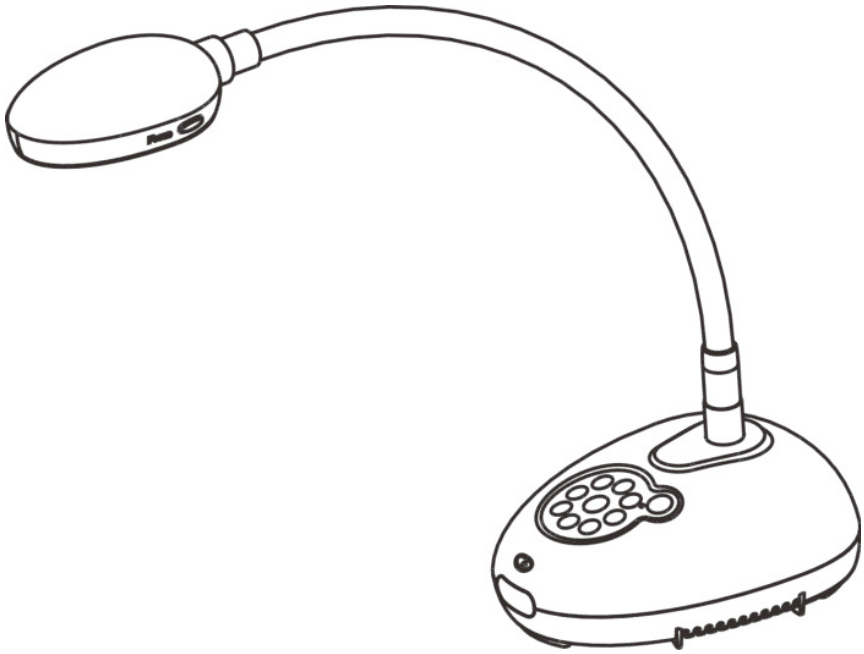
DC145

Document Camera

User Manual - English



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Lumens™

Table of Contents

Copyright Information **3**
Chapter 1 Safety Instructions **4**
Precautions 5
FCC Warning 5
EN55022 (CE Radiation) Warning 5
Chapter 2 Package Contents **6**
Chapter 3 Product Overview **7**
3.1 Relative position of the presenter and document 8
Chapter 4 Installation and Connections **9**
4.1 System diagram 9
4.2 Installation and setup 10
4.3 Connecting to a speaker and projector or monitor simultaneously 10
4.4 Connecting to a computer and use Lumens™ software 10
4.5 Connecting to a computer and projector or monitor simultaneously 11
4.6 Connect to a PC and read the SD card 11
4.7 Connecting to an Interactive Whiteboard (IWB) 12
4.8 Connecting to a computer with RS232 12
4.9 Connecting to a TV 13
4.10 Installing application software 13
Chapter 5 Start Using **14**
Chapter 6 Control Panel and Setting Menu **15**
6.1 Function Descriptions of Control Panel Button 15
6.2 Setting menu 16
Chapter 7 Descriptions of Major Functions **21**
7.1 I would like to automatically adjust the image to have the best brightness and focusing performance 21
7.2 I would like to switch image sources 21
7.3 I would like to switch the image mode 21
7.4 I would like to make text clearer and photos more colorful 21

7.5 I would like to zoom in/out images 22
7.6 I would like to use the auto focus 22
7.7 I would like to adjust the brightness 22
7.8 I would like to turn on/off the lamp 22
7.9 I would like to freeze images 22
7.10 I would like to rotate the image 22
7.11 I would like to capture images 22
7.12 I would like to record images 23
7.13 I would like to view captured/recorded images 24
7.14 I would like to delete the captured/recorded images 25
7.15 I would like to automatically delete the stored images whenever it is turned off (Auto Erase) 25
7.16 I would like to enlarge a part of the image (PAN) 25
7.17 I would like to use the MASK and Spotlight function 25
7.18 I would like to play the slides (Slide Show) 26
7.19 I would like to compare images (compare live images with stored image files (PIP)) 27
7.20 I would like to reduce the image noise (Projector Type) 27
7.21 I would like to resume the factory default setting (Factory Reset) ... 28
7.22 I would like to change the power on image. 28
7.23 I would like to use a SD Card 29
7.24 Computer-related functions 29
Chapter 8 DIP switch setting 31
8.1 Connecting to a projector or monitor 31
8.2 Connecting to a TV 32
Chapter 9 Troubleshooting 33

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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 Light Engine 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, extension cords 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 Document Camera 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 Document Camera 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 on top of vibrating 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 cord or plug becomes damaged or frayed.
    - If liquid is spilled into it or the Document Camera has been exposed to rain or water.

■ 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.

<table>
<tr><td colspan="4"> Note
Risk of Electric Shock
Please do not open it by yourself </td></tr>
<tr><td colspan="4">Caution: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to licensed service personnel.</td></tr>
<tr><td> </td><td>This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock.</td><td> </td><td>This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.</td></tr>
</table>

■ FCC Warning

This Document Camera has been tested and found to comply with the limits for a Class A computer device, pursuant to Article 15-J of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

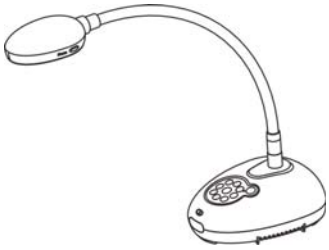
■ EN55022 (CE Radiation) Warning

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 residential 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, reception room or hall.

Chapter 2 Package Contents

DC145

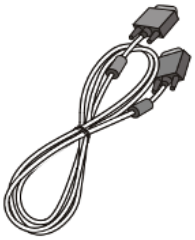


Quick Start Guide

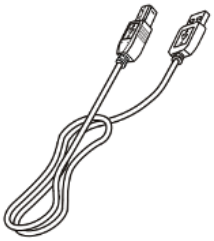
(For download of other language versions, please visit Lumens website)

4-Steps Card

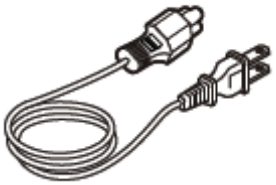
VGA cable



USB cable



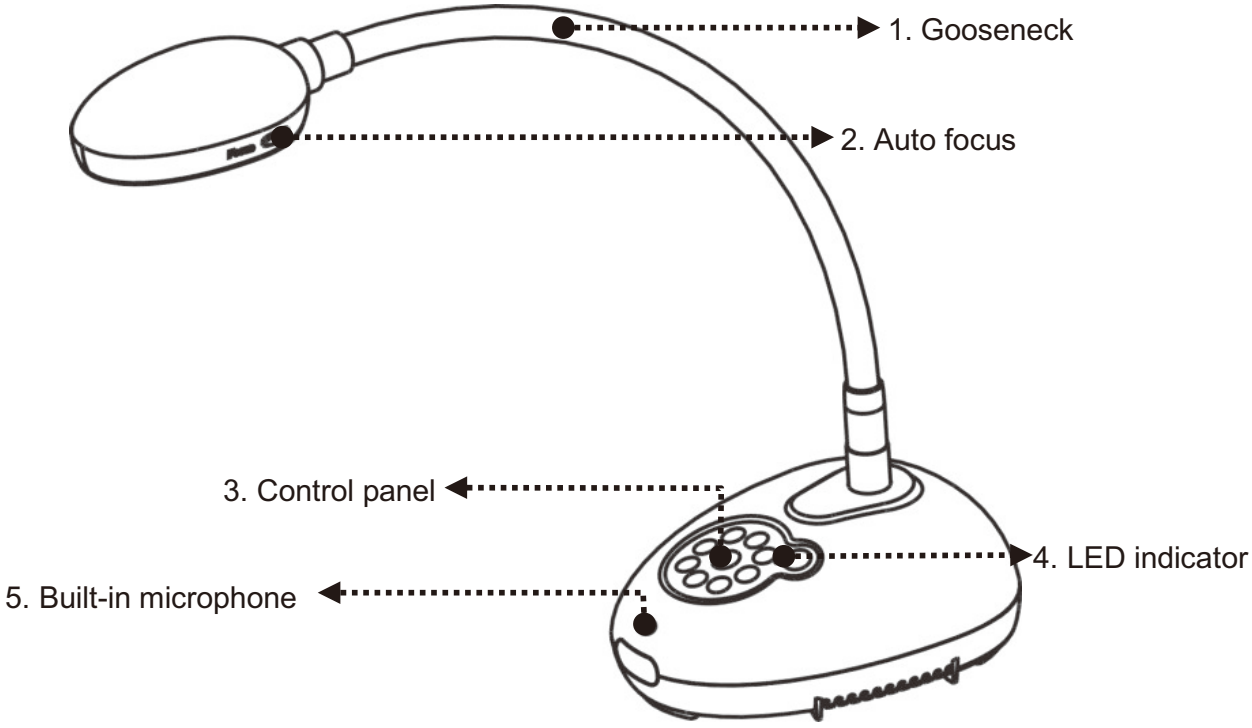
Power cord

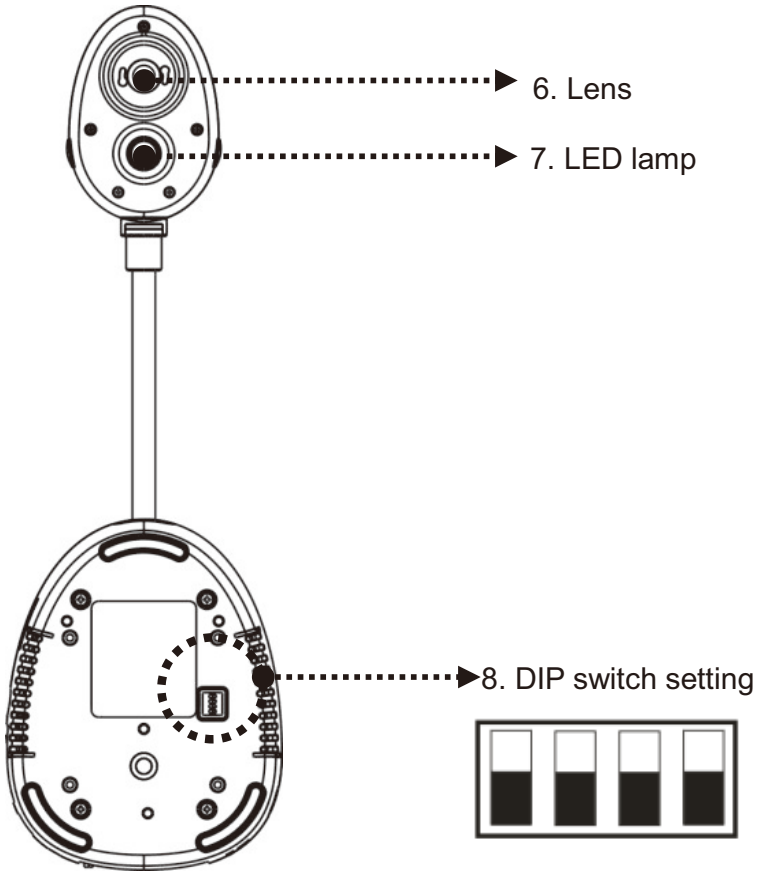


Appearance may vary depending on country/region

Accessory Pouch

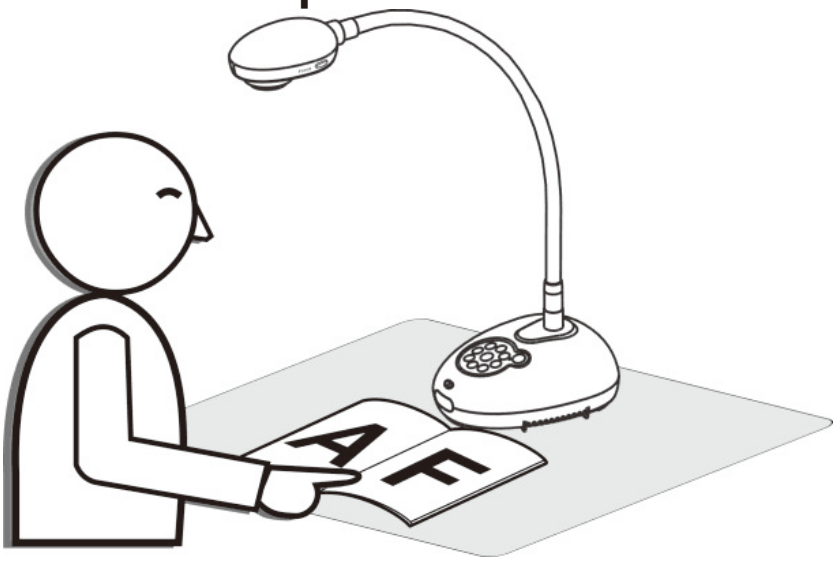
Chapter 3 Product Overview





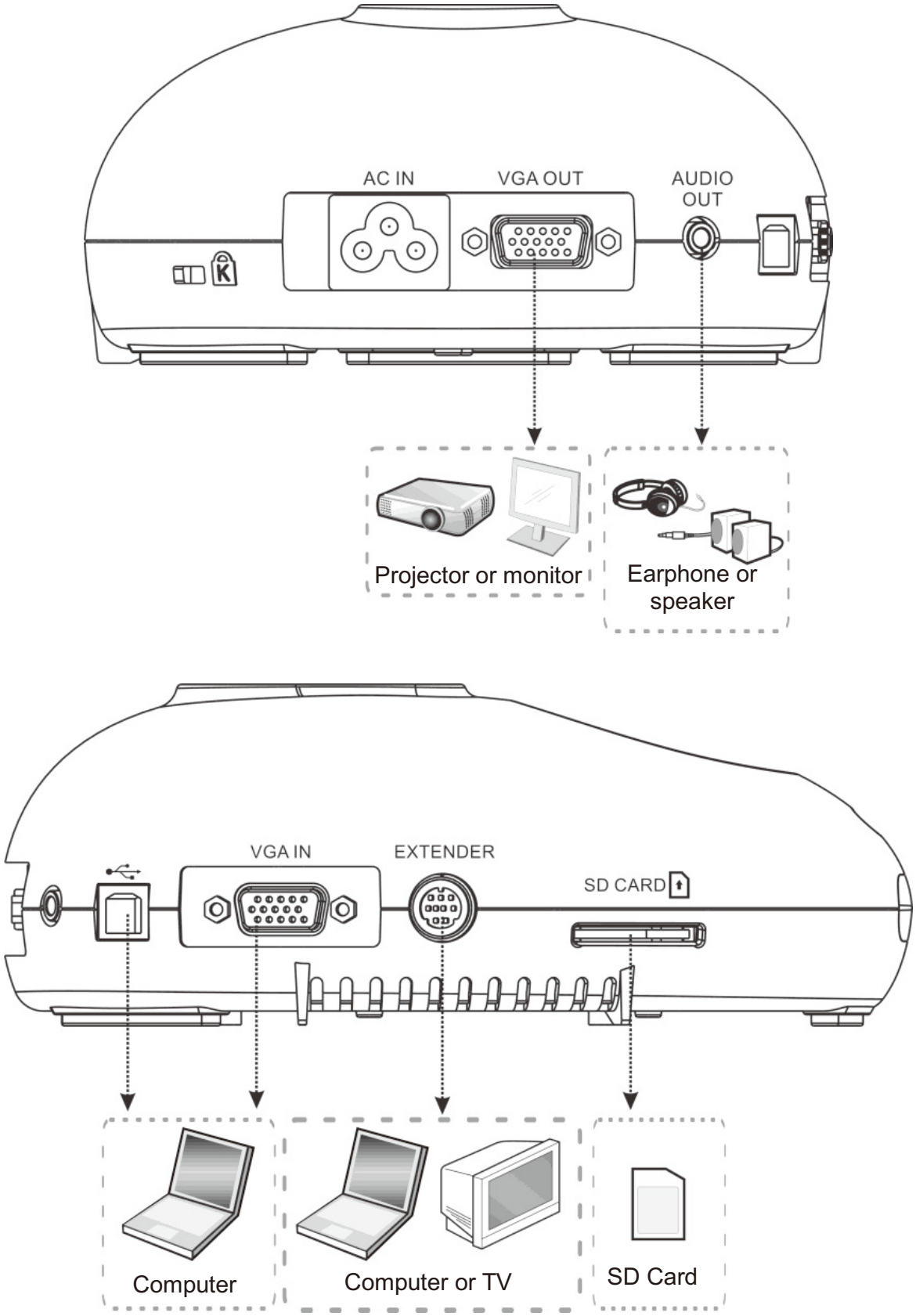
(Bottom)

3.1 Relative position of the presenter and document



Chapter 4 Installation and Connections

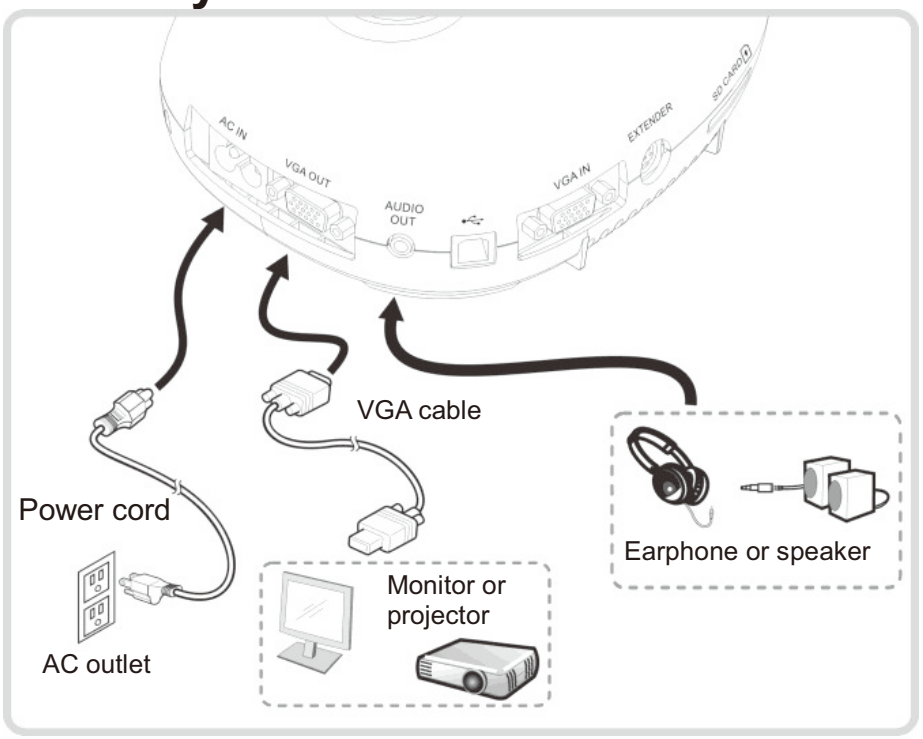
4.1 System diagram



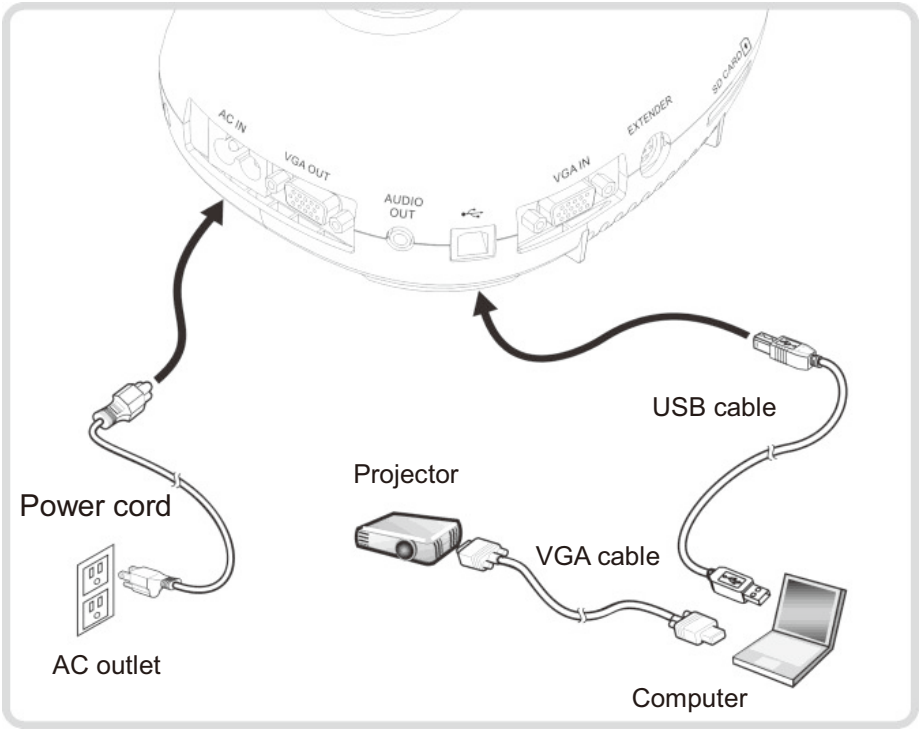
4.2 Installation and setup

1. Please set up the DIP switch setting first. Refer to **Chapter 8 DIP Switch Setting**.

4.3 Connecting to a speaker and projector or monitor simultaneously

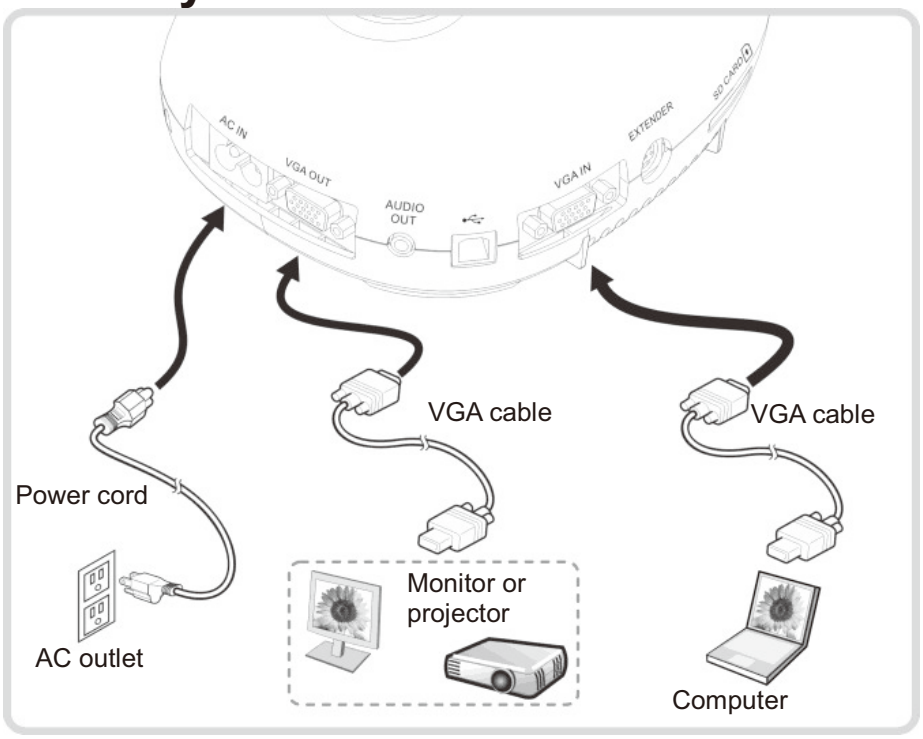


4.4 Connecting to a computer and use Lumens™ software



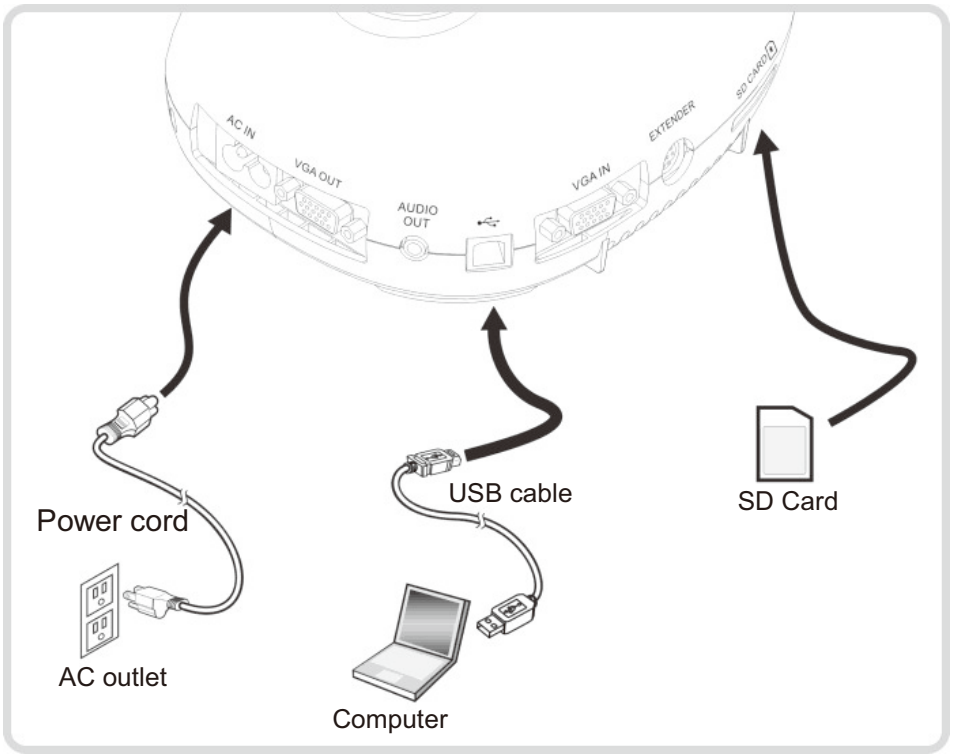
➢ Driver and software can be downloaded from Lumens website

4.5 Connecting to a computer and projector or monitor simultaneously



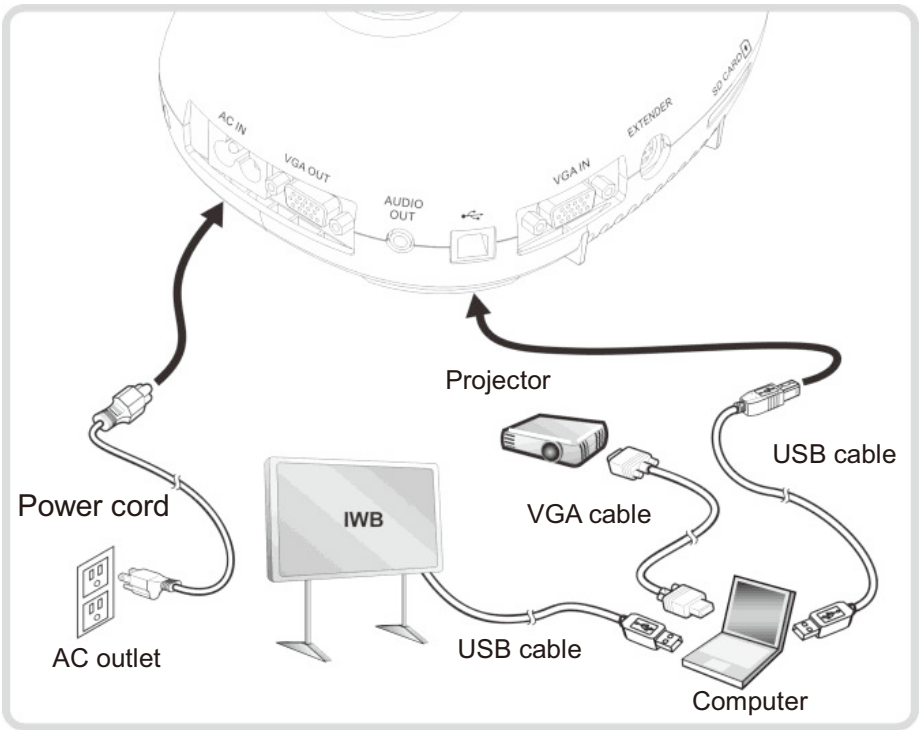
➢ Press [SOURCE] button to switch the image source.

4.6 Connect to a PC and read the SD card

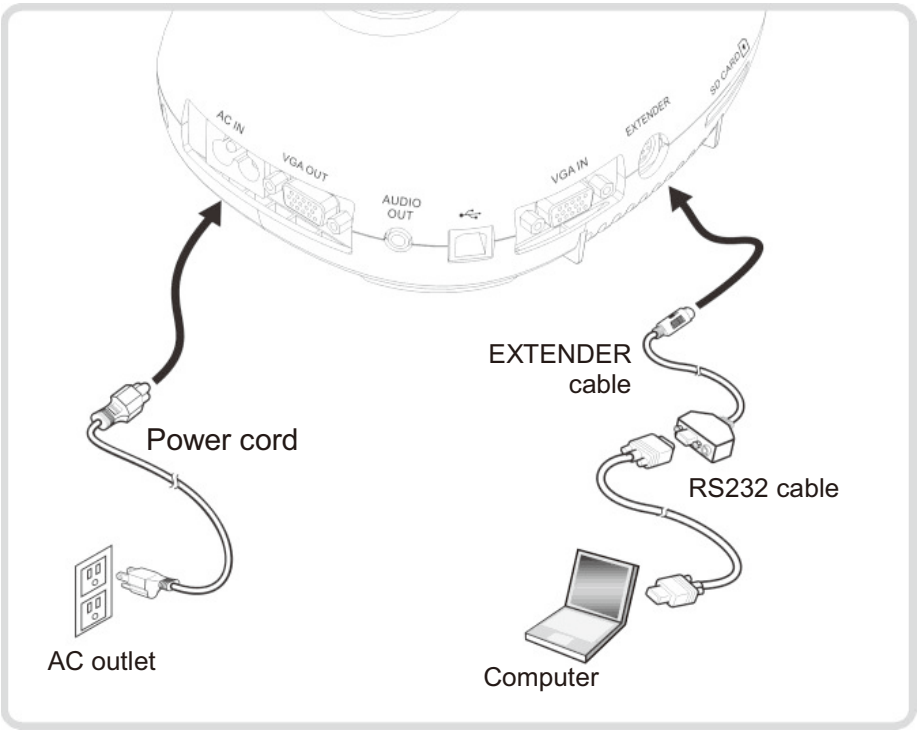


<Note> Connected to a computer and turned off, the Document Camera is just regarded as an external storage device.

4.7 Connecting to an Interactive Whiteboard (IWB)

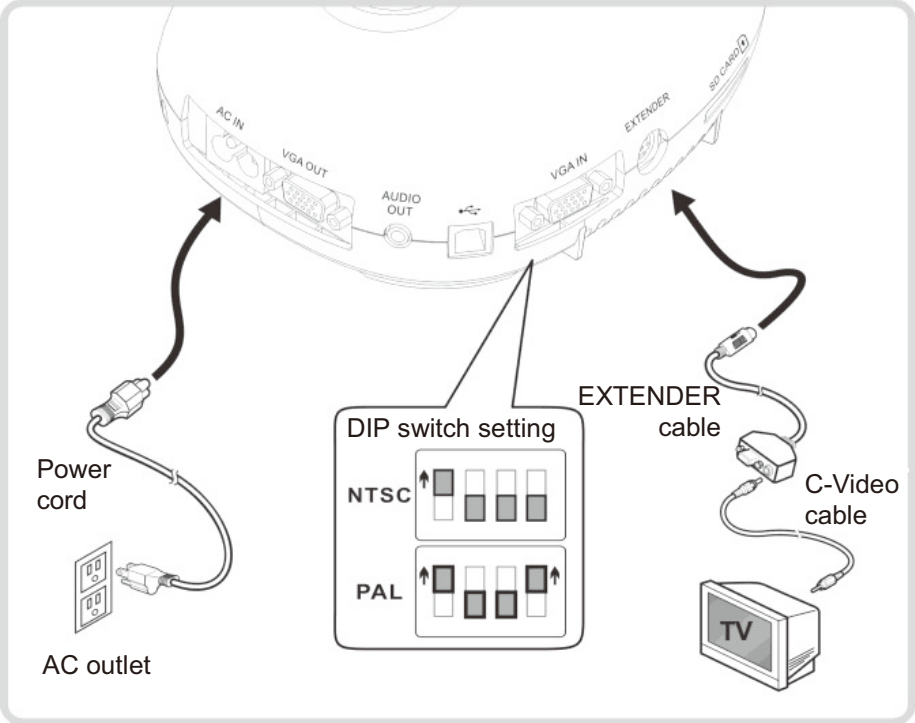


4.8 Connecting to a computer with RS232



- After connecting to the RS232 cable, you can use RS232 commands to control DC145.

4.9 Connecting to a TV



- NTSC: USA, Canada, Mexico, Panama, Chile, Japan, Taiwan, Korea, and Philippines.
- PAL: Countries/regions not listed above

<Note> You should unplug and reconnect the power cord, and then restart the machine for DIP switch setting to take effect. Once C-VIDEO is enabled, VGA OUT is not supported.

<Note> Only the live image can be displayed in C-Video output mode.

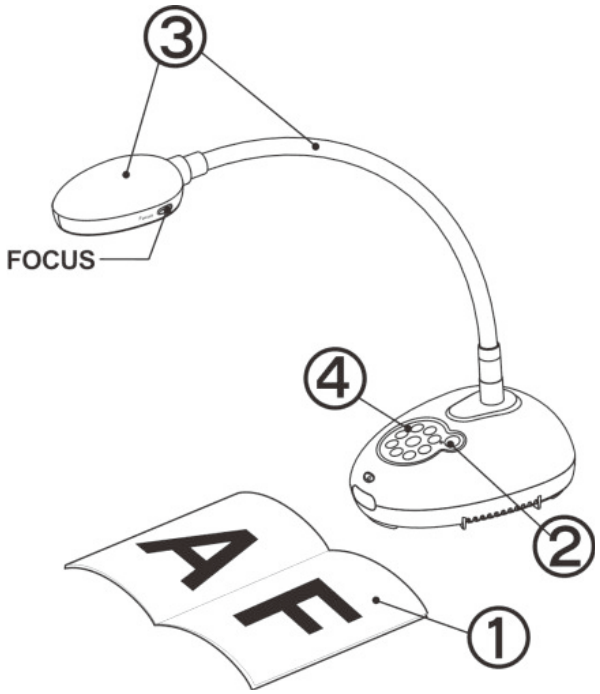
4.10 Installing application software

The application software installed on the computer enables you to:

- Control the DC145.
- Capture and record images.
- Annotate the image, highlight important details and save it.
- Support the full screen function.

<Note> Please refer to Ladibug™ software user manual for installation steps and software operation.

Chapter 5 Start Using



1. Place an object to be displayed under the camera.
2. Turn on Power .
3. Adjust the gooseneck and lens to the appropriate positions.
4. Press [AUTO TUNE]

button to optimize the image. You are ready to teach/present.

➢ Each time the camera head is moved, please locate it and then press [FOCUS] to refocus the lens.

- Once the Power is turned on, the LED on the control panel will flash a few times and stay lit. Please contact your distributor if the LED does not light up.

Chapter 6 Control Panel and Setting Menu

6.1 Function Descriptions of Control Panel Button

<Remark> The below functions are listed alphabetically

Name	Function Descriptions	Operation
	Turn on and off the Document Camera.	**Control panel**
◄,►,▲,▼	Move up, down, left or right to select the needed function.	**Control panel**
FOCUS	Auto focus.	**Either sides of the lens**
AUTO TUNE	Automatically adjust the image to have the best brightness and focusing performance.	**Control panel**
CAPTURE	Capture images to SD Card (priority) or internal memory card. **<Remark> When connecting to SD card, press and hold [CAPTURE] to start recording images.**	**Control panel**
ENTER / FREEZE	Live image: Freeze the image OSD mode: Activate/Enter functions	**Control panel**
LAMP	Lamp mode toggle switch.	**Control panel**
MENU	Activate the setting menu/exit the menu.	**Control panel**
PLAYBACK	Read files stored in the SD Card (priority) or internal memory.	**Control panel**
SOURCE	Switch between different sources of signals: 1. Live images (default). 2. Computer. **<Remark> This button is disabled in C-Video Output mode.**	**Control panel**
ZOOM +/-	Increase or decrease the image size.	**Control panel**

6.2 Setting menu

6.2.1 Main menu

<Remark> Press **[MENU]** to activate the setting menu.

	Auto Tune Automatically adjust the image to have the best brightness and focusing performance.		**Slide Show** Show the photos or videos stored in the SD card (priority) or internal memory in slide mode.
	PAN Enable/Disable the partial enlarged mode.		**Manual Focus** Auto focus.
	LAMP Lamp mode toggle switch.		**Rotate** Screen rotation 0°/180°/Flip/ Mirror
	PIP Image comparison (to compare live images with stored image files).		**Settings** Set up various functions.
	Brightness Adjust the brightness of the image.		**Photo/Text** Select Photo/Text/Gray Mode.
	Mask Activate the mask mode.		**Zoom** Increase or decrease the image size.
	Mode Select image mode.		**Spotlight** Activate the spotlight mode.

6.2.2 Setting menu

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment Values	Function Descriptions
Capture	**Capture Mode**	**Single Capture**/ Time Lapse/Record/ Off	Use the left and right arrow keys to select the capture mode.
	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> This will be active only when capture mode is set to time lapse**
	Capture Interval	1. 3 sec 2. **5 sec** 3. 10 sec 4. 30 sec 5. 1 min 6. 2 min 7. 5 min	Use the left and right arrow keys to select the capture interval. **<Note> This will be active only when capture mode is set to time lapse**
	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.
Storage	**Slide Show**	**Enter**	Show the photos or videos stored in the SD card (priority) or internal memory in slide mode.
	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.
	Copy To SD Card	**Enter**	Use the left and right arrow keys to select, and then press [ENTER] to confirm to copy files from internal memory to SD Card.
	Delete All	Yes/**No**	Use the left and right arrow keys to select, press [ENTER] to confirm the deletion of all images from the SD Card (priority) or internal memory.
	Format	Yes/**No**	Use the left and right arrow keys to select, and then press [ENTER] to format the SD Card (priority) or internal memory.

Control	**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.
	Auto White Balance	**Enter**	Regardless of outside light or color, the machine will adjust the color to the optimal condition; Press [ENTER] to execute.
	Audio 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	**語言(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 20. Latvijas	**English** Traditional Chinese Simplified Chinese German French Spanish Russian Dutch Finnish Polish Italian Portuguese Swedish Danish Czech Arabic Japanese Korean Greek Latvian Use the left and right arrow keys in the Language option to select the preferred language.
	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.

	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.
	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].
	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].
	Splash Screen Settings	**Enter**	Launch **[Splash Screen Settings]** window
	Factory Reset	Yes/**No**	Use the left and right arrow keys to select, and then confirm by pressing [ENTER] to restore the factory defaults.
	Firmware Version	NA	Display FW version

6.2.3 Mask mode setting menu

2nd Level Major Items	3rd Level Minor Items	4th Level Adjustment Values	Function Descriptions
MASK Mode	**Live**	**Enter**	Press [ENTER] to return to live image.
	Transparency	0~**2**~3	Use the left and right arrow keys to adjust the transparency of the mask.
	Step	Large/**Medium**/Small	Use the left and right arrow keys to select the step of the mask.
	V Size	0~**A**~Max	Use the left and right arrow keys to select the vertical height of the mask.
	H Size	0~**A**~Max	Use the left and right arrow keys to select the horizontal length of the mask.
	Exit	**Enter**	Press [ENTER] to confirm your selection and exit the mask mode setting menu.

6.2.4 Spotlight mode setting menu

2nd Level Major Items	3rd Level Minor Items	4th Level Adjustment Values	Function Descriptions
Spotlight Mode	**Live**	**Enter**	Press [ENTER] to return to live image.
	Shape	**Ellipse**/Rectangle	Use the left and right arrow keys to select the shape of the spotlight zone.
	Transparency	0~**2**~3	Use the left and right arrow keys to adjust the transparency of the border in the spotlight mode.
	Step	Large/**Medium**/Small	Use the left and right arrow keys to select the step of the spotlight zone.
	V Size	0~**A**~Max	Use the left and right arrow keys to adjust the height of the spotlight zone.
	H Size	0~**A**~Max	Use the left and right arrow keys to adjust the width of the spotlight zone.
	Exit	**Enter**	Press [ENTER] to confirm your selection and exit the spotlight mode setting menu.

6.2.5 Splash Setting Windows

2nd Level Major Items	3rd Level Minor Items	4th Level Adjustment Values	Function Descriptions
Splash Screen Setting	**Power On Image Setting**	**Default**/Custom	Select to use default/custom power on image.
	Power On Logo Show Time	4 ~ 30 sec	Set up power on logo show time.
	Power On Image Select	**Enter**	Select power on image. Only pictures in JPEG format are supported.
	Exit	**Enter**	Press [ENTER] to confirm your selection and exit splash screen setting window.

Chapter 7 Descriptions of Major Functions

7.1 I would like to automatically adjust the image to have the best brightness and focusing performance

1. Press [AUTO TUNE] for the best brightness and focusing performance.

7.2 I would like to switch image sources

Live image is the default image source. Press [SOURCE] to have DC145 switch among the following images sources:

1. Live images (default).
2. Computer.

7.3 I would like to switch the image mode

1 Press [MENU] to activate the setting menu.
2 Press [▲], [▼], [►], or [◄] to select [Image Mode].
3 Press [►] or [◄] to the [Normal/Film/Slide/Microscope].
4 Press [MENU] to exit.

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 activate 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 Set up Photo/Text mode

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Photo/Text]. (Please refer to **7.4.1 Photo/Text mode descriptions** to make the best choice.)
3. Press [ENTER] to activate.
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 +] to zoom in the image.
2. Press [Zoom -] to zoom out the image.

7.6 I would like to use the auto focus

1. Press the [FOCUS] AF button on the right side of the lens.

7.7 I would like to adjust the brightness

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Brightness].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to adjust the brightness.
5. Press [MENU] to exit.

7.8 I would like to turn on/off the lamp

The default of the lamp is **OFF**.

1. Press [LAMP] to switch On/Off. (The sequence of switching is: Off / Head Lamp)

7.9 I would like to freeze images

1. Press [FREEZE] to freeze the current image on the screen. Press again to lift the freeze.

7.10 I would like to rotate the image

1. Press [MENU] to activate the setting menu.
2. Press [▲] or [▼] or [►] or [◄] to select [Rotate].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to switch the rotation method. (The sequence of switching is: 0°/180°/Flip/Mirror)
5. Press [MENU] to exit.

7.11 I would like to capture images

7.11.1 Capture and save images

1. Press [CAPTURE] 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] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Setting].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to the [Capture Settings] menu.
5. Press [▼] to find [Image Quality].
6. Press [►] or [◄] to select among [High/Medium/Low].
7. Press [MENU] to exit.

7.11.3 Setting continuous capture

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Setting].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to the [Capture Settings] menu.
5. Press [▼] to the [Capture Mode].
6. Press [►] or [◄] to select [Time Lapse].
7. Press [▼] to find [Capture Time]; Press [►] or [◄] to set capture time.
8. Press [▼] to find [Capture Interval]; Press [►] or [◄] to set interval time.
9. Press [MENU] to exit.

7.12 I would like to record images

<Note> Connect SD Card to start recording images.

7.12.1 Recording motion images

<Remark> You may not be able to capture or record images when [Capture Mode] mode is set to [Disable].

1. Press and hold [CAPTURE] button for about 2 seconds to start recording images

2. Press [CAPTURE] again to stop recording.

7.12.2 Setting the quality of captured images

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Setting].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to the [Capture Settings] menu.
5. Press [▼] to find [Image Quality].
6. Press [►] or [◄] to select among [High/Medium/Low].
7. Press [MENU] to exit.

7.12.3 Recording setup

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Setting].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to the [Capture Settings] menu.
5. Press [▼] to the [Capture Mode].
6. Press [►] or [◄] to select [Record].
7. Press [MENU] to exit.

<Remark> When the [Capture Image] mode is set to [Record], the function of [Capture] is changed to image recording.

7.12.4 Playing images

- **For playing videos, please refer to 7.13 I would like to view captured/recorded images.**

7.13 I would like to view captured/recorded images

1. Press [PLAYBACK] to show the thumbnails of all stored files.
2. Press [▲], [▼], [►], or [◄] to select the thumbnail you want to play.
3. Press [ENTER] for full-screen play.
4. When the video is played, it can be paused/played by pressing [Freeze].
5. Press [►] or [◄] to select the next or previous audio/video file.
6. Press [▲] or [▼] to adjust the volume of the video.
7. Press [PLAYBACK] to return to the Thumbnail Mode to select other Audio/Video Files, or press [MENU] to exit.

<Note> An external speaker must be connected to AUDIO OUT to play sound.

7.14 I would like to delete the captured/recorded images

1. Turn off the Document Camera. Connect to a computer
2. Open [My Computer], and open [Removable Disc] to delete the files

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

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Setting].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to the [Advanced] menu.
5. Press [▲] or [▼] to [Auto Erase].
6. Press [►] or [◄] to select [On].
7. Press [MENU] to exit.

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

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [PAN].
3. Press [ENTER] to execute.
4. Press [▲], [▼], [►], or [◄] to move and view the partial enlarged images.
5. Press [MENU] to exit the partial enlarged mode.

7.17 I would like to use the MASK and Spotlight function

7.17.1 I would like to use the mask or spotlight mode

1. Press [MENU] to activate the setting menu.
2. Press [▲] or [▼] or [►] or [◄] to select [Mask], Press [ENTER] to activate mask mode or select [Spotlight] and press [ENTER] to activate spotlight mode.
3. Press [MENU] to activate the image OSD menu.
4. Press [▲] or [▼] to select [Live Image].
5. Press [ENTER] to return to live image.

7.17.2 I would like to set the size of mask

In Mask mode:

1. Press [MENU] to activate 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 6.2 Setting Menu.)**
3. Press [►] or [◄] to perform the modification.
4. Press [MENU] to exit the image OSD menu and return to the mask mode.

7.17.3 I would like to set spotlight function

In Spotlight mode:

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

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

7.18.1 Setting delay time

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Setting].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to the [Storage] menu.
5. Press [▼] to find [Delay].
6. Press [►] or [◄] to select the delay time between [0.5 sec/1 sec/3 sec/5 sec/10 sec/Manual].
7. Press [MENU] to exit.

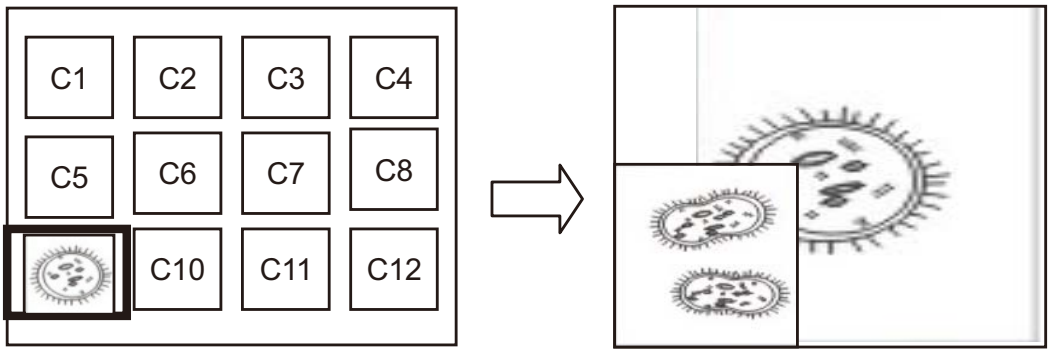
7.18.2 Playing/Pausing/Stopping the slide show

<Note> Upper limit: The maximum size of single photo is 7 MB.

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Slide Show].
3. Press [ENTER] to play.
4. Press [ENTER] again to pause/play.
5. Press [MENU] to exit.

7.19 I would like to compare images (compare live images with stored image files (PIP))

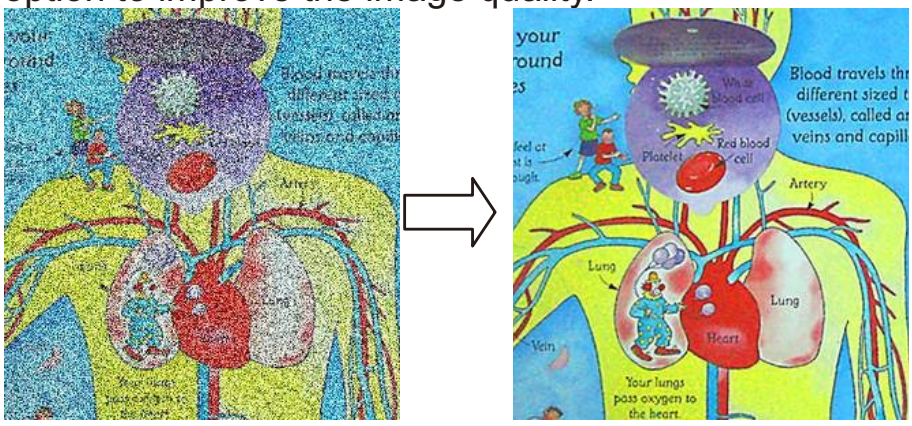
This function will compare and contrast a live image with a stored image.



1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [PIP].
3. Press [ENTER] to activate image comparison.
4. Press [▲], [▼], [►], or [◄] to move the live image.
5. Press [MENU] to exit.

7.20 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] to activate the setting menu.
2.2. Press [▲], [▼], [►], or [◄] to select [Setting].
2.3. Press [ENTER] to activate.
2.4. Press [►] or [◄] to select [Control].

2.5. Press [▼] to [Projector Type].
2.6. Press [►] or [◄] to select [**LCD/DLP**].
2.7. Press [MENU] to exit.

7.21 I would like to resume the factory default setting (Factory Reset)

7.21.1 Use function menu

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Setting].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to select [Advanced] menu.
5. Press [▼] to select [Factory Reset].
6. Press [►] or [◄] to select [Yes].
7. Press [ENTER] to execute.

7.21.2 Use Compound Key

1. Press **[ENTER] + [MENU]** simultaneously to restore the initial value.

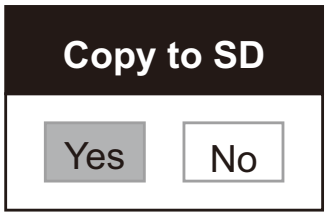
7.22 I would like to change the power on image.

<Note> The power on image file must be less than 5 MB and in JPEG format.

1. Press [MENU] to activate the setting menu.
2. Press [▲], [▼], [►], or [◄] to select [Setting].
3. Press [ENTER] to activate.
4. Press [►] or [◄] to select [Advanced] menu.
5. Press [▼] to select [Power On Image Setting].
6. Press [ENTER] to activate.
7. Press [▲] or [▼] to select [Power On Image Setting] and press [►] or [◄] to select [Default/Custom].
8. Press [▲] or [▼] to select [Power On Logo Show time] and press [►] or [◄] to set up the time.
9. Skip to Step 12 if your select [Default] in Step 7.
10. Press [▲] or [▼] to [Power On Image Select] and press [ENTER] to read selected file.
11. Select [YES] to confirm the modification.
12. Press [▼] to [Exit] and press [ENTER] to exit.

7.23 I would like to use a SD Card

1. After the SD Card is inserted, the [Copy To SD Card] dialog box will be displayed for you to select to copy files in DC145 to SD Card.
   - ➢ Press [►] or [◄] to select.

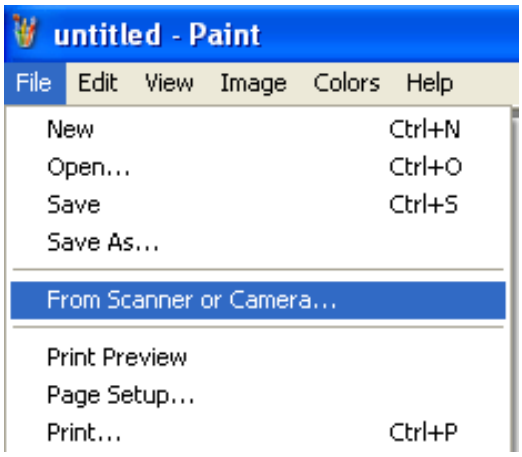


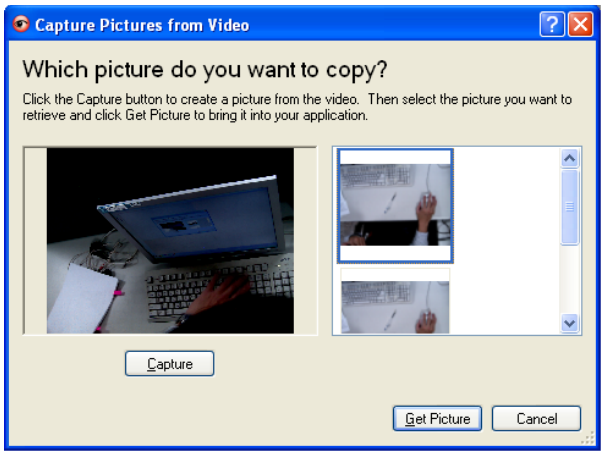
7.24 Computer-related functions

Ensure that the USB cable is connected and the drivers are installed before using the computer-related functions. Refer to **Chapter 4 Installation and Connections** in this User Manual.

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

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



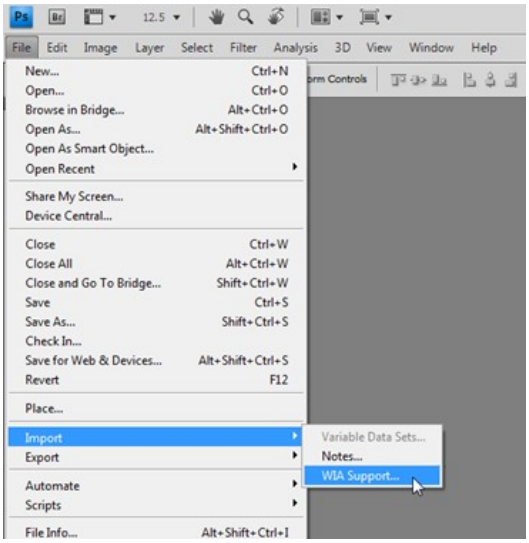


2. Complete by clicking [Get Picture] as shown in the top right figure.

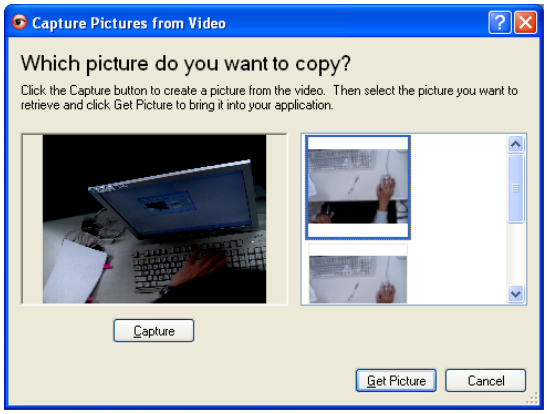
<Remark> Support Windows XP Operation System only.

7.24.2 I would like to insert photos in Photoshop

1. Click [File/Read-in/WIA-USB Video Device] in ***Photoshop***.



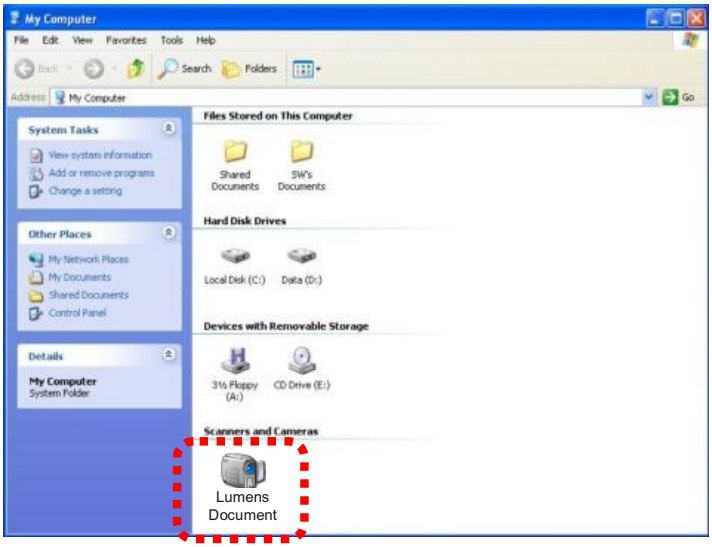
2. Complete by clicking [Capture], then clicking [Get Picture].



7.24.3 I would like to set the DC145 as a PC Camera

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

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

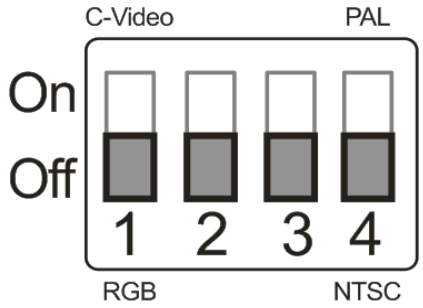


Chapter 8 DIP switch setting

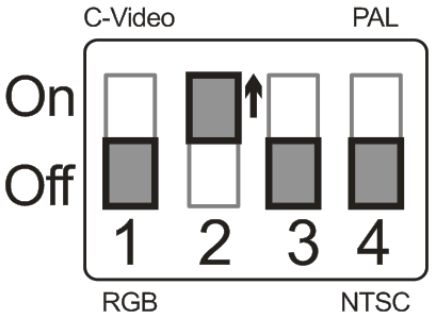
<Note> You should unplug and reconnect the power cord, and then restart the DC145 for all DIP Switch Settings to take effect.

8.1 Connecting to a projector or monitor

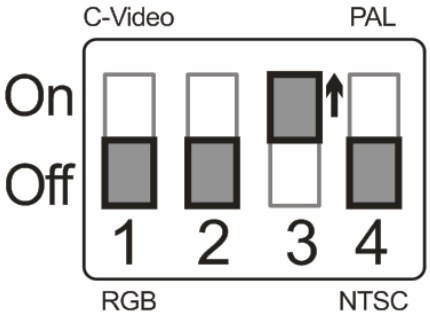
8.1.1 XGA output (default values):



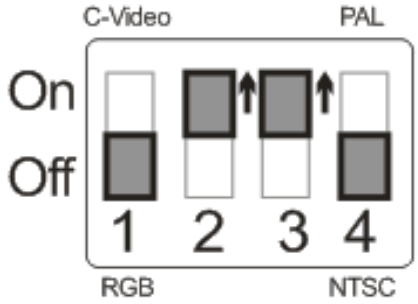
8.1.2 SXGA output



8.1.3 WXGA output

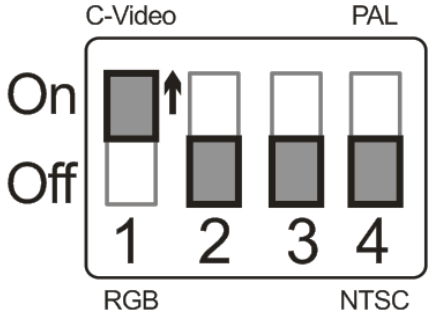


8.1.4 1080P output

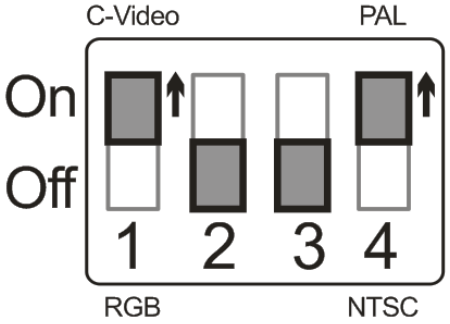


8.2 Connecting to a TV

8.2.1 NTSC: USA, Taiwan, Panama, Philippines, Canada, Chile, Japan, Korea, and Mexico



8.2.2 PAL: Countries/regions not listed above



<Remark> Once C-VIDEO is enabled, VGA OUT is not supported.

Chapter 9 Troubleshooting

This chapter describes problems you may encounter while using DC145. 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	**There is no image output from DC145**	1. Check the power 2. Check all cable connections. Refer to **Chapter 4 Installation and Connections** in this manual. 3. Check the [Source], refer to **7.2 I would like to switch image sources of Chapter 7 Descriptions of Major Functions**. 4. Check the settings for the source of the projector. Please refer to the user manual of the projector. 5. Check if DIP switch is properly set. Please refer to **Chapter 8 DIP Switch Setting** for related settings.
3	**Unable to focus**	Probably the document is too close. Press [ZOOM -] or pull away the distance between document and lens, then press [FOCUS] button on the right side of the lens for auto focus.
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 setting.
5	**Lumens Document Camera, Ladibug™ and other applications cannot be used simultaneously**	**Lumens Document Camera**, **Ladibug™** and other applications cannot be used simultaneously. Only one application can be executed at a time. Please close the currently running applications and then execute the application to be used.
6	**DC145 fails to store images or react**	1. Check to see if the stored data have reached the maximum size of the SD Card (priority) or internal memory. 2. Please make sure if the capture function is set to continuous mode or the time for capture is set to be long. For the related setting, please refer to **7.11 I would like to capture images of Chapter 7 Descriptions of Major Functions**.

7	**The images output from DC145 are too bright, dark or vague**	Press [AUTO TUNE] button to automatically adjust the image to have the best brightness and focusing performance.
8	**Unable to record images**	1. Check to see if the stored data have reached the maximum size of the SD Card. 2. The recording function is not supported in the internal memory. Please make sure that SD Card is inserted for image recording.
9	**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. www.Mylumens.com/goto.htm 2 The steps to check the FW version are as below: 2.1 Press [MENU] to activate the setting menu. 2.2 Press [▲], [▼], [►], or [◄] to select [Setting]. 2.3 Press [ENTER] to activate. 2.4 Press [►] or [◄] to select [Advanced] menu. 2.5 View [Firmware Version]. If you are not sure whether it is the latest version, please consult your distributor for advice. http://www.Mylumens.com/en/Request_form.php
10	**How to unlock the locked device**	1. Press [MENU] to activate the setting menu. 2. Press [▲], [▼], [►], or [◄] to select [Setting]. 3. Press [ENTER] to activate. 4. Press [►] or [◄] to select [Advanced] menu. 5. Press [▼] to [Lock Down]. 6. Press [►] or [◄] to select [Off] and cancel the password setting function.

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