

- **Welcome!**
  - **It is our honor that you have chosen our products.**
  - **Before using the product, please read the declaration below carefully.**
- 

■ **FCC Compliance Statement (Class A):**

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

■ **Federal Communications Commission (FCC) Statement :**

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



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■ **European Community Compliance Statement (Class A):**

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

■ **VCCI-A**

This is a class A product.

In a domestic environment this product may cause radio interference, in which case the user may be required to take corrective actions.



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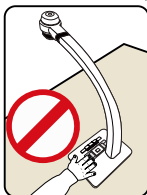
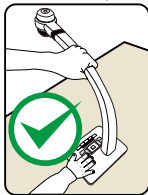
When the equipment exceeds its effective usage life and is subject to disposal, please comply with related laws and regulations to recycle all accessories.

Please do not dispose the battery and rechargeable battery with other household waste! Please deliver the battery and rechargeable battery to a local recycle collection station for recycle. Let's do our share in protecting the environment.



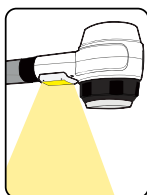
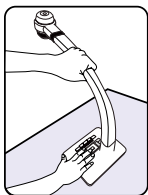
## ■ Warnings

1. Please prevent children from operating the device without supervision.

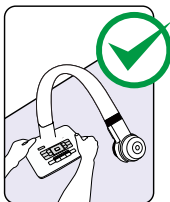
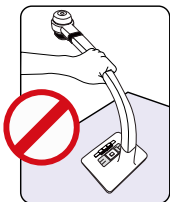


2. Please unfold the device and adjust the camera head with one hand placing on the base and the other hand holding the case of camera head.

3. Please do not look directly to the LED lamp to prevent your eyes from being damaged.



4. When allocating the device, please hold the base with both hands. Do not carry the device by the gooseneck flexible tube or camera head with one hand.



5. Please prevent the camera head to hit the desk top or any other hard objects, or it can be damaged easily.

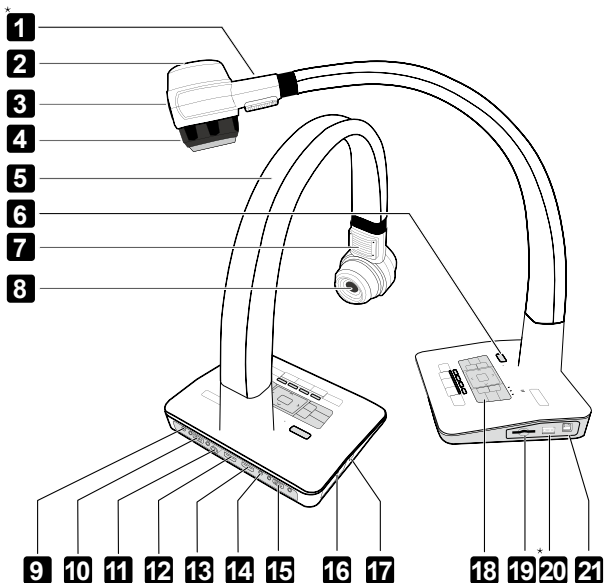
6. Please do not twist the gooseneck flexible tube.

7. Please be careful not to spill liquid on the control panel keys.

8. When the device is not in use for a while, please turn off the power.

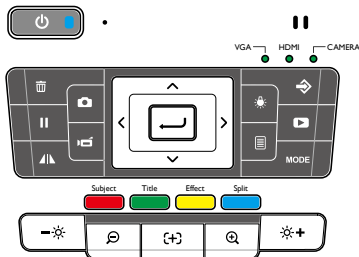
# Understand the Portable Visualizer

## ■ Knowing the Parts





















- |  |                      |  |
|--|----------------------|--|
| <b>1</b> Laser Location Touch Point (Optional) | <b>8</b> Camera Head | <b>15</b> VGA-IN                         |
| <b>2</b> Gradienter                            | <b>9</b> AUDIO-OUT   | <b>16</b> DC 12V Power Socket            |
| <b>3</b> Work Indicator Light                  | <b>10</b> VGA-OUT    | <b>17</b> Anti-theft Slot                |
| <b>4</b> IF Receive Area                       | <b>11</b> VIDEO-OUT  | <b>18</b> Control Panel                  |
| <b>5</b> Gooseneck                             | <b>12</b> HDMI-OUT   | <b>19</b> SD Card Slot                   |
| <b>6</b> Power Switch                          | <b>13</b> HDMI-IN    | <b>20</b> USB Flash Disk Port (Optional) |
| <b>7</b> LED Lamp                              | <b>14</b> AUDIO-IN   | <b>21</b> USB to PC Port                 |








# Control panel



Button	Function	Button	Function
	Power On/Off	Title	Freeze the top one-sixth of the screen
	Delete one file from memory when in playback mode	Effect	Display negative/positive conversion, black & white and color selection
	Freeze the current image	Split	Display a split screen with one half of the screen frozen and the other half to display the live image
	Mirror the current image		Decrease the brightness
	Capture a still image		Increase the brightness
	Record a video clip		Zoom in/Zoom out
	Turn on/off the LED lamp		Automatic Focusing
	To show or hide OSD menu		left/right
	Select the output signles		up/down
<b>MODE</b>	Mode switching		OK
Subject	Select Text or Graphics modes		

## Remote Control

Button	Function
	Power On/Off
	Select Text or Graphics modes
	Freeze the top one-sixth of the screen
	Display negative/positive version, black & white and color selection
	Display a split screen with one half of the screen frozen and the other half to display the live image
	To show or hide OSD menu
	Select the output signles
	Automatic Focusing
	Adjust the direction / Confirm
	Capture a still image
	Record a video clip
	Display stored images in live display and use direction arrow keys to toggle stored image display direction arrow keys to move its position
	Re-display stored imaged and videos
	Freeze the current image
	Delete one file from memory when in playback mode
	Image rotation of 90° 180° 270°
	Micro focus adjustment
	Mirror the current image

Button	Function
	Zoom in / Zoom out
	If the screen is partially blocked, use the direction arrow keys to move its position.
	Decrease/Increase the brightness
	Select resolution from XGA, SXGA, WXGA, 720P, and 1080P directly
	Focus near/Focus far
	Turn on/off the LED lamp and adjust the brightness
	Volume control
<b>MODE</b>	Mode switching



# Portable Visualizer

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Next, the section explains how to set up, adjust the device to meet your needs.

## ■ Camera Head

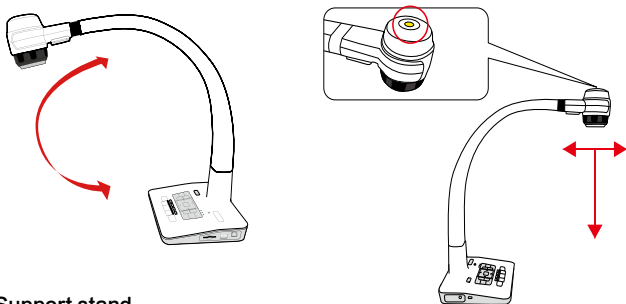
Please hold the camera head and adjust it to the position where you want to shoot the image.

## ■ Gooseneck

Bend the gooseneck flexible tube gently by hand and place the camera head to the preferable height and orientation.

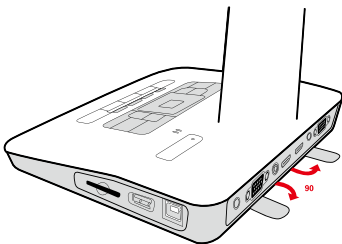
## ■ Gradienter

Rotate the camera head. When the bubble in the gradienter is located at the middle, the camera head is at the standard work position.



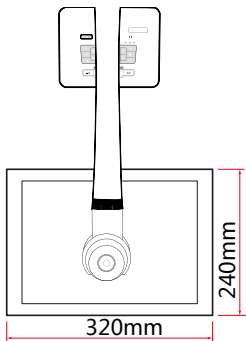
## ■ Support stand


Unfold the support stand of the base to prevent the device from falling backward.



## Recommended working environment

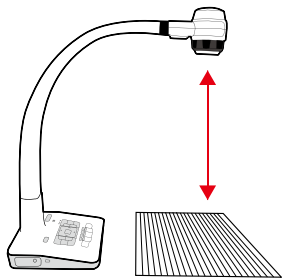
### ■ Main working environment



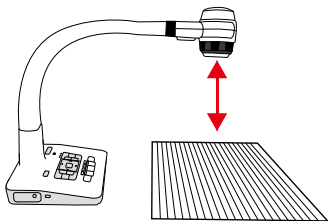
❗ If you do not select a working environment and placement according to the recommendation described above, please use the rotation (  ) key of the control panel or the remote control to adjust the orientation.

Object distance in Telescope mode: 250mm~ ∞。

Object distance in Wide mode: 80mm~ ∞。



Suggested minimum height from device in telescope mode: 250mm.

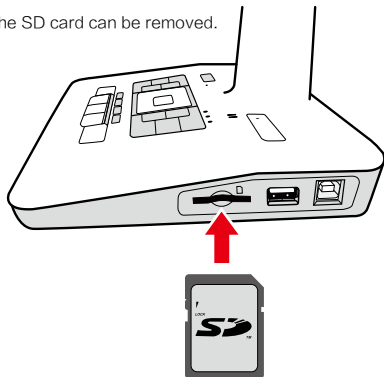


Suggested minimum height from device in wide mode: 80mm.

❗ When the distance between object and camera is from 10mm to 80mm, please switch to Macro mode.

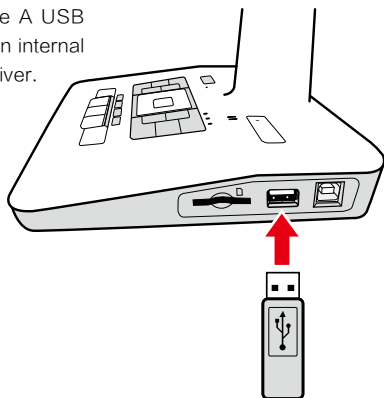
## Insert and remove SD/SDHC cards (not supplied)

1. Insert the SD/SDHC card into the SD card slot of the side panel.
2. When SD card is inserted successfully, the OSD menu shows SD icon in the left-down corner of the display and the capture image will save to SD card instead of internal memory.
3. Push the SD card lightly with your finger, the SD card can be removed.



## USB flash driver (not supplied)

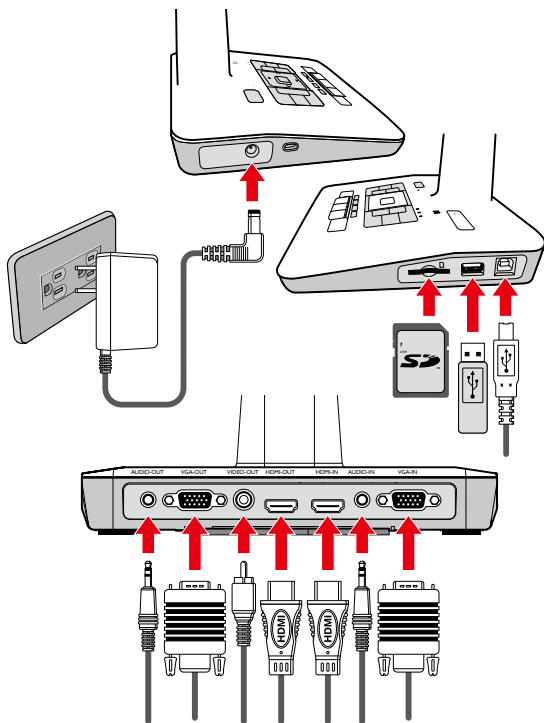
When USB flash driver plug in Type A USB port successfully, the images and files in internal memory can be copied to USB flash driver.





# Connecting Portable Visualizer to external equipments

## ■ System connection diagram



























### Connecting the power cord

Plug in the power adapter to the device DC 12V IN power socket first and then connect the AC power cord to a stand 100V~240V AC power source.

- ❶ The plug type of AC cord varies depending on the countries and regions where you are in.

## ■ Making the connection

Type	Device interface	Cable	External equipment interface
HDMI	 HDMI-OUT		 HDMI-IN
	 HDMI-IN		 HDMI-OUT
VGA	 RGB-OUT		 RGB-IN
	 RGB-IN		 RGB-OUT
VIDEO	 VIDEO-OUT		 VIDEO-IN
AUDIO	 AUDIO - OUT		 AUDIO -IN
	 AUDIO -IN		 AUDIO -OUT
USB	 TYPE B PORT		 TYPE A PORT

## ■ Output pixels and image ratios

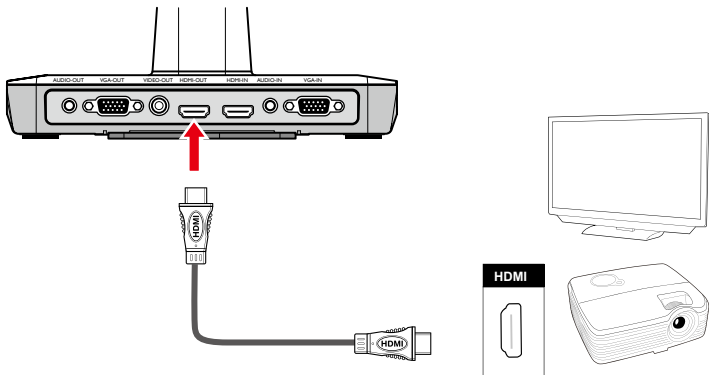
According to different pixels and image ratios, various display selections are listed below. Please refer to the table below to select the image output you prefer.

Output	Image ratio	TV system	Pixel	Frame rate
HDMI	16:9	/	1920x1080 1360x768 1280x720	50 HZ / 60 HZ
	4:3	/	1280x1024 1024x768	50 HZ / 60 HZ
VGA	16:9	/	1920x1080 1360x768 1280x720	50 HZ / 60 HZ
	4:3	/	1280x1024 1024x768	50 HZ / 60 HZ
VIDEO	/	NTSC	720x480	60HZ
	/	PAL	720x576	50HZ

## ■ HD TV

Connecting the HDMI input

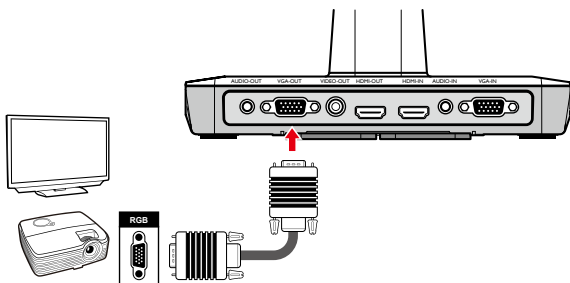
Use a HDMI cable to connect the HDMI output port of the device with the HDMI input port of TV or projector.



## ■ Standard TV

Connecting the VGA output port

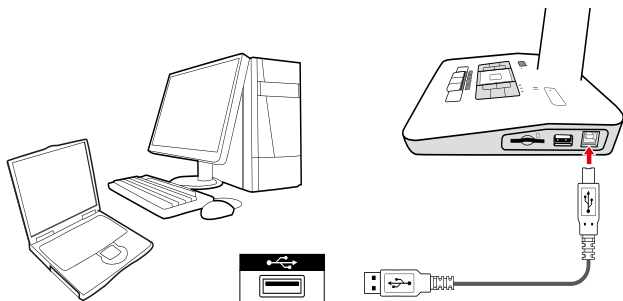
Use a VGA cable to connect the VGA OUT port of the device with the VGA input port of TV or projector.










❗ Please use the Fn key on the notebook to switch between modes. Please refer to your notebook manual to select between different settings.



## ■ Using USB connection



Press Menu → System → USB to PC setting.





## Basic Operation

1. Press MENU (  ) on the remote control or control panel.
2. Use (  /  ) to make a selection.
3. Use (  /  ) to adjust the setting.
4. Press the OK button (  ) to make the new setting activated.
5. Press the MENU (  ) button to hide the OSD menu.

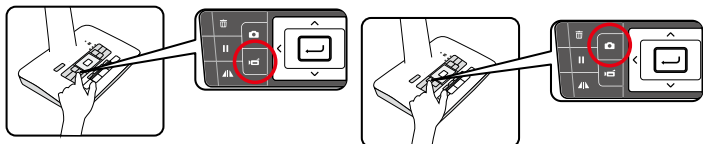
Name	Icon	Selection	Function description
Menu		Resolution	XGA
			SXGA
			WXGA
			720P
			1080P
		Auto Focus	Activate
		PIP	Activate
			Off
Mask	Activate the Mask		
Cross line	Activate the Cross Line		
Camera setting		Image resolution	2M
			5M
			8M
			10M
		Video resolution	Full HD
			HD
			VGA
		Video format	AVI
			MOV
MPG			

Name	Icon	Selection	Function description
System setting		System time	User defined
		Language	Simplified Chinese
			Tradetional Chinese
			English
		Information	On
			Off
		Buzzer	On
			Off
		USB to PC setting	PC camera
			Mass storage
		Document manager	Copy to a SD card
			Copy to a USB flash drive
			Delete all
		System reset	NO
			Yes
		NTSC\PAL	NTSC
PAL			
Personal information	User 1		
	User 2		
	User 3		
Auto adjust	On		
	Off		
Image effect		Mask setting	50%
			80%
			Personal setting
		Macro focus	On
			Off

Name	Icon	Selection	Function description
Slow speed		On / Off	On
			Off
		Time lapse	User defined
Information		Software version: XXX	
		MCU version:XX-XX	
		PI calibration: Y	
		White/black point calibration: Y	

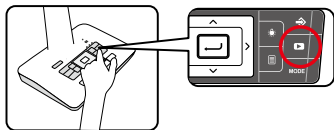
## ■ Recording videos and capturing images

1. Please choose the focus mode according to the distance to object: Normal mode for 25cm to ∞ ; Macro mode for 1cm to 25cm.
2. Use the Zoom in / Zoom out keys (⊕ / ⊖) to adjust the image size.
3. Auto focus / manual adjust focus Use the Auto Focus key (⊞) to adjust the focus automatically.
4. Use the Manual Focus key (⊞ / ⊞)(★) to adjust the focus manually.
5. Use the Video key (📹) to begin recording a video. Press the key again to stop recording.



6. Use Camera key (📷) to capture an image.

## ■ Play



1. Using the Play key (▶).
2. The latest captured image or video will be displayed.
3. Use arrow up/down keys to select the file to be displayed.
4. Press the OK (↵) key.

Capture image resolution	2M	5M	8M	10M
PCS	100	50	35	25
Recording image resolution	Full HD	HD	VGA	
Time	30 Seconds	60 Seconds	150 Seconds	


The above data is just for reference.



## Advanced operation


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### ■ Highlighting key functions


1. You can use the Highlight Key Function to mark those functions with a cross line.
2. Use the Menu (  ) function key of the control panel or the remote control to show the menu.
3. Use the arrow keys to make your selection.

### ■ Mask function


You can use the Mask function key to block the area that you do not wish to display;

Use the Menu function key (  ) on the control panel or the remote control to view the menu;

Use the arrow keys to select Mask.

 Press the "Title" key on the remote control and then use the arrow keys to adjust the key highlights or the mask area.


### ■ Screen function of PIP characters (★)

1. Use the PIP key (  ) on the remote control. This function can display an image of a quarter of the screen size at the upper left corner of the screen.
2. Use the Left / Right arrows to select the image file.


## ■ Transferring the captured image to computer

Please note all recorded videos are in MP4/MPG/MOV/AVI format and saved under the file name format of PICTxxxx.mp4/PICTxxxx.mov/PICTxxxx.avi. (xxxx is a 4-digit sequence).

To view the videos, you may need to install certain multimedia programs on the computer first.

1. Please turn on the power of the device first.
2. Use a USB cable to connect the device with a computer.
3. Use MENU (  ) → Select "USB to PC" → Select "Mass storage" to detect the built-in memory or external memory card.

After, use the computer software to view images on the SD card or simply cut and paste the image to the computer.

 When the control panel or the remote control is in operation, please do not unplug the USB cable to prevent the device from malfunction.

## Using the device as a camera

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### ■ Installing the software

You may locate the driver of the camera in the accessory box. Please install the driver prior to using the PC camera function.

### ■ Starting the settings

1. Connect the device with the computer: Turn on the power of your computer, and use the USB cable to connect the device with the USB port of your computer. Please confirm the USB is connected correctly.
2. Switch to Camera mode.
3. After connecting the device with your computer, when the computer detects the camera, the connection is therefore successfully established. You may use the installed software and start the camera functions (for example, QQ or YahooMessenger).

## Time-lapse photography

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The default time-lapse photography file path in SD card is \DCIM\101COACH\TIMEXXXX.JPG. You can produce the time-lapse video with any video maker software.

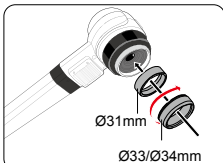
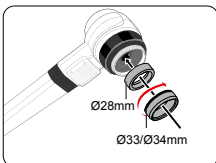
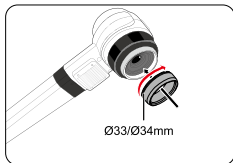
## ■ Connecting the microscope

To connect the device with a microscope can display microscopic objects on a large screen.

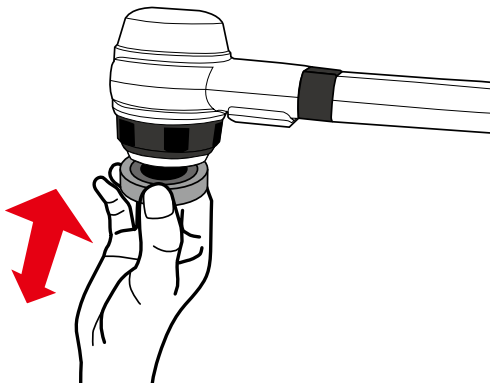
1. Adjust the microscope and the objects to be focused.
2. Please select a proper microscope adapter.
3. The microscope adapter is suitable for the ocular lens of xxxxxx.

❶ For a microscope with a diameter of 33mm or 34mm, microscope adapter rings can be installed.

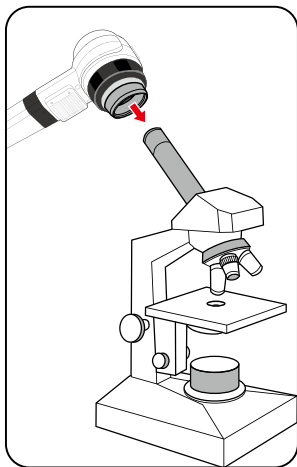
❷ For a microscope with a diameter of 28mm or 31mm, a specific corresponding microscope adapter is required.



4. First, install the microscope adapter on the lens of device.
5. Switch the focus mode to Macro mode. Press the "Menu" key → Select the "Focus" key → Select the "Macro" key or the "Macro" key on the remote control.



6. After the microscope adapter is installed on the camera head, connect the camera head with an ocular lens.

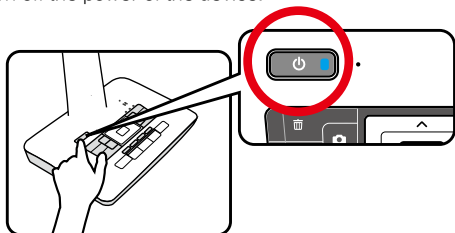


- ❗ If the image on the presentation screen is blurry, please adjust the focus of the microscope.
- ❗ Please use the Auto Focus key (🔍) on the control panel or the Manual Focus key on the remote control to conduct the macro focus.

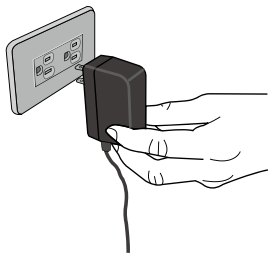
## Storage

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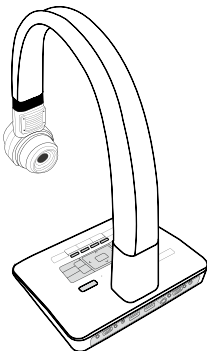
1. Please turn off the power of the device.



2. Please unplug and remove the power cord and all other cables from the device.



3. Please refer to the diagram to the right to fold the gooseneck flexible tube for storage.



## Problems and Solutions:

### ■ Check the solutions below if you are having trouble using the Portable Visualizer:

Problem	Possible causes	Solutions
The device does not turn on in normal condition.	The power adapter is not connected correctly to the device or the power socket.	Make sure the power adapter is connected correctly to the device and power socket.
The device is unable to capture images or record videos.	The device has insufficient memory.	Remove some files and clear up the memory space of SD/MMC card /USB flash drive or built-in memory.
	The SD card is protected.	Reset the SD card to be writable.
After the device is connected, there is no image output.	The device is not connected to the external equipment correctly.	Re-connect the device with the external equipment.
	The external equipment is not selected correctly.	Select the correct external equipment.
	The resolution of the external equipment is set incorrectly.	Reset the resolution of the external equipment.
	The device is not switched to the correct source of signals.	Switch to the correct source of signals.
	The computer transfer key (VGA) is activated.	Press the source of signal (CAM).
	HDMI is activated.	Press the source of signal (CAM).
The captured image is too blurry.	The object to be photographed may be too close to the camera head.	Use Auto Focus or Manual Focus to adjust the focus.
		If the distance for photographing is less than 20cm, please switch the focus mode to Macro mode.
The image is upside down.	The objects are not placed in the recommended working environment.	Press the image Rotation key to adjust the display orientation.
The image can not be moved around.	The image can not be moved around because the Freeze function of the device is activated.	Press again the Freeze function key on the control panel or the remote control to de-activate the function.
The remote control does not respond.	The battery runs out.	Please replace with 2 new AAA batteries.
	Objects are located between the remote control and the device and block the communication signals.	Please remove the objects that block the communication signals.
	The distance between the remote control and the device is too far.	Please shorten the distance between the remote control and the device.
Replay captured video with PC without audio.	The video player doesn't support ACC code mode.	Install the "media.player.codec.pack.v4.3.1.setup.exe" file come with the CD.

## Specifications

Resolution	XGA, SXGA, WXGA, 720P, 1080P
Total Pixels	5000000
Shooting area(max.)	375x280mm
Lens	5 x optical zoom, 10 x digital zoom
Focus	Auto/manual selectable
White balance	Auto
Negative/positive conversion	Yes
Black/white and color selection	Yes
Text/image selection	Yes
Image split	Yes
Title	Yes
Image freeze	Yes
Image mirror	Yes
Image rotation	0° 90° 180° 270°
Image Storage	Built-in storage
	SD card
	USB flash driver
Lights	2W LED
Input connectors	HDMI (1)
	RGB DB15FLC (1)
	3.5mm Audio 1
	MIC(Built-in) 1
Output connectors	HDMI (1)
	RGB DB15FLC (1)
	RCA 1
	3.5mm Audio 1

Frame refresh rate	30 frames/sec
USB Port	USB 2.0
Power Consumption	10W
Operating temperature	0° C~40° C
Power requirements	100~240V AC, 50/60Hz
Dimension	Folded: 310x200x310mm
	Setup: 410x200x420mm
	Packing: 246x206x348mm
Weight	Net: 1.7Kg
	Gross: 3.5Kg
Accessories	Remote control
	AC adapter
	AC power cord
	RGB cable
	A-B USB cable
	HDMI cable
	CD
	*Warranty card
	*Certificate of Approval

Note: \* denotes option or optional item.

Our company is committed to product updates and technology improvements.

Product specifications and descriptions are subject to change without further notice.

The image in the description is for illustration purpose only and the actual goods may differ from the image.