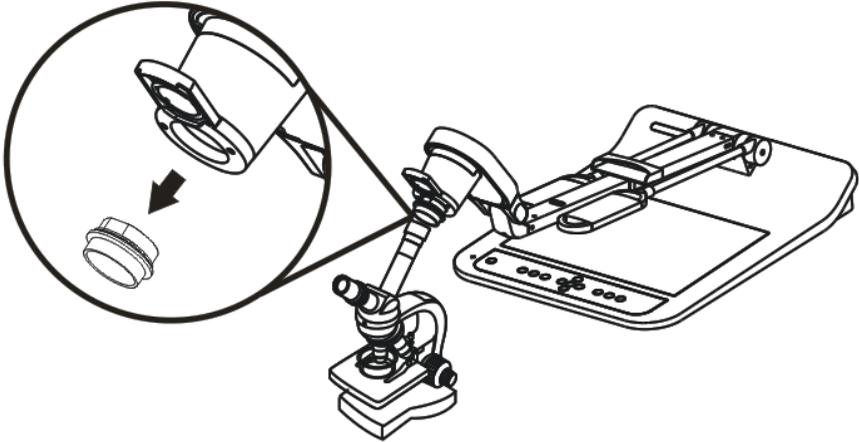
> If the eyepiece is **Ø 28 mm** or **Ø 31 mm**, you need **two microscope adapters**. (1. The **Lumens microscope adapter**. 2. The **microscope adapter suitable** for the eyepiece size **Ø 28 mm** or **Ø 31 mm**).

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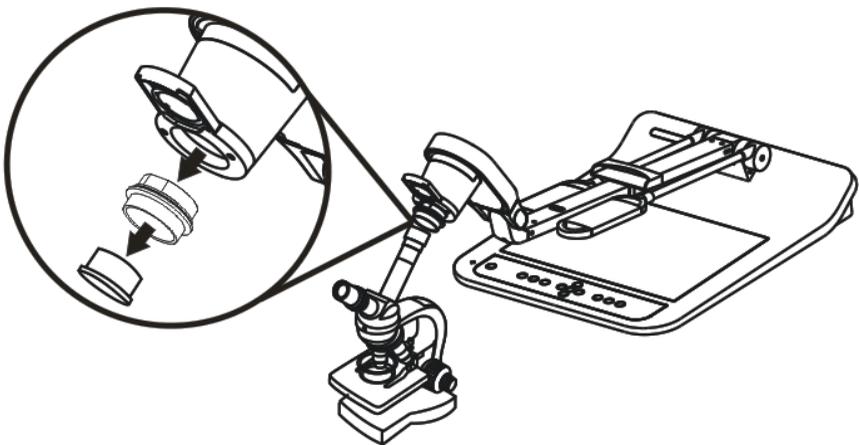
3 Select the **[Microscope]** mode

    3.1. If you use the **remote control** or the **control panel**

        3.1.1. Press [MENU] to enter the setting menu.

        3.1.2. Press [►] or [◄] to the [Display].

        3.1.3. Press [▼] to select [Mode].

        3.1.4. Press [►] or [◄] to the [Microscope].

4 If the image is not clear

    4.1. Please adjust the focus of microscope.

    4.2. Please press the **remote control** or the **control panel** [AUTO TUNE]
        button to activate the auto focus.

5 Digital Zoom

    5.1. If you use the **remote control** or the **control panel**

        5.1.1. Press [MENU] to enter the setting menu.

        5.1.2. Press [►] or [◄] to the [Display].

        5.1.3. Press [▼] to select [Digital Zoom].

        5.1.4. Press [►] or [◄] to the [On].

        5.1.5. Press [ZOOM +] / [ZOOM -].

**<Note> Please reset to normal mode after using the microscope,
otherwise, you are unable to use zoom in/out function.**

    1. Press [MENU] on the **remote control** or **control panel** to enter the
       setting menu.

    2. Press [►] or [◄] to the [Display].

    3. Press [▼] to select [Mode].

    4. Press [►] or [◄] to the [Normal].

Chapter 9   DIP Switch

<Note> You should unplug and reconnect the power cord, and then restart the PS760 for all DIP Switch Settings to take effect.

9.1 Connecting to a projector or monitor

9.1.1 XGA 60Hz output (default values)   XGA 50Hz output
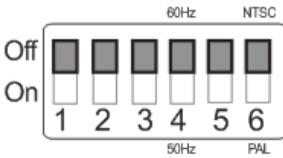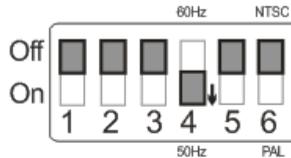
9.1.2 SXGA 60Hz output   SXGA 50Hz output
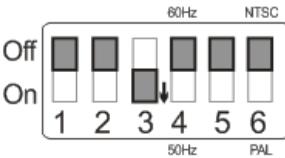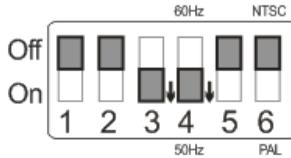
9.1.3 WXGA 60Hz output   WXGA 50Hz output
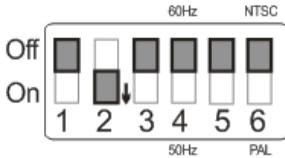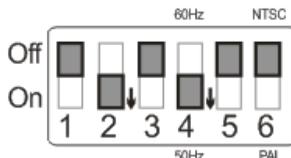
9.1.4 UXGA 60Hz output   UXGA 50Hz output
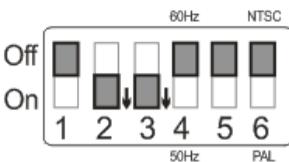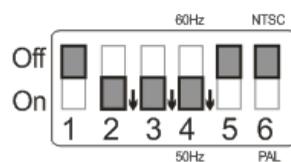
9.1.5 1080P 60 Hz output 1080P 50 Hz output
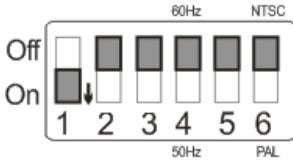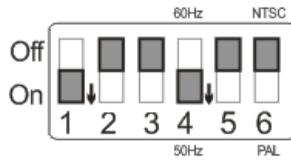
9.2 Connecting to a TV/DVD

9.2.1 NTSC: USA, Taiwan, Panama, Philippines, Canada, Chile, Japan, Korea, and Mexico.
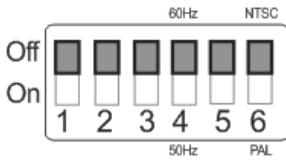
60Hz **50Hz**
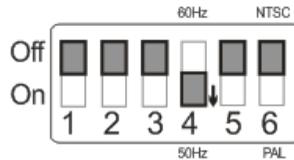
9.2.2 PAL: Countries/regions not listed above.
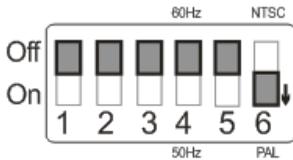
60Hz **50Hz**
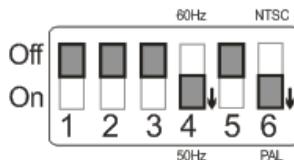
Chapter 10   Packing the Machine

1. Put the remote control back to the holder.

2. Fold back the camera head to align with the arm.

3. Turn the two lamp arms and the arm of camera head down and adjust them to be parallel with the platform.

4. Put the lens cap on the camera head.

5. Finally, fold the machine as in the following figure.
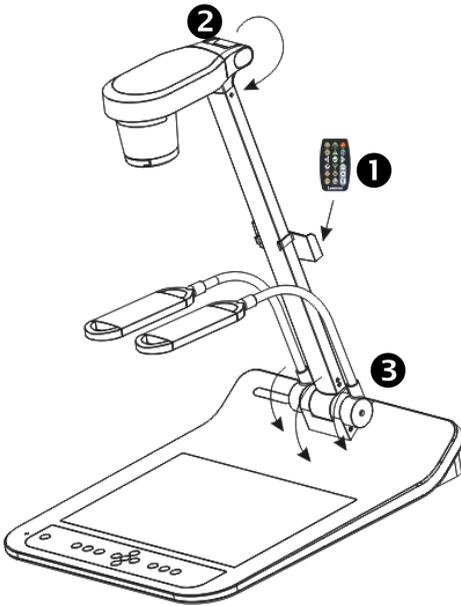
Chapter 11   Troubleshooting

This chapter describes problems you may encounter while using PS760. If you have questions, please refer to related chapters and follow all the suggested solutions. If the problem still occurred, please contact our distributors or service center.

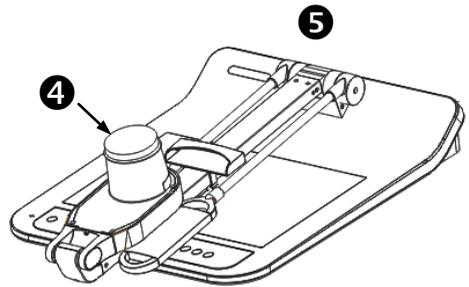| No.	Problems	Solutions
1	**Boot without power signal**	Make sure you have plugged in the power cord.
2	**No image output from the PS760**	1. Check the power 2. Check all cable connections. Refer to **Chapter 4 Installation and Connections** in this manual. 3. Check the , refer to **PS750 User Manual Chapter 7 Descriptions of major functions 7.2 I would like to switch image sources**. 4. Check the settings for the source of the projector. For the appropriate input selection of the projector, refer to the projectors user manual. 5. Check if DIP Switch is properly set. Refer to **Chapter 9 DIP Switch Settings** for related settings.
3	**Unable to focus**	Probably the document is too close. Press [ZOOM-] on the **remote control or control panel**. Or pull away the distance between document and lens, then press [AUTO TUNE].
4	**The image is incomplete**	Check the Auto Image setting of your projector. Please refer to the user manual of the projector or check for the DIP SWITCH settings.
5	**Forget the password for turning on**	Please contact your distributor or the service center.
6	**Lumens Document Camera, Lumens™ and other applications cannot be used simultaneously**	**Lumens Document Camera**, **Lumens™** and other applications cannot be executed simultaneously. Only one application can be executed at a time. Please close the currently running applications and then execute the application to be used.
7	**When the unit is turned on, the auxiliary floodlight do not light**	Please make sure the arm lamp is set to [OFF]. For the switch-on or -off of arm lamp, refer to **PS750 User Manual Chapter 7 Descriptions of major functions 7.8 I would like to turn on/off the lamp**.
8	**PS760 fails to store images or react**	1. Check to see if the stored data have reached the maximum size of the USB device (priority) or internal memory. 2. Please make sure if the Capture function is set to

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		Continuous mode or the time for capture is set to be long. For the related setting, refer to **7.11 I would like to capture images of Chapter 7 Descriptions of major functions**.
9	**The images outputted from PS760 are too bright, dark or vague**	Press [AUTO TUNE] to automatically adjust to the optimal brightness and focal length.
10	**Unable to record images**	1. Check to see if the stored data have reached the maximum size of the USB disk (priority) or internal memory. 2. Please confirm the rotation angle. You may not able to record when the image is rotated by 90°/270°.

11	**The operating steps in the manual are not applicable to the machine**	The operating steps in the manual may be not applicable to the machine due to improvement in functions.Check to see if the Firmware version of your machine is up-to-date.
		1 Please go to Lumens official website to check whether the latest version is available for update. http://www.Mylumens.com/goto.htm
		2 The steps to check the FW version are as below:
		   2.1 Press [MENU] on the remote control or control panel to enter the setting menu.
		   2.2 Press [▶] or [◀] to select [Advanced] menu.
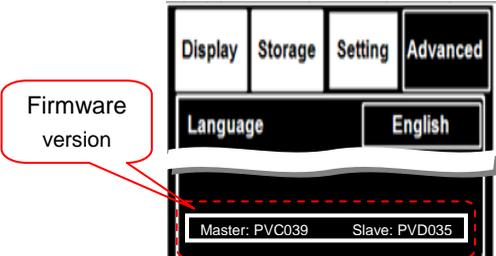		
		If you are not sure whether it is the latest version, please consult your dealer for advice. **http://www.Mylumens.com/en/Request_form.php**

12	**Unable to login to the network control page**	If DHCP is enabled, the IP address may not be updated. Please follow the steps below: 1 Press [MENU] on the **remote control** or **control panel** to enter the setting menu. 2 Press [▶] or [◀] to the [Advance] menu. 3 Press [▲] or [▼] to the [Ethernet]. 4 Press [ENTER] to open the Ethernet OSD menu. 5 Press [▼] to find [DHCP]. 6 Press [ENTER] to modify it. 7 Press [▲] or [▼] to select [On].

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		8 Press [MENU] to exit the Ethernet OSD menu. 9 Repeat steps 3 ~ 4 and check IP address.
13	**The images outputed are not clear, and the moire appears**	Please refer to the manual (**Attachment 1**), confirm the voltage frequency and reset it according to **Chapter 9 DIP Switch Settings**.

14	**The live image does not display after you login to the website**	1. Please install the **ActiveX** control according to the instruction on the screen
		2. If the instruction for installing the **ActiveX** control does not appear, please follow the following steps to confirm and remove the old version of **ActiveX** control components, and then re-install the **ActiveX** control components.
		  2.1 **Remove the components (Browser IE 8.0/IE 9.0):**
		    Open the IE browser, activate [Tool] → [Manage Add-ons] → in the drop-down menu of [Display] at the left side, select [All add-ons]. Then, after selecting "**GFFMpeg Class**" and "**GoDB Class**", right-click the mouse to open the menu, and click [More Info (R)]. Click the [Remove] button at the bottom left, and then press the [Close] button at the bottom right to complete the removal of components.
		  2.2 **Remove the components (Browser IE 7.0):**
		    Open the IE browser, activate [Tool] → [Manage Add-ons] → [Enable/Disable Add-ons] → in the drop-down menu of [Display], select [Add-ons that have been used by Internet Explorer]. Then, after selecting "**GFFMpeg Class**" and "**GoDB Class**", press the [Delete] button at the lower right corner.
		  2.3 **After reloading the website, please follow the instruction on the screen.**

15	**Q: A warning message ("Windows has blocked this software because it can't verify the publisher.") appears when installing the ActiveX controls as shown in the figure below:**	

Internet Explorer Add-on Installer - Security Warning

Windows has blocked this software because it can't verify the publisher.

Name: IPNCWebDlls.CAB
Publisher: **Unknown Publisher**

OK

To help protect your computer, Windows will block software when it cannot verify the publisher. See how this helps protect your computer.

	A: Please follow the steps below to modify security settings and re-install ActiveX control components again: 1. Setup steps: Open the web page -> click **[Tools]** in function bar -> **[Internet Options]** -> **[Security]** -> **[Custom Level]** -> select **[Download Unsigned ActiveX Controls]** and set to **[Prompt]** -> **[OK]** 2. Exit the "Internet Option" setup screen, restart your IE browser, and install control components according to the instructions on the screen.	
16	**Only video signal is produced from the video recorded using Lumens software. No audio output.**	USB Audio is not supported in PS760. Therefore, the built-in microphone cannot work in a computer. To record the sound, please use an external microphone for a desktop or a microphone built in a notebook.

Attachment 1

World voltage & frequency

Region/Country		Frequency	Region/Country		Frequency	Region/Country		Frequency
Chinese	English		Chinese	English		Chinese	English	
阿 富 汗	Afghanistan	50	大 陸	China	50	關 島	Guam	60
阿爾及利亞	Algeria	50	哥 倫 比 亞	Colombia	60	石 榴 島	Grenada	50
安 哥 拉	Angola	50	剛 果	Congo	50	瓜 地 馬 拉	Guatemala	60
安 地 瓜	Antiqua	50	哥斯大黎加	Costa Rica	60	幾 內 亞	Guinea	50
阿 根 廷	Argentina	50	古 巴	Cuba	60	蓋 亞 納	Gayana	50
澳 洲	Australia	50	塞 普 路 斯	Cyprus	50	海 地	Haiti	60
澳 地 利	Austria	50	捷 克	Czechoslovakia	50	夏 威 夷	Hawaii	60
亞 述 爾	Azores	50	達 荷 美	Dahomey	50	宏 都 拉 斯	Honduras	60
巴 哈 馬	Bahamas	60	丹 麥	Den mark	50	香 港	Hong Kong	50
巴 林	Bahrain	60	多 明 尼 加	Dominican	60	匈 牙 利	Hungary	50
孟 加 拉	Bangladesh	50	杜 貝	Dubai	50	冰 島	Ice land	50
巴 貝 多	Babados	50	厄 瓜 多 爾	Ecuador	60	印 度	India	50
比 利 時	Belgium	50	埃 及	Egypt	50	印 尼	Indonesin	50
百 慕 達	Bermuda	60	薩 爾 瓦 多	El Salvador	60	伊 朗	Iran	50
玻 利 維 亞	Bolivia	50	赤道幾內亞	Equatorial Guinea	50	伊 拉 克	Iraq	50
波 札 那	Botswana	50	衣 索 匹 亞	Ethiopia	50	愛 爾 蘭	Ireland	50
巴 西	Brazil	50 60	法 羅 群 島	Faeroe Island	50	曼 島	Isle of Man	50
保 加 利 亞	Bulgaria	50	裴 濟	Fiji	50	以 色 列	Israel	50
緬 甸	Burma	50	芬 蘭	Finland	50	義 大 利	Italy	50
蒲 隆 地	Burundi	50	法 國	France	50	象 牙 海 岸	Ivory Coast	50
高 棉	Cambodia	50	蓋 亞 那	French Guiana	50	牙 買 加	Jamaica	50
喀 麥 隆	Cameroon	50	加 彭	Gabon	50	日 本	Japan	50 60
加 拿 大	Canada	60	甘 比 亞	Gambia	50	約 旦	Jordan	50
康那利群島	CanaryIsland	50	德 國	Germany	50	肯 亞	Kenya	50
中非共和國	Central Africa Rep.	50	迦 納	Ghana	50	韓 國	Korea	60
錫 蘭	Ceylon	50	直 布 羅 陀	Gibraltar	50	科 威 特	Kuwait	50
查 德	Chad	50	大 不 列 顛	Great Britain	50	黎 巴 嫩	Lebanon	50
海 峽 群 島	Channel Island	50	希 臘	Greece	50	賴 索 托	Lesotho	50

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Region/Country		Frequency	Region/Country		Frequency	Region/Country		Frequency
Chinese	English		Chinese	English		Chinese	English	
智　　　利	Chile	50	格　陸　蘭	Greenland	50	賴 比 瑞 亞	Liberia	60
利　比　亞	Libya	50	阿　　　曼	Oman	50	敘　利　亞	Syria	50
盧　森　堡	Luxembourg	50	巴 基 斯 坦	Pakistan	50	大　溪　地	Tahiti	60
澳　　　門	Macao	50	巴　拿　馬	Panama	60	中 華 民 國	R.O.C. Taiwan	60
馬得拉群島	Madeiral	50	巴　拉　奎	Paraguay	50	坦 尚 尼 亞	Tanzania	50
馬 約 卡 島	Majokca Island	50	秘　　　魯	Peru	60	泰　　　國	Thailand	50
馬 拉 加 西	Malagasy	50	菲　律　賓	Philippines	60	多哥共和國	Togo Rep.of	50
馬　拉　威	Malawi	50	波　　　蘭	Poland	50	東　　　加	Tonga	50
馬 來 西 亞	Malaysia	50	葡　萄　牙	Portugal	〃	千　里　達	Trinidad	60
馬　　　利	Mali Rep.	50	波 多 黎 各	Puerto Rico	60	他　巴　哥	Tobago	60
馬　爾　他	Malta	50	科　　　托	Qatar	50	突 尼 西 亞	Tunisia	50
馬丁尼克島	Martinique	50	羅 德 西 亞	Rhodesia	50	土　耳　其	Turkey	50
茅里塔尼亞	Mauritania	50	羅 馬 尼 亞	Romania	50	烏　干　達	Uganda	50
模 里 西 斯	Mauritius	50	盧　安　達	Rwanda	50	美　　　國	USA.	60
墨　西　哥	Mexico	60	沙　烏　地 阿　拉　伯	Saudi Arabia	50 60	蘇　　　聯	USSR	50
摩　那　哥	Monaco	50	蘇　格　蘭	Scotland	50	英　　　國	United Kingdom	50
蒙特色納島	Montserrat	60	塞 內 加 爾	Senegal	50	上　伏　塔	Upper Volta	50
摩　洛　哥	Morocco	50	獅　子　山	Sierra Leone	50	烏　拉　奎	Uruguay	50
莫 桑 鼻 克	Mozambique	50	新　加　坡	Singapore	50	委 內 瑞 拉	Venezuela	60
尼　泊　爾	Nepal	50	索 馬 利 亞	Somalia	50	越　　　南	Viet-Nam	50
荷　　　爾	Netherlands	50	南非共和國	South Africa Rep.	50	維爾京群島	Virgin Island	60
新 蘇 格 蘭	New Caledonia	50	西　班　牙	Spain	50	西 薩 摩 亞	Western Samoa	50
紐　西　蘭	New Zealand	50	斯 里 蘭 卡	Sri Lanka	50	葉 門 亞 丁	Yeman(Aden)	50
尼 加 拉 瓜	Nicaragua	60	蘇　　　丹	Sudan	50	葉門阿拉伯	Yemen(Arab)	50
尼　　　日	Niger	50	蘇　利　南	Surinam	60	南 斯 拉 夫	Yugoslavia	50
奈 及 利 亞	Nigeria	50	史 瓦 濟 蘭	Swaziland	50	薩伊共和國	Zaire Rep. of	50
挪　　　威	Norway	50	瑞　　　典	Sweden	50	尚　比　亞	Zambia	50
琉　　　球	Okinawa	60	瑞　　　士	Switzerland	50			

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