



VISUAL PRESENTER

MX-1

取扱説明書

ご使用になる前に本取扱説明書をよくお読みください。

日本語

INSTRUCTION MANUAL

Please read this instruction manual carefully before using this product.

English

MANUEL D'INSTRUCTIONS

Veuillez lire attentivement ce manuel d'instructions avant d'utiliser ce produit.

Français

BEDIENUNGSANLEITUNG

Bitte lesen Sie dieses Bedienungshandbuch aufmerksam durch, bevor Sie dieses Produkt benutzen.

Deutsch

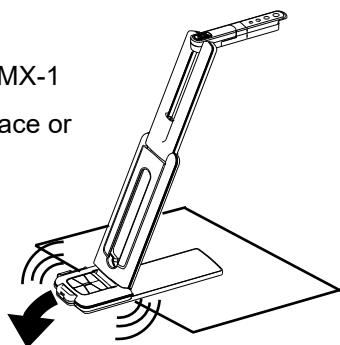


HANDLING PRECAUTIONS

The followings are special precautions against mishandling of the product, which may cause serious damages to the product. Pay close attention to them.

① Installation

Do not place the MX-1 on an unstable place or slanted surface.



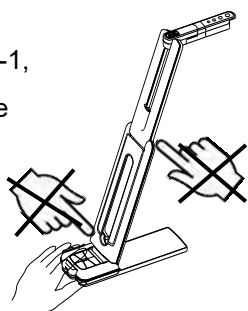
② Magnet in the bottom

A magnet is in the bottom of the MX-1. Keep the bottom of the MX-1 away from devices and objects that could be damaged by strong magnetic fields (such as a computer, monitor, and magnetic card).



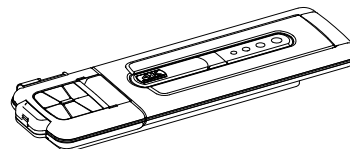
③ Setting up

When setting up the MX-1, hold the body around the Operating panel. Be careful not to pinch your fingers.



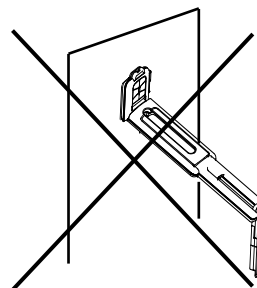
④ Carrying the MX-1

Carry the MX-1 by folding the arm so as not to damage the camera. Do not carry by holding the arm or camera head.



⑤ Stage

There is a magnet inside the bottom of the MX-1. By removing 2 screws in the bottom, you can move the position of the MX-1 within the stage. Do not attach the MX-1 to a metal object such as a steel cabinet. The stage may fall and get broken.

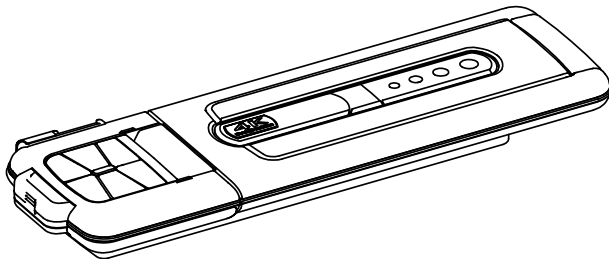
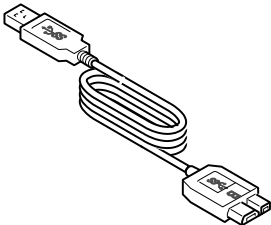


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① PACKAGE CONTENTS

The items below are included with this product. If any item is missing, contact the dealer from whom you purchased this product.

Document Camera (MX-1)		
<div>P. 32</div> 		
USB3.0 cable	Instruction manual	Warranty card (Only Japan and North America)
	<div>Instruction manual</div>	<div>Warranty card</div>

日本語

English

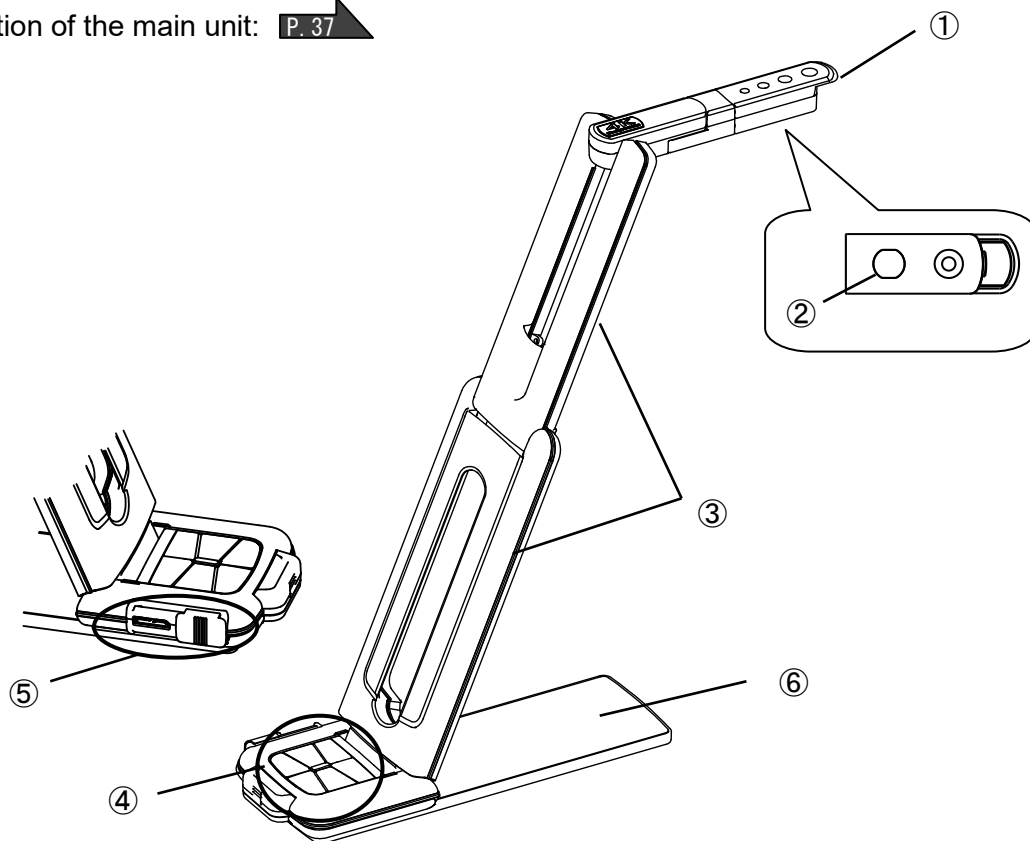
Français

Deutsch

② PART NAMES AND FUNCTIONS

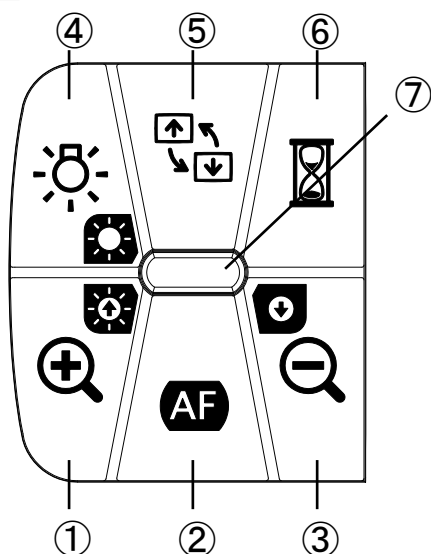
■ THE NAME OF EACH PART

Operation of the main unit: [P. 37](#)



	Name	
①	Camera head	
②	LED lighting	P. 40
③	Arm	
④	Operating panel	P. 33
⑤	Side panel	P. 35
⑥	Stage	



OPERATING PANEL



⑦LED display

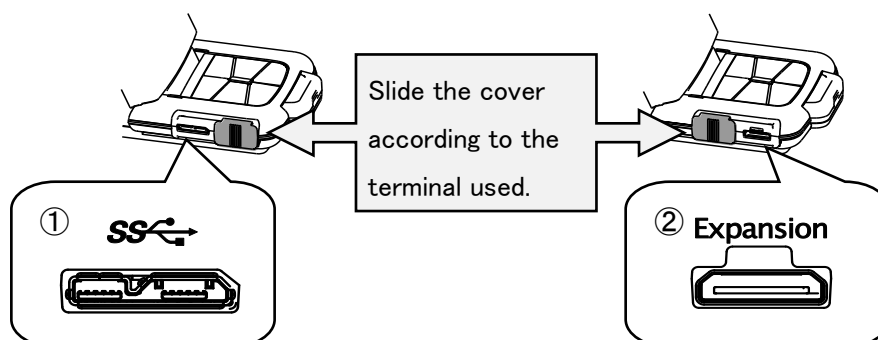
LED color		On/Off	Operation status	Connection status
	Off	Off	Power OFF	-
	Blue	On	Zoom mode	USB3.0
	Green	On	Zoom mode	USB2.0
	Purple	On	Brightness adjustment mode	-




- ※ Select the mode according to the application. (④ long press)
- Zoom mode ... To enlarge or shrink the image, to On or Off the LED lighting.
 - Brightness adjustment mode ... To brighten or darken the image.

Mode	Button	Function	Description
 Zoom mode (blue or green)	①	ZOOM-IN	To enlarge the image.
	②	One-Push AF	To focus automatically.
	③	ZOOM-OUT	To shrink the image.
	④ (Short press)	LED lighting	On / Off
	④ (Long press)	Brightness adjustment mode selection	To use ① and ③ buttons to adjust the brightness.
	⑤	Image rotation	To rotate the image. (0°/180°)
	⑥	Freeze	To pause or restart the image.
 Brightness adjustment mode (purple)	①	Brightness +	To brighten the image
	②	One-push AF	To focus automatically.
	③	Brightness –	To darken the image
	④	Zoom mode selection	To use ① and ③ buttons to adjust the zoom.
	⑤	Image rotation	To rotate the image. (0°/180°)
	⑥	Freeze	To pause or restart the image.
	①+③	Initialization of the brightness	To initialize the brightness level.

※The Zoom function and Freeze function may not be used when a commercially available software is used.

■ SIDE PANEL AND CABLE CONNECTION



	Mark	Function
①	 	To connect to a computer to save image data, etc. (USB3.0 cable is included.)
②		To connect the MX-1 CONNECT BOX to display to a monitor or projector without using a computer. (Expansion cable is include to MX-1 CONNECT BOX.) Max. resolution 4:3 UXGA1600×1200 16:9 1980×1080p

Note

Depending on the computer's USB environment or the peripheral equipment, image transfer may be disrupted. We do not guarantee the operation of all types of devices with the MX-1.

■ RESOLUTION／FRAME RATE

There is no difference in resolution between USB3.0 connection and USB2.0 connection.

The frame rate may be lower than the specification in the following conditions:

- A low-spec computer is used.
- YUV is selected.

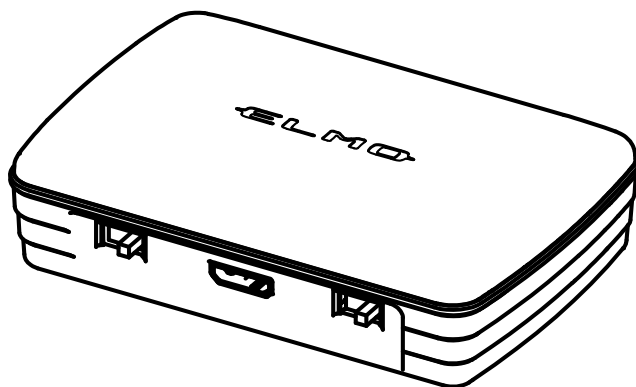
Resolution	USB3.0		USB2.0	
	MJPEG[fps]	YUV[fps]	MJPEG[fps]	YUV[fps]
4160x3120	21	6	6	1
3840x2160	30	15	6	1
2048x1536	30	20	18	3
1920x1080	60	60	30	5
1280x960	30	30	30	10
1280x720	60	60	60	5
1024x768	30	30	30	20
640x480	30	30	30	30

■ ABOUT MX-1 CONNECT BOX

The MX-1 can be connected to a projector or a monitor through HDMI or RGB using the MX-1 CONNECT BOX.

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For details of the MX-1 CONNECT BOX, refer to the instruction manual included in the MX-1 CONNECT BOX.



Note

The MX-1 CONNECT BOX is not included when you purchase the MX-1 only.

■ SIZE OF THE OUTPUT IMAGE

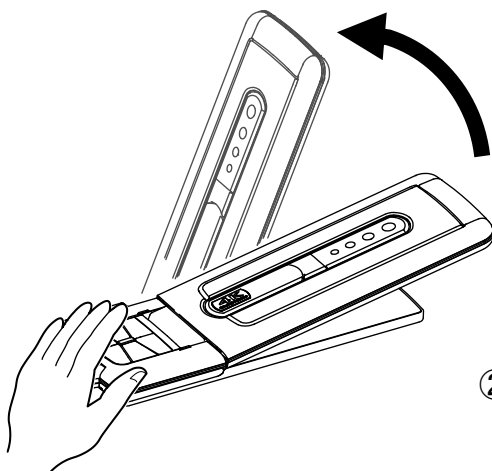
The output image varies depending on the setting of the Resolution/Output mode and whether the MX-1 CONNECT BOX is used or not.

For details of the size of the output image, refer to the instruction manual included in the MX-1 CONNECT BOX.

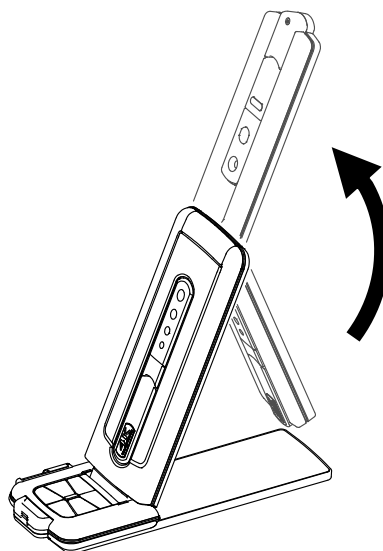
③ PREPARATION AND CONNECTION

■ SETTING UP THE MX-1

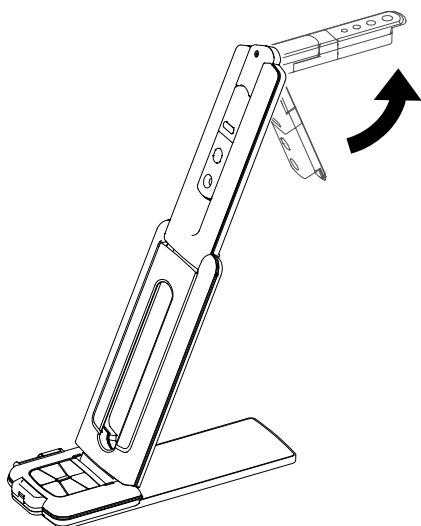
① Raise the body while holding the operating panel.



② Raise the arm as indicated by an arrow.



③ Raise the camera head. Set it horizontally.

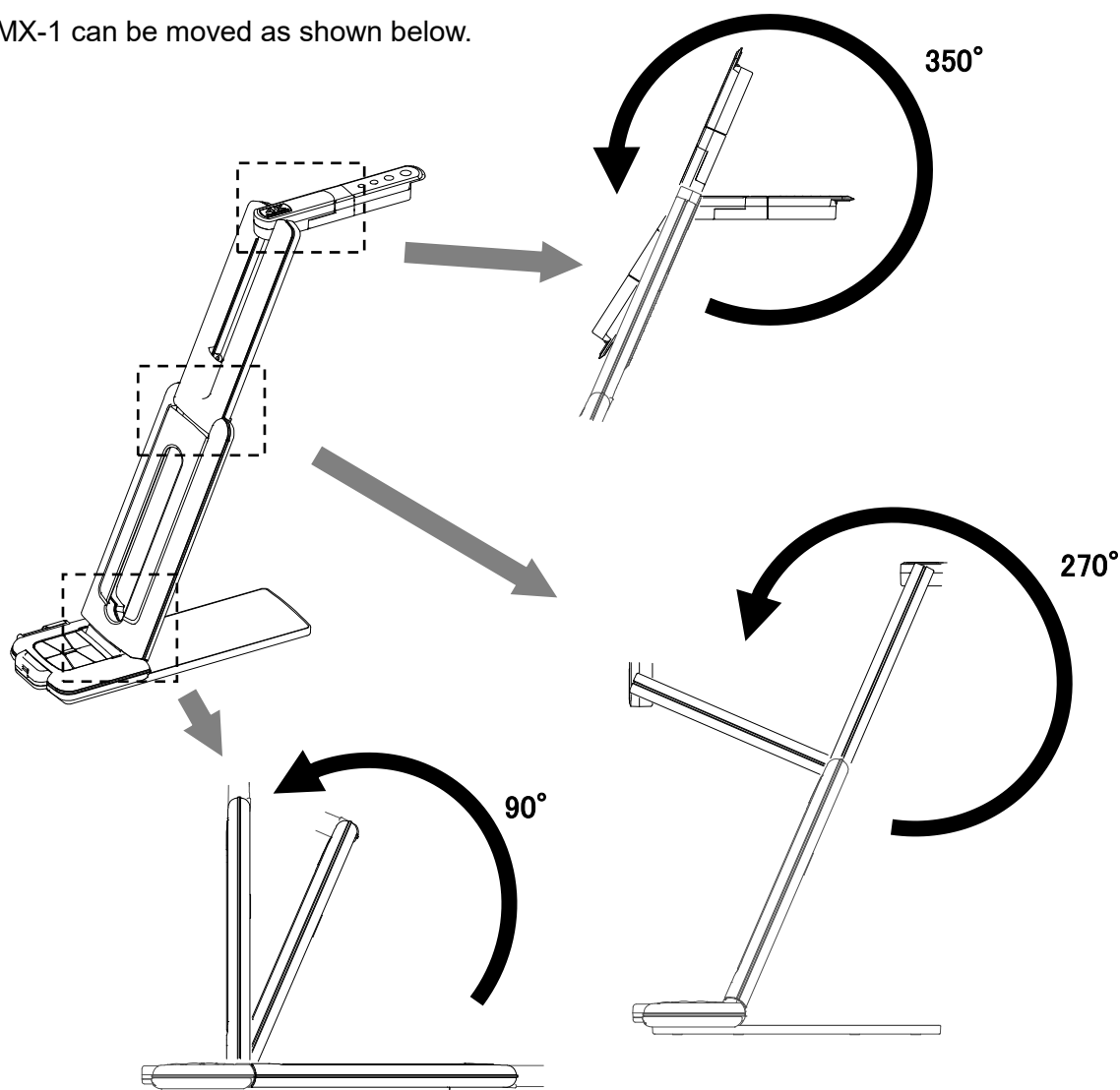


Caution

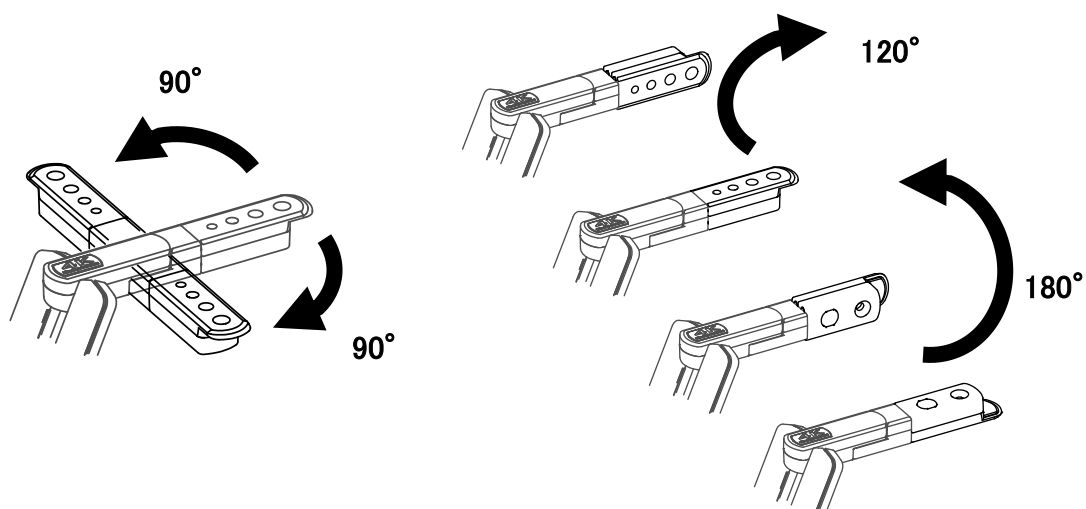
- Be careful not to pinch your fingers when moving the arm.
- Do not hold the arm or camera head when carrying the MX-1.
- Be careful not to give an impact to the camera head.

MOVING PARTS OF THE MX-1

The MX-1 can be moved as shown below.

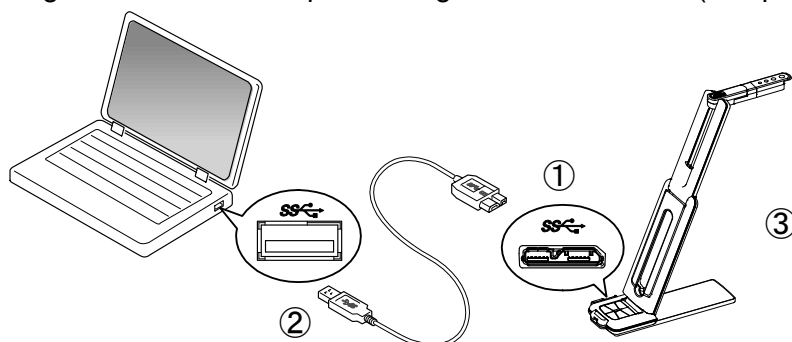



Camera head



■CONNECTING TO A COMPUTER

The MX-1 is compliant to uvc (video class) standard. You can transfer the image via USB by connecting the MX-1 to a computer using the USB3.0 cable (bus power).



- ① Connect the microB connector terminal of the USB3.0 cable to  connector in the side of the MX-1.
- ② Connect the typeA terminal of the USB3.0 cable to the USB port of your running computer.
- ③ The MX-1 will be turned on after the connection is established.

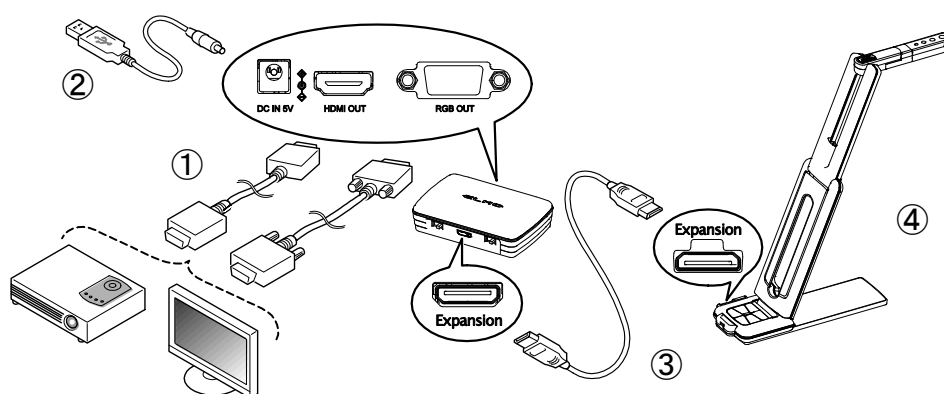
Caution


- When connecting to the USB2.0 port, the frame rate may be decreased depending on the output resolution.
- The frame rate may be decreased depending on the computer used.

■CONNECTING TO A PROJECTOR OR MONITOR

By using the MX-1 CONNECT BOX, you can connect the MX-1 to a projector or monitor without using a computer.



P. 36



- ① Connect a projector or monitor to the MX-1 CONNECT BOX via the HDMI cable or RGB cable.
- ② Connect the supplied DC power cable to  . Connect the USB plug to the AC adapter. Then connect it to a wall outlet.
- ③ Connect the MX-1 to the MX-1 CONNECT BOX via the supplied Expansion cable.
- ④ The MX-1 and MX-1 CONNECT BOX will be powered on. (MX-1 of LED : blue)

4 SHOOTING IMAGES

■ ADJUSTING THE SIZE



The image size can be adjusted using [ / ] buttons on the Operating panel in the Zoom mode (LED: blue/green). If the MX-1 is in the Brightness adjustment mode (LED: purple), change the mode to the Zoom mode.

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Note

The maximum zoom ration is 8x (digital zoom).
The image quality will be degraded when using the digital zoom.

■ ADJUSTING THE BRIGHTNESS

The brightness of the image can be adjusted using [ / ] buttons on the Operating panel in the Brightness adjustment mode (LED: purple). The brightness does not change automatically according to the brightness of the shooting environment. If the MX-1 is in the Zoom mode (LED: blue/green), change the mode to the Brightness adjustment mode.


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■ ADJUSTING THE FOCUS

Press the **AF** button on the Operating panel to automatically focus on an object.


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■ PAUSING THE IMAGE

Press the  button to pause the camera image. Press the button again to restart. (This function can be used in both the Zoom mode and Brightness adjustment mode.)

P. 33


■ ROTATING THE IMAGE

The image rotates by 180° by pressing the  button on the Operating panel.

(This function can be used in both the Zoom mode and Brightness adjustment mode.)

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■ TURNING THE LED LIGHTING ON/OFF

The LED lighting can be turned ON/OFF by pressing  button on the Operating panel in the Zoom mode (LED: blue/green). If the MX-1 is in the Brightness adjustment mode (LED: purple), change the mode to the Zoom mode.

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Caution

- To take shots of people, turn the LED lighting OFF.
- Make sure that the light from the LED lighting does not shine directly into your eyes.
- This product is equipped with a high-brightness LED. You can safely use it to light up the object. The brightness will gradually decrease with long-term use. This is not a malfunction but a characteristic of the LED.
- Do not touch the LED lighting while it is on as it may become very hot.

⑤ ABOUT IMAGE MATE4

The following operations can be performed by connecting the MX-1 to a computer with Image Mate 4 installed via the USB cable:

P. 39

- Save live video streaming or still images to a computer
- Operate the MX-1 from a computer, etc.

※If Image Mate 4 is already installed in your computer, update the version of Image Mate 4.

※You can view the camera image with a commercially available software. With Image Mate 4, you can also use other functions such as zoom and freeze.

This instruction manual explains the downloading/installation procedure of Image Mate 4 and its instruction manual.

For further details, refer to the instruction manual of Image Mate 4. You can download the instruction manual of Image Mate 4 from the following website:

<http://www.elmousa.com>

■ SYSTEM REQUIREMENTS

The Image Mate 4 can be used in the following computer environments.

OS	Win10 64bit
CPU	Core i7(3840x2160@30fps) Core i5 or higher (1920x1080@60fps)
Memory	16GB(3840x2160@30fps) 4GB or more (1920x1080@60fps)
Screen resolution	3840x2160(3840x2160@30fps) 1920x1080 or higher (1920x1080@60fps)
Graphic board	Should be able to output 3840x2160
USB	USB3.0

Note

If your computer does not meet these requirements or depending on the performance of your computer, the recording frame rate may be decreased.

日本語

English

Français

Deutsch

■ INSTALLING IMAGE MATE 4


Install Image Mate 4 to your computer.

※Image Mate 4 can be downloaded from Elmo official website.

※If Image Mate 4 is already installed in your computer, update the version of Image Mate 4.

1. Access the following Elmo official website.

<http://www.elmousa.com>

2. Choose Image Mate 4.
3. Click "Download" and read the "Precautions on the handling of the downloaded data".
Click "Agree".
4. Downloading will start.
5. Run the downloaded file (ImageMate4Setup.msi) after the downloading is completed.
Follow the instructions displayed on the screen to install Image Mate 4.
6. The icon  will be created on the desktop after the installation is completed.

Caution

- Do not connect/disconnect the USB cable while operating the MX-1. It may cause malfunction.
- We recommend using the supplied USB cable.
- It may take some time to display the image after the resolution is changed via UVC (with the USB cable). Do not turn off the power of the MX-1 or disconnect the USB cable before the image is displayed.
- The displayed image may pause for a brief second when the object moves quickly. This is not a malfunction.
- The displayed image may be distorted depending on the object. Reducing the resolution or frame rate may improve the distortion of the image.

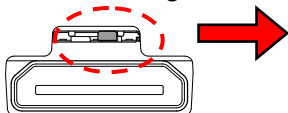




Note


- Depending on the computer's USB environment or the peripheral equipment, image transfer may be disrupted.
- We do not guarantee the operation of all types of devices with the MX-1.

⑥ TROUBLE SHOOTING

■ SYMPTOMS AND CONFIRMATION

Check the following items. If any abnormality is found, consult the dealer from whom you purchased this product or our nearest branch/office.

Symptom	Possible cause/ remedy
No image is displayed.	<ul style="list-style-type: none"> The cable is not correctly connected. Zoom is set at the TELE side, displaying only the white or black part of the document. If you turn the power ON immediately after turning it OFF, the unit may not start. Wait for several seconds after turning the power OFF, and then turn it back ON. The USB cable is disconnected. The switch in the side panel is set to the left. Make sure that the switch is set to the right. 
No image is displayed.	<ul style="list-style-type: none"> Image Mate 4 is not started correctly. Restart Image Mate 4 and try to connect again. The MX-1 is not selected in the setting of Image Mate 4.
The image is out of focus.	<ul style="list-style-type: none"> The document (object) is too close to the lens. Move the document (object) slightly away from the lens.
The image is too dark.	<ul style="list-style-type: none"> The intensity of the lighting is insufficient. Press the  button on the operating panel to adjust the brightness. Or press the  button to turn on the LED lighting. P. 33
The image does not move.	<ul style="list-style-type: none"> The "Freeze" function is selected by pressing  button on the Operating panel. Cancel the freeze status by pressing  button again. The "Freeze" function is selected by Image Mate 4. Cancel the freeze status to resume the live image feed. P. 33
The image is striped.	<ul style="list-style-type: none"> This may be interference fringes between dots of printed matter and TV scanning lines or CMOS pixels. Changing the shooting range may improve the problem. The image may be distorted when shooting a monitor screen while the live image feed is displayed.

The UVC video stream is upside down.	<ul style="list-style-type: none"> Verify that the graphic driver and other device drivers of your computer are the latest version. You can download the latest version of device drivers from the official website of the manufacturer of your computer.
Other image than the camera image overlaps on the UVC video stream.	<ul style="list-style-type: none"> Depending on your software, OS or the connection status, other images than the camera image may be overlapped on the camera image. This can be solved by reconnecting the MX-1 or restarting the software.
No UVC video stream is displayed. (An error message appears.)	<ul style="list-style-type: none"> The software may recognize it as error when it takes time to prepare the image output. Restart the MX-1 and reconnect it to the computer. Then restart the software.
Fails to output the UVC video stream.	<ul style="list-style-type: none"> Disconnect the USB cable and restart the software. Then connect the USB cable again.
The UVC video stream sometimes freezes.	<ul style="list-style-type: none"> The displayed image may pause for a brief second when the object moves quickly. In that case, adjusting the brightness manually may improve the problem. 
There is a distortion of the image.	<ul style="list-style-type: none"> Use a high-spec computer. Also, reducing the resolution or frame rate may improve the distortion of the image.
4K image cannot be displayed.	<ul style="list-style-type: none"> The system requirements to display 4K image are as follows: CPU: Intel® Core™ i7 or higher Memory: 16GB Graphic board: GeForce GTX750 or higher

About the light (LED lighting)

The brightness of the LED lighting will diminish with long-term use. If its brightness has significantly diminished, consult the dealer from whom you purchased this product or our nearest branch/office for replacement (subject to charge).

About long-term usage of this product

Due to the lifetime of its parts, if this product is used for longer than the warranty period, its performance and quality may deteriorate. In this case, we will replace the parts for a charge. Consult the dealer from whom you purchased this product or our nearest branch/office.

About using the MX-1 without the stage

We do not recommend using the MX-1 without the stage. We cannot be held responsible for any damages caused by the use of the MX-1 without the stage even if still within the warranty period.

7 SPECIFICATIONS

MAIN CAMERA

Item	Specifications
Power source	DC5V ※Power supply by the USB bus power
Power consumption	3.2W
Outside dimensions	W 73.2 ×D 294.3 ×H 298[mm](When setup) W 73.2 ×D 244 ×H 18[mm](When folded)
Weight	Approx. 2.4kg (Main body only)
Ext. control terminal	USB3.0 type microB × 1 Expansion terminal (Exclusive) × 1 ※The expansion terminal connects with MX-1 CONNECT BOX.
Lens	F=2.0
Frame rate	60fps (in high frame rate mode at 1080P)
Focus working range	From lens surface: 100mm ~ ∞
Focus	Auto (One-push)
Image pick-up element	1/3.1 inch CMOS 13,000,000 pixels
Effective pixels	H: 4160, V: 3120
Sync. signal	Internal
Imaging area	374mm×281mm (Height: 286mm) 4:3

※The MX-1 CONNECT BOX is required to output in RGB and HDMI

FUNCTIONAL SPECIFICATION

Item	Content	Operation panel	IM4	Application
Brightness	Auto (Set value 0~12)	✓		
Image rotation	0°/180° (Camera video)	✓		
LED lighting	ON/OFF	✓		✓
AF	Auto (One-push)	✓		
Zoom	Possible	✓		
Video still	Possible	✓		
Resolution	Manual		✓	
Flicker	60Hz / 50Hz		✓	
Contrast	Possible (Set value 0~20)		✓	
Hue	Possible (Set value -180~180)		✓	
Saturation	Possible (Set value 0~31)		✓	
Definition	Possible (Set value 5~15)		✓	
Gamma	Possible (Set value 100~200)		✓	

WhiteBalance	Auto/Manual (Set value 2000 ~ 8000)		✓
Backlight	ON/OFF		✓
Focus	Auto/Manual (Set value 100~3000)		✓
Exposure	Auto/Manual (Set value -10~1)		✓
Low-light	Auto/Manual		✓
Color Mode	Normal/Gray/Negative /Black-and-White		✓
Scene Mode	Normal/Document		✓
Priority Mode	Binned/Resized		✓
NoiseReduction	Auto/Manual (Set value 0~10)		✓
MaxFramerate	Auto/Manual (Set value 3~30)		✓
Factory setting	Possible		✓

■ ILLUMINATION DEVICE

Item	Specifications
Illumination	White LED