IMPORTANT SAFEGUARDS

■ Read Instructions
All the safety and operating instructions should be read before the appliance is operated.

■ Retain Instructions
The safety and operating instructions should be retained for future reference.

■ Heed Warnings
All warnings on the product and in the operating instructions should be adhered to.

■ Follow Instructions
All operating and use instructions should be followed.

■ Cleaning
Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

■ Attachments
Do not use attachments not recommended by the product manufacturer as they may cause hazards.

■ Water and Moisture
Do not use this product near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

■ Placement
Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer’s instructions, and should use a mounting accessory recommended by the manufacturer.

■ Ventilation
Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer’s instructions have been adhered to.

■ Power Sources
This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home consult your appliance dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

■ Grounding or Polarization
This product may be equipped with either a polarized 2-wire AC line plug (a plug having one blade wider than the other) or a 3-wire grounding type plug, a plug having a third (grounding) pin. If the 2-Wire polarized plug will not fit in the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug. The 3-wire grounding type plug will fit into a grounding type power outlet.
This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

■ Power-Cord Protection
Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- **Lightning**
  For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

- **Overloading**
  Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

- **A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.**

- **Object and Liquid Entry**
  Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

- **Servicing**
  Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

- **Damage Requiring Service**
  Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - When the power-supply cord or plug is damaged.
  - If liquid has been spilled, or objects have fallen into the product.
  - If the product has been exposed to rain or water.
  - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
  - If the product has been dropped or damaged in any way.
  - When the product exhibits a distinct change in performance - this indicates a need for service.

- **Replacement Parts**
  When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

- **Safety Check**
  Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

- **Heat**
  The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

This symbol [crossed-out wheeled bin WEEE Annex IV] indicates separate collection of waste electrical and electronic equipment in the EU countries. Please do not throw the equipment into the domestic refuse. Please use the return and collection systems available in your country for the disposal of this product.
WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification or Declaration of this device and may cause interference levels which exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces. Changes or modifications not expressly approved by the manufacturer could void the user’s authority to operate the equipment.

FOR UNITED STATES USERS:
INFORMATION
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 instruction manual, 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.

USER-INSTALLER
CAUTION:
Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party responsible for compliance to Part 15 of the FCC rules.
BEFORE YOU USE

■ The supplied power cord and AC adapter are designed for exclusive use with this product. Do not use them with other products.
■ Be sure to use the power cord applicable to your local power specifications. If the product was sold in Japan, use the AC adapter sold with the product with 100 VAC and 50 or 60 Hz.
■ When storing the product, do not leave it under direct sunlight or by heaters. It may be discolored, deformed, or damaged.
■ Do not place this product in any humid, dusty, salt bearing wind, or vibrating locations. Use it under the following environmental conditions: Temperature : 0℃ ~ 40℃  Humidity : 30% ~ 85% (No condensation)
■ Do not put your finger between the arms when moving the arm. You may pinch your finger and result in injury. It is recommended to attach the supplied caution sticker to the product.
■ Use a soft, dry cloth for cleaning. Do not use any volatile solvent such as thinner or benzene.
■ Do not point the lens directly to the sun. It could degrade the imaging capability.
■ Luminescent and Black Spots
  There may be some pixels that do not properly operate due to the use of CMOS Area Image Sensors made-up of many pixels. Though luminescent or black spots may be found on the screen, it is a phenomenon peculiar to the CMOS Area Image Sensors and is not a malfunction.
■ A protection sheet is attached to the touchscreen at the factory to avoid damage during transportation. Remove the sheet before use. Do not strongly press the touchscreen or press it with sharp objects. This may result in damage or malfunction to the touchscreen.
■ Follow the guidelines below to prevent the unit from dropping or overturning.
  · Use the product on a stable base, desk, or table. Do not place the product on an unstable base or slanted location.
  · Place or wire the product so as to prevent the cables from being pulled or drawn.
■ Never hold the product by the arm or the camera head. Carry the product by holding the lower part of the main unit in both hands after folding the arm and the camera head.
■ Pay careful attention when using (including setting-up and storing) or carrying the product to prevent the camera head from receiving any shocks.
■ After folding the product, do not place heavy object on the arm.
■ Do not look directly into the LED light. If you look directly into it at pointblank range, your eyes may be injured.
■ The LED may get hot after using it for long hours. Do not touch it directly. It is recommended to attach the supplied caution sticker to the product.
■ Depending on the type of the SD card or USB flash drive, it may not be used with the product.
■ Transfer the data from the SD card or USB flash drive onto a device such as a PC to save a backup copy. Malfunction of the product or repairs to it may cause the data saved in the SD card or USB flash drive to be deleted.
■ If this product is used for longer than the warranty period, its performance and quality may deteriorate due to the lifetime of its parts. For parts replacement (on chargeable basis), consult the dealer from whom you purchased this product or our branch/office near your location.
■ Battery precautions:
  · Remove the battery from the remote control when not in use for an extended period of time.
  · Do not use a rechargeable battery.
  · Do not charge or short-circuit the battery.
  · Follow the regulations of the city or town when disposing of the battery.
Pay attention to the polarity (+ / -) of the battery.
Children may ingest small batteries; always keep batteries safe and out of reach. If a battery is swallowed, consult a doctor immediately as this could result in asphyxiation or be an obstacle to digestion, etc.
If any liquid from a battery leaks onto your skin or clothes, flush the area with clean water immediately. If it gets into your eye, flush immediately with clean water and then contact a doctor.

Microphone
Connecting a microphone other than an electret condenser microphone (a microphone for a computer) may cause malfunction.

Audio input port
The power is supplied to the audio input port (dedicated for the microphone input). Do not connect any audio line-output devices such as a CD/MP3 player to the audio input port.

Menu and Icons
Some functions of this product may not be set or used depending on the operation mode or menu settings.

Recording / Playback
Before recording an important scene, make sure to do a test recording to confirm that the camera is working properly.
The recording time varies depending on the resolution setting, recording quality setting or type of SD card.
Video files that are recorded with this product or converted by the proprietary software can only be played with this product.
Be careful not to operate the touchscreen or touch any buttons during the recording. The operation noise may be recorded.

Whiteboard Sheet
Use a proper whiteboard marker. If you use a permanentarker on the board, you may not be able to erase it.
When writing, write on the whiteboard sheet. If you write directly on the stage, you may not be able to erase it.
It is recommended to attach the supplied caution sticker to the product.
Do not leave writing or drawings on the writing surface for an extended period of time. It may stick to the surface and will be difficult to erase.
It may be difficult to erase writing or drawings on the surface with a whiteboard eraser. We recommend you used a melamine sponge.

Remote control
The receivable range may be reduced when the product is placed in direct sunlight or near an inverter fluorescent light. Depending on the surrounding environment, the receivable range may be shorter or the sensor may fail to receive any infrared light. In such cases, relocate the product or shield the light source.

Network Function (For PX-30 only)
We do not guarantee the performance when the product is connected to the Internet directly. For details of the network settings, consult with your network administrator.

Copyright
Unless used for personal use, it is prohibited strictly under copyright law to use any photo files without the prior consent of the copyright holder. Even if using for personal use, be careful that there could be a situation where video or audio recording is restricted or illegal.
HANDLING PRECAUTIONS

The followings are special precautions against mishandling of the product. Pay close attention to them.

① Installation
Do not place the product on an unstable place or slanted surface.

② Carrying the product
To avoid malfunction of the camera, fold the arm before carrying the product. Never hold the product by the arm or the camera head when carrying the product.

③ Setting Up
When setting up the product, pay attention not to pinch fingers between moving parts.

④ Cabling of the AC adapter
Do not wrap the power cable tightly around the AC adapter. By doing so may cause cable disconnection.
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**Main Features**

★ **High-Definition 4K Image**
With the 12Mega pixels CMOS sensor, the PX-10/30 can produce high-definition images with max. 4K resolution.
※ The PX-10 cannot output 4K images. The max output resolution is 2K.

★ **Natural, Smooth Image**
The PX-10/30 can output 2K images at 60fps.
High definition and smooth video images can be fully displayed without degrading the image quality.

★ **Maximum excitement generated by state-of-the-art zoom – Optical zoom, Digital zoom, Sensor zoom**
The PX-10/30 are equipped with 12x Optical zoom and 2x Sensor zoom. 24x zooming without image degradation is possible. (Total 288x zooming together with 12x digital zoom.)

★ **Both A4 portrait image and A3 landscape image can be captured, respectively, in HDMI output mode**
By changing the settings of the angle of view and resolution of the output image, you can capture full A4 portrait image and A3 landscape image respectively.

★ **Easy to store and carry**
Thanks to its thin and lightweight design, the PX-10/30 can be easily stored and carried.

★ **Possible to record HDMI input**
The PX-10/30 can record or capture HDMI signals being sent to the unit.
The HDMI signals being sent to the unit can be output as HDMI signals, RGB signals, and HDBasetT signals (for PX-30 only).

★ **Extendable with HDBaseT (for PX-30 only)**
Using the LAN cable, the PX-30 can transmit uncompressed 2K video signals up to 100m at high frame rate, without delay. (For 4K video signals, up to 70m.)

★ **HDMI1.4 compliant (4K)**
The PX-10/30 support HDMI1.4, which allows the transfer of 4K/2K video signals and the network connection in a single cable.

★ **USB3.0 compliant (4K)**
The PX-10/30 support USB3.0, which allows the high-speed data transfer of max. 5Gbps (10 times faster than USB2.0). Suitable for the transmission of large volumes of data such as high resolution image data, audio data, and video data.

★ **Recording and playback of 4K videos (for PX-30 only)**
It is possible to record or playback 4K videos.

★ **Possible to draw on the stage (can be used as a whiteboard)**
By placing the supplied whiteboard sheet on the stage, you can draw directly on the sheet with a whiteboard marker and shoot it.

★ **Bright LED lighting**
The small LED lighting of the PX-10/30 is designed to reduce glare to a minimum by focusing lights with lenses.
It delivers bright and even illumination to the entire stage.
1 PREPARATION

◆ 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
- AC adapter
- AC power cord
  (The shape of the plug differs according to the region in which the product is sold.)
- Remote control
- Lithium coin battery
  (For remote control (CR2025))
- USB3.0 cable
  (1.5m)
- Warranty Card
  (For Japan/ North America only)
- Quick Start Guide
- Warranty Card
- Whiteboard sheet
  (⇒P.18)
- Melamine sponge
  (For Whiteboard sheet)
  (⇒P.18)
- Caution sticker
  (⇒P.19)
## Basic Operations

### ABOUT THE DOCUMENT CAMERA

**PART NAMES**

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<th>Description</th>
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<td>②</td>
<td>Operating panel</td>
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<tr>
<td>③</td>
<td>Speaker</td>
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<td>④</td>
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<td>⑤</td>
<td>Side panel</td>
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<tr>
<td>⑥</td>
<td>IR receiver</td>
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<tr>
<td>⑦</td>
<td>Rear panel</td>
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### OPERATING PANEL

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<th>Mark</th>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
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<tr>
<td>1</td>
<td>Power</td>
<td>To ON/OFF the power. (⇒P.21)</td>
</tr>
<tr>
<td>2</td>
<td>Zoom jog dial</td>
<td>Rotating counter clockwise: Zoom out. Rotating clockwise: Zoom in. (⇒P.21)</td>
</tr>
<tr>
<td>3</td>
<td>AF</td>
<td>The auto focus works once when the AF button is pressed. (⇒P.22)</td>
</tr>
<tr>
<td>4</td>
<td>LCD touchscreen</td>
<td>Images being output is displayed with the OSD menu for configuration of various settings. (⇒P.23) When displaying video, the focus is on the point you tapped.</td>
</tr>
<tr>
<td>5</td>
<td>Brightness</td>
<td>To display the menu for brightness settings. (⇒P.24)</td>
</tr>
<tr>
<td></td>
<td>Lighting</td>
<td>To ON/OFF the LED lighting.</td>
</tr>
<tr>
<td></td>
<td>Anti-reflection</td>
<td>To ON/OFF the anti-reflection function.</td>
</tr>
<tr>
<td></td>
<td>Iris</td>
<td>To adjust the brightness. Slide bar: 0～18 (Default value : 11)</td>
</tr>
<tr>
<td></td>
<td>Default</td>
<td>To initialize the brightness settings.</td>
</tr>
<tr>
<td>6</td>
<td>Select image</td>
<td>To display the Select image menu. (⇒P.26)</td>
</tr>
<tr>
<td></td>
<td>Camera</td>
<td>To display the camera image.</td>
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<tr>
<td></td>
<td>USB/SD</td>
<td>To display the USB/SD menu for displaying still images or playing video files.</td>
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<td></td>
<td>HDMI - 1</td>
<td>To display images being input to the HDMI in 1 port.</td>
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<tr>
<td></td>
<td>HDMI - 2</td>
<td>To display images being input to the HDMI in 2 port.</td>
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<tr>
<td></td>
<td>RGB</td>
<td>To display images being input to the RGB in port.</td>
</tr>
<tr>
<td>7</td>
<td>Settings</td>
<td>To display the menu for configuration of various settings. (⇒P.27)</td>
</tr>
<tr>
<td></td>
<td>System</td>
<td>To display the menu for configuration of the system.</td>
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<td></td>
<td>Image Quality</td>
<td>To display the menu for configuration of the camera image.</td>
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<td></td>
<td>Network</td>
<td>To display the menu for configuration of the network function.</td>
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<td>Product Information</td>
<td>To display the information of the version and license of the camera.</td>
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<td>Recording</td>
<td>To start and stop recording. (⇒P.36)</td>
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<td>9</td>
<td>Freeze</td>
<td>To pause and restart the camera image. (⇒P.32)</td>
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<td>10</td>
<td>Image rotation</td>
<td>To rotate the camera image. (0°/90°/180°/270°)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>※In the System Setting menu, the rotation angle can be selected between 90°and 180°. (⇒P.29)</td>
</tr>
<tr>
<td>11</td>
<td>Capture</td>
<td>To save the currently displayed image as a still image. (⇒P.35)</td>
</tr>
</tbody>
</table>

※An operation sound is heard when the operating panel is pressed down.
The operation sound can be adjusted in the Op. sound vol. setting. (⇒P.28)
CAUTION

The touchscreen is made of glass. Pay attention to the followings to avoid glass breakage and injury.

- Do not rub or press the touchscreen with a sharp object such as a knife.
- Do not press the touchscreen strongly by finger or do not apply weight to the touchscreen.
- Do not rub the touchscreen with a hard object.
- Do not hit the touchscreen with a hard object or do not drop it onto the touchscreen.
- Do not put an object on the touchscreen.
- Gently wipe the surface with a soft cloth to remove dirt.

Pay attention to the followings in order to maintain the performance of the touchscreen.

- Do not stick adhesive tape on the touchscreen.
- A protective sheet is attached to the surface of the touchscreen to avoid scratches during transportation.
- Remove the sheet gently before use.

◆REAR PANEL

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
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<tbody>
<tr>
<td>① DC IN 12V</td>
<td>To connect the DC plug of the supplied AC adapter. (DC12V)</td>
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<tr>
<td>② RS-232C</td>
<td>To connect the RS-232C cable (commercially available) to control the PX-10/30 from a PC.</td>
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<tr>
<td>③ HDMI in 1</td>
<td>To connect the HDMI cable (commercially available) to input HDMI images and audio. [HDMI TYPE-A]</td>
</tr>
<tr>
<td>④ RGB in</td>
<td>To connect the RGB cable (commercially available) to input analog RGB images. [mini DSUB15pin]</td>
</tr>
<tr>
<td>⑤ LAN (for PX-30 only)</td>
<td>To connect the LAN cable (commercially available) to control the PX-10/30 from a PC or transfer images over the network. [RJ45]</td>
</tr>
<tr>
<td>⑥ HDBaseT (for PX-30 only)</td>
<td>To connect the LAN cable (commercially available) to connect the PX-30 and a device which has the HDBaseT port. [RJ45] ※1</td>
</tr>
<tr>
<td>⑦ RGB out</td>
<td>To output RGB images. [mini DSUB15pin]</td>
</tr>
<tr>
<td>⑧ USB3.0B</td>
<td>To connect the USB cable compliant to USB3.0 (super speed USB) to connect the PX-10/30 and a device which supports USB3.0. [USB Standard-B (USB device)] ※ USB 2.0 cable can also be connected.</td>
</tr>
<tr>
<td>⑨ DC OUT 5V</td>
<td>To supply power to other devices. Use this port for connecting a WHDI dongle or charging a tablet. [USB TYPE-A (USB power supply)] ※2</td>
</tr>
<tr>
<td>⑩ HDMI out</td>
<td>To output HDMI images and audio. [HDMI TYPE-A (HDMI1.4 compliant)]</td>
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</table>

※1 The maximum transmit distance for 4K video signals at 30fps will be 70m when using the cat 5e LAN cable. The maximum transmit distance for video signals of less than 1080 resolution will be 100m when using the cat 5e LAN cable.
The maximum transmit distance for 4K video signals at 30fps will be 100m when using the cat 6a (or higher) LAN cable.

※2 The maximum current available from the ⑨[DC OUT 5V] port in the rear panel and the ②[USB2.0] port in the side panel is 1.2[A] in total.
◆SIDE PANEL

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>① SD</td>
<td>To insert an SD card (commercially available). Push the card again to remove the SD card.</td>
</tr>
<tr>
<td>② USB2.0A</td>
<td>To connect a USB flash drive (commercially available). [USB TYPE-A (USB host)]</td>
</tr>
<tr>
<td>③ MIC</td>
<td>To connect a microphone. [Φ3.5mm jack (monaural)] ※Plug-in power type electret condenser microphone supported.</td>
</tr>
<tr>
<td>④ LINE OUT</td>
<td>To output audio line. (The audio cable is not supplied and should be purchased separately.) [Φ3.5mm jack (stereo)]</td>
</tr>
</tbody>
</table>

**CAUTION**
Connecting a microphone other than an electret condenser microphone (a microphone for a computer) may cause malfunction.

◆MOVING PARTS OF THE DOCUMENT CAMERA

The PX-10/30 can be moved as shown below.
◆SETTING UP
Place the PX-10/30 on an even, flat surface. Then set up the PX-10/30 as shown in the figures below.

◆FOLDING THE DOCUMENT CAMERA
After using the PX-10/30, fold it as shown in the figures below.

CAUTION
- Be careful not to pinch your fingers when moving the arm or camera head during setup.
- Be careful not to damage the lens when folding the camera arm.
- Rotate the camera head by 84° and rotate the camera arm before folding it. Otherwise, the camera head may hit the stage and damage the lens.
- When folding the camera arm, do not press the camera head.
SUPPLIED ACCESSORIES
◆ REMOTE CONTROL

PREPARATION OF THE REMOTE CONTROL
Remove the battery case by squeezing the release lock. Insert the coin battery into the battery case, so you see the positive (+) side facing up. Then insert the battery case into the remote control.

WARNING
Children may ingest small batteries; always keep batteries safe and out of reach. If a battery is swallowed, consult a doctor immediately as this could result in asphyxiation or be an obstacle to digestion, etc.

RECEIVING IR FROM THE REMOTE CONTROL
Point the IR transmitter of the remote control to the IR receiver of the PX-10/30, and press the desired button. (⇒P.12)
Receivable range: within approx. 5m

<table>
<thead>
<tr>
<th>Button</th>
<th>Name/Function</th>
<th>Button</th>
<th>Name/Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF</td>
<td>AF</td>
<td>LED</td>
<td>LED lighting</td>
</tr>
<tr>
<td></td>
<td>To focus automatically.</td>
<td></td>
<td>To ON/OFF the LED lighting.</td>
</tr>
<tr>
<td></td>
<td>Zoom out</td>
<td>Camera</td>
<td>Camera</td>
</tr>
<tr>
<td></td>
<td>To shrink the camera image.</td>
<td></td>
<td>To display the camera image.</td>
</tr>
<tr>
<td></td>
<td>Zoom in</td>
<td>RGB in</td>
<td>RGB in</td>
</tr>
<tr>
<td></td>
<td>To enlarge the camera image.</td>
<td></td>
<td>To display images being input to the RGB in port.</td>
</tr>
<tr>
<td></td>
<td>Default</td>
<td>HDMI in 1</td>
<td>HDMI in 1</td>
</tr>
<tr>
<td></td>
<td>To initialize the brightness settings.</td>
<td></td>
<td>To display images being input to the HDMI in 1 port.</td>
</tr>
<tr>
<td></td>
<td>Brightness DOWN</td>
<td>HDMI in 2</td>
<td>HDMI in 2</td>
</tr>
<tr>
<td></td>
<td>To darken the camera image.</td>
<td></td>
<td>To display images being input to the HDMI in 2 port.</td>
</tr>
<tr>
<td></td>
<td>Brightness UP</td>
<td>Capture</td>
<td>Capture</td>
</tr>
<tr>
<td></td>
<td>To brighten the camera image.</td>
<td></td>
<td>To save the currently displayed image as a still image.</td>
</tr>
<tr>
<td></td>
<td>Image rotation</td>
<td>Recording</td>
<td>Recording</td>
</tr>
<tr>
<td></td>
<td>To rotate the camera image.</td>
<td></td>
<td>To start and stop recording.</td>
</tr>
<tr>
<td></td>
<td>Freeze</td>
<td>Power</td>
<td>Power</td>
</tr>
<tr>
<td></td>
<td>To pause and restart the camera image.</td>
<td></td>
<td>To ON/OFF the power.</td>
</tr>
</tbody>
</table>

※1 In the System Setting menu, the rotation angle can be selected between 90° and 180°. (⇒P.29)
◆ WHITEBOARD SHEET

By placing the supplied whiteboard sheet on the stage, you can draw directly on the sheet with a whiteboard marker. As the camera can shoot the annotation made on the whiteboard sheet, you can use the whiteboard sheet like a normal whiteboard.

It may be difficult to erase writings or drawings on the surface with a whiteboard eraser. We recommend you to use the supplied melamine sponge. The melamine sponge is consumable. When the supplied melamine sponge needs to be replaced, purchase a commercially available melamine sponge. Be sure to strictly observe the precautions provided when using the stage of the PX-10/30 as a writing board.

![Diagram of whiteboard sheet and marker]

**CAUTION**

- When drawing, always use a whiteboard sheet. If you draw directly on the stage, you may not be able to erase it. It is recommended to attach the supplied caution sticker to the PX-10/30. (⇒P.19)
- Use a proper whiteboard marker. If you use a permanent marker on the board, you may not be able to erase it. It is recommended to attach the supplied caution sticker to the unit. (⇒P.19)
- Do not leave the whiteboard sheet under strong sun light or within humid condition or near a heater as it may change the shape or color.
- Do not leave drawings on the writing surface for an extended period of time. It may stick to the surface and will be difficult to erase.
- When stains cannot be removed by wiping with a dry cloth, wipe with a soft cloth with diluted neutral detergent. Then wipe off the water and remaining detergent with a dry cloth.
◆CAUTION STICKER

A caution sticker which contains the folding instructions of the camera arm and other precautions is supplied with the PX-10/30. Follow the instructions when using the PX-10/30. Attach the sticker to the unit as indicated in the sticker.

1 / 3 Be careful not to pinch your fingers when folding the PX-10/30.

2 The LED lighting may get hot during use. Do not touch the LED lighting directly when it is on or right after it is turned on.

4 Make sure to draw on a whiteboard sheet. If you draw directly on the stage, you may not be able to erase it.

5 These numbers are assigned to cables to be connected to the PX-10/30.

6 Attach the stickers perpendicular to the corresponding cables as shown in the figure.
2-3  SHOOTING IMAGES

◆ CONNECTING TO A PROJECTOR OR MONITOR

Connect the PX-10/30 to a projector or monitor with the HDMI cable (commercially available) or the RGB cable (commercially available). Then connect the supplied AC power cord to the AC adapter.

Connect the AC adapter to the unit and connect the AC power cord to the wall outlet. The LED of the Power button lights up red.

---

CAUTION

Before connecting the unit to other devices, be sure to turn off the power of all the devices.
If the image is not displayed correctly after the resolution setting is set to Auto, change the resolution setting according to the connected device. (⇒P.27)

---

NOTE

- Zoom ratio: Optical zoom 12x + Sensor zoom 2x, Digital zoom 12x  (Total 288x zooming) ※Sensor zoom 2X can be set only when FHD output is used.
- When the optical zoom reaches 12x, it automatically shifts to the sensor zoom. When the sensor zoom reaches 2x, it automatically shifts to the digital zoom.
- Within the digital zoom range, the image quality is degraded.
- ON/OFF of the digital zoom can be set in the System Setting menu. (⇒P.30)
- When the digital zoom is set to OFF, only the optical zoom is available. (The sensor zoom is not available.)
TURNING ON/OFF THE POWER

- Press the Power button [ ■ ] on the operating panel or the Power button [ ■ ] on the remote control to turn on the power.
  The color of the LED of the Power button [ ■ ] on the operating panel changes from red to blue. (During start up: flashes blue)

- Press the Power button [ ■ ] on the operating panel or the Power button [ ■ ] on the remote control to turn off the power.
  Press longer for the Power button on the operating panel.
  The color of the LED of the Power button [ ■ ] on the operating panel changes to red.

ADJUSTING THE SIZE

The size of the image displayed can be adjusted by rotating the zoom jog dial on the operating panel or by pressing the zoom buttons [ ] / [ ] on the remote control.
※ A zoom bar indicating the zoom position appears on the LCD touchscreen during zoom operation. (Touch operation is disabled during zoom operation.)

Zoom in : To enlarge the subject.
  Rotate the zoom jog dial clockwise or press the Zoom-in button [ ] on the remote control.
Zoom out : To shrink the subject.
  Rotate the zoom jog dial counter clockwise or press the Zoom-out button [ ] on the remote control.

CAUTION
Do not operate the PX-10/30 while the LED is flashing.
A zoom bar indicating the zoom position appears on the LCD touchscreen during zoom operation. The upper part indicates the digital zoom range and the lower part indicates the optical zoom range.
※The zoom bar appears only on the LCD touchscreen of the PX-10/30.

**AF (AUTO FOCUS)**
The AF works once when the AF button [AF] on the operating panel or the AF button [AF] on the remote control is pressed.
The AF icon appears on the LCD touchscreen AF operation.
**USING THE LCD TOUCHSCREEN**

The PX-10/30 can be controlled using the LCD touchscreen.

**STARTUP SCREEN**

When the PX-10/30 is started, the startup screen appears on the LCD touchscreen, and then the camera image appears.

**HOW TO USE THE LCD TOUCHSCREEN**

1. **Tap**
   
   By tapping an icon on the LCD touchscreen, you can select a function and operate. The color of the touched icon changes.

2. **Drag**
   
   By sliding your finger across the LCD touchscreen surface while touching the item, you can operate it. When the Presentation function (Mask) is in use, you can move the area.

3. **Flick**
   
   By quickly moving your finger or flicking on the LCD touchscreen, you can move pages or files.

4. **Slide**
   
   Horizontal bar: You can change the setting value by sliding the bar left and right while touching the icon of the current setting value.
   
   Vertical bar: You can change the setting value by sliding the bar up and down while touching the icon of the current setting value.

**CAUTION**

- A protective sheet is attached to the surface of the LCD touchscreen to avoid scratches during transportation. Remove the sheet gently before use.
- Do not press the LCD touchscreen strongly by finger or sharp objects. This can cause damage or malfunction.
- Do not put a thing on the LCD touchscreen.
- The LCD touchscreen may not work properly if you operate it with a wet finger or with two fingers.
- Do not use the product near equipment that generates electrical noise. This can cause malfunction.
**ADJUSTING THE BRIGHTNESS**

Press the Brightness button [ ] on the operating panel to display the menu for brightness adjustment. The image brightness can be adjusted by sliding the bar to the right or left, or by using the [ ] buttons on the remote control.

Press the Default button [ ] on the operating panel or the Default button [ ] on the remote control to initialize the brightness settings.

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TURNING ON/OFF THE LED LIGHTING

Press the Brightness button [ ] on the operating panel to display the brightness settings menu, and press the lighting icon [ ] to turn on the LED lighting. ON/OFF the LED lighting can also be performed from the remote control by pressing the LED lighting button [ ].

The LED lighting can be rotated by 90°. Adjust the angle according to the subject. Use the anti-reflection function when there is too much reflection of the light. (⇒P.24)

CAUTION

・When you take a picture of a person, turn off the LED lighting.
・The PX-10/30 is equipped with high-brightness LED. You can safely use it to light up subjects. Make sure that the light from the LED does not shine directly into your eyes.
・The brightness of the LED will gradually diminish with long-term use. This is not a malfunction of the LED lighting, but a characteristic of the LED.
・Do not touch the LED lighting while it is on as it may become very hot.
SELECTING THE IMAGE SOURCE

Press the Select image button [ ] on the operating panel to display the Select image menu. The image of the selected device is displayed on the LCD touchscreen and external monitor. The input selection can also be performed from the remote control using the input source select buttons. (⇒P.1)

<table>
<thead>
<tr>
<th>Menu</th>
<th>Function</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera image</td>
<td>To display the camera image.</td>
<td>-</td>
</tr>
<tr>
<td>USB / SD</td>
<td>To display the USB/SD menu for displaying still image or playing video files.</td>
<td>⇒P.26</td>
</tr>
<tr>
<td>HDMI - 1</td>
<td>To display images being input to the HDMI in 1 port.</td>
<td>⇒P.14</td>
</tr>
<tr>
<td>HDMI - 2</td>
<td>To display images being input to the HDMI in 2 port.</td>
<td>⇒P.14</td>
</tr>
<tr>
<td>RGB</td>
<td>To display images being input to the RGB in port.</td>
<td>⇒P.14</td>
</tr>
</tbody>
</table>

Press [ X ] button to go back to the screen being displayed previously.

※When RGB is selected, the image being input is not displayed on the LCD touchscreen.
※When HDMI 1 or HDMI 2 is selected, the signals being sent to the unit can be output as USB signals, HDMI signals, RGB signals, and HDBasetT signals (for PX-30 only), and can be recorded or captured.

USB/SD menu

<table>
<thead>
<tr>
<th>Menu</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD still image</td>
<td>To display the menu to playback still image saved in the SD card.</td>
</tr>
<tr>
<td>SD video</td>
<td>To display the menu to play videos saved in the SD card.</td>
</tr>
<tr>
<td>USB still image</td>
<td>To display the menu to playback still image saved in the USB flash drive.</td>
</tr>
</tbody>
</table>
2-4 CONFIGURING THE SETTINGS

Each setting of the PX-10/30 can be configured through the menu (texts or icons) displayed on the screen.

◆ HOW TO CONFIGURE THE SETTINGS

Press the Settings button [ ] on the operating panel.

The settings menu appears. "System Setting", "Image Quality Setting", "Network Settings", and "Product Information" can be selected from the menu.

[✔ : Default setting (default value)]

---

<table>
<thead>
<tr>
<th>Menu</th>
<th>Function</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Setting</td>
<td>To display the menu for configuration of the system.</td>
<td>➞ P.27</td>
</tr>
<tr>
<td>Image Quality Setting</td>
<td>To display the menu for configuration of the camera image.</td>
<td>➞ P.30</td>
</tr>
<tr>
<td>Network Settings</td>
<td>To display the menu for configuration of the network function.</td>
<td>➞ P.31</td>
</tr>
<tr>
<td></td>
<td>(For PX-30 only)</td>
<td></td>
</tr>
<tr>
<td>Product Information</td>
<td>To display the information of the version and license of the camera.</td>
<td>➞ P.31</td>
</tr>
</tbody>
</table>

---

### System Setting

#### (1/5 page)

![System Setting Menu](image)

#### Resolution

- Auto [✔]
- UHD (3840 x 2160)
- FHD (1920 x 1080)
- HD (1280 x 720)
- UXGA (1600 x 1200)
- XGA (1024 x 768)

**Function:** To set the resolution of the output image.

※ The PX-10 does not support UHD (3840 x 2160).

#### Viewing angle ❗

- Normal (16:9) [✔]
- Full (4:3)

**Function:** To set the viewing angle of the output image.

#### Flicker mode

- 50Hz
- 60Hz [✔]
- OFF

**Function:** When there is flickering in the image due to the fluorescent light, set to the same value as the power supply frequency of the location where the PX-10/30 is used.

- 50Hz: Europe
- 60Hz: Japan/USA

- ND Filter

**Function:** Select this item when there is halation due to flickering. (For example, when shooting outside or when the surrounding environment is too bright.) Flickering may be reduced.
<table>
<thead>
<tr>
<th><strong>USB mode</strong></th>
<th>To configure actions when the PX-10/30 is connected to a PC through the USB3.0 port.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UVC ✔</td>
<td>To control the PX-10/30 from a PC.</td>
</tr>
<tr>
<td>Mass storage</td>
<td>To transfer the data from the SD card to a PC.</td>
</tr>
<tr>
<td><strong>Sound switch</strong></td>
<td>To select the source of the audio input.</td>
</tr>
<tr>
<td>External mic ✔</td>
<td>To set the audio source to external microphone.</td>
</tr>
<tr>
<td>HDMI sound</td>
<td>To set the audio source to HDMI in.</td>
</tr>
<tr>
<td>Sound OFF</td>
<td>To mute the audio.</td>
</tr>
</tbody>
</table>

※1 For details about the video output, refer to 6 Specifications. (⇒P.47)

(2/5 page)

<table>
<thead>
<tr>
<th><strong>System Setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Sound volume" /></td>
</tr>
<tr>
<td><img src="image" alt="Op. sound vol." /></td>
</tr>
<tr>
<td><img src="image" alt="Video rec quality" /></td>
</tr>
<tr>
<td><img src="image" alt="Compress type" /></td>
</tr>
<tr>
<td><img src="image" alt="Video mode" /></td>
</tr>
</tbody>
</table>

※1 HEVC(H.265) can achieve image quality equivalent to that of H.264 with half bit rate and half data size. However, it may take longer to process data due to its high compression ratio.

(3/5 page)

<table>
<thead>
<tr>
<th><strong>System Setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Time-lapse" /></td>
</tr>
<tr>
<td><img src="image" alt="Auto Power OFF" /></td>
</tr>
<tr>
<td><img src="image" alt="Language" /></td>
</tr>
<tr>
<td><img src="image" alt="Formatting" /></td>
</tr>
<tr>
<td><img src="image" alt="Format SD" /></td>
</tr>
<tr>
<td>Time-lapse</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Auto Power OFF</td>
</tr>
<tr>
<td>Language</td>
</tr>
<tr>
<td>Formatting</td>
</tr>
<tr>
<td>Format SD</td>
</tr>
</tbody>
</table>

Format USB | YES / NO | To perform a quick format of the USB flash drive. |

Time setting | YEAR / MONTH / DAY / HOUR / MINUTES / SECOND | To configure the time setting of the PX-10/30. Touch the desired item and configure by using the up and down cursors. |

Rotate angle | 90° / 180° ✓ | To set the rotation angle of the image. |

Freeze image | Move / Freeze ✓ | To set whether to freeze the image on the LCD touchscreen when Freeze function is activated. ※When this setting is set to Move, the image on the LCD touchscreen does not freeze when Freeze function is activated. |

Still image to internal memory | Save / Play | To record a still image to the internal memory. Tap "Save" to save. |

Auto wake up | ON / OFF | When this setting is set to ON, the PX-10/30 automatically starts up after the AC power is supplied. |

Default saving location | SD Card ✓ / USB Memory Stick | To set the primary destination for saving still image or videos. |
### Image Quality Setting

<table>
<thead>
<tr>
<th>Name</th>
<th>Selection item</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AF mode</strong></td>
<td>Zoom sync</td>
<td>To perform auto focus only once after zooming.</td>
</tr>
<tr>
<td></td>
<td>One-push✓</td>
<td>To perform auto focus only once when [ ] on the operating panel or [ ] on the remote control is pressed.</td>
</tr>
<tr>
<td><strong>Digital zoom</strong></td>
<td>ON ✓</td>
<td>To enable the digital zoom.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>To disable the digital zoom.</td>
</tr>
<tr>
<td><strong>White balance</strong></td>
<td>Auto ✓</td>
<td>To always adjust the white balance automatically. The white balance is adjusted automatically to ensure a more natural color according to the characteristics of the object.</td>
</tr>
<tr>
<td></td>
<td>One-push</td>
<td>To automatically adjust the white balance only once when this setting is selected.</td>
</tr>
<tr>
<td></td>
<td>Fluorescent</td>
<td>To adjust the white balance according to the environment under fluorescent light.</td>
</tr>
<tr>
<td></td>
<td>Indoors</td>
<td>To adjust the white balance according to indoor environment.</td>
</tr>
<tr>
<td></td>
<td>Outdoors</td>
<td>To adjust the white balance according to outdoor environment.</td>
</tr>
<tr>
<td><strong>Image mode</strong></td>
<td>Normal ✓</td>
<td>Suitable for displaying documents.</td>
</tr>
<tr>
<td></td>
<td>Emphasis</td>
<td>To emphasize the image.</td>
</tr>
<tr>
<td></td>
<td>Color emphasis</td>
<td>Suitable for displaying colorful subjects.</td>
</tr>
<tr>
<td></td>
<td>Black/white</td>
<td>To display black and white images.</td>
</tr>
<tr>
<td></td>
<td>DLP projector</td>
<td>Suitable for projecting images with a projector.</td>
</tr>
<tr>
<td><strong>Image mask</strong></td>
<td></td>
<td>To mask a part of the image selected by dragging on the screen with your finger.</td>
</tr>
<tr>
<td><strong>Contour correct</strong></td>
<td>0~10 (Default value: 5)</td>
<td>To adjust the level of edge enhancement.</td>
</tr>
<tr>
<td><strong>Contrast</strong></td>
<td>0~10 (Default value: 5)</td>
<td>To adjust the contrast of the image.</td>
</tr>
</tbody>
</table>
Network Settings (for PX-30 only)
To display the network configuration area as well as the network information assigned to a connected device. Connect the LAN port on the back panel to the network with the LAN cable. (⇒ P.14)

By connecting to the network, the following actions are possible.
・To operate the PX-30 with commands. (You can control the PX-30 from your PC.)

<table>
<thead>
<tr>
<th>MAC Address</th>
<th>MAC address set in the PX-30</th>
</tr>
</thead>
<tbody>
<tr>
<td>inet</td>
<td>To select between static and DHCP.</td>
</tr>
</tbody>
</table>

When selecting “DHCP”, a unique IP address is assigned to the PX-30 automatically. If you need to configure the IP address manually, select “static”.
When performing the operation with commands, connect your PC to the PX-30 with the LAN cable after installing a serial communication software on your PC.
Tap the item to display the on-screen keyboard with numeric keypad. Then enter the necessary information manually.

CAUTION
For details about the commands, contact our branch/office near your location.

Product Information

## Camera Information
- Production Name: Product name (e.g. PX-30)
- Serial Number: Serial number of the PX-10/30
- Production Version: Version of the PX-10/30
- CMOS: Version of CMOS FPGA
- MAIN: Version of MAIN FPGA
- PANEL: Version of PANEL FPGA
- HDBaseT (for PX-30 only): Version of HDBaseT
- Production Date: Production date of the PX-10/30

## License
The license information used for the PX-10/30 is displayed.
◆ DETAILS ABOUT FUNCTIONS

FREEZE
To pause the camera image.
Press the Freeze button [ 🕒 ] on the operating panel or [ 🕒 ] on the remote control to pause the image.
You can set whether to freeze the image on the LCD touchscreen when Freeze function is activated from the System Setting. (⇒ [Move/Freeze] : P.29)

IMAGE ROTATION
To rotate the camera image.
Press the Image rotation button [ ⏱️ ] on the operating panel or [ ⏱️ ] on the remote control to rotate the image. (⇒ P.13, P.17)
You can set the angle of image rotation from the System Setting. [90°/180°] (⇒ P.29)

MASK
To mask a part of the image.

How to use MASK
Press the Settings button [ 🕒 ] on the operating panel while the camera image or a playback image is displayed on the monitor. Select “Image mask” from the “Image Quality Setting”. (⇒ P.30)
By pressing “Image mask”, you can setup the mask tool on the LCD touchscreen.
Select the area to be masked by dragging on the screen with your finger. (The color of the mask is blue.)
Tap [ 🕒 ] to apply. (The color of the mask is black.)
The number of mask that can be applied to the image is one. When [ 🕒 ] is tapped after creating a new mask, a previously created mask disappears.
Tap [ 🕒 ] to remove the applied mask.

• The mask function is available only when the “Camera image” is selected in the Select image menu.
• It is not possible to record the image with a mask.
• The mask does not follow the change of the lens (zoom in/ zoom out, lens direction). It is advisable not to use the mask function for the purpose of hiding confidential information.
CONTOUR CORRECT
To enhance the edge of the image. (0~10: 11 levels) Default value 5 (⇒P.30)
As the value gets smaller, the image becomes softer. As the value gets larger, the image becomes sharper.
While the image gets sharper by setting to a larger value, it may take more time to process the image or the file size may become large.
※This function is available only when [Camera image] is selected in the Select image menu. (⇒P.26)

How to use CONTOUR CORRECT
Press the Settings button [ ] on the operating panel while the camera image or a playback image is displayed on the monitor. Select “CONTOUR CORRECT” from the “Image Quality Setting”. (⇒P.30)

CONTRAST
To increase the contrast of the image. (0~10: 11 levels) Default value 5
While the image gets sharper and becomes more vivid by setting to a larger value, the glare on the image may increase.

How to use CONTRAST
Press the Settings button [ ] on the operating panel while the camera image or a playback image is displayed on the monitor. Select “Contrast” from the “Image Quality Setting”. (⇒P.30)

TIME-LAPSE
To create a 1 second video by combining 30 photos taken at set intervals (1 minute, 10 minutes, 30 minutes, 1 hour, 3 hours, 6 hours).
For example:
When setting to 1 minute ⇒ Record 30 minutes = 30 frames of images = Video length: 1 second
When setting to 1 hour ⇒ Record 1 week (168 hours) = 168 frames of images = Video length: 5.6 seconds

CAUTION
・If the video file length exceeds 2 hours or video file size exceeds 4 GB, a new file will be created automatically in the same project.
ADVANCED OPERATIONS

3–1 USING SD CARD/USB FLASH DRIVE

With the PX-10/30, you can record the camera image as a still picture to an SD card, USB flash drive, or internal memory. Also, you can record the camera image as a video to an SD card. The image data recorded in an SD card, USB flash drive, or internal memory can be displayed on the monitor.

Insert the SD card (SD/SDHC/SDXC, commercially available) or USB flash drive (commercially available) into the slot on the side panel before starting the operation. (⇒P.15)

※Recording is not possible if either an SD card or USB flash drive is inserted.

- Video recording (HEVC (H.265) / H.264): SD
- Still image recording (JPEG): SD / USB flash drive / internal memory
  ※For video recording, an SD card with class 10 speed or above is required.
  ※You can select the video compression method (HEVC (H.265) / H.264) from the System Setting. (⇒P.28)

NOTE

- About SD card
  - We recommend you to format the SD card with the PX-10/30 before using it.
  - Video recording is only possible to an SD card (SD / SDHC / SDXC) with class 10 speed or above.
  - We recommend you to use an SD card with class 10 speed or above.
- About USB flash drive
  - Use a USB flash drive up to 32GB.
  - We recommend you to format the USB flash drive with the PX-10/30 before using it.
    (⇒P29: FORMAT USB FLASH DRIVE)
  - It may take some time to recognize the memory card after inserting the SD card / USB flash drive or to record images to the memory card.
  - Do not remove the memory card (SD card / USB flash drive) when the PX-10/30 is accessing the memory card (during recording or playback).

- Formatting the SD card/USB flash drive.
When you need to format the SD card/USB flash drive, insert it into the PX-10/30 and perform formatting. (⇒P.29)
  1. Press the Settings button [ ] on the operating panel and select “Format SD” or “Format USB” from the “System Setting”.
  2. Select a media to be formatted and select “YES” to format it.
     If you do not want to format, select “NO”.

① Press the Settings button [ ] on the operating panel and select “Format SD” or “Format USB” from the “System Setting”.
② Select a media to be formatted and select “YES” to format it.
  If you do not want to format, select “NO”.
◆ RECORDING
STILL IMAGE
Recording using the operating panel

① Press the Capture button [ ] on the operating panel to record a still image.

② Recording is performed when a mark appears on the preview image displayed on the LCD touchscreen.

Recording using the remote control

① Press the Capture button [ ] on the remote control.

② Recording is performed when a mark appears on the output image.
VIDEO

Recording using the operating panel

① Press the Record button [ ] on the operating panel.

② Video recording begins when a mark appears on the LCD touchscreen.

③ When the Recording button [ ] on the operating panel is pressed again, video recording stops and the mark disappears.

Recording using the remote control

① Press the Recording button [ ] on the remote control.

② Video recording begins when a mark appears on the LCD touchscreen.

③ When the Recording button [ ] on the remote control is pressed again, video recording stops and the mark disappears.

NOTE

- When recording video onto an SD card, use an SD card that has fast read and write speeds (class 10 or above). If you use an SD card that has slow read and write speeds, the video quality may be degraded.
- When both SD card and USB flash drive are inserted into the PX-10/30, the primary recording destination is SD card. When recording a still picture to a USB flash drive, go to the System Setting and select "USB Memory Stick" from the "Default saving location". (⇒ P.29)
RECORDING SPECIFICATIONS (STILL PICTURE / VIDEO)

<STILL IMAGE RECORDING>

<table>
<thead>
<tr>
<th>Recording media</th>
<th>SD card, USB flash drive, internal memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording size</td>
<td>Determined according to the settings of Resolution and Viewing angle. (⇒ P.27)</td>
</tr>
<tr>
<td>Image type</td>
<td>JPEG</td>
</tr>
<tr>
<td>File format</td>
<td>DCF 2.0 compliant</td>
</tr>
</tbody>
</table>

※ Only still image can be recorded to a USB flash drive and the internal memory.

<VIDEO RECORDING>

<table>
<thead>
<tr>
<th>Recording media</th>
<th>SD card, SDHC card, SDXC card (class 10 or above) ※1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video format</td>
<td>H.264 / HEVC(H.265)</td>
</tr>
<tr>
<td>Recording mode</td>
<td>Normal recording / Time-lapse recording</td>
</tr>
<tr>
<td>Recording file size / frame rate</td>
<td>In Normal recording: Varies according to the Video rec quality setting (⇒ P.28)</td>
</tr>
<tr>
<td></td>
<td>In Time-lapse recording: 30fps (fixed)</td>
</tr>
<tr>
<td>Audio recording</td>
<td>Select from the Sound switch menu. (⇒ P.28)</td>
</tr>
<tr>
<td>File format</td>
<td>DCF 2.0 compliant (mp4)</td>
</tr>
<tr>
<td></td>
<td>A thumbnail is created each time a video is recorded. (Extension: thm)</td>
</tr>
</tbody>
</table>

※1 Only still image can be recorded to a USB flash drive and the internal memory.

◆DISPLAYING RECORDED FILES

THUMBNAIL DISPLAY (LIST OF STILL IMAGE / VIDEOS)

BASIC OPERATIONS

① Press the Select image button [  • ] to select [USB/SD] in the Select image menu. (⇒ P.26)
   Select a media to be displayed. (SD still image / SD video / USB still image)

To change the number of thumbnails displayed. (9 / 4)
② Select a still image or video that you want to display full-screen.
   (1) Tap the thumbnail on the touchscreen to move the cursor.
   
   (2) Tap the selected thumbnail again to display the selected still image or video full-screen. (The video automatically starts to play.)

SD still image / SD video / USB still image (list of thumbnails)

③ Tap the Return icon [ ] to return to the thumbnail display.

DELETING FILES

Tap the Delete icon [ ] to enter the File delete mode. (A checkbox appears on the Delete icon in the File delete mode.)

Tap the file to be deleted to put a check mark in the check box. (Multiple files can be selected.)
※ Tap the selected file again to deselect it.
※ Use [ ] icons to move between pages. It is possible to select or delete files across multiple pages.

Tap the Delete icon again to delete the selected file.
※ Tap the Return icon to exit the File delete mode.
EXPLANATION OF ICONS
SD still image / SD video / USB still image (list of thumbnails)

<table>
<thead>
<tr>
<th>Icon</th>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Number of thumbnails displayed</td>
<td>To change the number of thumbnails displayed. (9 / 4)</td>
</tr>
<tr>
<td>②</td>
<td>Return</td>
<td>To return to the [USB/SD] screen.</td>
</tr>
<tr>
<td>③</td>
<td>Go to previous page</td>
<td>To move to the previous page.</td>
</tr>
<tr>
<td>④</td>
<td>Go to next page</td>
<td>To move to the next page.</td>
</tr>
<tr>
<td>⑤</td>
<td>Total number of pages</td>
<td>To display total number of pages in the SD card or USB flash drive.</td>
</tr>
<tr>
<td>⑥</td>
<td>Delete all</td>
<td>To delete all the files selected. Tap the Return button to exit the File delete mote. （※It is possible to select files across multiple pages.）</td>
</tr>
<tr>
<td>⑦</td>
<td>Select file</td>
<td>To select a video to play or still image to display.</td>
</tr>
</tbody>
</table>

DISPLAYING STILL IMAGE
Tap a thumbnail to display a still image. Tap the screen to display the menu.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Recorded time and date / File name</td>
<td>To display the recorded time and date, and file name.</td>
</tr>
<tr>
<td>②</td>
<td>Return</td>
<td>To return to the [SD still image / SD video / USB still image] screen.</td>
</tr>
<tr>
<td>③</td>
<td>Flick</td>
<td>To move between images. Left flick: move to the previous image Right flick: move to the next image</td>
</tr>
<tr>
<td>④</td>
<td>Delete</td>
<td>To delete the displayed still image.</td>
</tr>
</tbody>
</table>

※When any part of the screen outside the menu is tapped while the menu is displayed, the screen returns to the still image screen.
PLAYING VIDEOS
Tap a thumbnail to play a video file.
Tap the Return icon [ ] to return to the list of thumbnails. You can switch between videos by performing left flick or right flick while the video is playing. (The switched video does not play automatically.)

Left flick: To display the previous video.
Right flick: To display the next video.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Seek bar</td>
<td>To display the current playback position of the video. The playback position can be shifted by tapping any part of the bar or by sliding the seek bar left and right.</td>
</tr>
<tr>
<td>②</td>
<td>-</td>
<td>Playback time</td>
</tr>
<tr>
<td>③</td>
<td>Play / Pause</td>
<td>To pause the played video. This button changes to the Playback button during pause. Tap this button again to restart the video.</td>
</tr>
<tr>
<td>④</td>
<td>Go to previous video file</td>
<td>To play previous video.</td>
</tr>
<tr>
<td>⑤</td>
<td>Go to next video file</td>
<td>To play next video.</td>
</tr>
<tr>
<td>⑥</td>
<td>Return</td>
<td>To return to the [SD video] screen.</td>
</tr>
<tr>
<td>⑦</td>
<td>Playback audio</td>
<td>To adjust the playback audio volume using + and -. (0～10: 11 levels)</td>
</tr>
<tr>
<td>⑧</td>
<td>Repeat</td>
<td>To automatically replay the video.</td>
</tr>
<tr>
<td>⑨</td>
<td>-</td>
<td>Display area</td>
</tr>
<tr>
<td>⑩</td>
<td>Flick</td>
<td>To switch between videos. Left flick: to display the previous video Right flick: to display the next video</td>
</tr>
</tbody>
</table>

PLAYBACK SPECIFICATIONS (STILL PICTURE / VIDEO)

<STILL IMAGE PLAYBACK>

<table>
<thead>
<tr>
<th>Media</th>
<th>SD card, USB flash drive, internal memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codec</td>
<td>JPEG</td>
</tr>
</tbody>
</table>

<VIDEO PLAYBACK>

<table>
<thead>
<tr>
<th>Media</th>
<th>SD card (Class 10 or above)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codec</td>
<td>H.264 / HEVC(H.265)</td>
</tr>
<tr>
<td>Container</td>
<td>MP4</td>
</tr>
<tr>
<td>Pause</td>
<td>Yes</td>
</tr>
<tr>
<td>Playback position</td>
<td>To start video from specific time using the seek bar.</td>
</tr>
<tr>
<td>Audio playback</td>
<td>To playback audio by sending audio signals to HDMI and HDBaseT. ※No audio playback from the built-in speaker.</td>
</tr>
</tbody>
</table>
ABOUT RS-232C

CONNECTION VIA RS-232C

When the RS-232C port is connected to a PC, the PX-10/30 can be controlled from the PC. When using a commercially available RS-232C cable, make sure that the pins are connected as shown below.

For details of the RS-232C cable, contact the dealer from whom you have purchased the PX-10/30 or our nearest branch office or sales office.

Applicable lead wire
Single cable: Φ0.32mm～Φ0.65mm (AWG28～AWG22)
Stranded cable: 0.08mm2～0.32mm2(AWG28～AWG22) Strand diameter: more than Φ0.12mm

How to connect the lead wire
Press and hold ① with a flat screwdriver. Insert the lead wire into ② firmly.
Release the flat screwdriver from ①.

How to disconnect the lead wire
Disconnect the lead wire while pressing ① with a flat screwdriver.

For setting up
To use communication control, be sure to set up in the order described below.
①Connect the PX-10/30 to your PC with the RS-232C cable.[Rear panel: RS-232C port (⇒P.14)]
②Start your PC and set the communication mode of the RS-232C to the communication mode of the PX-10/30.

NOTE
・To protect the PX-10/30 and your PC, be sure to turn off the power of each unit before starting the connection work.
・For the information how to set the communication mode of the RS-232C, refer to the instruction manual of your PC.

③Start the program to control the PX-10/30 from your PC and start the RS-232C control.

RS-232C connector specifications

<table>
<thead>
<tr>
<th>Pin No</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CTS←</td>
</tr>
<tr>
<td>2</td>
<td>RX←</td>
</tr>
<tr>
<td>3</td>
<td>TX→</td>
</tr>
<tr>
<td>4</td>
<td>RTS→</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
</tr>
</tbody>
</table>

(←: Reception →: Send)

RS-232C communication specifications

<table>
<thead>
<tr>
<th></th>
<th>RS-232C connector side</th>
<th>HDBaseT side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud rate</td>
<td>9600 bps</td>
<td>9600 bps</td>
</tr>
<tr>
<td>Data length</td>
<td>8bit</td>
<td>8bit</td>
</tr>
<tr>
<td>Parity</td>
<td>No parity</td>
<td>No parity</td>
</tr>
<tr>
<td>Stop bits</td>
<td>1bit</td>
<td>1bit</td>
</tr>
<tr>
<td>Flow control</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Communication method</td>
<td>Full duplex</td>
<td>Full duplex</td>
</tr>
</tbody>
</table>

Transfer of the packet data to the HDBaseT serial port

The packet data that is not for the PX-30 will be transferred to the RS-232C port of the HDBaseT receiver via HDBaseT. With this function, you can control a device connected to the PX-30 with the HDBaseT cable through serial communication remotely.

You can also control the PX-30 from the HDBaseT receiver side through serial communication.

• For the information of RS-232C command, etc., contact the dealer from whom you have purchased the PX-10/30 or our nearest branch office or sales office listed on the supplied Quick Start Guide.
### 3-3 ABOUT NETWORK FUNCTION

By configuring the network settings after connecting the PX-30 to a network device with the LAN cable, you can transmit the setting command from the network device via the network to control the PX-30.

The setting command will be available from the following Elmo's official website.


For further information, contact the dealer from whom you purchased the PX-10/30 or our nearest branch/office.

### 3-4 FIRMWARE UPDATE PROCEDURE

The firmware of the PX-10/30 will be updated from time to time. By updating the firmware, you will be able to use new functions.

Download the latest firmware from Elmo official website and update the firmware of the PX-10/30 according to the following procedure.

※ Check the firmware version of the PX-10/30 before starting the firmware update. There is no need to update the firmware if the firmware of the PX-10/30 is the latest version (⇒P.31)

- **Items required for the firmware update**
  - PX-10/30
  - The latest firmware (※1)
  - SD card (to save the firmware)

※1 Preparation of the latest firmware
Download the latest firmware from the following Elmo official website and copy the firmware for update file to a PC in advance.


<Update Procedure>
1. Insert the SD card which contains the copied the firmware for update file into the SD card slot of the PX-10/30. (⇒P.15)
2. While pressing the AF button [AF] and Power button [•] on the operating panel together, connect the AC power cord to the PX-10/30. (Make sure to connect the AC adapter to the wall outlet in advance.)
3. The firmware update starts. (The Power LED flashes green during the update.)
4. The firmware update is complete when the Power LED turns blue.

※ The update will be performed automatically regardless of the version of the PX-10/30.
※ Check whether the firmware has been successfully updated to the latest version by going to “Product information”. (⇒P.31)
ABOUT EIT(ELMO INTERACTIVE TOOLBOX)
The PX-10/30 is compatible with the ELMO Interactive Toolbox (EIT) application software. By installing EIT into your PC, you can control a large monitor or tablet PC or annotate on the image using the touchscreen.
The following features are available by connecting a PC with EIT installed to the PX-10/30 with the USB cable.

① Enlarge: You can control the PX-10/30 or enlarge the PC screen.
② Annotate: You can draw directly on the camera image or on still image or videos in the PC without capturing them.
③ Save / playback: You can save the material with annotation to a desired destination.
④ Useful functions: sticky notes / trimming / stamps / time-lapse recording
⑤ Various tools: various operation modes / compare picture / mask
※ If EIT is already installed in your PC, you need to update it.

This instruction manual briefly explains the feature of the ELMO Interactive Toolbox (EIT) application software and downloading procedure of the instruction manual of EIT. For further details, refer to the instruction manual of EIT.

The instruction manual of EIT can be downloaded from the following Elmo official website:

SOFTWARE INSTALLATION
1. Go to Elmo official website.
2. Select “EIT (ELMO Interactive Toolbox)”.
3. Click “Download” and read "Precautions on the handling of the downloaded data "Click “Agree”.
4. Downloading will start.
5. After downloading is complete, run the downloaded file. Follow the instructions displayed on the screen to install the software.
6. An EIT icon will be created on the desktop after installation is complete.

CAUTION
• Do not connect or disconnect the USB cable while the unit is in operation. By doing so may cause malfunction.

NOTE
• If you use a PC that does not meet the recommended operating environment or depending on the performance of a PC, the frame rate of the recording function may become slower.
• Depending on the USB environment used with a PC or due to the effects of the peripheral devices, the image transfer may not work correctly.
• Operation is not guaranteed for all computer environments.
# ERROR MESSAGES

<table>
<thead>
<tr>
<th>Error message</th>
<th>Possible cause/Countermeasure</th>
</tr>
</thead>
</table>
| SD card is not ready.               | The PX-10/30 failed to start the video recording. Check the followings: (⇒P.15, 34)<br>・The SD card is not inserted into the SD card slot.  
  ・The SD card is broken.  
  ・The remaining capacity of the SD card is insufficient  
  ・The SD card is not formatted. (⇒P.29)<br>・The SD card was removed during data saving.                                             |
| SD card is full. Recording is       | The video recording stopped because there is insufficient free space on the SD card. (A video recording file up to the point the recording is stopped will be created.)<br>Replace the SD card or delete unnecessary files. (⇒P.38)        |
| stopped.                            |                                                                                                                                                                |
| SD card/USB flash drive is not      | The PX-10/30 failed to capture a still image. Check the followings: <br>・The SD card/USB flash drive is broken.  
  ・The remaining capacity of the SD card/USB flash drive is insufficient.  
  ・The SD card/USB flash drive is not formatted. (⇒P.29)<br>・The SD card/USB flash drive was removed during data saving. |
| ready.                              |                                                                                                                                                                |
| Displaying RGB input                | When outputting the image being input to the RGB in port to an external monitor, no image is displayed on the LCD touchscreen. (⇒P.26)                        |
| Cannot display images               | This message appears when HDCP-protected signals is input to the PX-10/30 after selecting the HDMI in the Select image menu. (⇒P.26)<br>To display images on the LCD touchscreen, input unencrypted HDMI signals.                   |
| Failed to delete file.              | The PX-10/30 failed to delete the file. The thumbnail list screen will be displayed in 2 seconds after this message. Try again from the beginning.               |
| Failed to format.                   | The PX-10/30 failed to format the SD card/USB flash drive. Try again from the beginning.                                                                     |
# TROUBLE SHOOTING

> SYMPTOMS AND CONFIRMATION

Check the following items. If any abnormality is found, consult the dealer from whom you purchased the PX-10/30 or our nearest branch/office.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible cause/ remedy</th>
</tr>
</thead>
</table>
| No image is displayed. | ・The cable is not correctly connected.  
・The AC power cord is disconnected from the wall outlet.  
・The AC adapter is disconnected from the power inlet of the PX-10/30. （⇒P.20）  
・The power is not on. (Power button: lit in blue)  
・If you turn on the power immediately after turning it off, the PX-10/30 may not start. Wait for several seconds after turning the power off, and then turn it back on.  
・Reconnect the AC power cord.  
・Zoom is set to the TELE side, displaying only the white or black part of the document. （⇒P.21）  
・Wrong input source is selected. Set the correct input source from the Select image menu. （⇒P.26）  
・The output resolution setting of the connected monitor or projector does not match that of the PX-10/30. Check the output resolution setting of the monitor or projector. （⇒P.27） |
| The output image (resolution) changes automatically. | ・The resolution setting is set to Auto. When the resolution setting is set to Auto, the output resolution is automatically changed based on the information from the connected device. （⇒P.27） |
| No image is displayed from the USB port. | ・No image will be output from the USB port when the USB mode is set to “Mass storage (file transfer)”. Check the USB mode and select “UVC (image output)” from the System Setting. （⇒P.28） |
| The image is out of focus | ・The document (subject) is too close to the lens. Move the document (subject) slightly away from the lens.  
・The intensity of the lighting is insufficient. Turn on the LED lighting with the Brightness button in the operating panel or adjust the Iris. （⇒P.22, P.23）  
・Press the [ / ] buttons on the remote control to adjust the brightness. |
| The image is too dark. | ・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.  
・Vertical stripes may appear on an LCD projector image. Manually adjusting the dot clock at the projector side may help the problem. |
| The image is striped. | ・Images on the SD card/USB flash drive are not displayed.  
・“Freeze” function is used. Press the Freeze button [ ] on the operating panel or [ ] on the remote control to restart the live image feed. （⇒P.13, 17）  
・The remaining battery level of the remote control is low. Replace the battery with a new one.  
・Wrong remote control is used. Use the supplied remote control. （⇒P.17） |
<p>| Images on the SD card/USB flash drive are not displayed. | ・Remove the SD card/USB flash drive, wait for a few seconds, and insert again. （⇒P.15） |
| The image does not move. | ・Wrong remote control is used. Use the supplied remote control. （⇒P.17） |
| Not possible to operate with the Remote control. | ・&quot;Freeze&quot; function is used. Press the Freeze button [ ] on the operating panel or [ ] on the remote control to restart the live image feed. （⇒P.13, 17） |</p>
<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>After inserting the SD card/USB flash drive, operations cannot be performed.</td>
<td>The SD card/USB flash drive is not being read correctly. Use the SD card/USB flash drive after formatting it twice as described below. First, format the card using a PC. Then, format the card using the PX-10/30. (⇒P.29)</td>
</tr>
<tr>
<td>The touchscreen does not work properly.</td>
<td>• Check that the touch points on the touchscreen are pressed correctly. (⇒P.23)</td>
</tr>
<tr>
<td>No audio from the external microphone.</td>
<td>• The audio volume is too low. Go to the System Setting and adjust the volume (⇒P.28), or adjust the volume of the external microphone. • Go to the System Setting and check that “External mic” is selected in the “Sound switch”. (⇒P.28)</td>
</tr>
<tr>
<td>The network function does not work.</td>
<td>• Check the network configuration of the PX-30 and the PC to be connected to the PX-30.</td>
</tr>
<tr>
<td>The LAN cable cannot be connected.</td>
<td>• The LAN port (RJ45) is located on the rear panel of PX-30. • Check that the connector of the LAN cable is properly connected to the LAN port.</td>
</tr>
<tr>
<td>The LAN link LED does not light up.</td>
<td>• Power is not supplied to the PX-30 or to the device connected to the PX-30. Check that the cable is connected firmly, and then turn on the power. • The cable is disconnected. Check the connection between the cable terminals. • Wrong cable is used. When a device to be connected to the PX-30 is a PC, “LAN cross cable” is used, and when it is a hub or router, “straight cable” is used.</td>
</tr>
<tr>
<td>Cannot connect to the PX-30 from the client.</td>
<td>• The IP address of the PX-30 has not been designated. Designate the IP address set in the PX-30. • The IP address of the client is not compatible with the network of the PX-30. To establish the connection from the client to the PX-30, the network address should be same between the client and the PX-30. Default setting of the PX-30: DHCP</td>
</tr>
<tr>
<td>The set time will be reset automatically.</td>
<td>• The clock setting will be reset automatically after a long period of non-operation. Then you will need to perform the clock setting again.</td>
</tr>
</tbody>
</table>

**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 PX-10/30 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 PX-10/30 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 PX-10/30 or our nearest branch/office.
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>PX-30</th>
<th>PX-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image pick-up element</td>
<td>12M Sony</td>
<td></td>
</tr>
<tr>
<td>Effective pixels</td>
<td>3,840x2,160 (16:9)</td>
<td>8.3M</td>
</tr>
<tr>
<td></td>
<td>3,520x2,640 (4:3)</td>
<td>9.3M</td>
</tr>
<tr>
<td>Horizontal resolution</td>
<td>1,600TV lines (center)</td>
<td></td>
</tr>
<tr>
<td>Zoom</td>
<td>24x (Optical zoom 12x + Sensor zoom 2x ※)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Digital zoom 12x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total zoom 288x</td>
<td>(※when output at 1080p)</td>
</tr>
<tr>
<td>Focus mode</td>
<td>AUTO : Zoom sync AF/ One-push AF</td>
<td></td>
</tr>
<tr>
<td>Focus range</td>
<td>WIDE : 5cm～∞</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TELE : 20cm～∞</td>
<td>(w/o close-up lens)</td>
</tr>
<tr>
<td>Shooting area</td>
<td>430x320mm (Aspect ratio 4:3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(A4 portrait image can be fully captured when output in HDMI.)</td>
<td></td>
</tr>
<tr>
<td>Illumination</td>
<td>1 (LED×1 + lens)</td>
<td></td>
</tr>
<tr>
<td>Operating buttons</td>
<td>Zoom : Jog dial (Stage)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Button : Power, AF, Brightness, Image rotation, Freeze, Video recording, Still image recording, Settings, Select image</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Touchscreen operation : Yes</td>
<td></td>
</tr>
<tr>
<td>LCD touchscreen</td>
<td>High image quality  (800x480)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5-inch capacitive touchscreen</td>
<td></td>
</tr>
<tr>
<td>HDMI out</td>
<td>HDMI1.4 compliant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. 3,840x2,160@30fps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. 1,920x1,080@60fps</td>
<td>(4k high image quality)</td>
</tr>
<tr>
<td></td>
<td>3. 1,280x720@60fps</td>
<td>(4k high image quality)</td>
</tr>
<tr>
<td></td>
<td>※In special mode, A4 portrait image can be fully captured during HDMI output.</td>
<td></td>
</tr>
<tr>
<td>RGB out</td>
<td>1. 1,920x1,080@60fps 16:9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. 1,280x720@60fps  16:9</td>
<td></td>
</tr>
<tr>
<td>USB out</td>
<td>USB3.0 compliant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UVC (video) compliant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(M-JPEG/YUY2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. UHD(3,840x2,160 @30fps) 16:9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. FHD(1,920x1,080 @60fps) 16:9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. HD(1,280x720 @60fps) 16:9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. QUXGA(3,200x2,400 @30fps) 4:3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. UXGA(1,600x1,200 @30fps) 4:3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. XGA(1,024x768 @30fps) 4:3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. VGA(640x480 @30fps) 4:3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>※The frame rate varies depending on the environment in use.</td>
<td></td>
</tr>
<tr>
<td>USB port</td>
<td>1. USB Type B (USB3.0) : Video out</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. USB Type A (USB2.0) : USB flash drive &amp; power supply</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. USB Type A (Power) : Power supply (e.g. WHDI)</td>
<td></td>
</tr>
<tr>
<td>Network</td>
<td>TCP/ IP network control</td>
<td></td>
</tr>
</tbody>
</table>

※ The frame rate varies depending on the environment in use.
| **HDBaseT out** | 1. 3,840×2,160@30fps ※2  
2. 1,920×1,080@60fps ※1  
3. 1,280×720@60fps ※1  
※1 Extendable up to 100m with the LAN cable  
※2 Extendable up to 70m with the LAN cable |
|-----------------|-------------------------------------------------------------------------------------------------|
| **Input source selection** | HDMI : Type A ×2  
VGA : D-Sub ×1  
For HDMI, recording is possible, and can be converted and output as RGB or USB.  
(※For RGB, recording is not possible. It will be output as is without being converted to other format.)  
For HDMI, the input signal should be either 1920x1080 @60fps or 1280x720 @60fps. |
| **Record/ playback** | Recording media : SD card  
: USB flash drive  
: Built-in memory  
Recording format : Video  
MP4  
(Image: HEVC, H.264/ Audio: AAC)  
: Still image JPEG  
Image size:  
4K@30,2K@60,2K@30,1K@30  
Video recording :  
Normal recording / Time-lapse recording, Date/time stamps  
※For USB flash drive, only Still image can be recorded. |
| **Drawing** | No  
※Possible to draw on the supplied whiteboard sheet directly using a whiteboard marker. |
| **Audio** | Input :  
External microphone / HDMI audio  
Output :  
Line out / HDMI |
| **Presentation** | Image rotation (including 90° rotation) / Freeze / Mask / Black and white |
| **External control** | RS-232C / USB / Remote control / Network |
| **Dimensions** | W297×D482×H478mm (When setup)  
W297×D482×H133mm (When folded) |
| **Weight** | 4.5kg |
| **Image related functions** | White balance / Flicker correction / Brightness adjustment / Contrast adjustment / Noise reduction / Contour correction / Color adjustment / Shading correction / Pixel defect correction / High-quality resizing / Chromatic aberration correction |
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- This product is designed to be used in industrial environment. If it is used in a residential area or in an adjacent area thereto, harmful interference to radio or television reception may occur.
- Repair parts
  Repair parts are the items which are needed to maintain product functionality. The holding period of such repair parts is 3 years after the product discontinuation, which is equal to the repair period we will accept.
- Any image, which is obtained by this product, and which can be identified, is considered to be private information. Be forewarned that the person who makes use of such images shall be liable for disclosing of such images.

For details about specifications and instruction manual of the product, refer to the following official website.
http://www.elmousa.com/
http://www.elmoeurope.com/

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