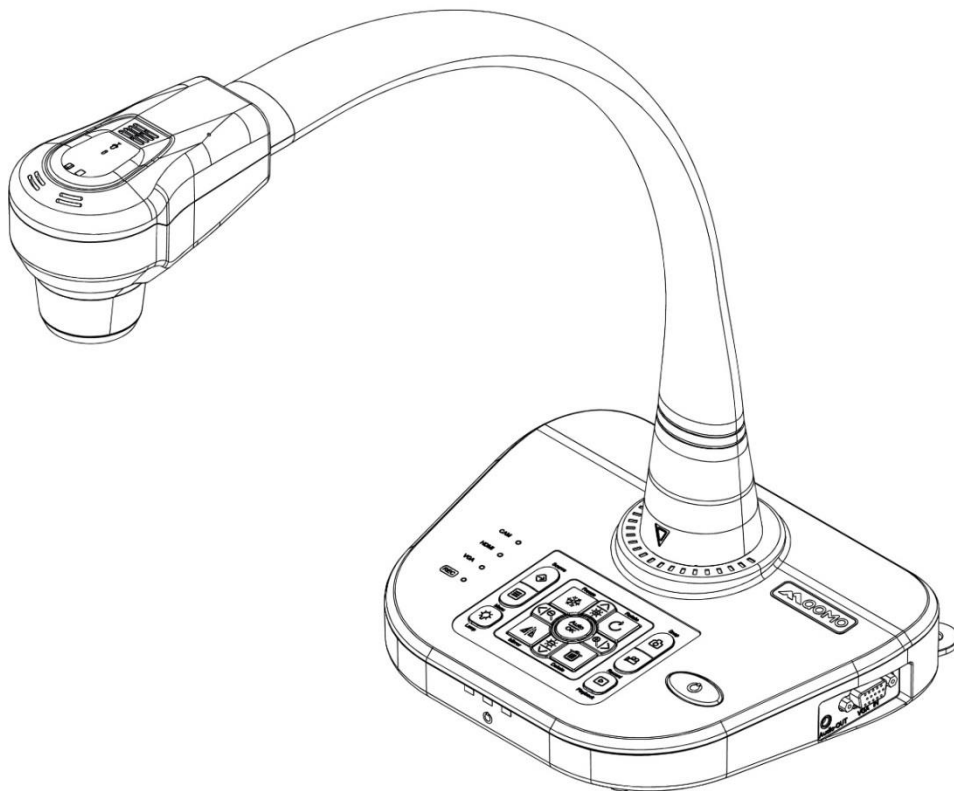# QPC80H2 Portable Visualizer
Quick Guide V2.0

This document is subject to change without notice.

Contents

Warnings

- Please prevent children from operating the device without supervision.

- 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.

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

- 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.

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

- Please do not twist the gooseneck flexible tube.

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

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

Parts Identification
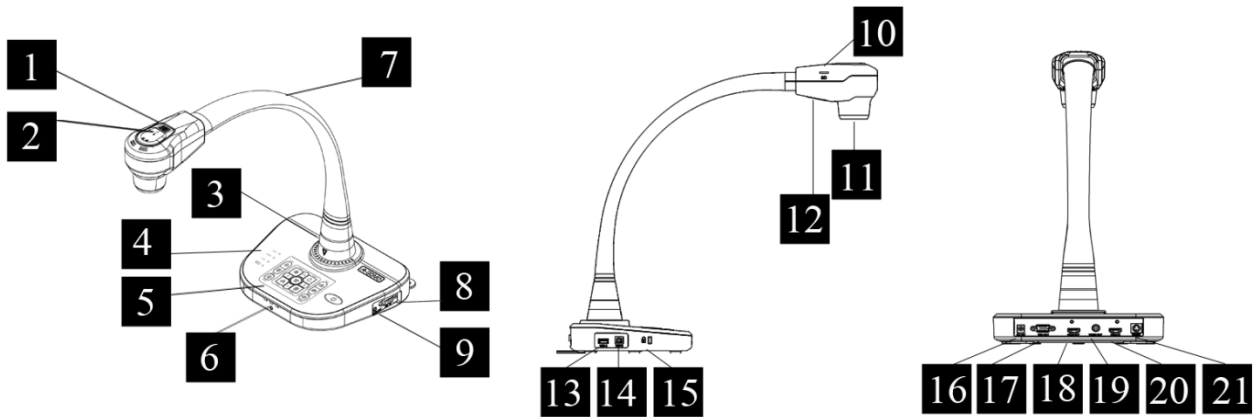
1	Ventilation Hole	**8**	VGA IN	**15**	Anti-theft Slot
2	Microphone	**9**	Audio-OUT	**16**	DC 12V Power Socket
3	Remote Sensor	**10**	Micro SD Card Slot	**17**	VGA-OUT
4	Signal Indicator	**11**	Camera Head	**18**	HDMI-OUT
5	Control Panel	**12**	LED Lamp Light	**19**	VIDEO-OUT
6	Power Indicator	**13**	USB-A for flash drive & USB mouse	**20**	HDMI-IN
7	Gooseneck	**14**	USB-B for PC Connection	**21**	RS232

Control Panel
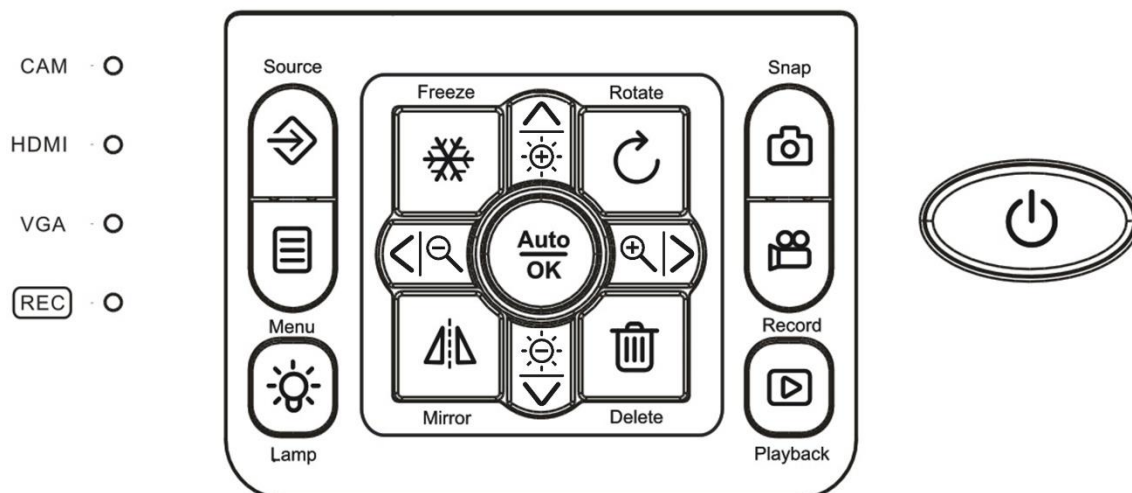
| Button	Function	Button	Function
⏻	Power on/off *Press and hold for more than 2 seconds to turn off. *Short press to enter sleep mode (Note: In sleep mode, camera and LED are off but HDMI pass-through function still works.)	⧄⧄	Mirror the current image
📷	Capture and save the current image	(up/down brightness icons)	Up/Down, Increase/Decrease brightness
🎥	Record video	(left/right zoom icons)	Left/Right, Zoom out/Zoom in
▷	Enter/Exit Playback Mode	Auto/OK	Auto-focus or confirm
↻	Rotate	⟳ (source)	Select the output signals
🗑	Delete selected file from memory when in playback mode	☰	To show or hide OSD menu
❄	Freeze/Unfreeze the current image	🔆	Turn on/off the LED lamp

Remote Control

1. US version

Button	Function
AUTO	Auto focus
TELE	Telescope mode/ Zoom in /Up
FAR	Focus far/Left
NEAR	Focus near/Right
WIDE	Wide mode/ Zoom out/Down
Delete	Delete one file from memory when in playback mode

Freeze	Freeze/Unfreeze the current image	Title	Freeze the top middle part of the screen
Power	Power on/off *Press and hold for 5~10 seconds to turn off.	XGA	Select resolution from XGA, SXGA, WXGA, 720P and 1080P
Save	Capture and save the current image	In Source	Select the output signal
Recall Exit	Enter/Exit playback mode	Red +	Increase red color
Record	Record video	Red -	Decrease red color
Split	Display a split screen with one half of the screen frozen and the other half to display the live image.	Blue +	Increase blue color
B&W Neg	Black & White and color selection	Blue -	Decrease blue color
Mirror	Mirror the current image	Bri +	Increase the brightness
Rotate	Image rotation of 90 °/180 °/270 °	Bri -	Decrease the brightness
Menu	To show or hide OSD menu	Projector	Interact with Projector
Text Video	Select Text or Video mode	Input	Select Projector output signal

2. EUR Version

| Button	Function	Button	Function
Power	Power on/off *Press and hold for more than 2 seconds to turn off. *Short press to enter sleep mode (Note: In sleep mode, camera and LED are off but HDMI pass-through function still works.)	Auto/OK	Auto-focus or confirm
Menu	To show or hide OSD menu	Freeze	Freeze/Unfreeze the current image
Snap	Capture and save the current image	Mirror	Mirror the current image
Record	Record video	Rotate	Rotate
Playback	Enter/Exit playback mode	Source	Select the output signals
Up/Down	Up/Down, Increase/Decrease brightness	Lamp	Turn on/off the LED lamp
Left/Right	Left/Right, Zoom out/Zoom in	Delete	Delete selected file from memory when in playback mode

Portable Visualizer

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.
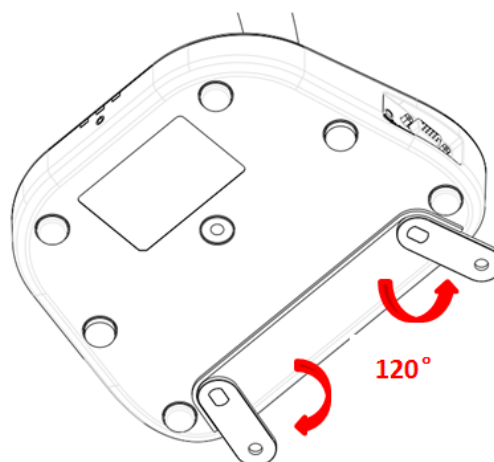
■ **Gooseneck**

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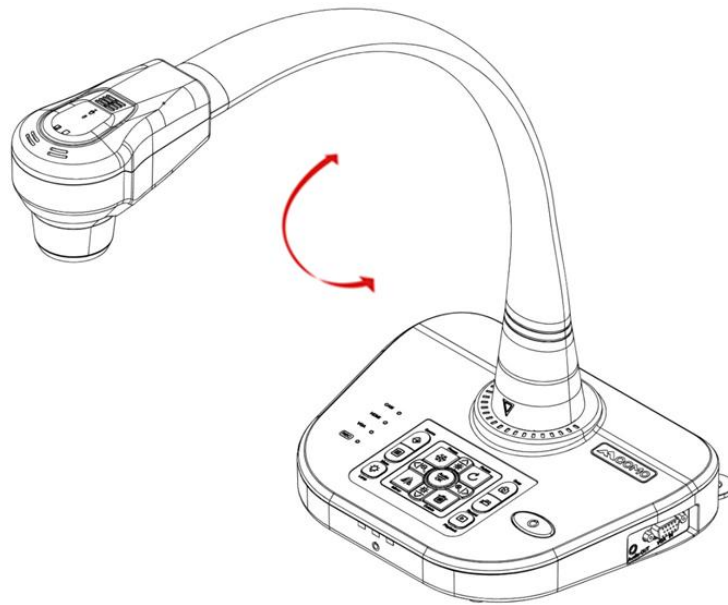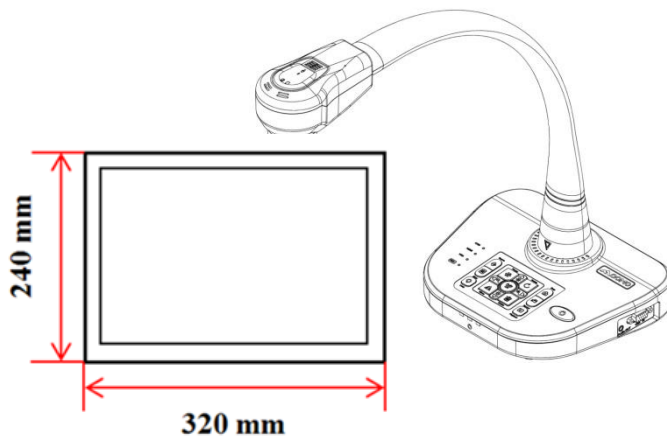

■ **Support Stand**

Unfold the support stand of the base to prevent the device from failing backward.
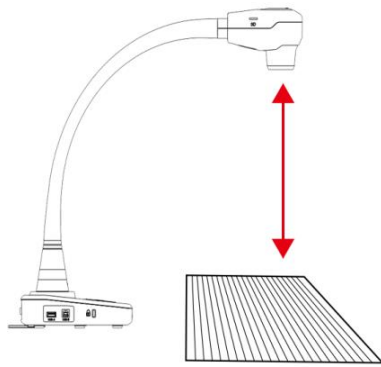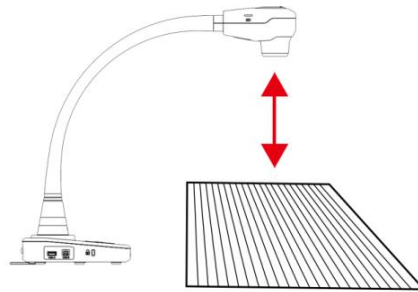
Recommended Working Environment

Object distance in Telescope mode: 250 mm~∞；

Object distance in Wide mode: 80 mm~ ∞；

Suggested minimum height from device in telescope mode: 250 mm

Suggested minimum height from device in wide mode: 80 mm

Note: When the distance between object and camera is from 10 mm to 80 mm, please switch to Micro mode.

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.

Insert and Remove Micro SD Card (not supplied)
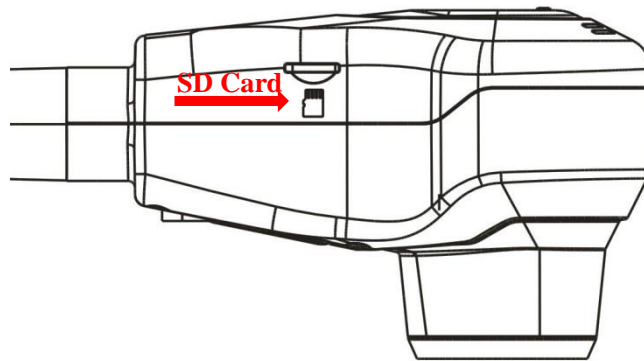
1. Insert the Micro SD card into the SD card slot on top of document camera. The images and files in internal memory can be copied to SD card or the capture image can be saved in the SD card.
2. The capture image will save to SD card instead of internal memory.
3. Push SD card lightly with your finger, the SD card can be removed.

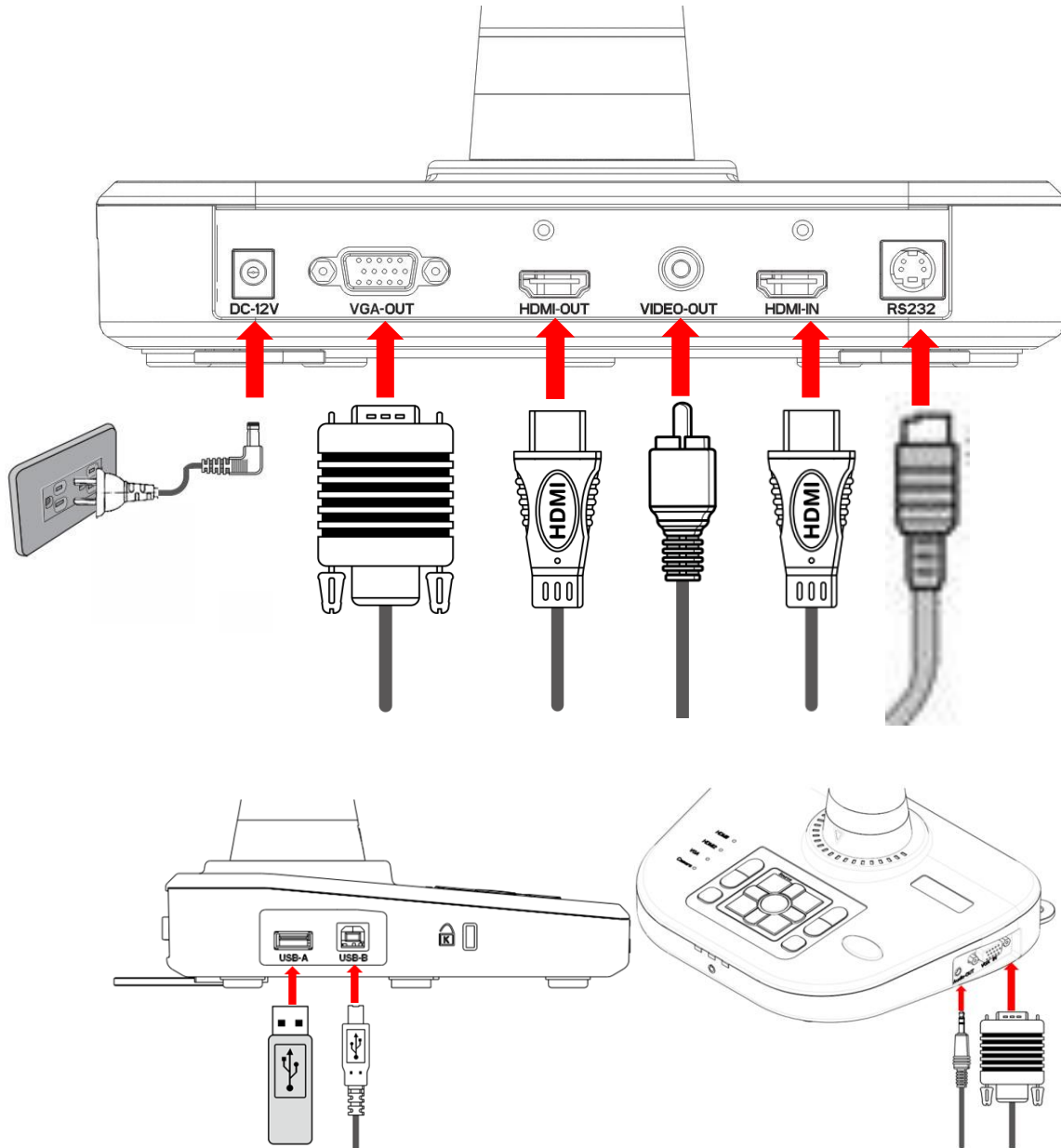# USB Flash Drive (not supplied)
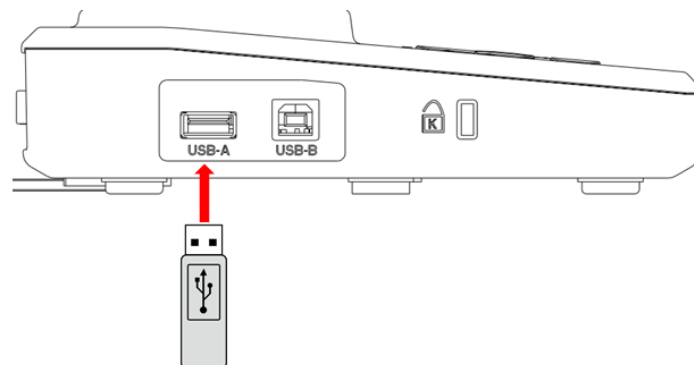
When USB flash drive plugs in USB Type-A successfully, the capture image and video can be saved in the flash drive.

Note: When USB flash drive and micro SD card are both connected, USB flash drive storage priority is higher than SD card.

Connect Portable Visualizer to external equipment

■ **System connection diagram**
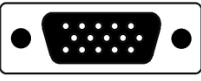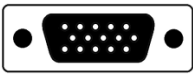
Connecting the power cord

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

Note: 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 HDMI-OUT		HDMI HDMI-IN
	HDMI HDMI-IN		HDMI HDMI-OUT
VGA	VGA-OUT		VGA-IN
VIDEO	VIDEO-OUT		VIDEO-IN
AUDIO	AUDIO-OUT		AUDIO-IN
USB	TYPE-B Port		TYPE-A Port
	TYPE-A Port		TYPE-B Port

■ RS232 control protocol

RS232 Setting

Baudrate	9600 bps
Parity check	no parity
Stop bit	one
Data bit	8 bits

RS232 Packet 1 (Packet size: 4 bytes)

0	1	2	3	4
HEADER	LENGTH	CAT	KEY	END
0X48	0X02	0X14	0XXX	0X54

Command list

FUNCTION	HEADER	LENGTH	CAT	KEY	END
UP	0x48	0x02	0X14	0x04	0x54
DOWN	0x48	0x02	0X14	0x05	0x54
LEFT	0x48	0x02	0X14	0x02	0x54
RIGHT	0x48	0x02	0X14	0x03	0x54
ENTER	0x48	0x02	0X14	0x06	0x54
POWERON	0x48	0x02	0X14	0x10	0x54
POWEROFF	0x48	0x02	0X14	0x11	0x54
STANDBY	0x48	0x02	0X14	0x3E	0x54
SAVE	0x48	0x02	0X14	0x12	0x54
RECALL	0x48	0x02	0X14	0x13	0x54
LAMP	0x48	0x02	0X14	0x14	0x54
FREEZE	0x48	0x02	0X14	0x15	0x54
NEG	0x48	0x02	0X14	0x16	0x54
MIRROR	0x48	0x02	0X14	0x17	0x54
SPLIT	0x48	0x02	0X14	0x18	0x54
ROTATE	0x48	0x02	0X14	0x19	0x54
XGA	0x48	0x02	0X14	0x1A	0x54
B&W	0x48	0x02	0X14	0x1B	0x54
TITLE	0x48	0x02	0X14	0x1C	0x54
TEXT	0x48	0x02	0X14	0x1D	0x54
AUTO	0x48	0x02	0X14	0x22	0x54
NEAR	0x48	0x02	0X14	0x23	0x54
FAR	0x48	0x02	0X14	0x24	0x54
SOURCE	0x48	0x02	0X14	0x25	0x54
VOL_UP	0x48	0x02	0X14	0x28	0x54
VOL_DOWN	0x48	0x02	0X14	0x29	0x54
WB_RED_UP	0x48	0x02	0X14	0x2A	0x54
WB_RED_DOWN	0x48	0x02	0X14	0x2B	0x54
WB_BLUE_UP	0x48	0x02	0X14	0x2C	0x54
WB_BLUE_DOWN	0x48	0x02	0X14	0x2D	0x54
BRIGHT_UP	0x48	0x02	0X14	0x2E	0x54
BRIGHT_DOWN	0x48	0x02	0X14	0x2F	0x54
RECORD	0x48	0x02	0X14	0x32	0x54

RECORD STOP	0x48	0x02	0X14	0x33	0x54
DELETE	0x48	0x02	0X14	0x35	0x54
ZOOM IN STOP	0x48	0x02	0X14	0x40	0x54
ZOOM OUT STOP	0x48	0x02	0X14	0x3f	0x54

■ Output Resolution and image ratios

According to different resolution 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	Resolution
HDMI	16:9	-	1280x720, 1280x800, 1920x1080,
	16:10		1280x800, 1920x1200
	4:3	-	1024x768, 1280x1024
VGA	16:9	-	1280x720, 1280x800, 1920x1080
	16:10		1280x800, 1920x1200
	4:3	-	1024x768, 1280x1024
Video	-	NTSC	720x480
	-	PAL	720x576

■ HD TV

Connecting the HDMI output

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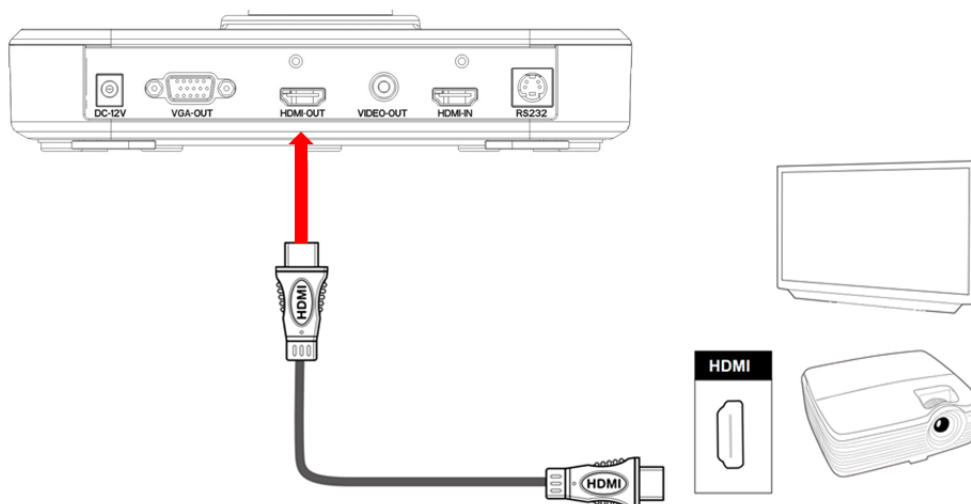
■ Standard TV

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.

Note: Use Source Button to switch between modes.

■ Using USB connection

Press Menu > System Setting > USB to PC > PC Camera
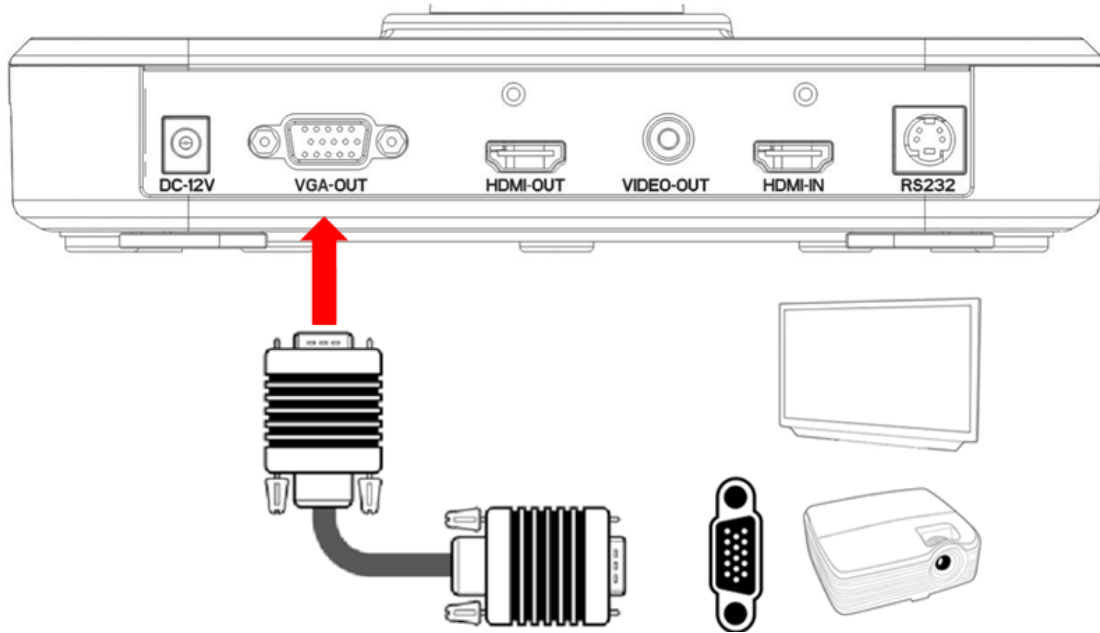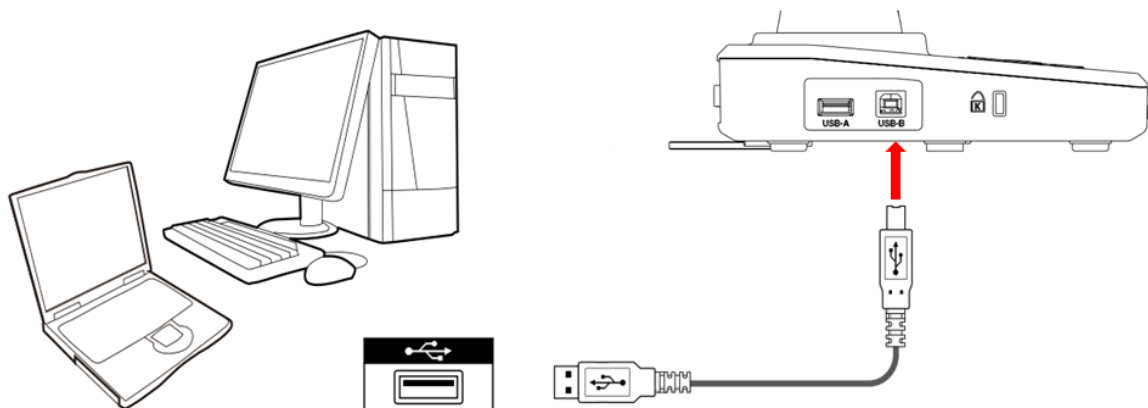
Basic Operation

1. Press MENU (▤) on the control panel or (▤) on the remote control.

2. Use (∧ / ∨ / ‹ / ›) to make a selection and adjust the setting.

3. Press OK button (OK̄ᵘᵗᵒ) to make the new setting activated.

4. Press the MENU (▤) button to hide the OSD menu.

OSD MENU			
Name	**Icon**	**Selection**	**Functions Description**
Function	▦	Resolution	XGA
			SXGA
			WXGA
			720P
			1080P
			1280*800
			1920*1200
		Focus Mode	Auto Focus
			Manual Focus
		Mask	Activate the Mask function
		Highlight Line	Activate the highlight line function
		MIC	ON
			OFF
Image Setting	📷	Photo Resolution	1280*720
			1920*1080
			2688*1522
		Recording Resolution	1080P@30FPS
			720P@30FPS
			VGA
		Video format	AVI
System Setting	🔧	Language	Support Chinese, English, Spanish, Russian, French, German and Italian.
		System Time	/
		Time Sett	User defined
		Display Information	Set to display the information on top of the display or not.
		Push Button sound	ON
			OFF

		USB to PC	PC Camera
			Mass Storage
		File Manager	Copy to a SD card
			Delete all
			Format SD card
		System Reset	Ensure
			Ignore
		Upgrade	Ensure
			Ignore
		NTSC/PAL	NTSC
			PAL
		User Profile	User 1
			User 2
			User 3
Effect Setting		Mask Setting	10%, 20%, 30%, 40%, 50%, 60%, 70% and 80%
		Micro Mode	ON
			OFF
		Mirror	Normal
			Left-right Mode
			Up-down Mode
		Effect	Normal
			Black-white Mode
			Negative Mode
		Frame per second	50HZ/60HZ
		Brightness, Sharpness, DNR, Contrast, Saturation	Use (〈 / 〉) to adjust its setting.
Time-lapse Photo		ON/OFF	ON
			OF
		Interval	User defined
Information			Firmware version: xxx
			Hardware version: xxx
			Release Date: xxx

■ **Recording videos and capturing images**

1. Please choose the focus mode according to the distance to object: Telescope mode for 250 mm to ∞；wide mode: 80 mm to ∞; Micro mode for 10 mm to 80 mm.

2. Use the Left/Right buttons (〈 / 〉) to adjust the image size.

3. Use the Auto Focus button $\frac{\text{Auto}}{\text{OK}}$ to adjust the focus automatically. Use the Manual Focus button to adjust the focus manually.

4. Use the video button (📹) to begin recording a video. Press the button again to stop recording.

5. Use Snap button (📷) to capture an image.
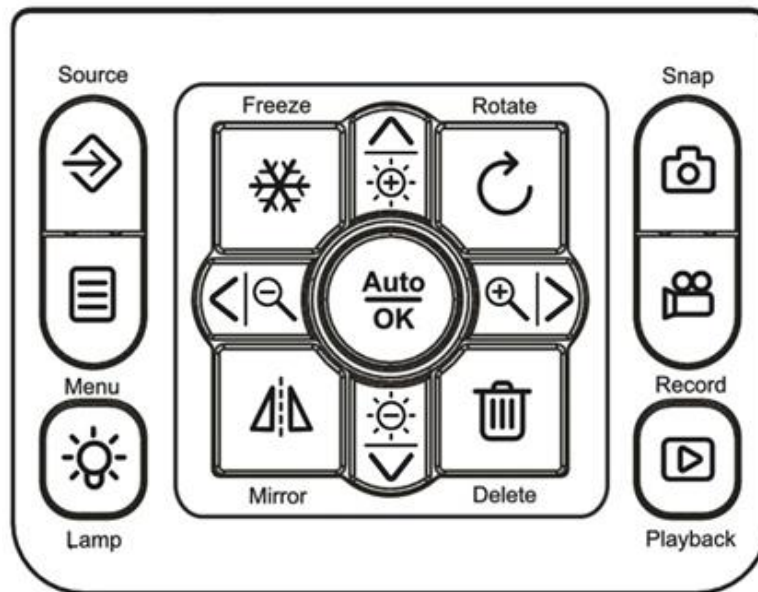
Note：You need insert SD card or USB drive first in order to take a video record.

■ **Play**

1. Use the Playback button (▷). The latest captured image or video will be displayed.

2. Use Left/Right buttons (< / >) to select the file to be displayed.

3. Press OK ($\frac{\text{Auto}}{\text{OK}}$) button.

Advanced Functions

■ **Mask function**

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

1. Use the Menu (▤) button on the control panel or the remote control to show the menu.

2. Use the arrow buttons to select Mask: Menu>Function>Mask.

Note: Use the Menu (▤) >Effect Setting>Mask setting to set the size of Mask.

- **Highlight Line function**

  You can use the Highlight Line function to mark those functions with a cross line.

1. Use the Menu (▤) button on the control panel or the remote control to show the menu.

2. Use the arrow buttons to make your selection: Menu>Function>Highlight Line.

- **Time-lapse photography**

You can produce the time-lapse video with video maker software.

1. Use the Menu (▤) button on the control panel or the remote control to show the menu.

2. Use the arrow buttons to make your selection: Menu>Delay Photography.

- **Transfer the captured image to computer**

Please note all recorded videos are in AVI format and saved under the file name format of xxxx.avi.

  Please turn on the power of the device first.

1. Use a USB cable to connect the device with a computer.

2. Use MENU (▤) > System Setting > USB to PC > Mass storage to detect SD card memory.

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

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

Use the device as a camera

- **Start the settings**

1. Connect the device with the computer through USB Type-B: 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. Press Menu > System Setting > USB to PC > PC Camera

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: Skype).

■ **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. First, install the microscope adapter on the lens of device.

4. Switch to Micro mode. Press Menu> Effect setting> Micro Mode ON.   .

5. 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 button on the control panel or the Manual Focus button on the remote control to conduct the micro focus.

Storage

1. Please turn off the power of the device.
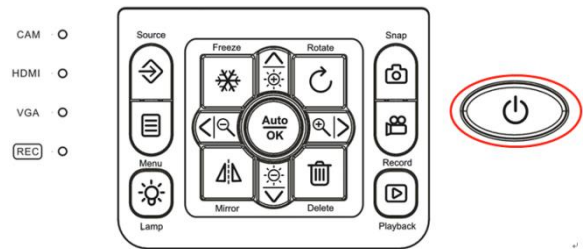
2. Please unplug and remove the power cord and
   all other cables from the device.
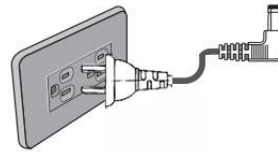
3. Please refer to the diagram to the right to fold the gooseneck
   flexible tube for storage.

Problems and Solutions

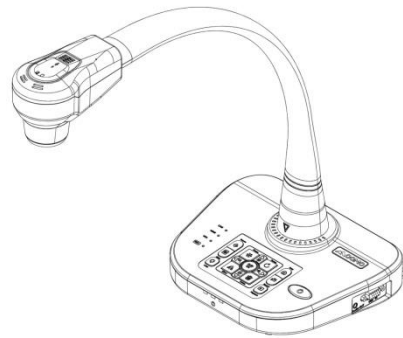| Problem	Possible causes	Solutions
The device does not turn on in normal condition.	The power adapter is not connected correctly to the device or the power socket.	Make sure the power adapter is connected correctly to the device and power socket.
The device is unable to capture images or record videos.	The device has insufficient memory.	Remove some files and clear up the memory space of SD 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 Micro 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 cannot be moved around.	The image cannot 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 deactivate the function.
The remote control does not respond.	The battery runs out.	Please replace with a new battery.
	Objects are located between the remote control and the device	Please remove the objects that block the

	and block the communication signals.	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.

Specifications

Model	QPC80H2
Image Sensor	Omnivision 1/3" CMOS
Lens	6 x optical zoom, 10 x digital zoom
Shooting Area	A3/A4
Video Resolution	XGA(1024*768), XGA(1280*1024), WXGA(1366*768), 720P(1280*720), 1080P (1920*1080), 1280*800, 1920*1200
Total Pixels	5.0 Mega
Frame Rate	1080p@30fps
Input Connector	HDMI 1.4 Compliant: (1) VGA: DB15FLC(1)
Output Connector	VGA: DB15FLC(1) C-Video: RCA(1) HDMI: (1) RS232(1)
Microphone	Build-in
Speaker	N/A
DC POWER	12V/2A
USB (UVC)	Yes
USB Mouse	Yes
USB Thumb Drive	Yes
USB Mass Storage	Yes
USB Camera	Yes
Digital Zoom	Yes
Video Merge	N/A
Audio Output	Yes
Memory Card	Yes
LED Lighting	Yes
LCD Preview	N/A
AWB/AF/AE	Yes
Image Effects	B&W/Negative/Mirror/Freeze/Text/Split
Remote Control	Yes
Rotate	90°/180°/270°