

# TEAC

# UR-NEXT 4K

## DIGITAL VIDEO RECORDER

UR-NEXT4KH (HDMI® model)  
UR-NEXT4KS (SDI model)


















Instructions for Use

ENGLISH



## Meaning of symbols

The following symbols may be used on the TEAC UR-NEXT 4K unit, its accessories and packaging as well as in the Instructions For Use. Be sure that you completely understand the meaning of the symbol when you read the related information.

	Medical device under EU legislation
	Catalog number
	Serial number
	Caution: Federal Law (USA) restricts this device to sale by or on the order of a physician
	Contents of the package
	Do not use if package is damaged
	Use only in non-tropical conditions
	Use only at altitudes not more than 2000 m above sea level
	Environmentally friendly use period (years)
	Consult instructions for use
	CAUTION, Attention: Consult accompanying documents
	Date of manufacture
	Legal manufacturer
	EU authorized representative
	UK Responsible Person
	Representative for Switzerland
	Importing Entity to European Union

Thank you for choosing TEAC.

Read this manual carefully to use the product safely and get the best performance.

Keep this manual in a safe place as it is part of the product.

Pass it on to all subsequent users of the product.

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# IMPORTANT SAFETY INSTRUCTIONS



**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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 appliance.

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Explosion hazard: Do not use the apparatus in the presence of flammable anesthetics or explosive gases.
- 6) Do not use this apparatus near liquids.
  - Do not expose this apparatus to drips or splashes.
  - Do not place any objects filled with liquids on the apparatus.
  - Clean only with a slightly dampened cloth.
- 7) Do not install near any heat sources such as radiators, heat registers, or other apparatus that produce heat.
  - Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
  - Do not install this apparatus in a confined space such as a book case or similar unit.
- 8) This apparatus conforms to Protection Class 1. It is equipped with a three-pole mains power connector and a power cord that has a 3-prong grounding plug. The cord of such a product must be plugged into an AC outlet that has a protective grounding connection.
  - Do not defeat the safety purpose of the grounding-type plug. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

- The apparatus should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time. The power plug is used as the disconnect device, the disconnect device shall remain readily operable.
- Protect the power cord from being pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Lay the power cord in such a way that nobody can step on it, drive over it or stumble over it.
- Do not use the apparatus with a damaged power cord.
- Unplug this apparatus during lightning storms or when unused for long periods of time.

- 9) The UR-NEXT 4K has a replaceable lithium battery. There is danger of explosion if a battery is replaced with an incorrect type of battery. When changing the battery is necessary, contact the retailer where you purchased the unit or a contact on the back cover of this manual and request replacement.
- 10) Only use attachments/accessories specified by the manufacturer.

- 11) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 12) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. Do not use the apparatus until it has been repaired.
- 13) Do not modify the apparatus in any way.
- 14) Caution when using earphones or headphones with the apparatus: Excessive sound pressure (volume) from earphones or headphones can cause hearing loss.
- 15) Under some single fault conditions, the temperature of the surface of the UR-NEXT 4K could get hot and there is a possible risk of a burn if touched.

### Cautions for batteries

This product uses batteries for its remote control. Misuse of batteries could cause fire, injury or other trouble. Always abide by the following precautions when using batteries.

- Never recharge non-rechargeable batteries.
- Do not use batteries other than those specified. Do not mix and use new and old batteries or different types of batteries together.
- When installing batteries, pay attention to the polarity indications (plus/minus ( $\oplus$ / $\ominus$ ) orientation), and install them correctly in the battery compartment as indicated.
- Do not carry or store batteries together with small metal objects.
- When you store or dispose batteries, isolate their terminals with insulation tape or something like that to prevent them from contacting other batteries or metallic objects.
- When throwing used batteries away, follow the disposal instructions indicated on the batteries and the local disposal laws.
- Do not heat or disassemble batteries. Do not put them in fire or water.
- If the battery fluid leaks, wipe away any fluid on the battery case before inserting new batteries. If the battery fluid gets in an eye, it could cause loss of eyesight. If fluid does enter an eye, wash it out thoroughly with clean water without rubbing the eye and then consult a doctor immediately. If the fluid gets on a person's body or clothing, it could cause skin injuries or burns. If this should happen, wash it off with clean water and then consult a doctor immediately.
- Remove the batteries if you do not plan to use the remote control for a long time. If the battery fluid leaks, wipe away any fluid on the battery compartment before inserting new batteries.

# Conformity statements and corresponding precautions

## Statement for Wireless Devices

This product contains a combined broadband transmitter/receiver.

### Supported standards

- Wi-Fi 801.11n/11ac  
Maximum output power: 200 mW  
Operating frequency range: 5180–5700 MHz
- Wi-Fi 801.11b/11g/11n  
Maximum output power: 100 mW  
Operating frequency range: 2412–2472 MHz
- Bluetooth® BDR/EDR/LE  
Maximum output power: Class 1.5 (less than 10 mW)  
Operating frequency range: 2402–2480 MHz

### Connecting to Wi-Fi

Connect the product to an existing Wi-Fi infrastructure. Connect to a reliable access point that complies with your national regulations.

Some frequency channels are prohibited for outdoor use. Do not use this product outdoors.

### Certifications for each country

This product uses an electronic display to show compliance with wireless regulations of each country.

To view it, tap the “Tools” icon in the menu, and select “Certifications”.

#### IMPORTANT NOTICE

Changes or modifications to the equipment not expressly approved by TEAC CORPORATION for compliance could void the user’s authority to operate this equipment.

## Radiation Exposure Statement

This equipment complies with FCC/IC/EU guidelines for limiting exposure to electromagnetic fields.

This equipment has very low levels of RF energy that it deemed to comply exposure limits set forth for an uncontrolled environment without maximum permissive exposure evaluation (MPE).

But it is desirable that it should be installed and operated keeping the radiator at least 20 cm or more away from person’s body.

## FCC Compliance Statement

### Supplier’s Declaration of Conformity



Trade Name: TEAC

Model Number: UR-NEXT4KH, UR-NEXT4KS

Responsible party: TEAC AMERICA, INC.

Address: 10410 Pioneer Blvd. Unit #3 Santa Fe Springs, California 90670, U.S.A.

Telephone number: 1-323-726-0303

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

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

The included RF transmitter/receiver module has a Grant of Equipment Authorization by the Federal Communications Commission.

FCC ID: TX2-RTL8822CE

## FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the 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.

## Industry Canada Statement

This device contains a licence-exempt transmitter/receiver that complies with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- 1) This device may not cause interference.
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

The included RF transmitter/receiver module has a Grant of Equipment Authorization by Innovation, Science and Economic Development Canada.  
IC: 6317A-RTL8822CE

This class A digital apparatus complies with Canadian ICES-003.  
CAN ICES-003(A)/NMB-003(A)

## Conformity Statement for EU/UK



Hereby, TEAC CORPORATION declares that the radio equipment type UR-NEXT4KH and UR-NEXT4KS are in compliance with Directive 2014/53/EU and other applicable European Directives.






Hereby, TEAC CORPORATION declares that the radio equipment type UR-NEXT4KH and UR-NEXT4KS are in compliance with UK Radio Equipment Regulations and other applicable UK regulations.

The full text of the EU or UK declaration of conformity is available at the following internet address:

<https://teacmv.jp/en/inquiry/>

(Please contact us by e-mail.)

## Disposal of waste electrical and electronic equipment and batteries and/or accumulators

- a) All electrical and electronic equipment and waste batteries/accumulators should be disposed of separately from the municipal waste stream via collection facilities designated by the government or local authorities.
- b) Improper disposal of waste electrical/electronic equipment and batteries/accumulators can have serious effects on the environment and human health because of the presence of hazardous substances in the equipment.
- c) By disposing of electrical/electronic equipment and waste batteries/accumulators correctly, you will help save valuable resources and prevent any potential negative effects on human health and the environment.
- d) The Waste Electrical and Electronic Equipment (WEEE) symbol, which shows a wheeled bin that has been crossed out, indicates that electrical and electronic equipment must be collected and disposed of separately from household waste.  
  
  
  
If a battery or accumulator contains more than the specified values of lead (Pb), and/or cadmium (Cd) as defined in the Battery Regulation (EU) 2023/1542, then the chemical symbols for those elements will be indicated beneath the WEEE symbol.
- e) Return and collection systems are available to end users. For more detailed information about the disposal of old electrical and electronic equipment, please contact your city office, waste disposal service or the shop where you purchased the equipment.

# IMPORTANT INFORMATION

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## Intended use

This product is a video recorder for use in medical facilities. It is intended to be used for backup recording of examinations and operations in combination with surgical microscopes, endoscope cameras, medical displays and similar devices.

- This product is for medical professionals.
- This product is not intended to be used for diagnoses.
- Use this product only in accordance with these instructions for use.
- No prior training is required to use this unit.

## Intended use environment

This product is intended for stationary use in medical environments, such as clinic examination rooms and operating rooms. It must not be used in an ambulance or during transportation. Any use in other environments is considered improper use.

This product does not require a sterile environment for use.

- The product itself does not require sterilization or disinfection.
- Protective equipment is not necessary for users of this unit.

## IMPORTANT NOTICE

All the equipment connected to this product shall be certified according to IEC 60601-1 standard or other IEC/ISO standards applicable to the product.

## Profile of intended users

This medical device can be operated by doctors, nurses, technicians, therapists, installers and maintenance staff. Operators must also have knowledge about video recording and playback, be able to read and understand these instructions for use, be able to read the operation panel and be able to press the operation buttons.

## Reporting an incident

Any serious incident that has occurred in relation to this device must be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

## Protecting patient information

- Before moving or disposing of this product, manage the patient data recorded on the internal HDD properly to prevent the data from being leaked (see on page 75, "Reformat Internal HDD" and "Factory Reset", on page 75, "Reset System").
- When connecting this product to a network, protect in- and outgoing communications with a firewall or other appropriate measures.
- Connect this product to an internal network line that is protected from external access.
- This unit is equipped with the following functions designed to safeguard patient information effectively:
  - Password Login  
Refer to the instructions in User Login (page 65) to limit access for users through a login password.
  - Session Timeout  
Refer to the instructions in Session Timeout Interval (page 67) to establish a duration after which re-login is necessary if the unit remains inactive for a specific period.
  - Data Encryption  
Accessing internal data on the removed internal HDD from this unit is no longer feasible. This feature cannot be deactivated.



**Cautionary Instructions for Handling a Medical Video Recorder with respect to HIPAA**

**Patient Information Protection:**

Patient information may include personally identifiable details such as names, ID numbers, examined body parts, procedures, and operating physicians. Please keep this information confidential and only have access to essential staff. Manage IDs and passwords for recorder access securely, protecting against unauthorized entry. Select robust passwords and change them regularly.

**Data Storage:**

Patient data such as endoscopic, laparoscopic, and surgical images are recorded on internal HDDs or external storage devices. These data are sensitive and should be stored with appropriate security measures. When exporting data from the video recorder, do so in a secure manner and use an encrypted connection when transferring data to external devices.

**Data Sharing:**

Sharing patient data must comply with HIPAA regulations. Obtain any necessary permissions or consents and take appropriate security measures when sharing data. When sharing data from the video recorder, use encrypted communication channels and secure networks. Prepare appropriate contracts or agreements for data sharing with third parties, ensuring the confidentiality of information.

**Data Disposal:**

Dispose of data and records that are no longer needed in an appropriate manner. Ensure that the data is permanently deleted from the external storage device or internal HDD and becomes unrecoverable.

**Prevention of Theft or Loss:**

Video recorders and external storage devices pose risks of theft or loss, necessitating security measures. Take measures to prevent unauthorized access to your data by physically securing your devices and using passwords and access controls. Safeguard device IDs and passwords in a secure location and change them regularly to prevent unauthorized access.

**System Monitoring and Updates:**

Regularly monitor the video recorder system, verifying the ongoing effectiveness of security measures such as ID passwords.

**Precautions in case of breakdown or repair:**

If your video recorder malfunctions and you need to repair it, there is a potential risk of data leakage, so if possible, delete the data before requesting a repair company to repair it. If that's not possible, choose a reliable repair company and sign a contract or non-disclosure agreement if necessary.

These precautions are important to comply with HIPAA and protect the privacy and security of patient data. Require compliance and understanding from all staff involved in handling the video recorder, implementing appropriate security measures.

**Environmental information**

The UR-NEXT 4K draws nominal non-operating power from the AC outlet when switched off on the front panel while its main power switch is still in the on position (|).

# Introduction

## Features

This unit is designed to record and play video signals as well as still images (photos) from various types of video equipment. Using H.264 and H.265 for video and JPEG, PNG, and TIFF for photos, it records data efficiently. Recorded data can be saved to the unit's internal drive, USB storage devices, and network storage.

- **Video recording over long periods of time**

The H.264 and H.265 formats compress efficiently, enabling video recording for up to 24 hours (except for 2ch recording and proxy recording.)

- **Five levels of photo quality**

Choose between EQ (JPEG, high compression), SQ (JPEG, standard quality), HQ (JPEG, high quality), PNG and TIFF (uncompressed).

- **Four levels of video quality**

Choose between EQ (high compression), SQ (standard quality), HQ (high quality) and XQ (highest quality).

- **Proxy Recording**

When a 4K video signal is input, 4K video can be recorded simultaneously in FHD as well.

- **Data management information can be added**

In order to enable fast searching, the following types of information can be added to image data:

- Date/Time: Date and time of recording
- Patient ID: Up to 32 letters and numbers
- Patient name: Up to 32 letters and numbers
- D.O.B.: Up to 32 letters and numbers
- Gender: Up to 32 letters and numbers
- Physician's Name: Up to 32 letters and numbers
- Procedure: Up to 32 letters and numbers

- **Image lists with thumbnails**

Multiple thumbnail images can be shown on a single screen, allowing quick selection of the desired photo or video.

- **Images can be viewed on computers**

By recording video or photos to a USB storage device, you can later view the material on a computer.

- **Display on computers without distortion**

The UR-NEXT 4K records square pixels, so image data is not distorted when viewed on a computer.

- **Image data can be deleted and recorded again**

Reformatting erases all the data on the USB storage device and allows you to record to it again.

## What's in the box

If anything is missing or damaged, contact the retailer where you purchased the unit.









- Instructions for use (this document) × 1
- Instruction for use (DICOM) × 1
- Instruction for use (Printing function) × 1
- Power cords (PS206) × 1
- Power cords (VNBEU16S3) × 1
- Cable clamp × 1
- Wi-Fi antennas × 2
- IR remote control (WRC-1) × 1
- AAA batteries × 2

## Indication on the unit

### Front

Indication	Function
	Use this button to turn the power on/off.

### Back

Indication	Function
	This marks the power input connector. Connect the included power cord here.
	This is a potential equalization connector. Connect a potential equalization cable that complies with DIN 42801.
	This is an LAN (network) connector.
	This is a video input connector.
	This is a video output connector.
	This is an audio input connector.
	This is an audio output connector.
	Static electricity could cause internal damage through connectors with this symbol. Be careful not to touch the connector contact points with bare hands.

### Setting up the unit

Before using the UR-NEXT 4K, read and follow all safety instructions given in section “IMPORTANT SAFETY INSTRUCTIONS” on page 4.

Set up the unit in a location that meets the following requirements in order to ensure safe and proper operation.

- Environmental conditions:
  - Temperature: 5–40 °C
  - Humidity: 30–80 %RH (no condensation)
  - Maximum wet bulb temperature: 29 °C
  - Electromagnetic environment: See “Limits for electromagnetic compatibility (EMC)” on page 84.
- Place the device on a level surface (rubber feet downwards).
- Avoid vibrations and shocks.
- Avoid placing the unit in direct sunlight, close to a heater or any other place that might become hot. Furthermore, do not place it on top of equipment that generates heat. Doing so might cause malfunction or result in discoloration or deformation.
- When installing this unit, leave at least 20 cm (8”) between it and walls and other equipment in order to enable good heat dissipation.
- If it is put in a rack, for example, take precautions to prevent overheating by leaving at least 15 cm (6”) open above it, at least 10 cm (4”) behind it, and at least 20 cm (8”) open on its sides.
- Before packing this product for relocation or transportation, for example, disconnect everything from it, including cables and USB storage devices. Not doing so could damage the connectors.
- Depending on the television broadcast frequency, uneven colors might appear on televisions that are used near this unit when its power is on. This is not a malfunction of either this device or the television. If this should happen, use the unit further from the affected device.
- In order to avoid malfunction or other problems, do not use the product near equipment that generates high-frequency waves, in places where strong magnetic force or static electricity is present.
- Electrostatic discharge to this unit may cause USB devices connected to the USB ports to stop working properly. If a USB device malfunctions, before restarting this unit, disconnect the USB device and reconnect it to the USB port to try restoring functionality. If

functionality is not restored, restart this unit. Before restarting this unit, disconnect USB devices. Then, reconnect them after this unit has restarted.

- For safety, do not touch patients while touching circuitry inside the unit or its signal connectors.

### Internal hard disk drive

This unit has a built-in hard disk drive (HDD). This HDD is easily affected by impact forces, vibrations and changes in the environment, including the temperature, and this could affect videos and photos that are being recorded.

Please observe the following precautions.

- Do not subject the unit to vibrations or impacts.
- Place and use the unit on a level surface.
- Do not turn the unit off while its hard disk is being accessed.

### IMPORTANT NOTICE

- Long-term storage of recorded contents on the built-in HDD cannot be guaranteed. Moreover, as space becomes necessary, the oldest recordings will be erased automatically. We recommend that you use a LAN or USB storage device to transfer important image data to a computer or Blu-ray discs, for example, for storage.
- Hard disk drives eventually fail. Depending on use conditions, problems might start occurring in a few years. If recording or playback becomes impossible, contact the retailer where you purchased the unit and request repair.
- Continuing to use the internal HDD with a large amount of usage for a long period of time may affect the performance of this product due to disk fragmentation. Before doing important recording, it is recommended to copy the necessary data in the internal HDD to USB storage device or transfer it to his network and initialize the internal HDD.

### Usable storage media

USB flash drives, USB hard drives and USB optical disc drives can be connected to this unit. Format the USB flash drives and USB hard drives with this unit before recording.

In this manual, USB flash drives, hard disk drives and optical disc drives are referred to collectively as “USB storage devices”.

### Long-term storage

We recommend using a computer, Blu-ray discs or DVDs, for example, for the long-term storage of recorded videos and photos.

### Built-in battery

This unit has a battery for the internal clock. If this battery dies, the correct time cannot be retained, and this will affect the time information of recorded videos and photos. We recommend changing the battery every five years before it dies. When changing the battery is necessary, contact the retailer where you purchased the unit and request replacement.

### Copyright and disclaimers

Information is given about products in this manual only for the purpose of example and does not indicate any guarantees against infringements of third-party intellectual property rights and other rights related to them. TEAC Corporation will bear no responsibility for infringements on third-party intellectual property rights or their occurrence because of the use of these products.

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The Bluetooth® wordmark and logo are registered trademarks owned by Bluetooth SIG, Inc. and any use of

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The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Other company names and product names in this document are the trademarks or registered trademarks of their respective owners.

Information about copyrights and licensing is contained in the section "Software license information" at the end of this document.

### File structure of recorded data

A folder is created for each patient information entry.

The folder name is "Year-Month-Day-Hour Minute Second\_Patient ID".

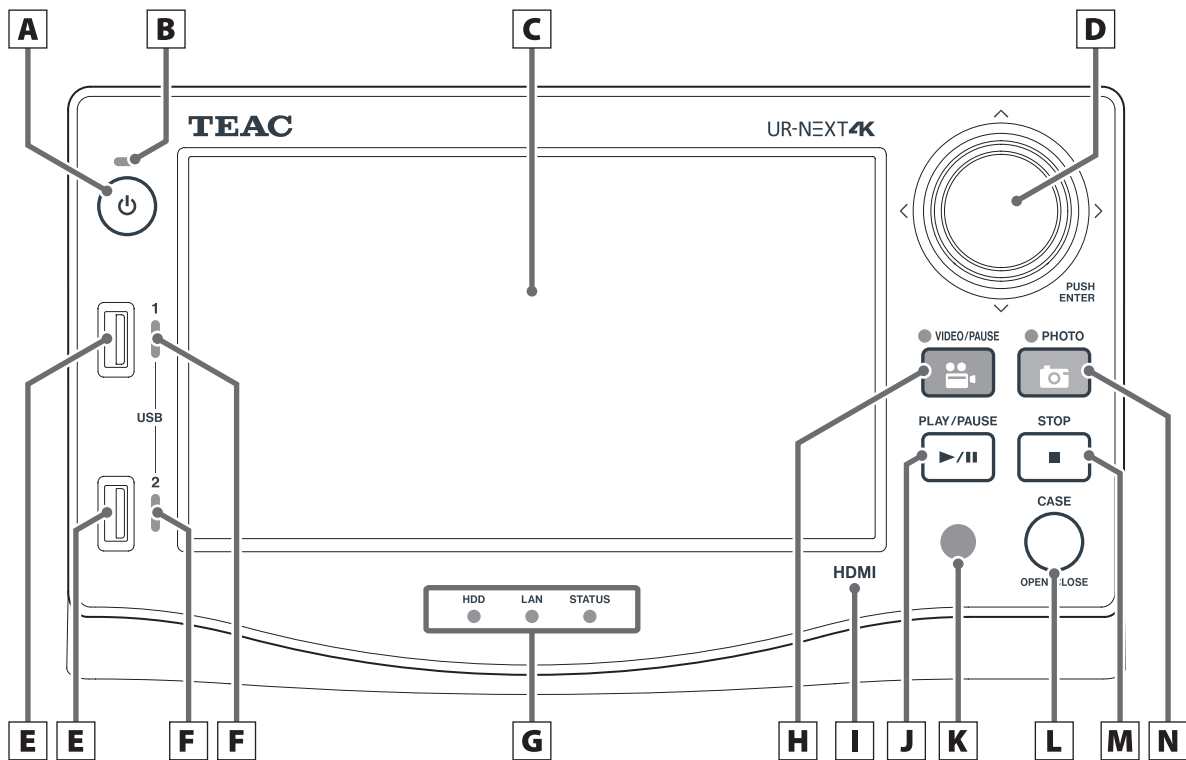
yyyy-mm-dd-hhmmss\_ID

If the patient ID is not registered, "\$yyyymmddhhmmss" will be added to the ID part of the folder name.

Folder information is updated at the end of recording (when the CASE OPEN/CLOSE button is pressed to close the CASE).

```
2022-11-11-160357_20221111160357
├── 000001.dat      management data file
├── video_files     video storage folder
│   ├── 000001.0.mp4 video file(1)
│   ├── 000001.1.mp4 divided video file following 000001.0.mp4
│   ├── 000001.2.mp4 divided video file following 000001.1.mp4
│   ├── 000001.3.mp4 divided video file following 000001.2.mp4
│   ├── 000002.0.mp4 video file(2)
│   └── 000003.0.mp4 video file(3)
├── proxy_video_files proxy video storage folder
│   ├── 000001.0.mp4 video file(1)
│   ├── 000001.1.mp4 divided video file following 000001.0.mp4
│   ├── 000002.0.mp4 video file(2)
│   └── 000003.0.mp4 video file(3)
└── photo_files    photo strage folder
    ├── 000004.jpg  photo file (numbered in order taken)
    └── 000005.jpg  photo file
```

If the Video Mode for transfer is "Original," a "video\_files" folder will be created, and the original video files will be stored inside the "video\_files" folder. If the Video Mode for transfer is "Proxy," a "proxy\_video\_files" folder will be created, and the proxy video files will be stored inside the "proxy\_video\_files" folder.



**A Power (⏻) button**

Press this button to turn the unit on. When the unit is on, press and hold this (for 3 seconds) to turn it off. Make sure the main power switch on the rear side is in the On position for this button to function.

**B Power indicator**

This lights green when the unit is on.

**C Touchscreen**

This shows the video input signal and the videos/photos being played back, operation and setting screens, date/time and status.

**D Jog dial**

It physically rotates, moves-up/down/left/right, corresponding to the cursor on the LCD. Also, moving left or pressing down represent a return to the previous screen or ENTER function. Press and hold the jog dial to switch OSD mode.

**E USB ports**

Connect USB storage devices to these.

**IMPORTANT NOTICE**

USB hubs must not be connected here.

**F USB access indicators**

These show the access status for USB 1 and 2.

Status	Meaning
Unlit	No device connected
Lit green	Device connected (standing by)
Blinking green	Reading from device
Blinking orange	Writing to device

**G Status indicators**

These show the current operating status of the unit.

HDD

Status	Meaning
Lit green	Hard disk standing by
Blinking green	Reading from HDD
Blinking orange	Writing to HDD

LAN

Status	Meaning
Unlit	No network link signal
Lit green	Network link signal present
Blinking green	Network being accessed
Blinking orange	Data being transmitted/received

STATUS

Status	Meaning
Unlit	Operation not possible
Lit green	Recording possible
Lit orange	Input signal not detected

**H VIDEO/PAUSE button**

Press this button to start and pause video recording.

Press during video recording to pause. Press again to resume video recording.

The indicator lights orange during video recording.

**I Model identifier**

HDMI: HDMI® model

SDI: SDI model

**J PLAY/PAUSE button**

Press this button to start and pause video playback.

Press during video playback to pause. Press again to resume video playback.

**K Remote control signal receiver**

This receives signals from the remote control. When operating the remote control, point it at the remote control signal receiver.

**L CASE (OPEN/CLOSE) button**

Use this button to open/close a Case (exam/surgery):

- Press this when the home screen is shown to enter patient information.
- Press this during an exam/surgery to close the Case.
- Press this in other states to open the home screen.

**M STOP button**

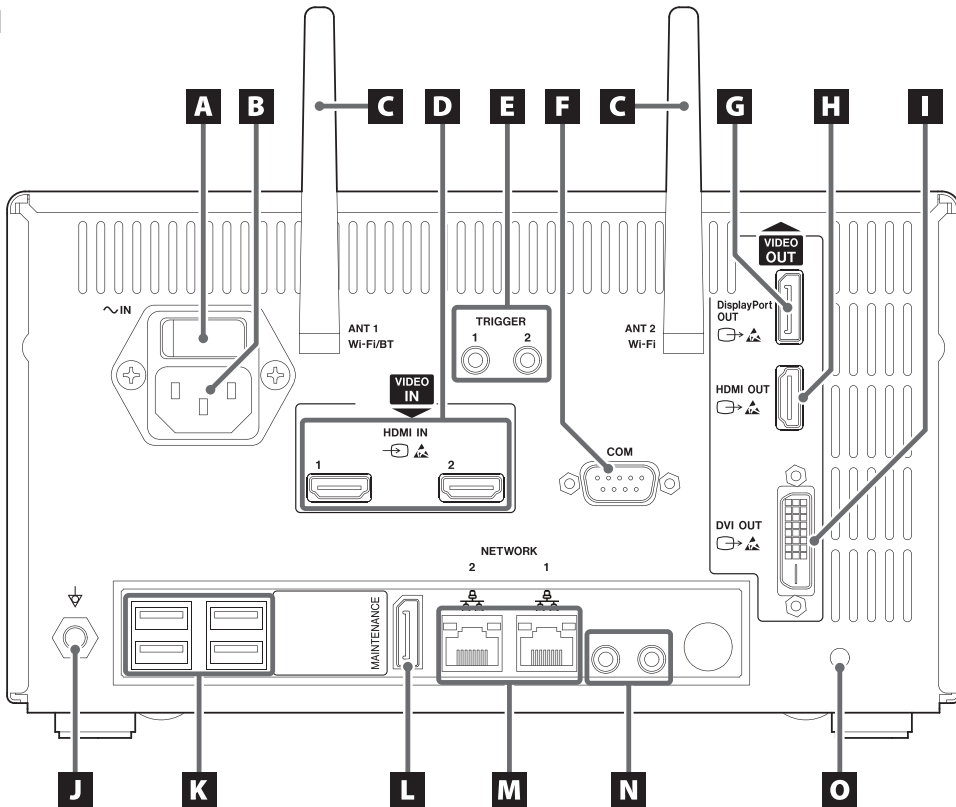
Press this button to stop video recording or playback.

**N PHOTO button**

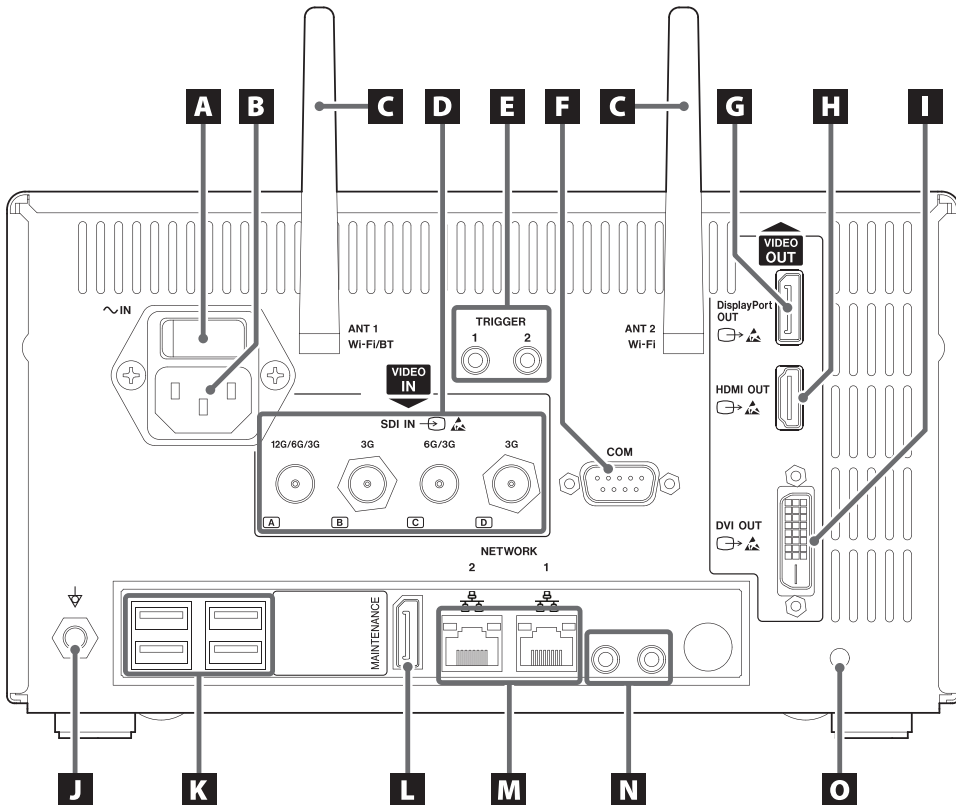
Press this button to capture a photo.

The indicator lights orange (for about half a second) when a photo is captured.

HDMI® model



SDI model



**A Main power switch**

This is the main power switch for the unit.

**B Power supply input connector (⌚IN)**

Connect the included power cord here. Always connect the power cord to a grounded power outlet.

**C Wi-Fi antennas**

**D VIDEO input connectors (⌚)**

HDMI® model:

- **HDMI IN 1:** Input for channel 1
- **HDMI IN 2:** Input for channel 2

SDI model: **SDI IN**

- For 4K 60P recording, use the **12G** connector (A), the two **6G** connectors (A and C), or the four **3G** connectors (A, B, C, and D).
- For 4K 30p and FHD input signals, use the **6G** connector (A) as the input for channel 1 and the **6G** connector (C) as the input for channel 2. Unless using four 3G SDI cables, connectors B and D are not used.
- For details on how to connect to the input terminal, see the section on page 28, "Video input connections".

**E Connectors for external triggers**

Connect contact switches to these 3.5-mm 3-pole mini jacks (for example a footswitch), to start/pause/stop video recording or to capture photos.

**F COM**

This connector is used when performing system control from an external device.

**G DisplayPort OUT connector (⌚→)**

Connect to the main monitor or the sub touch panel monitor.

To output the video of the main monitor to this connector, select Display Port OUT in "Monitor Output".

Connect the sub touch panel monitor to the "HDMI OUT connector.

**H HDMI OUT connector (⌚→)**

Connect to the main monitor or the sub touch panel monitor.

To output the video of the main monitor to this connector, select HDMI OUT in "Monitor Output".

Connect the sub touch panel monitor to the DisplayPort OUT connector.

- The default setting is HDMI.

**I DVI OUT connector (⌚→)**

This connector cannot be used.

**J Potential equalization connector (⌚↓)**

Connect a potential equalization cable that complies with DIN 42801.

When using the UR-NEXT 4K in combination with other medical equipment, connect the devices using dedicated cables.

**K USB ports**

Connect an optional USB printer, USB mouse, Touch monitor, and one USB input device (keyboard, card reader, or barcode reader) here.

**IMPORTANT NOTICE**

- Please connect only one USB input device (keyboard, card reader, or barcode reader). Connecting multiple USB input devices could cause malfunction.
- USB hubs and USB storage devices cannot be used with these ports.

**L MAINTENANCE port**

This port is for service use only. Do not use it. (DP)



**M LAN ports (네트워크)**

Connect the LAN cable to the NETWORK 1 (right side) terminal when using Network 1 and to the NETWORK 2 (left side) terminal when using Network 2.

Follow the instructions provided by the network administrator regarding connections and settings (100 Base-TX / 1000 Base-T (RJ45)).

LAN status indicators

ACT/LINK	Meaning
Unlit	No data link
Lit orange	Data link active
Blinking orange	Data being transmitted/received

SPEED	Meaning
Unlit	10 Mbit/s
Lit orange	100 Mbit/s
Lit green	1 Gbit/s

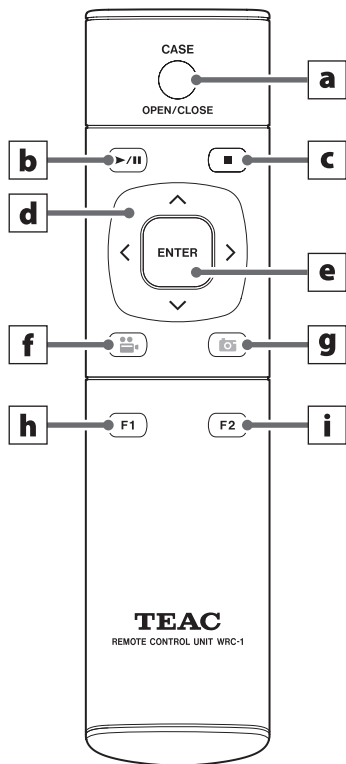
**N Audio input/output connectors (마이크 / 스피커)**

- **IN:** Connect a plug-in power microphone here (3.5mm TRS stereo mini jack).
- **OUT:** Connect active loudspeakers or an audio recorder here, for example (3.5-mm stereo mini jack).

**O Cable clamp attachment hole**

Attach the included cable clamp here. Fasten the cables so that there is no stress on the connectors.

# Remote control unit



Before using the remote control unit, remove its back cover and install the two included AAA batteries.

When the batteries are almost empty, the operating distance will be shortened or the remote control will stop working. Replace the batteries with new ones if this occurs.

## **a** CASE (OPEN/CLOSE) button

Use this button to open/close a Case (exam/surgery):

- Press this when the home screen is shown to enter patient information.
- Press this during an exam/surgery to close the Case.
- Press this in other states to open the home screen.

## **b** PLAY/PAUSE button

Press this button to start and pause video playback.

Press during video playback to pause. Press again to resume video playback.

## **c** STOP button

Press this button to stop video recording or playback.

## **d** Cursor buttons

Use these buttons to move the cursor up, down, left and right on the screen.

## **e** ENTER button

Press this button to confirm a selection.

## **f** VIDEO/PAUSE button

Press this button to start and pause video recording.

Press during video recording to pause. Press again to resume video recording.

## **g** PHOTO button

Press this button to capture a photo.

## **h** Function button 1

- Press this button on the home screen to open the main menu.
- Press this button when the List of Cases is shown to open the List of Recordings.

## **i** Function button 2

Press this button to select how two-channel video signals are displayed:

- Press it with picture-in-picture (PIP) to swap the large and small images.
- Press it with picture-by-picture (PBP) to swap the left and right images.

# Preparations before turning the power on

This section explains connections and settings to be made before turning the power on. Do not turn the power on until completing these steps.

## Connecting video sources

For video input signals, UR-NEXT 4K models are available with HDMI connectors or SDI connectors. Connect your video source(s) to the appropriate connector(s). See page 15 for details.

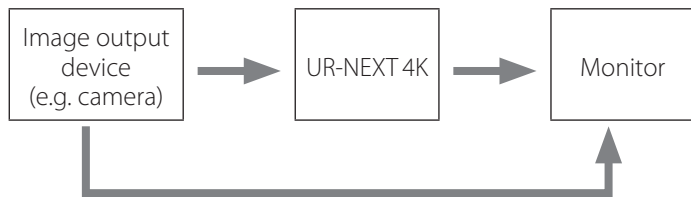
## Connecting a monitor

Connect the primary monitor to the HDMI OUT connector. In this case, the video input signal cannot be seen on the monitor when the UR-NEXT 4K is turned off (example 1). If you want the video input signal to be visible even when the UR-NEXT 4K is turned off, make connections as shown in example 2.

Example 1



Example 2

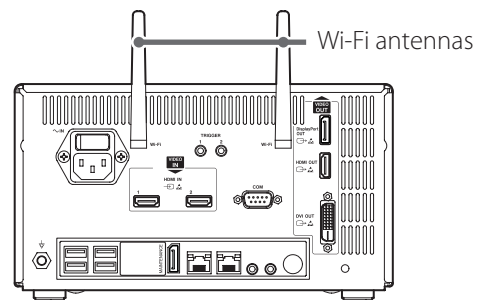


Direct connection between video source and monitor

## Connecting a microphone and loudspeakers

The UR-NEXT 4K has a microphone input and an audio output. Connect a microphone to record comments during an examination, for example, and connect loudspeakers to listen to recorded audio.

## Attaching the Wi-Fi antennas



Attach both Wi-Fi antennas to the appropriate connectors. Antennas are not required when neither Wi-Fi nor Bluetooth is used.

## Making a wired connection to a network

To use network functions, connect a LAN cable on the back of the unit.

### Connecting to mains power

#### **⚠ CAUTION**

Only connect this unit to a mains voltage of AC 100–240 V  $\pm$ 10% (50/60 Hz). Any other power supply could cause fire or electric shock.

Use an isolation transformer to prevent electric shocks.

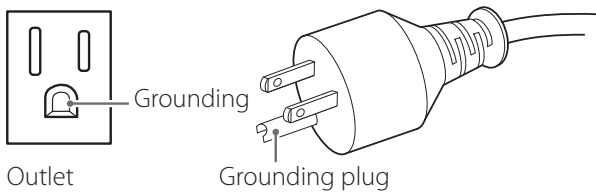
The power cord has a three-pole plug. In order to assure safe use, do not connect it to a two-pole (ungrounded) outlet.

When operating the UR-NEXT 4K in the UK: Use a power cord conforming to BS1363 with a 3A fuse.

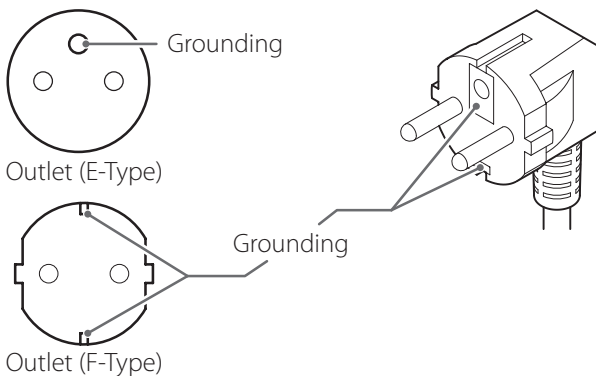
**1** Connect the included power cord to the power supply input connector on the back of the unit.

**2** Connect the plug of the power cord to a nearby power outlet.

For USA:



For Europe:

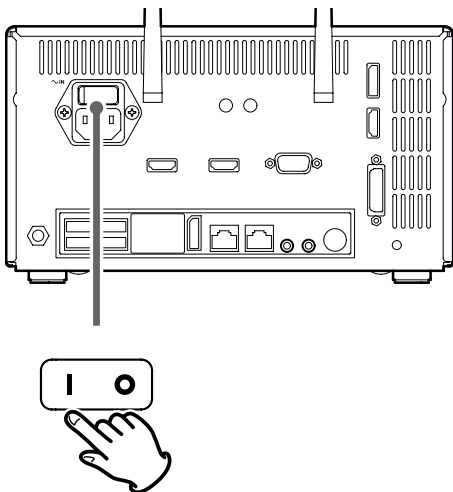


The screenshots included in this Instructions for Use are intended to aid in understanding the operation procedures. Please note that the actual screen display may differ due to differences in device specifications and firmware versions.

## Turning the unit on

If other devices are connected to the UR-NEXT 4K, observe the following sequence when turning on the power:

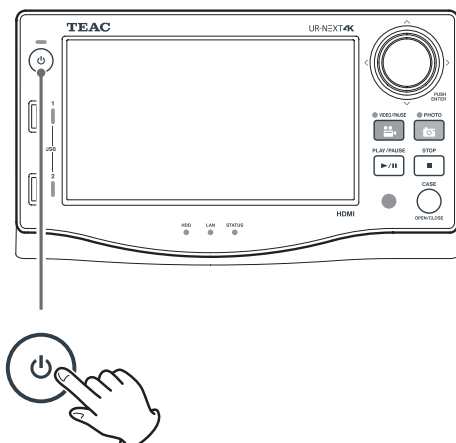
- 1 Turn on the monitor.**
- 2 Turn on the device that provides the video signal (e.g. camera).**
- 3 Set the main power switch on the back of the UR-NEXT 4K to the on position (I).**



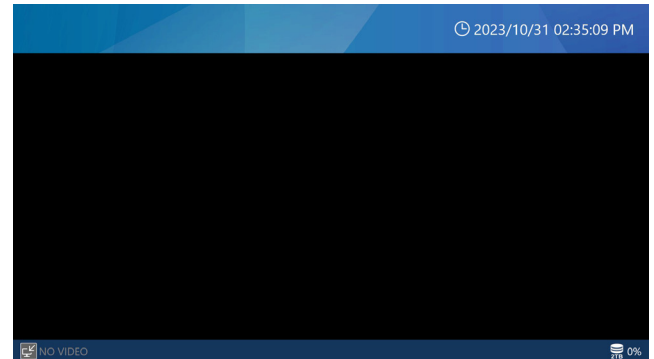
### NOTE

The unit starts up when the main power switch is turned on.

If the main power switch is on and the power indicator lights orange, press the power button (⏻) to start up.



When the power button's LED is in a green state and the following screen is displayed on the LCD, the startup process is complete.

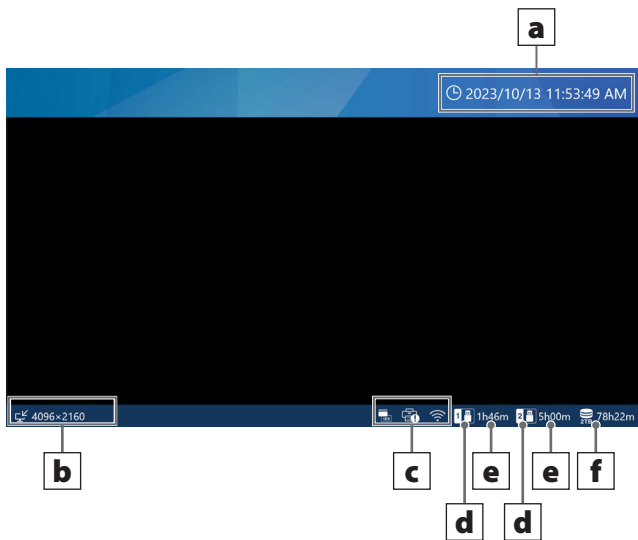


### Information shown on the touchscreen

The touchscreen shows the following information.

#### IMPORTANT NOTICE

When no recording or playback is in progress, the top and bottom bars on the screen are blue. They turn red during recording or playback, or any other access to storage devices.



#### a Current date and time

Date and time of the internal clock are displayed here (year/month/day hours: minutes: seconds).

#### b Status and resolution of the video input signal(s)

This shows the resolution of each input channel.  
“No Video” appears when there is no video signal.

#### c Icon Display Area



This is displayed when printing or when the printer's power is disconnected. This icon will not be displayed if the printer driver is not installed.



This displays the connection status of Wi-Fi®. If Wi-Fi® is not set up, this icon will not be displayed.



This is displayed when a card reader or barcode reader is set up and connected.

#### d Connected USB storage device

This shows to which port a USB storage device is connected.

#### e Used space / total storage capacity

This shows the used space of the connected USB storage device as a percentage value (on the left) and the total capacity in GB (on the right).

Nothing is shown if no USB storage device is connected.

When “Capacity Display” is set for “Remaining Time,” it will show the available space as an estimated value in hours and minutes that can be recorded. For more information, please refer to page 61.

#### f Used space of the internal HDD

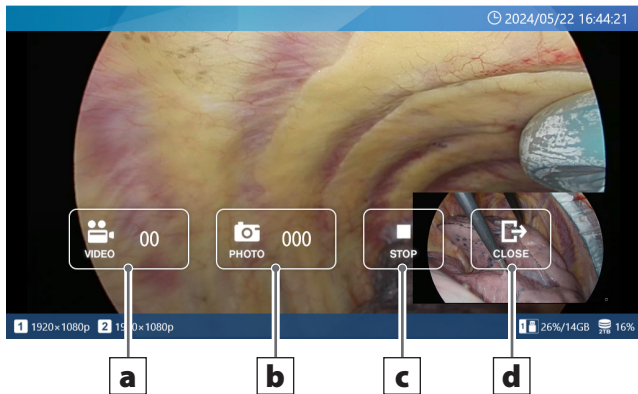
Display the usage of the internal HDD.

When “Capacity Display” is set for “Remaining Time,” it will show the available space as an estimated value in hours and minutes that can be recorded. For more information, please refer to page 61.

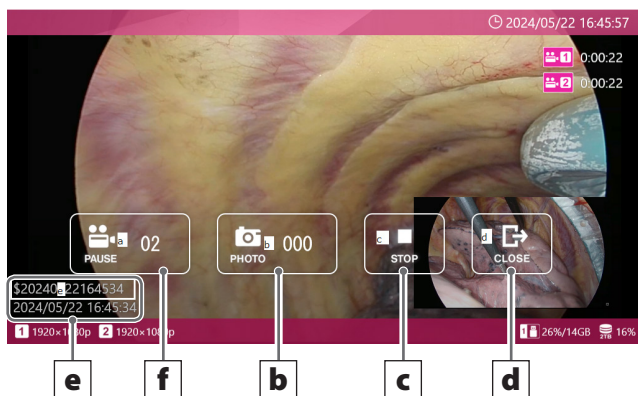
## Secondary Monitor (Touch Type)

The following information will be displayed on the sub touch panel monitor.

### Home Screen (Style 1)



### Screen when the CASE is open (Style 1)



#### a VIDEO button

Starts video recording.

Once recording begins, this button becomes a PAUSE button, and tapping it will pause the recording.

The number inside the button indicates the total number of recorded videos, including the one currently being recorded.

#### b PHOTO button

Captures photos (still images)

The number inside the button indicates the total number of photos (still images).

#### c STOP button

Stops video recording.

#### d CLOSE button

Closes the CASE (exam/surgery).

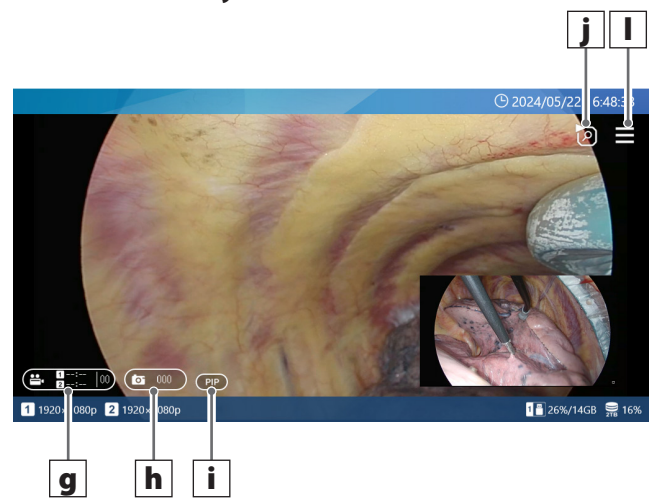
#### e Patient Information

Shows patient information. The display can be turned ON/OFF and the display position can be adjusted. (Refer to on page 69, "User Presets" for details).

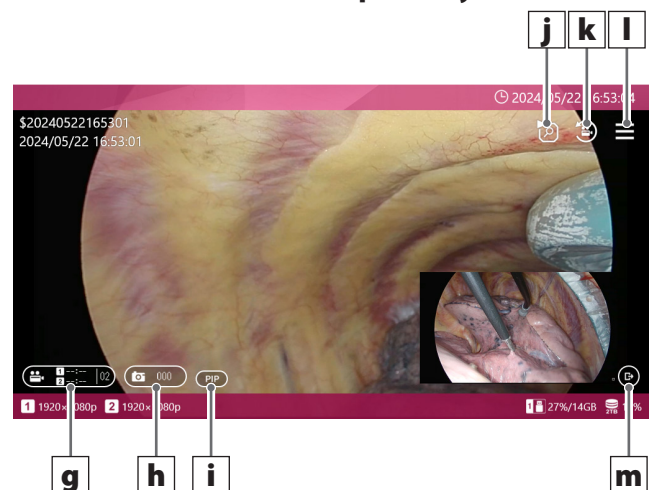
#### f PAUSE button

Pauses video recording.

### Home Screen (Style 2)



### Screen when the CASE is open (Style 2)



#### g VIDEO button

If neither CH1 nor CH2 is recording, pressing this button will start recording on both channels.

If either channel is recording, pressing this button will stop recording on both channels.

This button does not allow you to pause the video recording.

The recording time will be displayed inside the button while recording.

If the recording time is less than 1 hour, it will be displayed as MM

- If it is 1 hour or more, it will be displayed as H:MM
- If not recording, the time will be displayed as --:--.

The number of recorded videos (including the one currently being recorded) in the CASE will be displayed on the right side of the button.

The button will light up in red while recording.

If either channel is paused, the button will blink red.

### **h** PHOTO button

Captures photos on both channels.

The number of recorded photos in the CASE will be displayed in the center of the button.

The button will light up in orange while recording photos.

### **i** Display Layout Change button

When 2CH input is used, this button switches the display layout in the following order:

PIP → PBP → CH1 → CH2.

This button will not be displayed if CH2 is disabled or if PIP/PBP recording is enabled.

The button's display content is as follows:

PIP: Picture in Picture display

PBP: Picture by Picture display

CH1: Displays only video input CH1

CH2: Displays only video input CH2

### **j** Latest CASE Video/Photo List button

When on the home screen, this button displays a list of the latest videos and photos recorded on the internal hard disk drive within the CASE.

When in a CASE, it displays a list of videos and photos within that CASE.

### **k** Latest Video Playback button

This button plays the latest video within the current CASE.

This button will not be displayed if not in a CASE or if no videos have been recorded yet in the CASE.

### **l** Menu button

When on the home screen, this button displays the main menu.

When in a CASE, it displays a pop-up menu.

### **m** CLOSE button

This button is displayed at the bottom right of the screen only when in a CASE.

#### **NOTE**

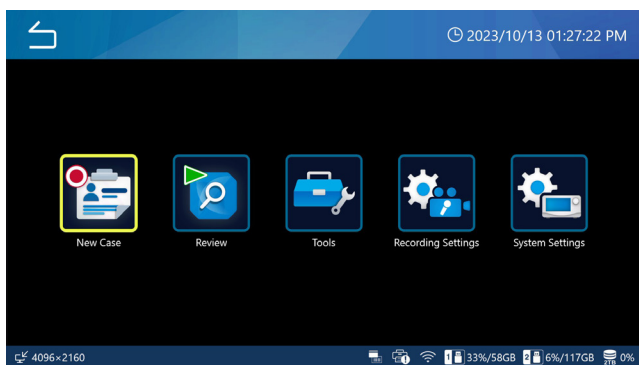
In Style 2 there is no PAUSE button, so you cannot pause video recording through touch operation (pausing video recording is possible through front buttons, external triggers, etc., other than touch operation).






In Style 2 tapping the empty space (non-button areas) of the screen will not bring up the main menu. Swipe or pinch operations cannot be used to change the layout either.



## Main menu

When the top and bottom bars on the screen are blue, tap anywhere to open the main menu.



Icon	Meaning
	<b>New Case</b> Tap this icon to open a new Case and enter the corresponding patient information.
	<b>Review</b> Tap this icon to play back recorded videos or view recorded photos.
	<b>Tools</b> Tap this icon to format a USB device, view the message history, update the firmware, and more.
	<b>Recording Settings</b> Tap this icon to access Recording Settings.
	<b>System Settings</b> Tap this icon to access System Settings.

Tap the Back icon () to return to the home screen.

### IMPORTANT NOTICE

Use a finger to gently touch the screen. Do not use hard or sharp objects. Doing so could damage the screen.

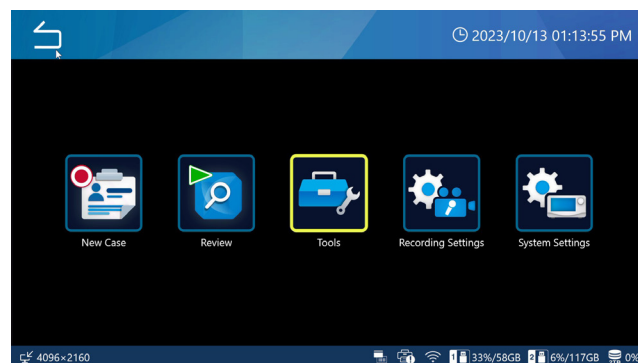
## Formatting a USB storage device

If you want to record on a USB storage device, you must format it first.

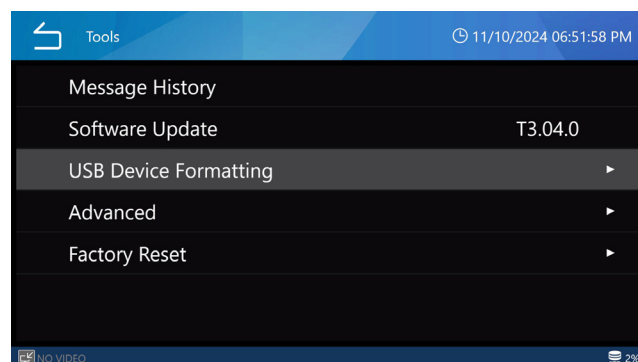
### IMPORTANT NOTICE

- Formatting a USB storage device will erase all data saved on it.
- Always use the UR-NEXT 4K to format media that you will use with it. Media formatted by a different device could cause problems.
- The UR-NEXT 4K performs quick formatting. If you want to make sure that no data on a medium can be recovered, use a computer or similar device to format it.

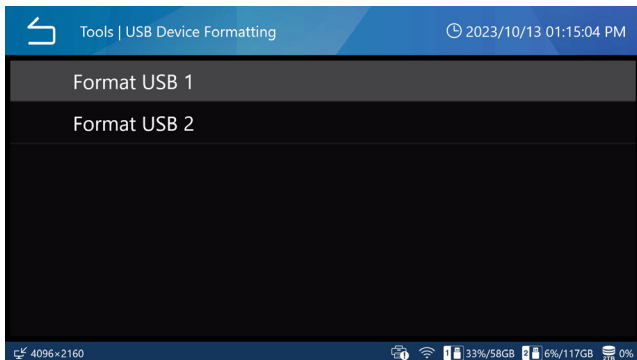
### 1 Tap “Tools” in the main menu.



### 2 Select “USB Device Formatting”.

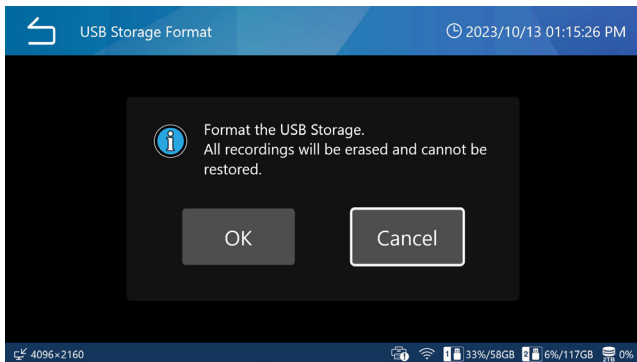


### 3 Select the storage device to format.



A confirmation dialog appears.

### 4 Tap "OK" to start formatting.



Tap "Cancel" to not format and return to the previous screen.

After formatting completes, the original screen appears.

### CAUTION

Media used with this device must be formatted with this device. Using media formatted with different device may cause malfunctions.

Formatting will erase all data stored on the USB media. Equipment may cause errors.

Formatting will erase all data stored on the USB media.

### Disconnecting a USB storage device

Before removing a USB storage device, observe the following:

#### IMPORTANT NOTICE

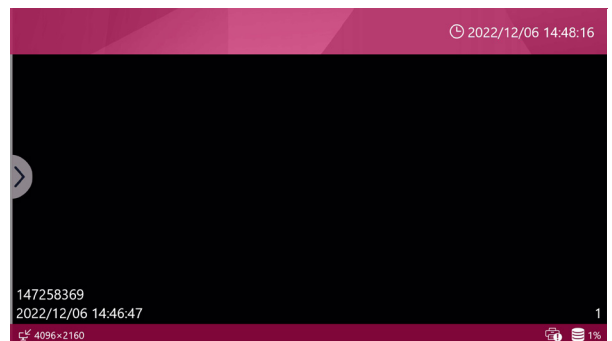
- Confirm that the USB access indicator is not blinking.
- Before removing the USB cable connected to an optical disc drive, remove the disc from the device. Otherwise, the data on the disc could be damaged.

### Turning the unit off

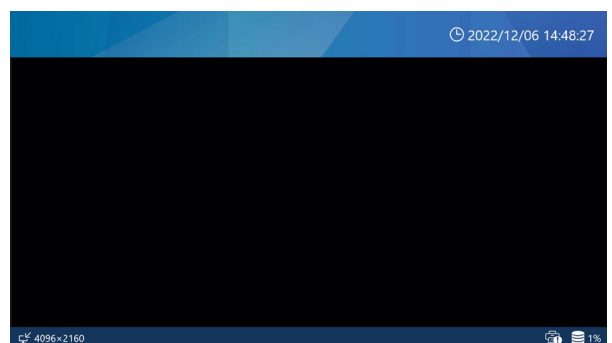
Perform the following steps to safely turn off the UR-NEXT 4K.

#### 1 If a Case is still open (the top and bottom bars on the screen are red), do one of the following to close the Case:

Tap the Back icon (←) multiple times.  
Press the CASE OPEN/CLOSE button.



The top and bottom bars are red: the Case is still open.



The top and bottom bars are blue: the Case is closed.

**2 Wait until the LAN, HDD and USB indicators stop blinking, then press and hold the power button (⏻) for at least three seconds.**

When the LED of the power button changes from green to orange, the system enters the shutdown state.

**3 To completely turn off the power, turn the main power switch on the back to the OFF side (○).**

Do not turn off the power only using the main power switch or its power source. To completely turn off the power, be sure to press the power button (⏻) to shut down, then turn off the main power switch and its power source.

#### **IMPORTANT NOTICE**

- Even when the home screen is open, the unit is still conducting internal operations if a LAN, HDD or USB indicator is blinking. Turning it off during this state could cause data loss or malfunction.
- Interrupting the power supply during recording may result in the recording no longer being able to be played back.
- After turning the unit off, wait about 20 seconds before turning it back on again (leave it off for at least 20 seconds).

#### **If the unit will not be used for a long time**

If the unit will not be used for a long time, turn it off as described above. Then, set the main power switch on the back to its off position.

# Preparations for two-channel and 3D recording

## Video input connections

Please refer to on page 30, "Setting channel 2 for recording" on how to set video input CH2.

### For HDMI® model

Connect the video input to be recorded on CH1 to HDMI 1, and the video input to be recorded on CH2 to HDMI 2.

### For SDI model

#### 1ch Recording

Video input type	SDI terminal used	Maximum recordable resolution
12G-SDI single link	A	4096x2160 60p
6G-SDI single link	A	4096x2160 30p
3G-SDI single link	A	1920x1080 60p
6G-SDI dual link	A+C	4096x2160 60p
3G-SDI quad link	A+B+C+D	4096x2160 60p

#### 12G-SDI single link

#### 6G-SDI single link

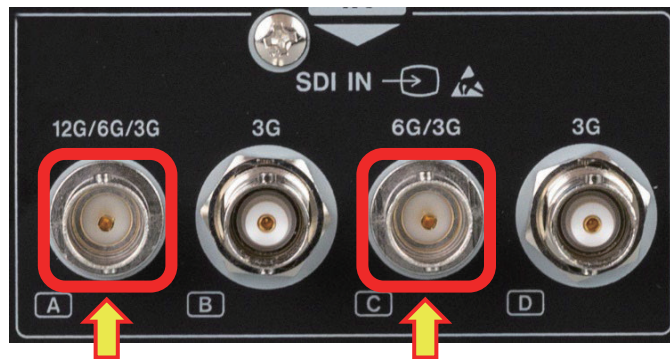
#### 3G-SDI single link

Connect to SDI terminal A



#### 6G-SDI dual link

Connect to SDI terminal A and terminal C



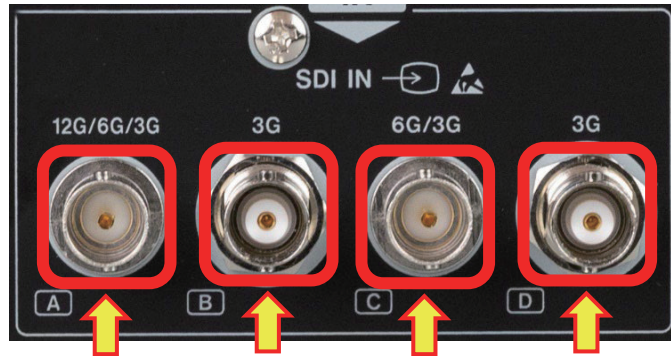
#### 3G-SDI dual link

Connect to SDI terminal A and terminal B



**3G-SDI quad link**

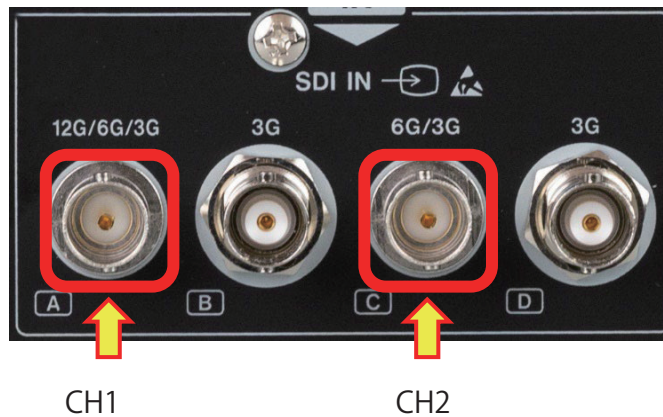
Connect to all SDI connectors A, B, C, and D.



**2ch Recording**

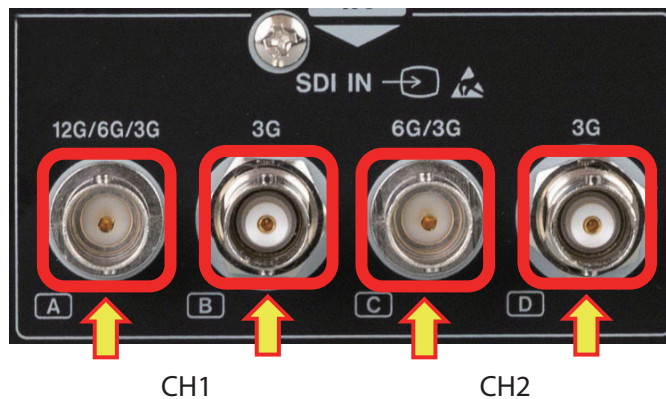
"Video input type Supports single link only"	SDI terminal used		Maximum recordable resolution	
	CH1	CH2	CH1	CH2
6G-SDI + 6G-SDI	A	C	4096 X 2160 30p	4096 X 2160 30p
3G-SDI + 3G-SDI	A	C	1920 X 1080 60p	1920 X 1080 60p
6G-SDI + 3G-SDI	A	C	4096 X 2160 30p	1920 X 1080 60p
3G-SDI + 6G-SDI	A	C	1920 X 1080 60p	4096 X 2160 30p

Connect the CH1 signal to SDI terminal A and the CH2 signal to terminal C.



**Dual-Link 3G-SDI Recording**

Video input type	SDI terminal used		Recordable resolution	
	CH1	CH2	CH1	CH2
3G-SDI Dual-Link	A+B	C+D	3840 x 2160 30p	3840 x 2160 30p



### Setting channel 2 for recording

This section explains how to prepare the UR-NEXT 4K for recording.

- On the HDMI® model, use the HDMI 2 connector as the input for channel 2.
- On the SDI model, use SDI connector C as the input for channel 2. Make settings for SDI models when there is no video input signal.

#### 1 Tap “Recording Settings” in the main menu.

#### 2 Select “Advanced Video Input”.

#### 3 Tap “Dual Channel Mode” and select “ON”.

When changing this setting, the UR-NEXT 4K restarts automatically.

When using 4K signals on two input channels, the frame rate is limited to 30p.

When “Channel 2 Video Input” is on and the video recording quality is set to H.264, recording will be at half the bit rate compared to when “Channel 2 Video Input” is off.

#### NOTE

Set to [ON] when selecting Dual Stream in “3D Format” (P56).

Set to [OFF] to enable “Proxy Recording” (P55).

#### 4 On the SDI model, tap “SDI Transport Method” and select the desired input method.

Select “2SI” for 12G-SDI input.

Adjust to the image output device for 3G-SDI with four inputs (2SI, SQD).

When changing this setting, the UR-NEXT 4K restarts automatically.

#### 5 On the SDI model, tap “Dual-Link 3G-SDI” (for SDI models).

The default setting is “OFF”.

Select ON when inputting 3G-SDI dual-link video.

Select OFF for other cases.

When changing this setting, the UR-NEXT 4K restarts automatically.

#### 6 Tap “Color Space” and select “BT.709 for 1080 HD”, “BT.2020 for 4K UHD” or “Auto”.

The UR-NEXT 4K records with BT.709. If the color space of the video input signal is BT.2020, select “BT.2020 for 4K UHD” to record without distorted colors.

#### 7 Tap “CH1 Color Range” or “CH2 Color Range”.

This sets the level range of the input video signal.

Auto: Automatically detects and sets the level range from the input video signal.

16–235: Manually sets the level range. The range is 16–235 (limited range).

0–255: Manually sets the level range. The range is 0–255 (full range).

The default setting is “Auto”.

#### NOTE

Even if “Auto” is selected, the appropriate level range may not be set depending on the input signal.

In such cases, please manually adjust the settings to avoid color clipping or crushing in the video signal.

For video recording, CH1 and CH2 cannot be set individually.

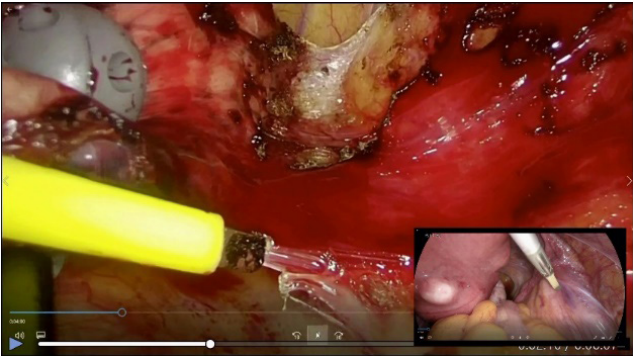
The level range setting of CH1 will be applied to CH2.

For still image recording and output video, the settings for each channel will apply.

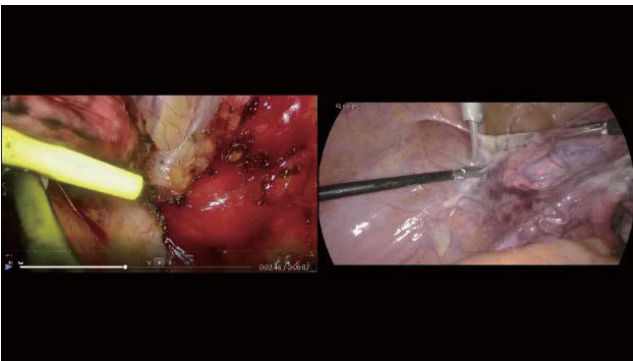
### Screen display during two-channel input

When "Channel 2 Video Input" is enabled and video signals are input on both channels 1 and 2, both images will be shown on the display.

- PIP: A small image is shown on top of a large image.



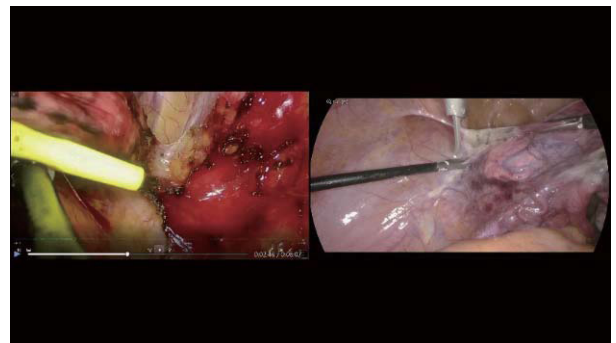
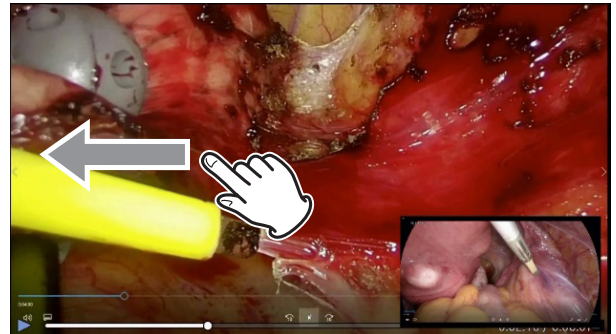
- PBP: Two images are shown side-by-side.



Select the initial video display in "Multi-input Display Setting" in "Video Output".

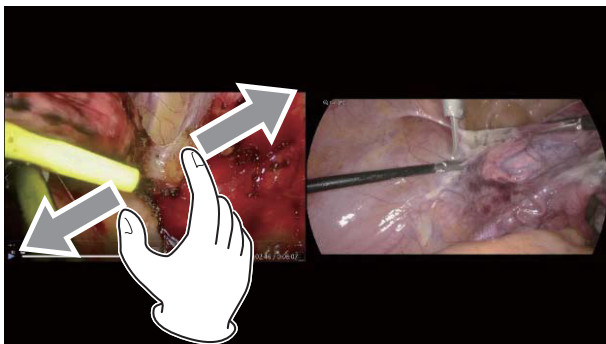
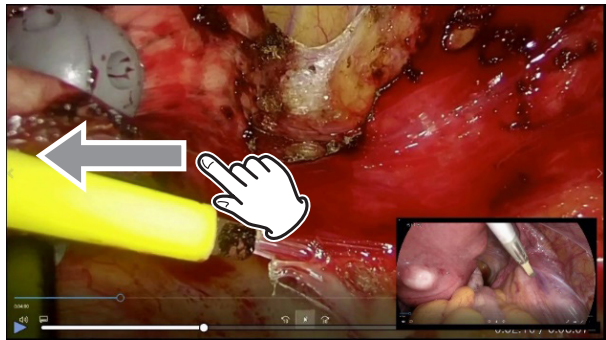
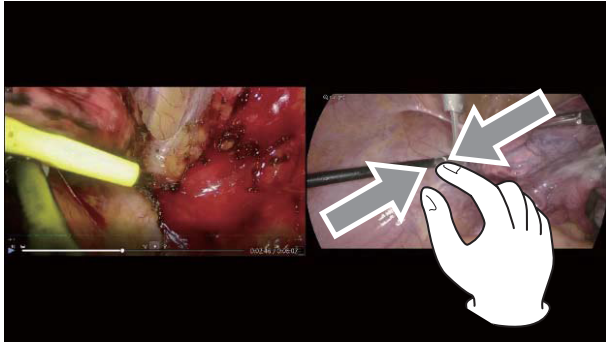
Displaying only one of video input CH1 or video input CH2 can be selected in "2CH Display Mode" of "Screen Display".

To change from PIP display to PBP display, swipe the large image away from the small image.



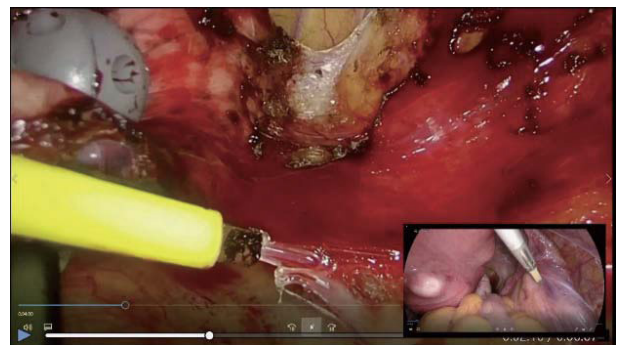
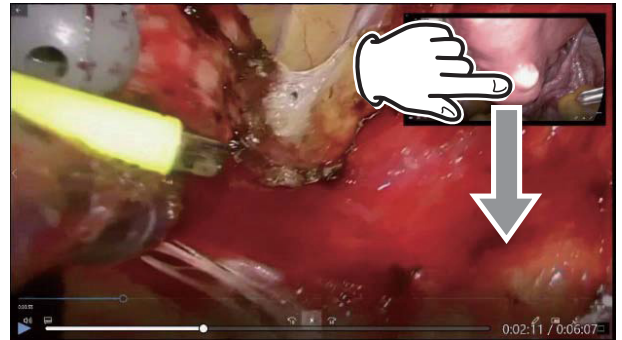
## Preparations for two-channel and 3D recording

To change from PBP display to PIP display, pinch out on an image to make it large or pinch in on an image to make it small.



To swap the positions of the images in PBP display, swipe the left image to the right or the right image to the left.

In PIP display, the small image can be moved up, down, left or right to any corner of the display.



### NOTE

- The size of the small image cannot be changed.
- The small image can only be placed in the four corners of the display.

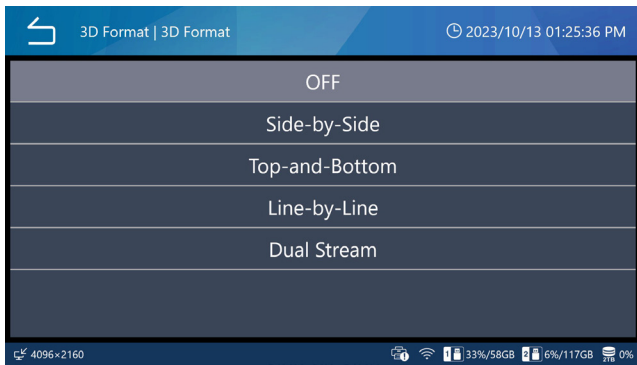


### Recording a 3D video signal

If your image output device provides a 3D video signal, make the proper settings to display and record the signal. If the selected signal type is not recognized at the input, "NO VIDEO" will be shown at the bottom left of the display. Recording will not be possible if it is attempted (a message appears).

When 3D Format is set to "Line-by-Line", 4K60fps can be received up to 1 ch.

See section on page 56, "3D Format" for details.



"Dual stream" is valid only when Channel 2 Video Input is ON in "Advanced Video Input". Input the left video into CH1 and the right video into CH2.

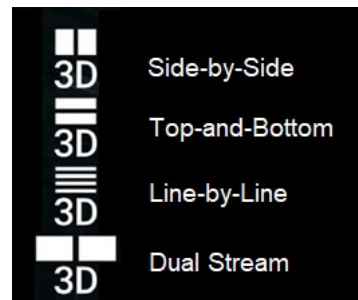
The video will be recorded in FHD. Select HQ or lower for Video Quality.

For 3D input video, still images are converted to 2D and recorded.

When set to Line-by-Line, the input Line-by-Line video is converted to Top-and-Bottom video for video output and video recording.

When any 3D video format is selected, still images will be converted to 2D and recorded.

When 3D format is set to anything other than OFF, an icon will be displayed at the left end of the bottom bar to indicate that 3D recording is active.

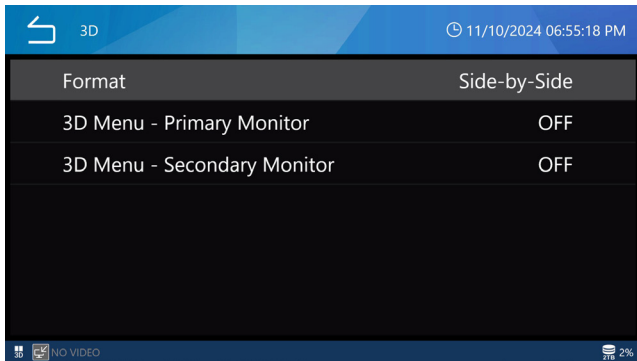


- When the 3D format setting is Dual Stream, only one video recording indicator will be displayed during recording.



## Preparations for two-channel and 3D recording

When selecting any 3D video mode other than OFF, you can make the following selections:



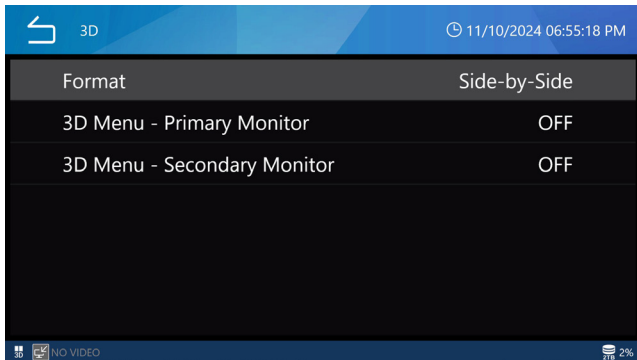
### Tap External Monitor 3D Output.

Choose whether to display the on-screen display (OSD) in 3D on the external monitor. The default setting is "OFF."

### Tap External Touch Panel 3D Output.

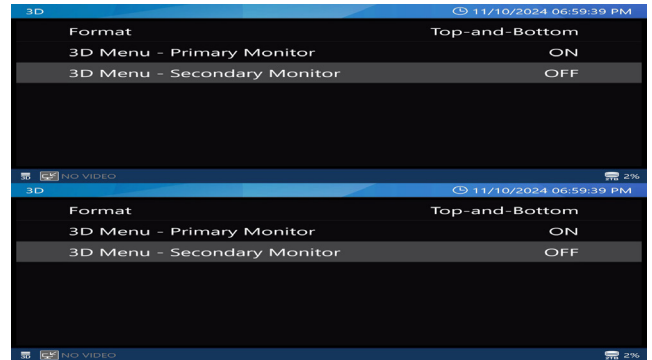
Choose whether to display the OSD in 3D on the external touch panel monitor. The default setting is "OFF."

Settings in steps 5 and 6 also determine the 2D/3D display mode when playing 3D videos recorded on this product. Display when OFF is selected The OSD (including menus, patient information, and mouse cursor) is displayed in 2D.

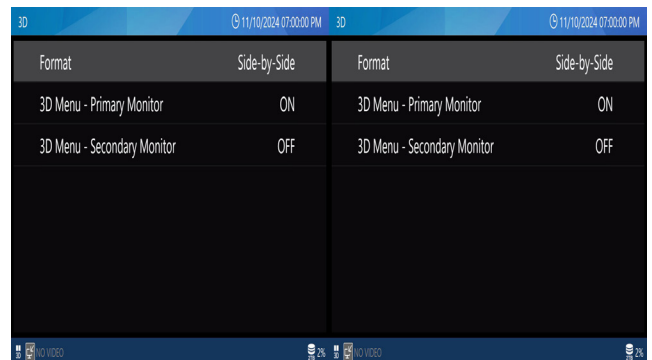


When playing 3D videos recorded on this product, the video is displayed as a 2D video with the top half (for Top-and-Bottom or Line-by-Line recordings) or the left half (for Side-by-Side or Simul recordings) magnified 2x in either vertical or horizontal direction.

Display when ON is selected The OSD (including menus, patient information, and mouse cursor) is displayed in 3D.



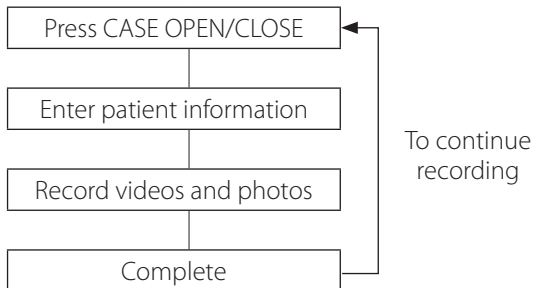
Top-and-Bottom / Line-by-Line



Side-by-Side / Dual Stream

## Recording process

The following diagram illustrates a typical recording process for an exam/surgery.



You can also start recording right away and enter patient information later. In this situation, a new Case is automatically opened and a temporary ID with the following format is assigned:

\$[year][month][date][hour][minute][second].

Example: November 15, 2024 at 2:15:40 p.m.

\$20241115141540

After recording the first video or capturing the first photo, the entered patient data or the temporary ID is retained even after stopping (the Case remains open until the CASE OPEN/CLOSE button is pressed).

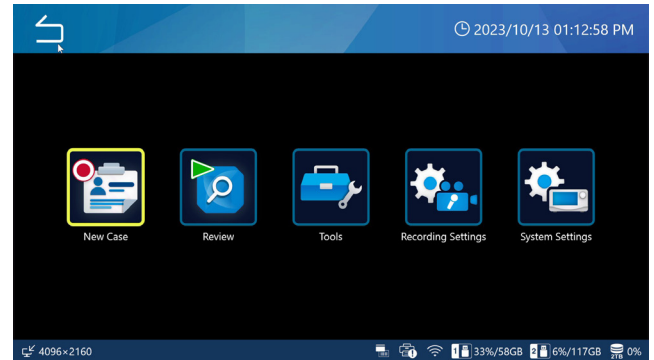
## Maximum number of recorded files

Each video and photo stored for the same ID is assigned an incrementing number from 1 to 1000.

Recording more than 1000 videos and photos in one Case is not possible. To record more than 1000 videos and photos or to record with a different ID, press the CASE OPEN/CLOSE button to close the Case (the home screen appears). Then, press the CASE OPEN/CLOSE button again to open a new Case.

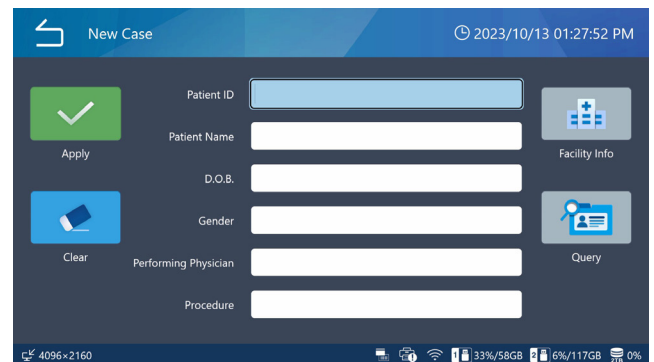
## Opening a New Case (starting an exam/surgery)

### 1 Tap "New Case" in the main menu.



### 2 Tap each field and enter data.

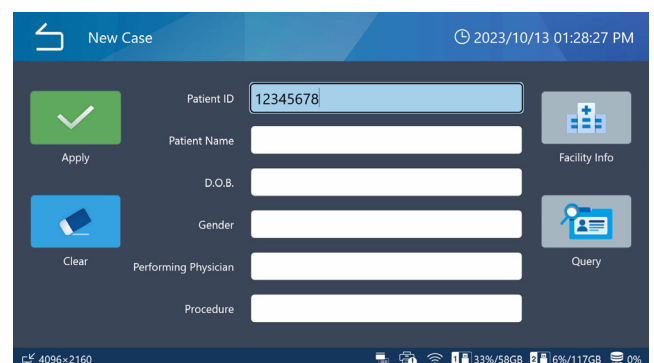
Tap Enter (↵) to confirm each entry.



Tap "Clear" to delete all entered patient information.

Tap "Facility Info" to enter the facility name and station name input screen.

### 3 When finished, tap the green "Apply" button to confirm.



If videos/photos are recorded without entering an ID, the ID of "\$ year, month, day, hour, minute, second" will be automatically registered as a temporary ID.

Example) December 25, 2022 14:15:40

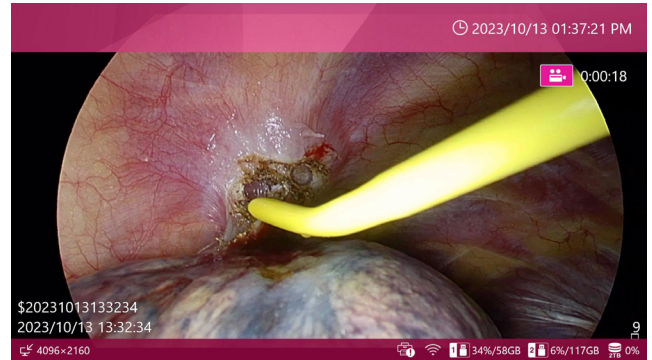
\$20221225141540

### IMPORTANT NOTICE

- The entered patient information is recorded in the built-in HDD.
- When transferring or disposing of this product, handle it appropriately so that the patient information recorded in the internal HDD is not leaked to the outside.
- When erasing patient information, perform "Reformat Internal HDD" or "Reset System" described in "Factory Reset" on page 75.
- Do not use characters prohibited from file description in the ID.

## Recording video

**Press the VIDEO/PAUSE button to start video recording.**



While recording video,

- press the STOP button to stop recording,
- press the VIDEO/PAUSE button to pause recording.

### IMPORTANT NOTICE

When recording repeatedly, allow at least two seconds between each recording and stopping operation.

### NOTE

- The number of images (videos and photos total) recorded for the same Case is shown at the bottom right of the screen.
- Use the "Free Up Space (iHDD)" setting to efficiently assure storage capacity on the internal HDD before recording video (page 61).

### Using an external contact switch start/pause/stop video recording

Controlling video recording is also possible using an external contact switch.

**1** Connect the switch to one of the TRIGGER connectors on the back (page 16).

**2** Assign that connector to the desired operation mode (page 60).

## Capturing photos

**Press the PHOTO button repeatedly to record a series of photos (still images).**

The PHOTO button can also be pressed to capture a photo during video recording.

## Using an external contact switch to capture photos

Capturing photos is also possible using an external contact switch.

**1 Connect the switch to one of the TRIGGER connectors on the back (page 16).**

**2 Assign that connector to “Photo Capture” (page 60).**

## Completing an exam/surgery (closing a Case)

**When an exam/surgery is completed, press the CASE (OPEN/CLOSE) button to close the Case.**

The home screen appears.

When starting a new recording or opening a new Case, new patient data must be entered.

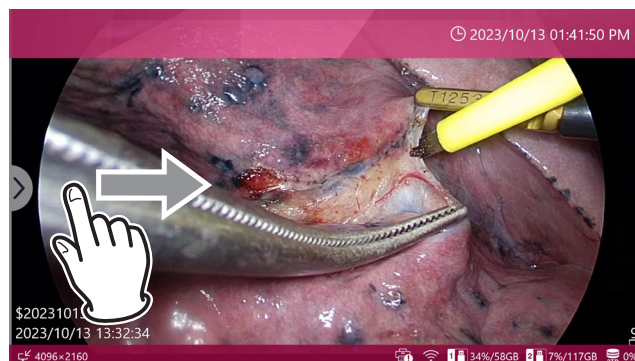
### NOTE

When pressing the button during video recording, the unit stops and closes the Case.

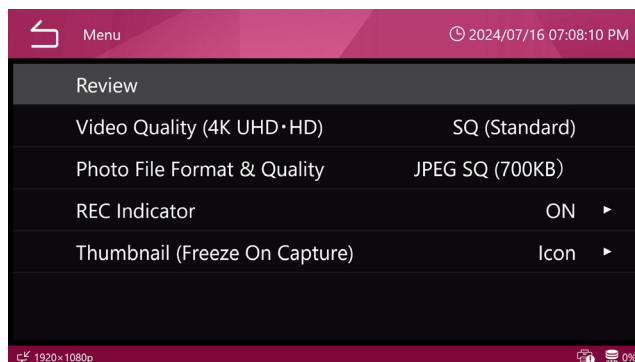
## Viewing the last video/photo recorded

During an exam/surgery, you can check the last recorded video or photo (within the same ID).

**1 Swipe from left to right to open the context menu.**



**2 Select “Review”.**

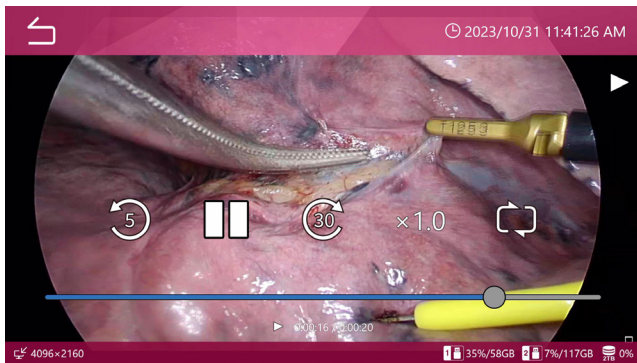


Thumbnails are shown in recording order, starting with the oldest.

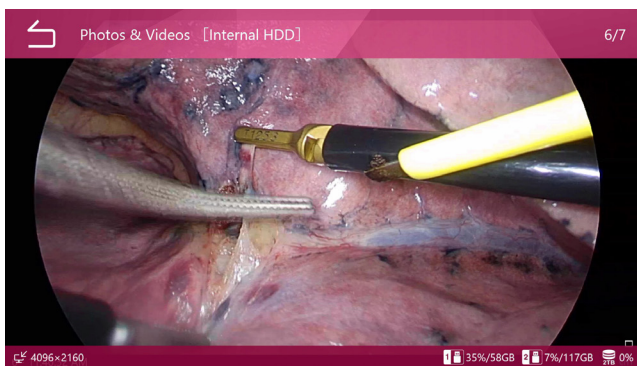
**3 Tap the thumbnail of the video/photo you want to check.**



### Video



### Photo



## Deleting videos or photos

It is possible to delete all recorded data for a Case together and videos/photos individually. Deleting a Case also deletes patient information for the respective Case.

See on page 45, "Deleting recorded data" for details.

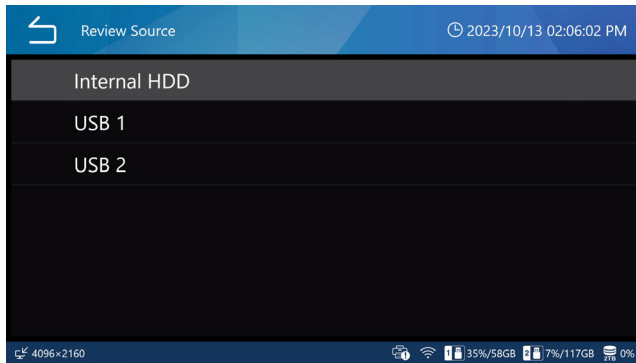
Use the formatting function for bulk deletion.

Recorded videos/photos cannot be deleted while the CASE is open.

Ensure that the desired image transfers are completed before deleting recorded videos/photos.

## 1 When the home screen is open, press the PLAY/PAUSE button or tap "Review" in the main menu.

A selection menu appears.

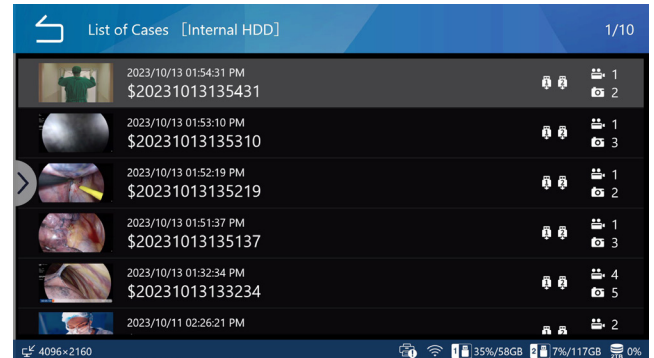


## 2 Select the storage device with the content to be viewed.

The List of Cases stored on the selected device appears.

## List of Cases

The List of Cases shows recorded data in order from the newest.



Swipe up and down on the screen to scroll through the list.

- The first image of the recorded data is shown as a thumbnail on the left side.
- On the right side, icons show the numbers of videos and photos along with USB and network transfer history.

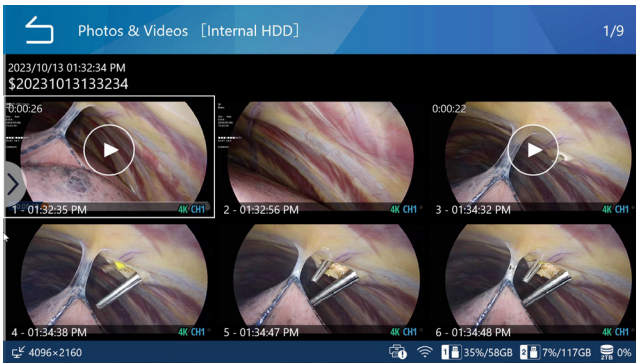
### Icon Meaning

	1 video recording available
	5 captured photos available
	Transferred/copied to USB 1
	Transferred/copied to USB 2
	Transferred/copied to Network 1.

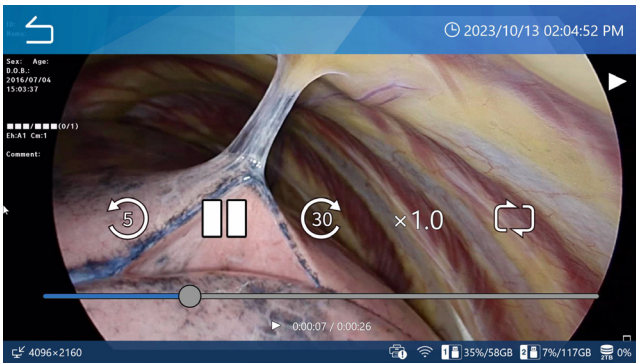
## 1 Tap the desired Case to open a preview screen.

Thumbnail images for videos and/or photos are shown in recording order, newest first.

## 2 Tap the video/photo you want to check.



### Video

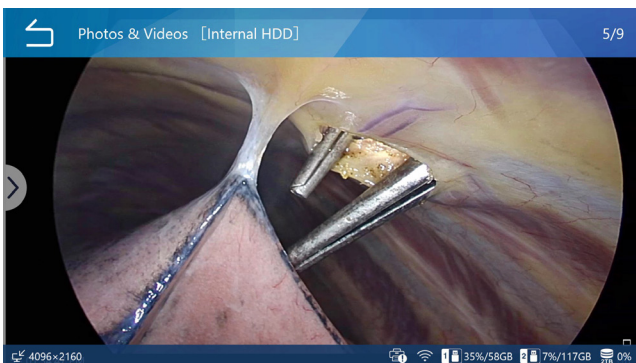


Elapsed/total times are shown at the bottom of videos. Tap the screen to show the playback control icons (⏮ ⏸ ⏭) for about 5 seconds.

### IMPORTANT NOTICE

Sometimes the last second of a video will not play back.

### Photo

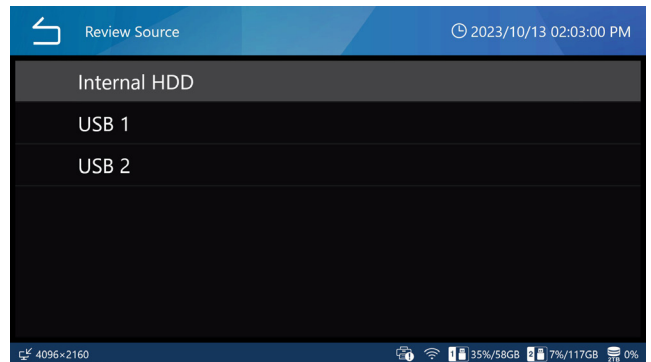


## Searching by ID

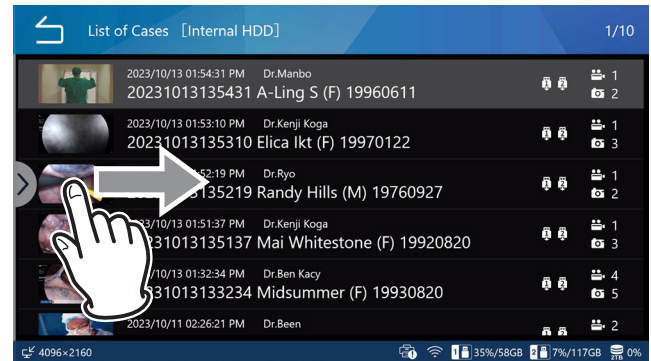
Videos/photos of a certain Case can be shown by specifying a patient ID.

### 1 Tap "Review" in the main menu.

### 2 Select the storage device to be searched.

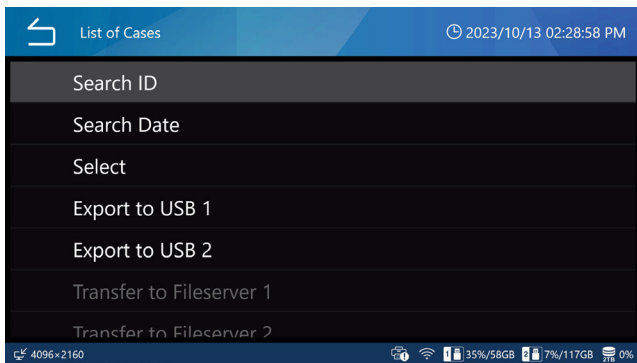


### 3 On the List of Cases, swipe from the left to right to open the context menu.



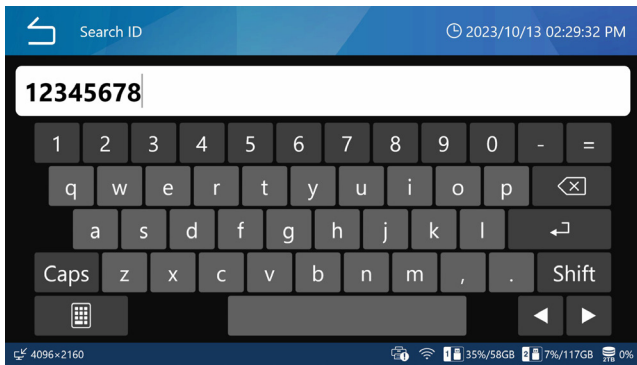


**4 Select “Search ID”.**



**5 Enter an ID, and tap Enter (↵).**

The unit will search for characters input in the Search ID search field.

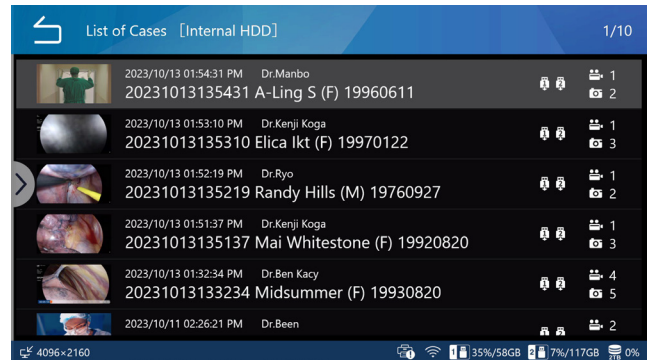


Put an asterisk (\*) at the beginning/end to search for the end/beginning of an ID. If no asterisk is included, then the unit only searches for exact matches.

**NOTE**

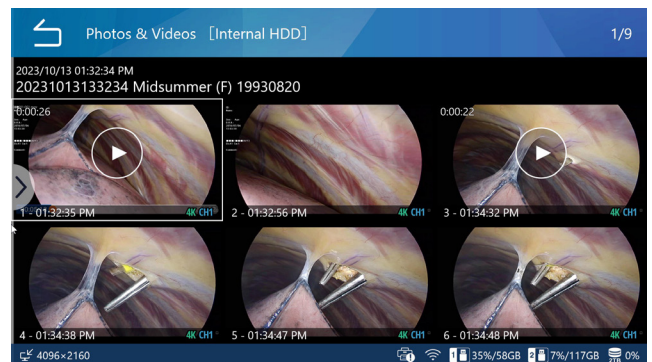
The asterisk is located on the number/symbol page of the on-screen keyboard. Tap the icon at the bottom left to open it.

**Tap the desired Case.**



The preview screen for the selected Case appears.

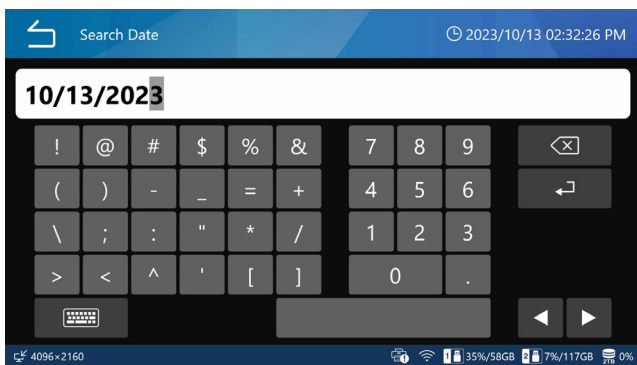
**6 Tap the video/photo you want to check.**



### Searching by date

Videos/photos of a certain Case can be shown by specifying a recording date.

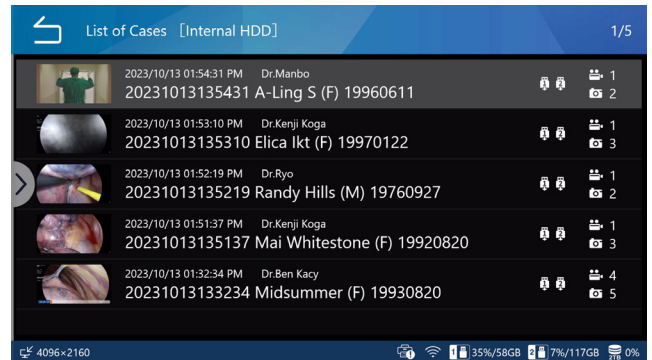
- 1 Tap “Review” in the main menu.**
- 2 Select the storage device to be searched.**
- 3 On the List of Cases, swipe from the left to right to open the context menu.**
- 4 Select “Search Date”.**
- 5 Enter a date, and tap Enter (↵).**



Input the date in an 8-digit format (MM/DD/YYYY). Slashes are added automatically.

Example: For March 8, 2023, enter 03 08 2023

### Tap the desired Case.



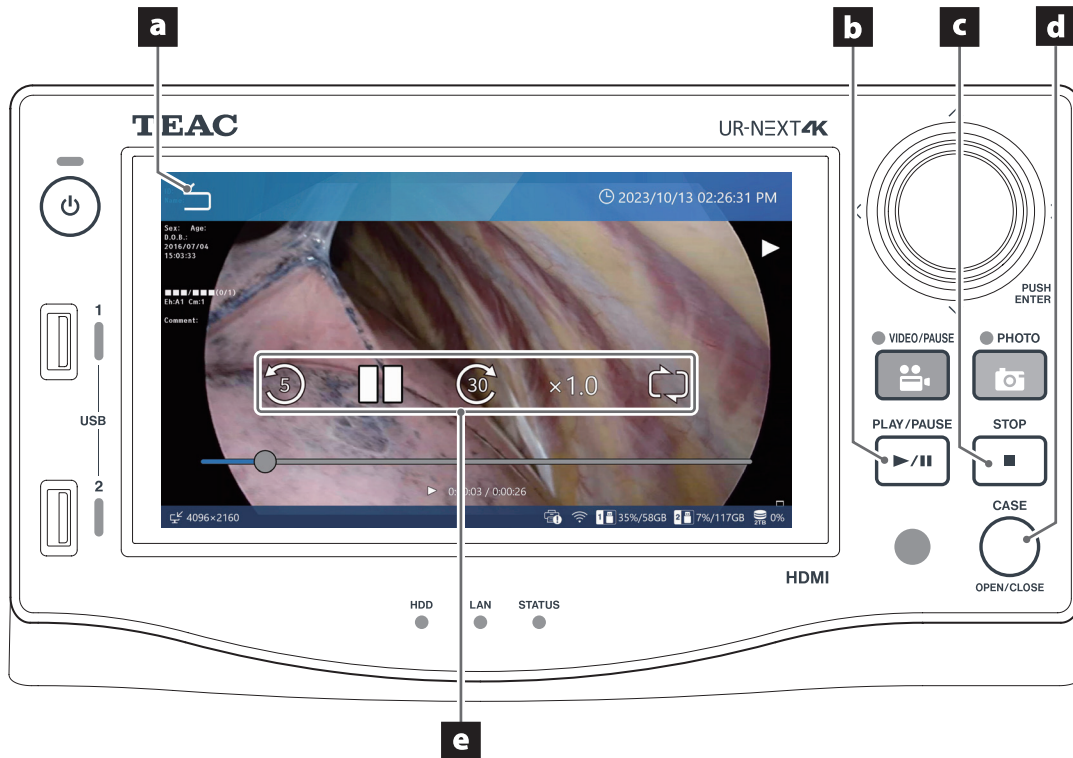
The preview screen appears.

- 6 Tap the video/photo you want to check.**



## Functions available during video playback

Use the front panel buttons and display icons shown below to control playback.



### a Back icon (⏪)

Tap this icon on the screen during video playback to return to the preview screen.

Each tap of this icon moves up one screen in the menu hierarchy.

### b PLAY/PAUSE button

Press this button during video playback to pause. Press it again to resume playback.

### c STOP button

Press this button during video playback to stop playback and return to the beginning of the video.

### d CASE (OPEN/CLOSE) button

Press this button to end playback and close the current Case (the home screen appears).

### e Playback control icons

Tap the display during video playback to show the following control icons for about 5 seconds.

Icon	Meaning
	Move back by approx. 5 seconds
	Move forward by approx. 30 seconds
	Pause
	Resume playback
x1.0 : Tap to select playback speed.	
x0.5 : 0.5x speed	
x1.0 : Constant speed (default)	
x2.0 : 2x speed	
	Tap to toggle repeat playback on/off.
	Enable repeat playback.
	Disable repeat playback.

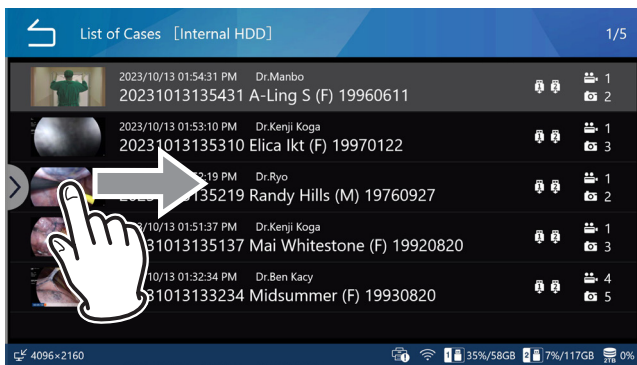
# Editing patient information and deleting recorded data

## Editing patient information

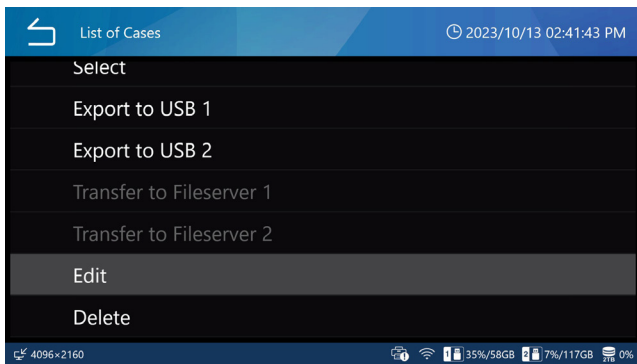
Patient information, including temporary IDs and patient names, can be edited.

**1** From the List of Cases (page 39), select the Case to be edited.

**2** Swipe from left to right to open the context menu.



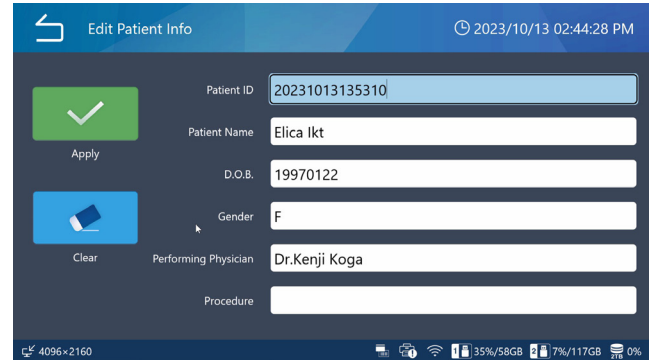
**3** Select "Edit Patient Information".



The entry screen for patient information appears.

**4** Edit the patient information.

Follow the procedures in on page 35, "Opening a New Case (starting an exam/surgery)".



## Deleting recorded data

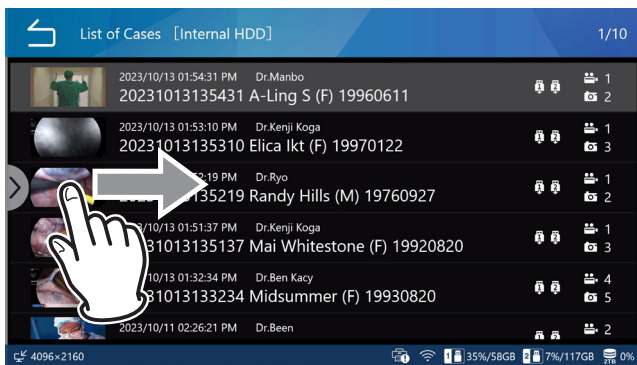
All recorded data for an exam/surgery can be deleted together by deleting the respective Case. It is also possible to delete individual videos/photos.

### IMPORTANT NOTICE

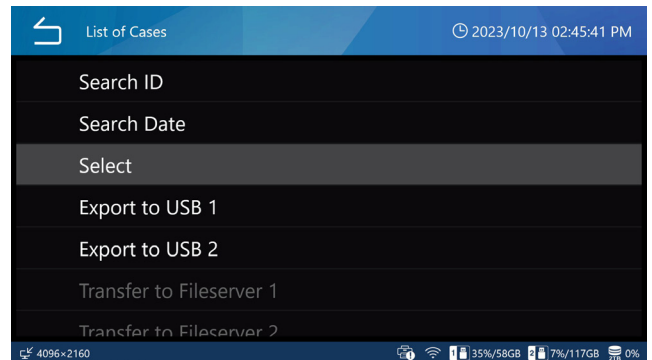
- Deleting recorded data for an exam/surgery also deletes its patient information.
- Deleted data cannot be restored.
- Use the formatting function to delete everything on a storage device or the internal HDD.

## When deleting with respect to each Case of an exam/surgery

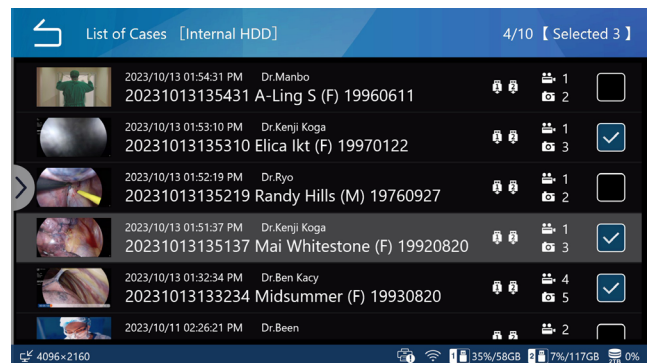
- 1 Select the recorded data you want to delete. From the List of Cases (page 39), select the Case to be deleted.**
- 2 Swipe from left to right to open the context menu.**



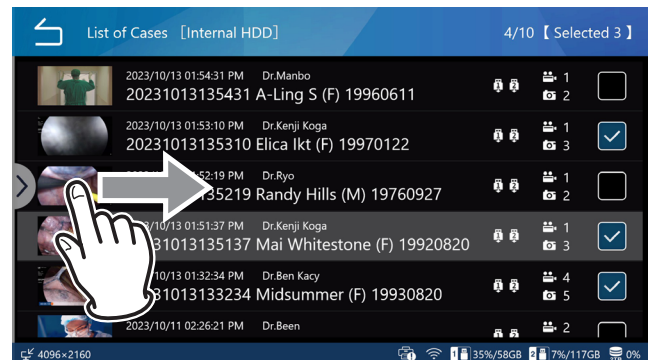
### 3 Select "Select".



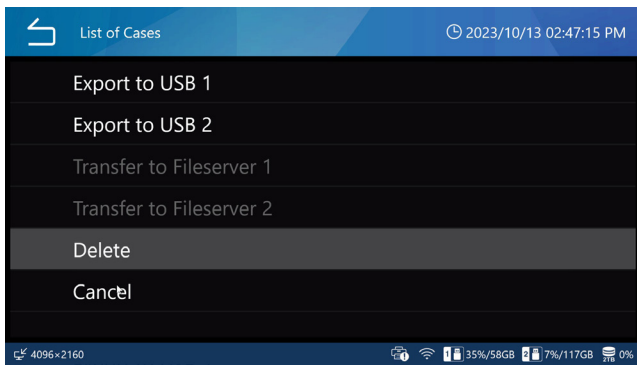
- 4 Check the rightmost checkbox of the recorded data you want to delete. (Multiple selections are possible.)**



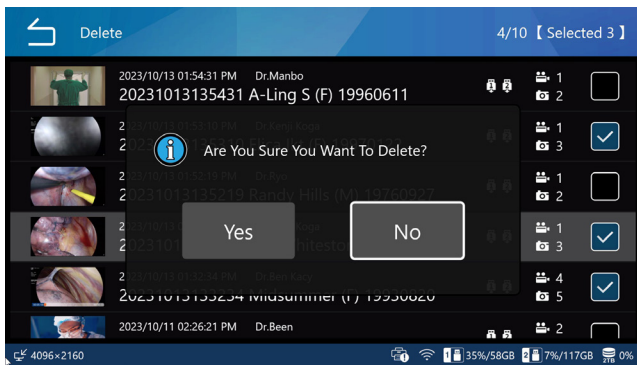
- 5 Swipe from left to right to open the context menu.**



**6 Select “Delete”**

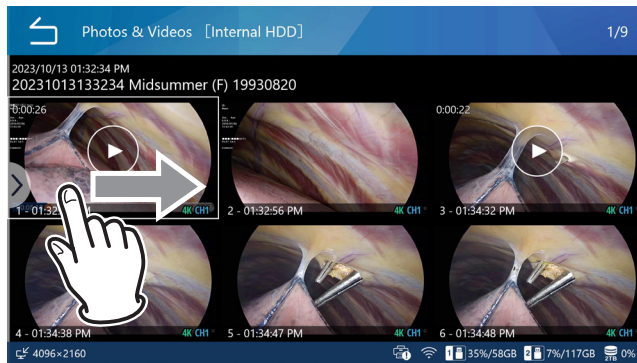


**7 Tap “Yes” to delete the data. If you do not want to delete the data, tap “No”.**



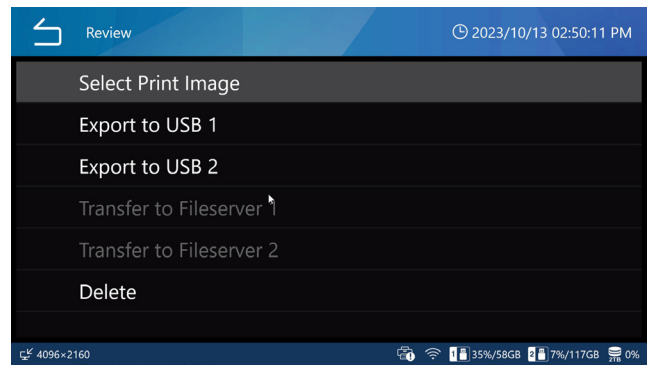
**When deleting videos/photos individually**

**1 From the List of Cases (page 39) , select the recorded data containing the videos/photos you want to delete to display the “Photos & Videos” screen.**



**2 Swipe from left to right to open the context menu.**

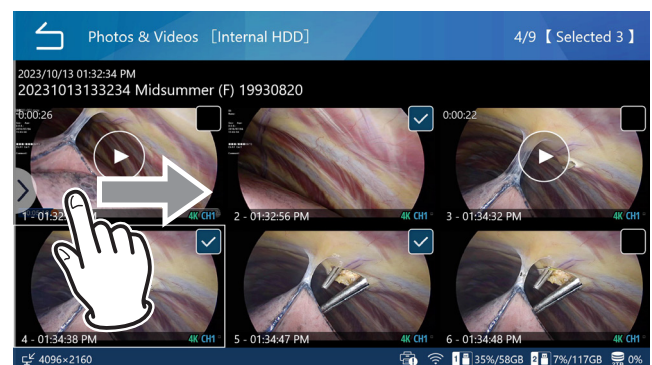
**3 Select “Select”.**



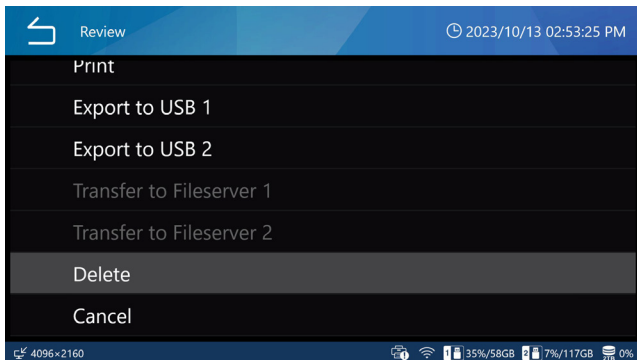
**4 Check the rightmost checkbox of the videos/photos you want to delete. (Multiple selections are possible.)**



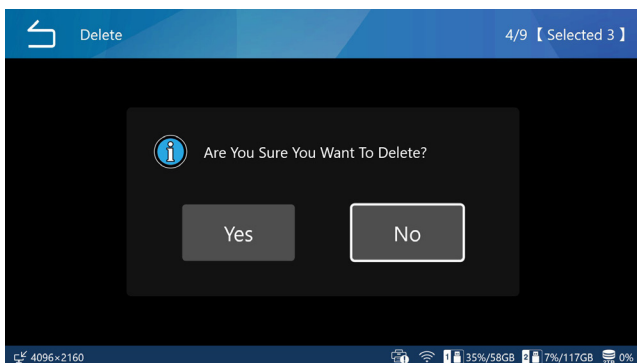
**5 Swipe from left to right to open the context menu.**



**6** Select “Delete”



**7** Tap “Yes” to delete the video(s)/photo(s).  
If you do not want to delete the data, tap  
“No”.



# Transferring and copying recorded data

## Network transfer

Recorded data can be transferred over the network by setting on page 64, "File Server 1".

SURGEONE transfer requires the Surgeone V2 app for Windows.

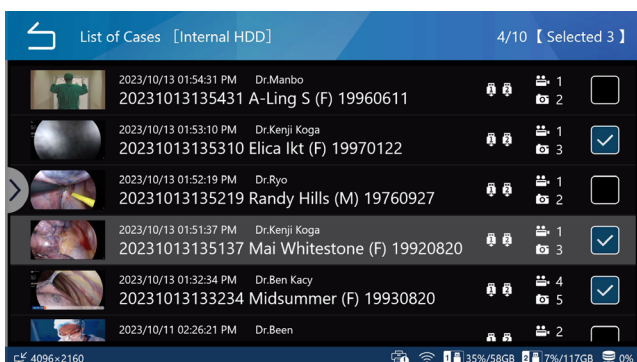
## Transferring and copying videos/photos

Recorded data can be copied to a USB storage device or transferred over a network using the file server settings for each Case of an exam/surgery and individual videos/photos respectively.

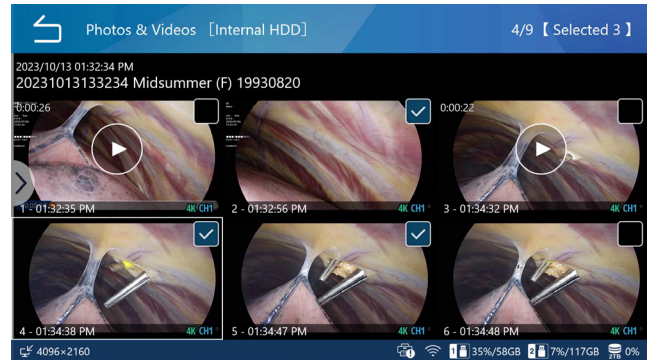
SURGEONE transfer requires the Surgeone V2 app for Windows.

- 1 Select the recorded data you want to transfer/copy.**
- 2 Select the recorded data and/or videos/photos you want to delete by performing the same operation as on page 45, "Deleting recorded data".**

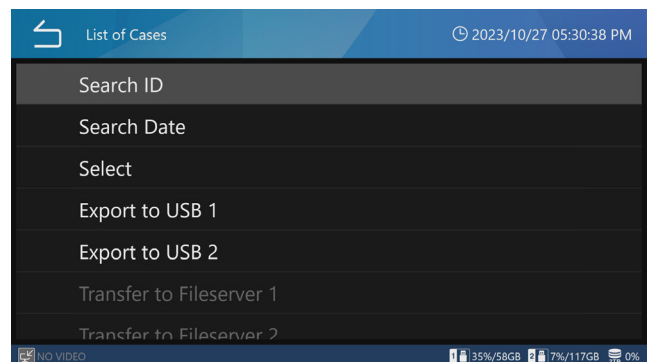
## When deleting with respect to each case of an exam/surgery



## When deleting videos/photos individually



- 3 Swipe from left to right to open the context menu after selecting recorded data and/or videos/photos.**
- 4 Select one of the following to copy to a USB storage device or transfer to a file server:**



- Export to USB1
- Export to USB2
- File Server 1
- File Server 2

When the process is complete, the List of Cases appears again.

- Tap the back icon (⏪) to return to the previous screen.
- To stop transferring or copying, press the STOP button to stop transferring/copying.



### **NOTE**

When a USB device or file server is not connected, the display is grayed out and cannot be selected.

During transfer/copy, you can stop the transfer/copy by pressing the "STOP" button.

If you cancel the transfer to the file server, the recorded data will be in a transfer pending state.

If automatic transfer of the file server is set, the recorded data that was in transfer pending status will be transferred again.

The videos of Original or Proxy selected in Video Modes of "USB Storage" will be automatically saved to the USB device.

Similarly, the videos of Original or Proxy selected in Video Modes of "File Server 1" and "File Server 2" will be transferred to each respective file server.

"Original" and "Proxy" of "Video Mode" to be transferred/copied are as set in "USB1 Video Mode" and "USB2 Video Mode" in "USB Auto Save" on page 49 and as set in "File server 1" and "File server 2" on page 54.

If the media becomes FULL during transfer / copy, the videos/photos are not exported properly. Manually transfer / copy to a media with sufficient available space.

When "USB Write" is set to "Disabled" in the "Security" settings, "Write to USB1" and "Write to USB2" will not be displayed.

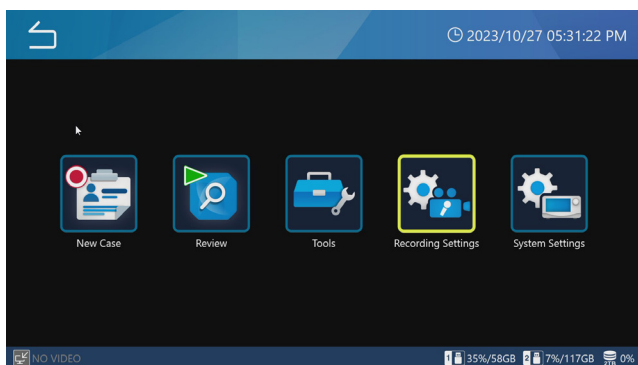
# Settings

## Settings overview

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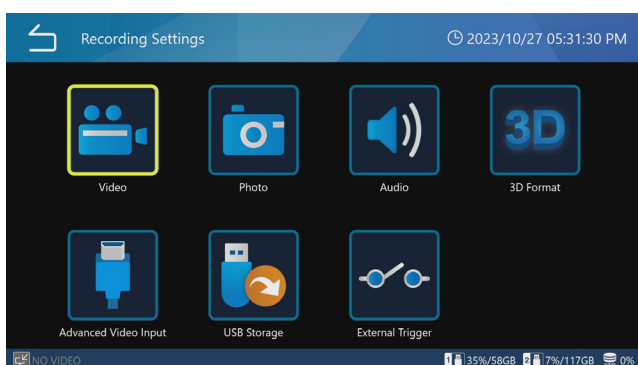
## Making Recording Settings

- 1 Tap "Recording Settings" in the main menu.



The settings menu is shown on the monitor and the display.

- 2 Tap the icon for the setting you want to change.



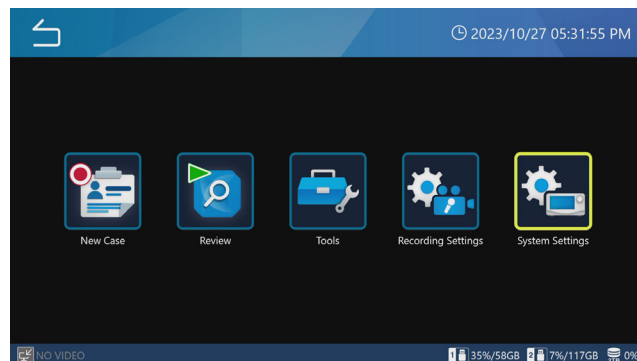
- 3 Tap a setting value or input a number for the setting or selection item.

Tap the Back icon (⏪) at the top left to return to the previous screen without changing any settings.

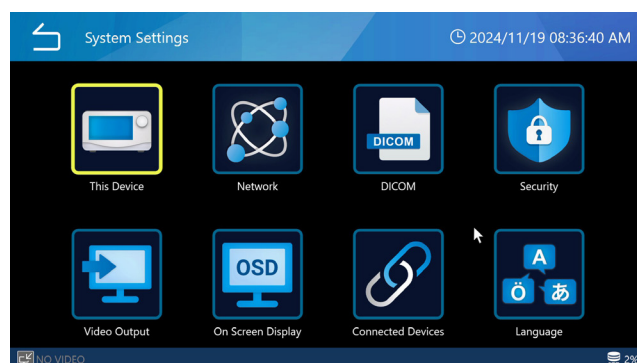
- 4 Tap the Back icon (⏪) to return to the home screen.

## Making System Settings

- 1 Tap "System Settings" in the main menu.



- 2 Tap the icon for the setting you want to change.



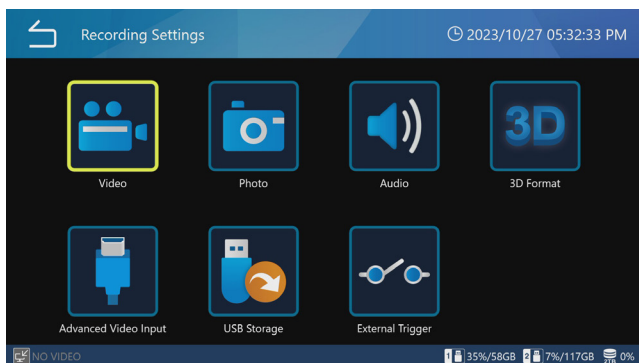
- 3 Tap a setting value or input a number for the setting or selection item.

Tap the Back icon (⏪) at the top left to return to the previous screen without changing any settings.

- 4 Tap the Back icon (⏪) to return to the home screen.

## Using “Recording Settings” menu

Recording settings can be made.



## Video



### File Format

Options:

- MP4 (default)
- TS

“MP4” is recommended for playback on this unit.

### Encoding Format

Options:

- H.264 (default)
- H.265

If the video file format is TS, only H.264 is enabled.

### Quality (4K UHD · HD)

EQ (25 Mbps · 8 Mbps) high compression (space-saving economy quality)

SQ (50 Mbps · 12 Mbps) standard quality (default)

HQ (100 Mbps · 20 Mbps) high quality

XQ (150 Mbps · 50 Mbps) highest quality

### NOTE

There are upper limits for 3D dual stream, video File Division Size “1GB”, and proxy recording. Please set below

the upper limit in the explanation of each item.

### File Division Size

Options:

- 1 GB
- 4 GB (default)
- None

### NOTE

When the File Division Size is set to “1GB”, set the video recording quality to “HQ” or lower.

### PIP/PBP Recording

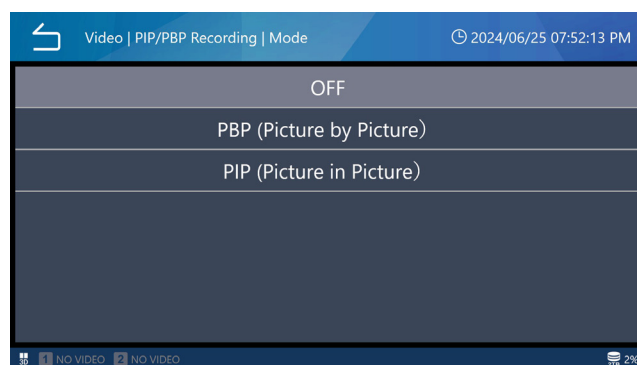
When using 2CH input, you can record picture-in-picture or picture-by-picture images as simultaneous dual-screen recordings. To ensure proper recording, the following conditions must be met:

- Video input CH2 must be set to ON.
- The 3D setting must be OFF.
- Both CH1 and CH2 must be receiving valid video input with a resolution of 1920 x 1200 or lower.

Please note that picture-in-picture/picture-by-picture recording cannot be performed when recording still images.

### PIP/PBP Video Recording

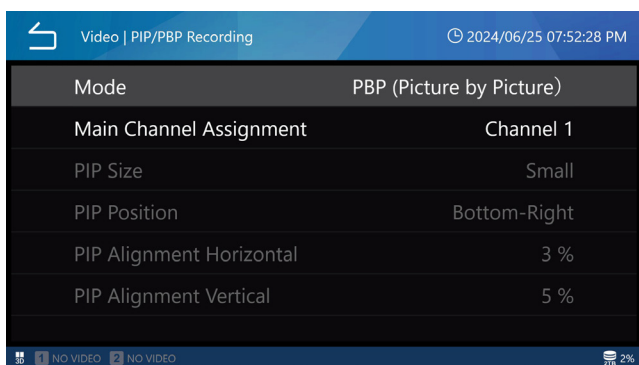
For simultaneous recording on two videos, select from the following three options:



PBP (Picture by Picture)

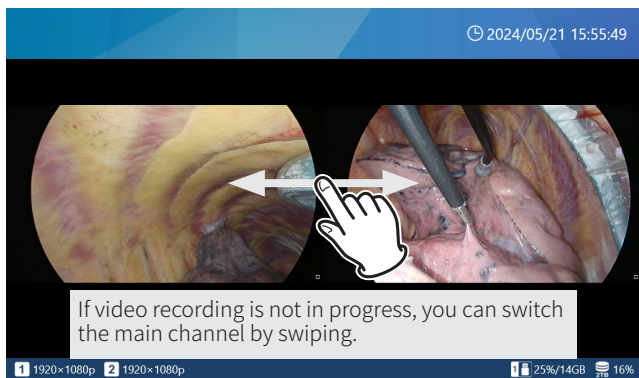
Records using Picture by Picture mode.

During Picture by Picture recording, input videos from CH1/CH2 are recorded side by side.



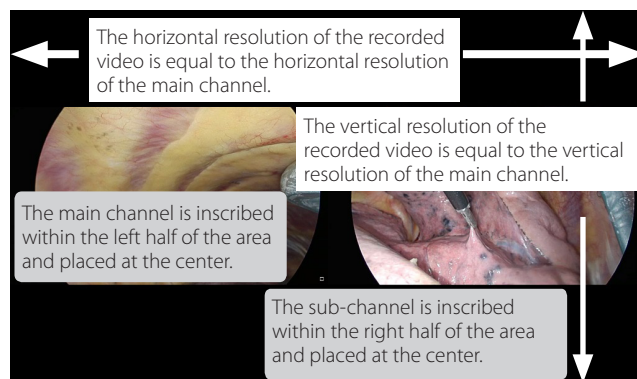
The video input on the left side is the main channel, and the one on the right side is the sub-channel. When not recording video, the main channel can be switched by swiping the touch panel (excluding External Touch Panel Mode 2).

During Picture by Picture recording, the following a recording indicator will be displayed on the top right of the screen.



During Picture by Picture video recording, the resolution and layout of the recorded video are as follows:

- The overall resolution of the recorded video follows the resolution of the main channel's video input.
- The resolution of the recorded video is divided equally into left and right, with the main channel on the left and the sub-channel on the right.
- The video from each channel is placed so that it is inscribed in the equally divided left and right areas while maintaining the aspect ratio.

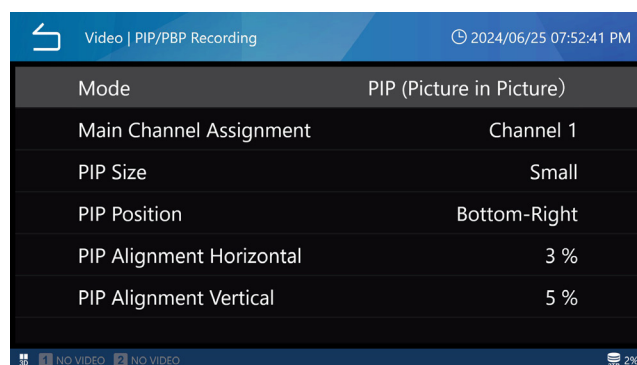


### PIP (Picture in Picture)

Records using Picture in Picture mode.

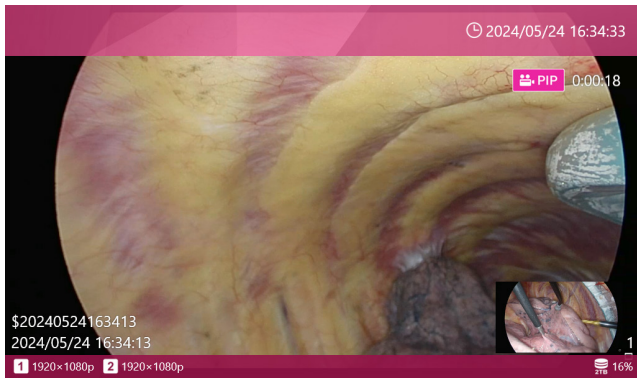
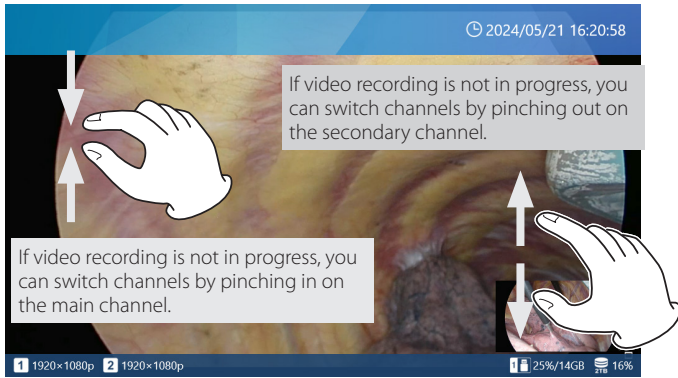
When Picture in Picture recording is enabled, the sub channel is placed inside the main channel during recording.

The video input that occupies the entire recording area is the main channel, and the small video input placed inside it is the sub channel.



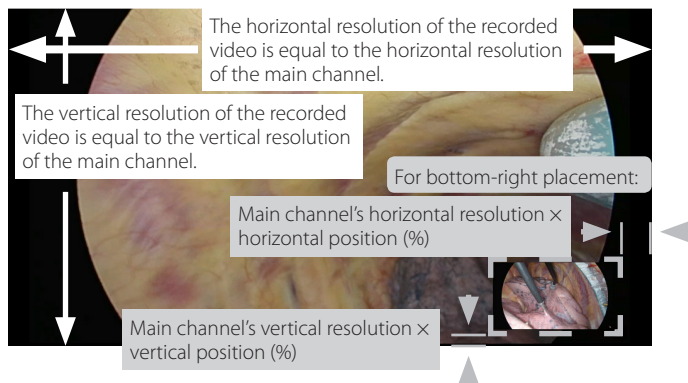
The embedding size, placement and position of the sub channel can be specified. When video is not being recorded, you can switch the main channel by pinching on the touch panel (excluding External Touch Panel Mode 2).

During Picture in Picture recording, the following a recording indicator will be displayed on the top right of the screen.



During Picture in Picture video recording, the resolution and layout of the recorded video are as follows:

- The overall resolution of the recorded video follows the resolution of the main channel's video input.
- The main channel is placed throughout the entire recorded video.
- The sub-channel is placed at the set position and with the set size.



OFF

Picture in Picture recording and Picture by Picture recording will not be performed.

The default setting is "OFF"

## PIP/PBP Video Recording Main Channel

Sets the main channel for Picture in Picture and Picture by Picture recording.

The default setting is "Video Input CH1"

## PIP Embedding Size

Changes the embedding size of the sub-channel during Picture in Picture recording.

The vertical resolution is determined as a ratio of the main channel's vertical resolution, with the aspect ratio following the input video.

Small: 1/5 of the main channel's vertical resolution

Medium: 1/4 of the main channel's vertical resolution

Large: 1/3 of the main channel's vertical resolution

The default setting is "Small".

## PIP Embedding Position

Sets the embedding position of the sub-channel during Picture in Picture recording from any of the four corners.

Top-left: Placed in the top left corner of the main channel

Top-right: Placed in the top right corner of the main channel

Bottom-left: Placed in the bottom left corner of the main channel

Bottom-right: Placed in the bottom right corner of the main channel

The default setting is "Bottom-right".

## PIP Embedding Horizontal Position

Changes the horizontal position (margin from left edge/ right edge) of the sub-channel during Picture in Picture recording.

Specifies the amount of white space to be left from the left or right edge of the main channel in percentage units, taking the horizontal resolution of the main channel as 100%.

If the settings cause the sub channel to extend beyond the main channel video area, the excess portion will be cut off.

You can set a value between 0 and 95%.

The default setting is "3%".

### PIP Embedding Vertical Position

Changes the vertical position (margin from the top edge/ bottom edge) of the sub-channel during Picture in Picture recording.

Specifies the amount of white space to be left from the top or bottom edge of the main channel in percentage units, taking the vertical resolution of the main channel as 100%.

If the settings cause the sub channel to extend beyond the main channel video area, the excess portion will be cut off.

You can set it from 0 to 95%.

The default setting is "5%".

### Proxy Recording

Select "ON" or "OFF" for proxy video recording. Proxy recording is valid only when "Video Input CH2 Valid" in "Video Input" is set to "OFF". Also, proxy video recording is performed only when the video input image is 4K (4096x2160 or 3840x2160).

- The default is "OFF".

What is proxy video recording?

Simultaneous recording of 4K video and FHD when 4K video signals are being input.

The relationship between the original input resolution and the resolution of the created proxy is as follows.

3840x2160 → 1920x1080

4096x2160 → 2048x1080

Auto save to USB device and auto transfer to file server can transfer either original (4K) or proxy (FHD) images depending on their settings.

For proxy video recording of 3D video, select "Side-by-Side", "Top-and-Bottom", or "Line-by-Line" in the "3D Format" setting according to the input video. Original video and proxy video (2D video) are recorded only when the video input is 4K and FHD. For video inputs with resolutions other than these, only the original video will be recorded.

#### NOTE

When using Proxy Recording in the same CASE, set "Video recording quality" to "HQ" or lower.

### Frame Skip Recording

When 4K60 fps is input to 2 ch, it is thinned to 30 fps and recorded.

Valid for HDMI® models only.

When the video system setting of "3D" is "line by line", 4K60 fps can be received up to 1 ch.

Set to "OFF" for SDI models.

- The default is "OFF".

#### NOTE

Switch the settings without inputting video signals, or turn the power off and on after switching the settings.

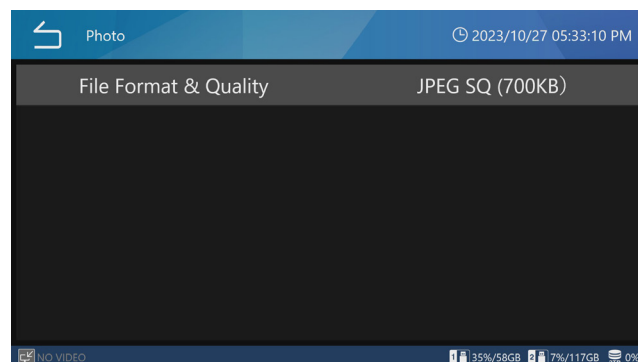
### Recording Stand-by Duration

If the video signal is interrupted during recording, the recording will be paused.

If the video signal recovers within the time set in "Recording restart standby time", this unit returns to the recording state. If the video time does not recover within the set time, recording will stop.

The default value is "72 hour".

## Photo



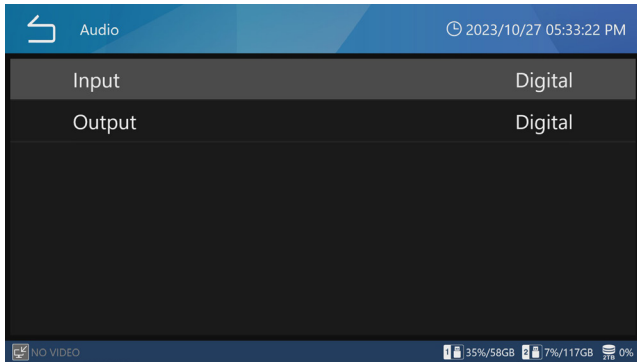
### File Format & Quality

JPEG EQ (600 KB)	high compression JPEG (space-saving economy quality)
JPEG SQ (700 KB)	standard-quality JPEG (default)
JPEG HQ (2 MB)	high-quality JPEG
PNG (6 MB)	high quality
TIFF (24 MB)	high quality, uncompressed

#### NOTE

Only the JPEG format has different recording quality settings. The PNG and TIFF format settings are high quality.

## Audio



### Input

Digital	Record audio input signals digitally. (Default)
Analog	Record audio signals coming in via the AUDIO input connectors on the back of the unit.

### NOTE

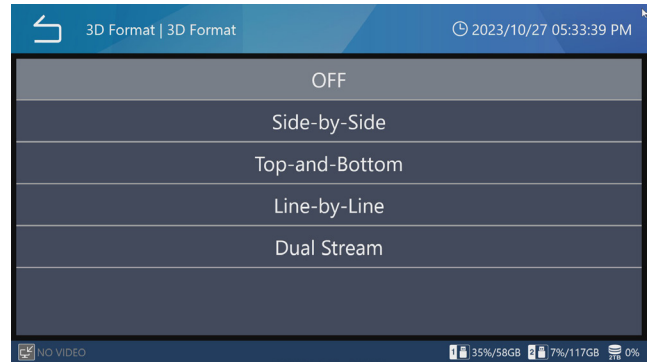
Please connect the microphone before powering on the device.

If the microphone audio is not recognized, set the Audio Input to 'Digital' once, then switch it back to 'Analog'.

### Output

OFF	Do not output any audio signals.
Digital	Output recorded audio signals digitally (HDMI) (Default).
Analog	Output recorded audio signals via the AUDIO output connectors on the back of the unit.

## 3D Format



### 3D Format

Options:

- OFF (default)
- Side-by-Side
- Top-and-Bottom
- Line-by-Line
- Dual Stream

- If the selected signal is not input to this product, "NO VIDEO" is displayed at the bottom left of the LCD, and when recording is performed, "No video input" is displayed and images cannot be recorded.
- When the video system setting of "o 3D" is set to "Line by Line", 4K60 fps can be received up to 1ch.

## Advanced Video Input

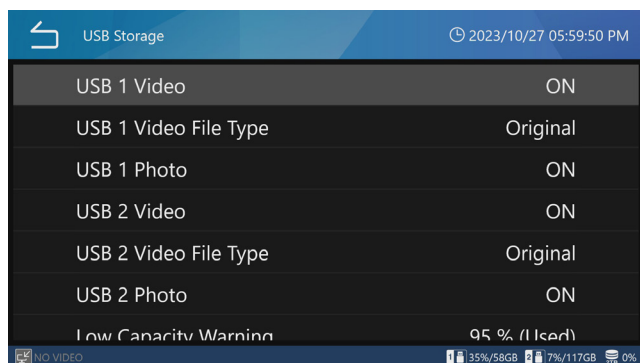
Configure video input settings.

See Preparations for two-channel and 3D recording on page 28 for details.



## USB Storage

Use these settings to record videos and photos not only to the internal HDD but also to USB storage devices connected to the unit.



### USB 1 Video

- ON Record videos to USB 1. (Default)
- OFF Do not record videos to USB 1.

### USB 1 Video Mode

- Original Input resolution video is transferred. (Default)
- Proxy Proxy resolution video is transferred.

### USB 1 Photo

- ON Record photos to USB 1. (Default)
- OFF Do not record photos to USB 1.

### USB 2 Video

- ON Record videos to USB 2. (Default)
- OFF Do not record videos to USB 2.

### USB 2 Video Mode

- Original Input resolution video is transferred. (Default)
- Proxy Proxy resolution video is transferred.

### USB 2 Photo

- ON Record photos to USB 2. (Default)
- OFF Do not record photos to USB 2.

### Low Capacity Warning

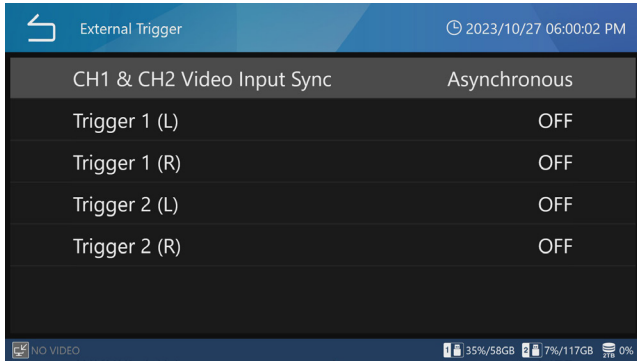
- 0 Do not output a capacity warning.
- Percentage value Output an alert message and a sound when the used space of a USB storage device exceeds the set amount (default: 95%)

## IMPORTANT NOTICE

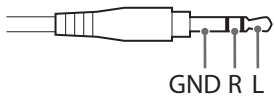
- When set to "ON", any newly recorded videos/photos are copied automatically to USB storage devices connected to the corresponding USB ports. Makes sure that the USB storage devices have enough free space.
- Video recordings are divided and copied at intervals. If the storage device becomes full during video recording, data up to that point will be copied. Since the last video was not copied completely, it will be copied again from the beginning when a new storage device is connected.
- If the media becomes FULL during transfer/copy, the images have not been exported properly. Please transfer/copy manually to a media with sufficient free space.
- When "Disabled" is set for "USB Device Exporting" under "Security", the USB Storage selection is grayed out and cannot be selected. In addition, automatic recording to USB1 and USB2 will not be performed.
- When the video type is set to "Proxy", if no proxy video has been recorded, the video in the input resolution will be transmitted.

## External Trigger

Make these settings to use external contact switches and other triggers to control video recording and photo capture.



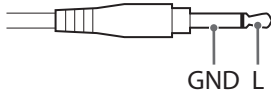
Use stereo mini plugs to connect one or two external contact switches to the TRIGGER 1 and 2 connectors on the back.



To make it function as a trigger, make sure the external switch electrically connects R and GND or L and GND.

### IMPORTANT NOTICE

- When using mono plugs, set the R settings to OFF.



- When using either L or R only as a trigger, set only the one being used (L or R) to ON. Set the one not being used to OFF.
- When setting both L and R for the same connector, it will function properly if either the L or R terminal is always connected to GND.
- If the L/R and GND terminals are shorted with a contact switch and the voltage between terminals becomes less than 1.4 V, the trigger will become ON.

## Channel Synchronization

Tap “External Trigger” and then tap “CH1 &CH2 Video Input Sync”

### Asynchronous:

Each input channel operates independently.

Trigger 1 (L) and Trigger 1 (R) control the operation of Input Channel 1.

Trigger 2 (L) and Trigger 2 (R) control the operation of Input Channel 2.

### Synchronous:

Operating either Trigger 1 or Trigger 2 will cause both Input Channels 1 and 2 to perform the same operation.

### Combination

There are cases where you want to record videos from Input Channels 1 and 2, but the timing and duration of the recordings differ for each channel.

- In this mode, the recorded files will have the same length, allowing you to compare the playback images of both channels simultaneously, making it convenient to always compare images with the same elapsed time. External trigger reception is performed asynchronously, with Trigger 1 controlling CH1 and Trigger 2 controlling CH2.
- Recording will not start on a channel that has no video input at the start of the recording.
- For more details, please refer to the examples of operation below.

Recording state controlled by trigger input		Actual recording state
CH1	CH2	
Pause	Stop	Pause
Stop	Pause	Pause
Recording	Stop	Recording
Recording	Pause	Recording
Stop	Recording	Recording
Pause	Recording	Recording

- Even if all video signals are lost during recording, recording will continue without entering a pause state after 1 minute.

### Setting and Operation Examples of Combination

Video Input: CH1, CH2 (2-channel input)

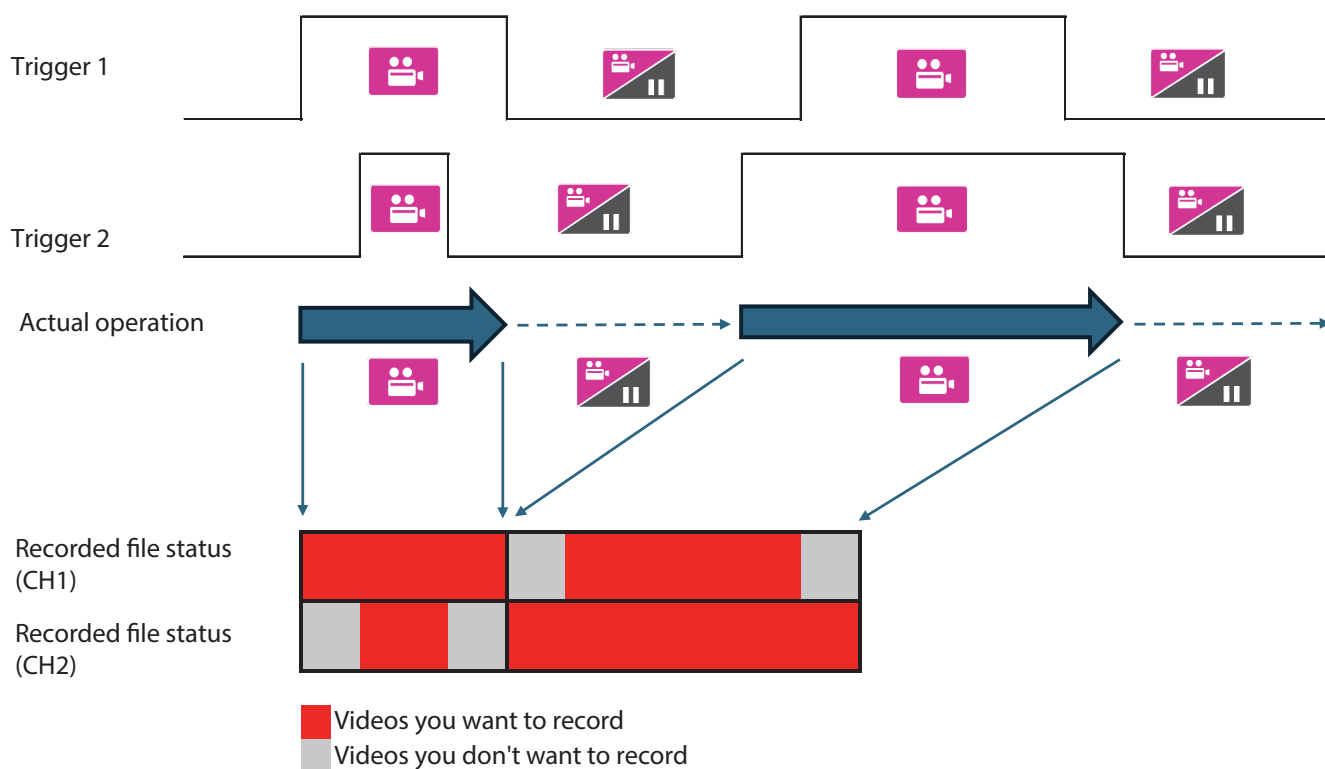
Channel Synchronization: Combination

Trigger 1 (L): Video Recording maintained (Pause)

Trigger 1 (R): OFF

Trigger 2 (L): Video Recording maintained (Pause)

Trigger 2 (R): OFF



**Trigger1 (L), Trigger1 (R), Trigger2 (L), Trigger2 (R)**

Set the operations for the L and R channels of the TRIGGER 1 and TRIGGER 2 connectors individually.

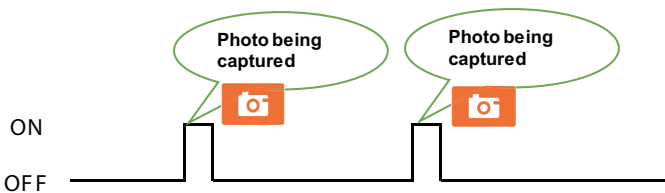
OFF	Trigger disabled (default).
Photo Capture	Capture one photo each time the contact switch closes.
Video REC Start ⇔ Pause	Start and pause video recording alternately. (Start when paused, and pause when recording.)
Video REC Stop	Stop video recording when the contact switch closes.
HOLD to Video REC & UNHOLD to Pause	Record video while the contact switch is closed. Pause when it opens.
HOLD to Video REC & UNHOLD to Stop	Record video while the contact switch is closed. Stop when it opens.
Video REC Start ⇔ Stop	Start and stop video recording alternately. (Start when stopped, and stop when recording.)
Video REC Start ⇔ Close	Start and stop video recording, and close the CASE.

**OFF**

The operation by trigger is invalid.

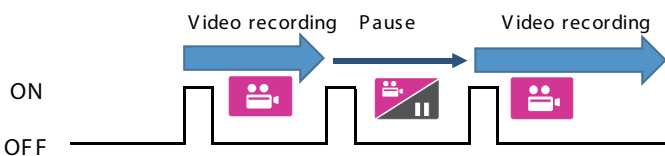
**Photo Capture**

A photo is captured each time the trigger is turned ON.



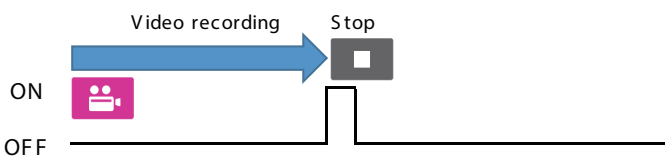
**Video REC Start ⇔ Pause**

Turn ON the trigger to start recording video. Turn ON the trigger again to pause. Turn ON the trigger in that state to start recording video again.



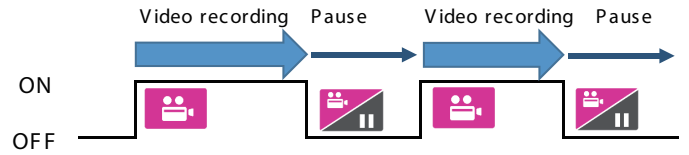
**Video REC Stop**

Turn ON the trigger during video recording to stop video recording.



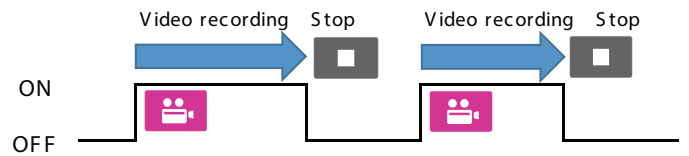
**HOLD to Video REC & UNHOLD to Pause**

Turn ON the trigger to start recording video. Turn ON the trigger again to pause. Turn ON the trigger in that state to start recording video again.



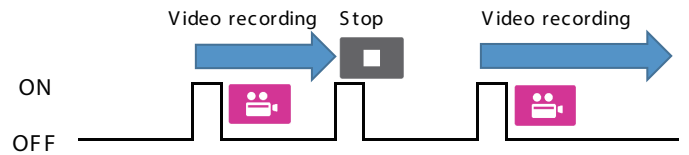
**HOLD to Video REC & UNHOLD to Stop**

Video is recorded only while the trigger is ON, and recording is stopped when the trigger is turned OFF.



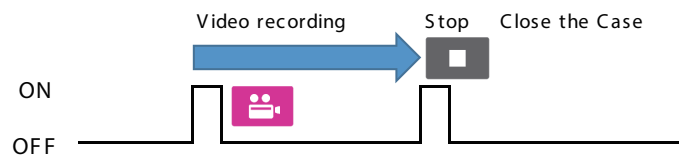
**Video REC Start ⇔ Stop**

Turn ON the trigger to start recording video. Turn ON the trigger again to pause. Turn ON the trigger in that state to start recording video again.



**Video REC Start ⇔ Close**

Turn ON the trigger to start video recording. Turn ON the trigger again to stop recording and end study/surgery.



## Using “System Settings” menu

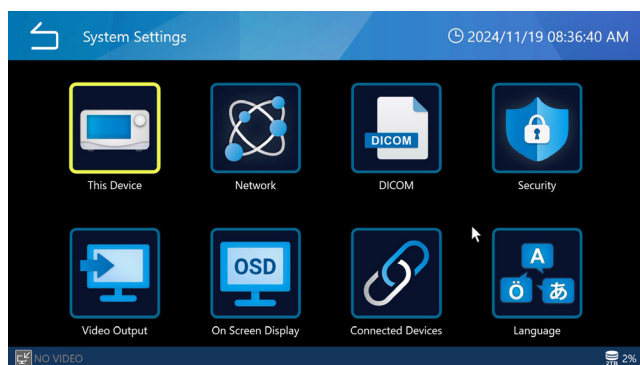
System settings can be made.



The following menu items in the “System” screen can be selected when logged in as an administrator or when “User Login” is disabled.

- Free Up Space (iHDD)
- Low Capacity Warning (iHDD)
- Beep Sound
- Time

## This Device



### Free Up Space (iHDD)

The amount of space available for recording on the internal HDD can be set as a percentage. Each time the UR-NEXT 4K is started, the free space on the internal HDD is checked. If it does not meet the percentage of the total capacity specified for recording, the unit will automatically delete files, oldest first, to make the specified amount of space available.

In order to use the internal HDD efficiently, set the value as small as is reasonable. The default setting is “10%”.

## IMPORTANT NOTICE

- Automatically deleted files cannot be restored. Save necessary files on a network server or USB storage device, for example, as soon as possible.
- The UR-NEXT 4K must be restarted in order to free the specified space. If it is used without restarting, this function will not be enabled, so the HDD could run out of free space during recording. We recommend shutting down once per day.
- If the internal HDD runs out of free space during recording, it will stop and additional recording will not be possible. Check the used space of the HDD at the bottom right of the display and confirm that there is sufficient free space before use.
- Recording will stop when the amount used reaches 99 percent in order to allow the internal HDD to complete processing. For this reason, the maximum amount shown for internal HDD use is 99 percent.

### Low Capacity Warning (iHDD)

Set the threshold to display the remaining capacity warning for the internal HDD.

### Storage Devices Usage

Specify how the capacity of the internal HDD and USB media is displayed at the bottom of the screen. You can select between “Usage Rate (%)” and “Recordable Time.” The default setting is “Usage Rate (%)”.

When “Usage Rate (%)” is selected, the usage/total capacity is displayed. The usage is shown as a percentage, and the total capacity is displayed in GB or TB.

When “Recordable Time” is selected, the free space is displayed as an estimated recordable time (hours, minutes).

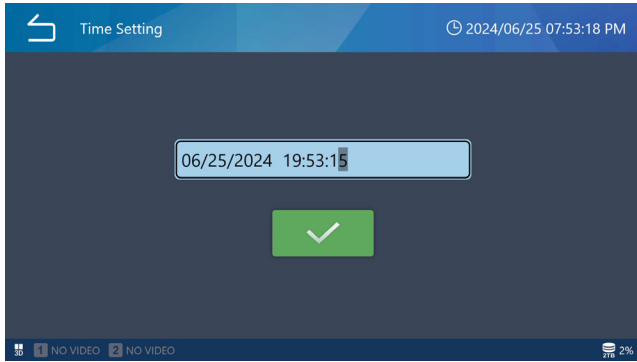
- If recording to USB is not possible, such as when USB automatic save is set to “OFF” or the capacity is FULL, the capacity of the USB media will be displayed as “Usage Rate (%)” even if “Recordable Time” is selected.
- When there is no video input, the capacity will be displayed as “Usage Rate (%)” even if “Recordable Time” is selected.
- When there is no video input, the capacity will be displayed as “Usage Rate (%)” even if “Recordable Time” is selected.

## Beep Sound

Select ON/OFF for the beep sound during operation. The default value is "ON".

## Time

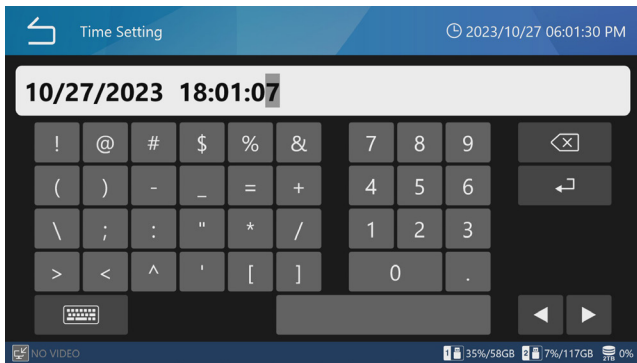
Use this to set the internal clock. The following screen appears.



Tap the date and time field and enter the current date and time as month, day, year, hour, minute and second.

## Adjustment

Tap "Time Change" to set the built-in clock. A numeric field will be displayed. Tap the date and time display input area to show the input screen.



Slash (/) and colon (:) are added automatically.

Example: For Mach 8, 2023 at 4:7:47 p.m. , enter 03/08/2023 16:07:47

Tap Enter (↵) to confirm the entry. Then, tap the check mark (✓) icon to enable the setting.

## NOTE

The UR-NEXT 4K has a built-in battery to run its internal clock. Under ordinary power supply conditions, this battery should last about five years. If the battery dies, accurate time information cannot be displayed. To have the battery changed, contact the retailer where you purchased the unit.

## Time Zone

Set the time zone for the area of use.

Select in one-hour increments between UTC-12:00 and UTC+14:00.

When this setting is changed, the time will automatically adjust according to the selected time zone.

The default setting is "(UTC+09:00) Tokyo, Seoul."

## Daylight Saving Time

Toggle the Daylight Saving Time ON/OFF.

The default setting is "OFF".

## NOTE

The settings for time zone and Daylight Saving Time only affect the timestamps of exported files and clock synchronization via NTP.

- Impact on timestamps of exported files  
USB or SMB destination filesystems  
Impact of setting time zone/Daylight Saving Time  
exFAT (file system when formatting USB with this product): Affected  
NTFS: Affected  
FAT32: Not affected

- exFAT (file system when formatting USB with this product): Affected  
NTFS: Affected  
FAT32: Not affected

## Date Format

Tap Date Format to set the display format for the date.

- YYYY/MM/DD: Displays in the order of year, month, and day.
- MM/DD/YYYY: Displays in the order of month, day, and year.
- DD/MM/YYYY: Displays in the order of day, month, and year.

The default setting is "YYYY/MM/DD."

## NOTE

When transferring via DICOM or SURGEONE, if the settings differ between recording and transfer, the correct date of birth may not be transferred accurately.

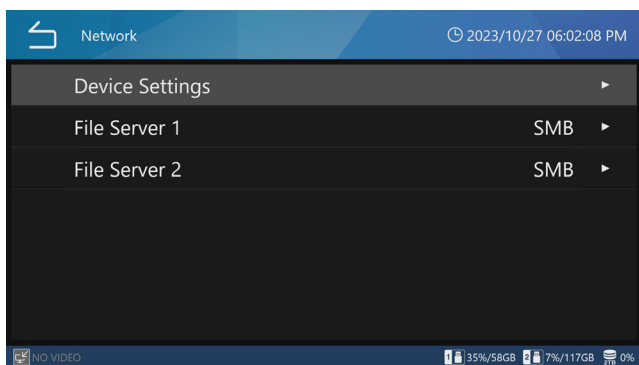
## Network

Network settings are necessary for transmitting videos and photos over a network.

### IMPORTANT NOTICE

- Do not connect with a network until you have finished making the settings.
- After changing the network settings, turn off the power of this unit once, connect to the network, and then turn on the power.
- Follow the directions from the administrator of the connected network regarding network settings and connections.

## Device Settings



### File Server 1

Make the following settings for File Server 1. Tap the Back icon (⏪) to apply any entered value.

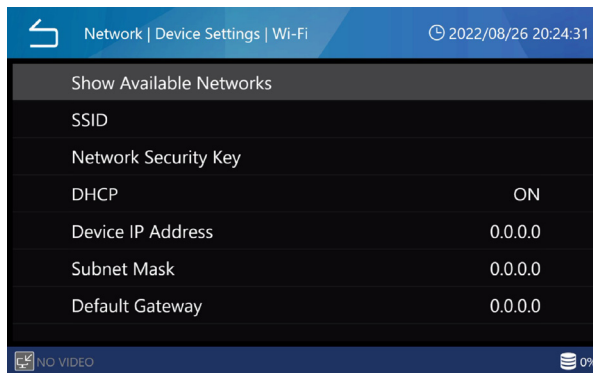
DHCP	
OFF	Manually set the IP address, subnet mask and default gateway and assign a fixed network address.
ON	Acquire the network address automatically (default). A DHCP server is necessary. With this setting, if automatic acquisition has succeeded, the IP address can be checked by pressing the STOP button when the home screen is open.
Device IP Address	Input the IP address of this unit. The default setting is "0.0.0.0".
Subnet Mask	Input the subnet mask of this unit. The default setting is "0.0.0.0".
Default Gateway	Input the default gateway of this unit. The default setting is "0.0.0.0".

### File Server 2

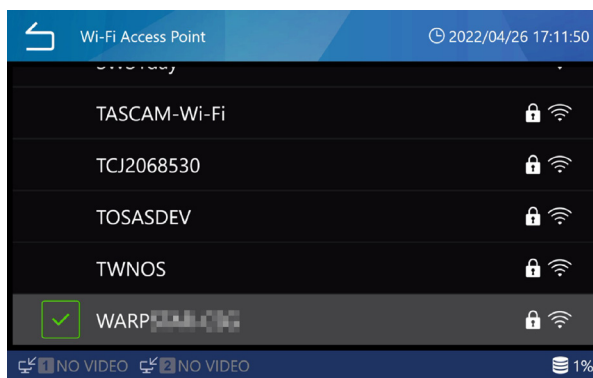
Each setting is the same as for File Server 2.

### Wi-Fi

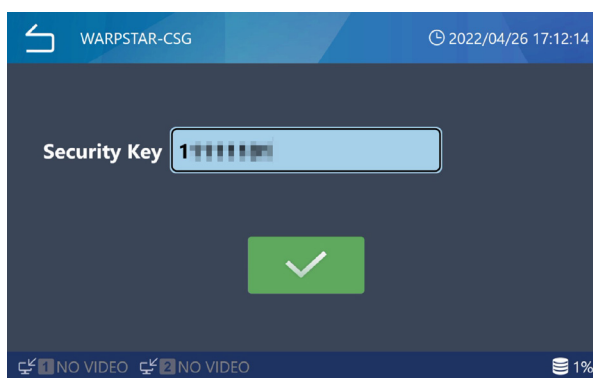
Show Available Networks



This opens a list of available Wi-Fi® access points. Tap the access point desired for connection.

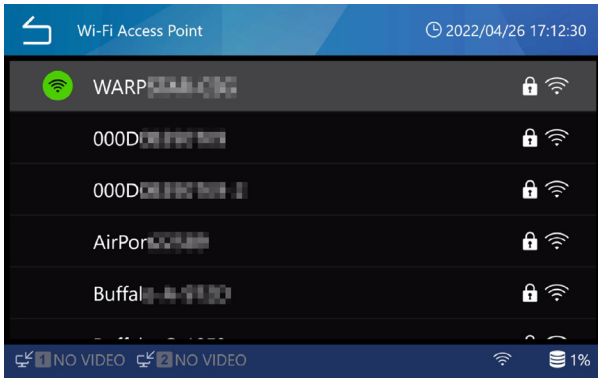


Enter the network security key, and tap the check mark.



Once connection is established, the connection icon appears to the left of the access point name.

Input the DHCP, IP address, subnet mask and default gateway as necessary.



### NTP Server IP Address

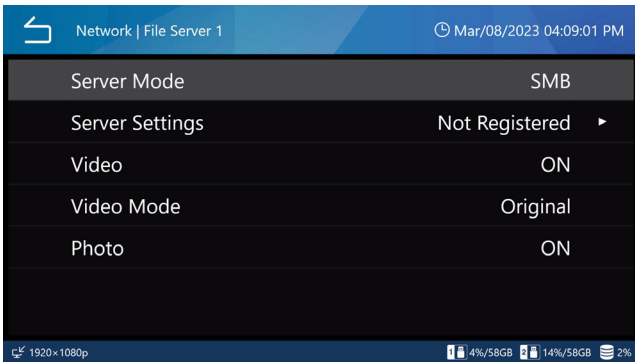
Enter the IP address of the desired NTP server.

### Communication Timeout

Enter the timeout in seconds.

Setting range: 5–120 (default:10)

## File Server 1



Server Mode

### SMB

Server Settings

SMB Server Path	Enter the shared name of the SMB server. Slashes (/) are input automatically at the beginning.
SMB Server 1 User Name	Enter the user name for the SMB server.
SMB Server 1 Password	Enter the password for File Server 1.
Video	Turn automatic video transfer ON/OFF. Default: ON
Video Mode	Select the type of video to be transferred to the file server. Original: Transfers the input video in its original resolution. (default) Proxy: If 4K video is input, the video converted to FHD resolution will be transferred. Select "Original" when no 4K video is input.

Photo	Turn automatic photo transfer ON/OFF. Default: ON.
-------	--

## SURGEONE

Server Settings

SURGEONE Server IP Address	Enter the IP address of the SURGEONE server
SURGEONE Server Port	Enter the port of the SUREONE server.
Video	Turn automatic video transfer ON/OFF. Default: ON
Video Mode	Select the type of video to be transferred to the file server. Original: Transfers the input video in its original resolution. (default) Proxy: If 4K video is input, the video converted to FHD resolution will be transferred. Select "Original" when no 4K video is input. When the video type is set to "Proxy," if a proxy video has not been recorded, the video in the input resolution will be transmitted.
Photo	Turn automatic photo transfer ON/OFF. Default: ON.

## File Server 2

These settings are the same as for File Server 1.

Changing the server mode will automatically restart the unit.

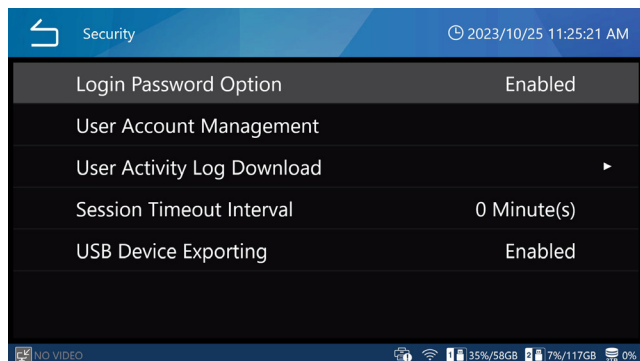
## DICOM

Please refer to the separate UR-NEXT4K DICOM IFU for more information.



## Security

Tap "Security" to access the setting screens.



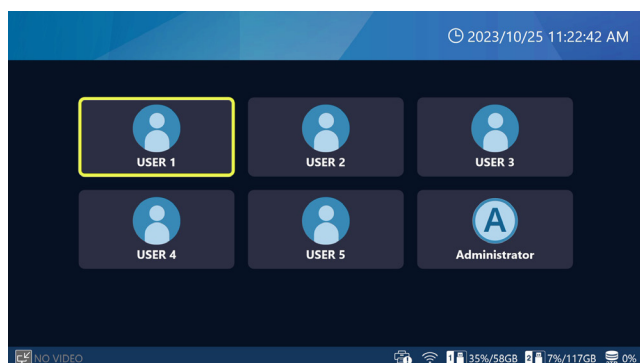
### Login Password Option

Select "Login Password Option"

After tapping "Login Password Option" choose between "Enabled" and "Disabled."

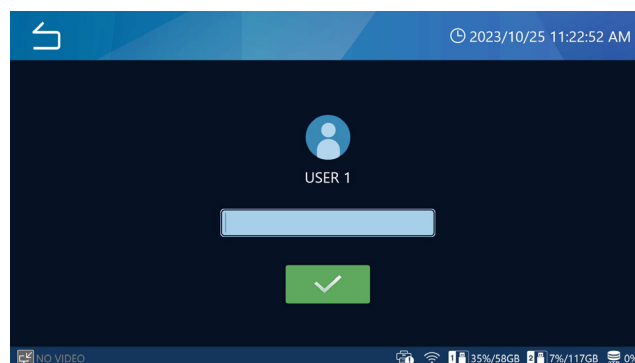
The default setting is "Disabled."

If you choose "Enabled" for "User Login," a user selection screen will appear when this unit is started.



Tap the user to log in to display the login screen. Enter the password to log in.

You can toggle the display of the entered password on and off using the button within the password entry field.



- Enabling or disabling "User Login" is only available when logged in as an Administrator.
- If you log in with a user other than the Administrator, some product features will be restricted.
- Users who have recorded data can view their own recorded data.
- The administrator user can view all data regardless of the user who recorded it.
- When user login is disabled, it is treated as the administrator user is logged in. For data recorded when user login is disabled, after changing to user login enabled, only the administrator user can view it.

For data recorded when user login is enabled, after changing to user login disabled, all recorded data can be viewed.

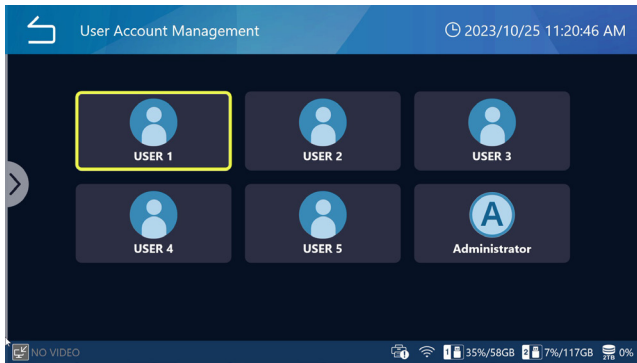
Recorded data that the currently logged in user does not have permission to view will not be displayed in the case list, so the user will not be able to know about the existence of data that they do not have permission to view.

- Currently logged-in users cannot see recorded data for which they do not have access rights, so they cannot know the existence of data for which they do not have access rights.

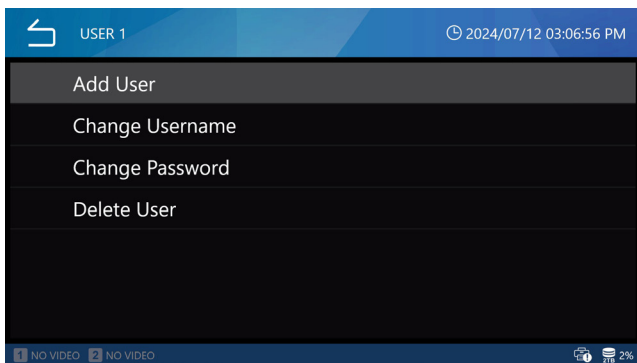
The default setting for the Administrator password is blank. After logging in, please change the password as instructed on page 66, "Change Password".

## User Account Management

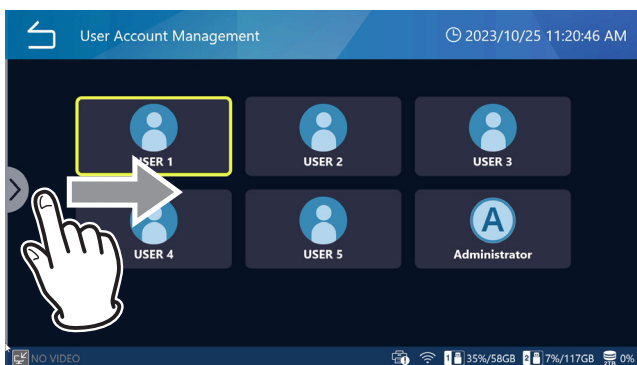
User settings and password changes can be made. Tap “User Account Management” to access the user management screen.



Tap a user icon to access the user settings menu.



The same menu appears if you slide the “>” mark on the left side of the screen to the right.



### NOTE

- When logged in as Administrator, all users are displayed. When logged in with a user other than Administrator, only the user himself is shown.
- User information will not be cleared even if Reset User Settings, Reformat iHDD, or Reset System is performed.
- User information will not be written to USB media even if configured through the “Tools / Advanced” menu.

## Add User

Tap “Add User” to add a new user.

When the user addition screen appears, enter the user name for the new user.

- Up to 5 users can be added.
- A username can have a maximum of 32 characters.
- You cannot specify a username that is already registered.
- Some usernames may not be allowed if they are system-reserved.

## Change User Name

Tap “Change Username” to change the username.

Once the user name change screen is displayed, input the new user name.

- A username can have a maximum of 32 characters.
- You cannot specify a username that is already registered.
- You may not be able to specify the user name if it is reserved by the system.
- Administrator’s username cannot be changed.
- “Username” cannot be selected unless a user is chosen in the User Management screen.

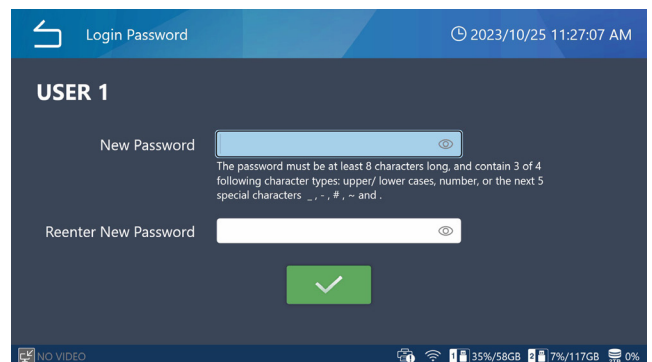
## Change Password

Tap “Change Password” to change the password.

When the password change screen appears, enter the New Password.

For confirmation, also enter the new password in “Reenter New Password.”

The password must be at least 8 characters and contain three of the following: uppercase letters, lowercase letters, numbers, or symbols. Spaces are not allowed.

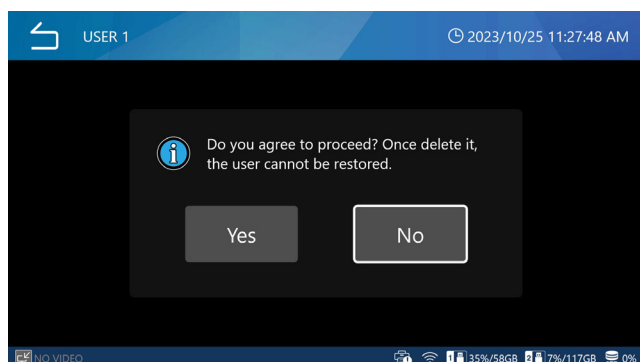


**NOTE**

- If you lose the Administrator's password, you will be unable to access recorded data. Keep the new password in a secure place.
- Change Password cannot be selected unless a user is selected on the User Management screen.

**Delete User**

Tap "Yes" to delete.



If you want to delete, tap "Yes."

**NOTE**

- Administrator cannot be deleted.
- Delete User cannot be selected unless a user is selected on the User Management screen.

**User Activity Log Download**

Export the user activity log file of this unit to a USB media.

The user activity log records information such as which users have logged in.

After tapping "User Activity Log Download," select a USB media.

Select the USB media from "USB1" and "USB2".

USB1: Exports the activity log file to USB1 media. When the export is complete, you will return to the previous screen.

USB2: Exports the activity log file to USB2 media. When the export is complete, you will return to the previous screen.

**NOTE**

- If there are already exported log files on the USB media, they will be overwritten.
- Export User Activity Log can only be selected when logged in as Administrator.

**Session Timeout Interval**

Set the session timeout time (in minutes).

Image playback will be locked if the specified time elapses without any operations. You will need to enter your password to unlock it.

Tap "Session Timeout Interval" to enter the timeout time.

The timeout time can be set in the range of 0 to 99999 minutes, with a default value of "0."

Setting "0" will disable the session timeout.

- Session Timeout Time can only be selected when logged in as Administrator.
- The session timeout time will be reset under the following conditions:
  - When any action is taken
  - During video recording
  - While playing a video

**USB Device Exporting**

Configure settings for exporting recorded images to a USB media.

After tapping "USB Device Exporting," select either "Disabled" or "Enabled."

The default setting is "Enabled."

When you choose "Enabled" for USB Write, the icon for USB media capacity display at the bottom of the screen will change.

In the case of "USB Write" set to "Enabled"



In the case of "USB Write" set to "Disabled"



Selecting "Disable" for USB Device Export prevents the export of recorded images to USB media.

- USB Write can be selected when logged in as an Administrator or when User Login is disabled.

## Video Output

### Primary Monitor (Regular Type)

Specify the port to output the primary monitor's video. Select between HDMI® and DisplayPort.

The default setting is "HDMI."

- When selecting "DisplayPort," we recommend setting the "Audio Output" to "Analog."
- If HDMI is selected for the Primary Monitor, the Touch Panel Output Connector will be set to DisplayPort.

### Recommended Resolution by Monitor

Set the "Recommended Resolution by Monitor" of the main monitor.

You can select "Recommended resolution" or "Maximum resolution" according to your monitor.

The default is ON."

### Resolution

Specifies the maximum resolution for the main monitor's video. Choose between 4096x2160 and 1920x1080. The default is "4096x2160." It is not possible to set the maximum resolution of both the main and secondary monitors to 4096x2160.

If you set the main monitor's maximum resolution to 4096x2160, the maximum resolution for the secondary monitor will be set to 1920x1080.

### Secondary Monitor (Touch Type)

Specify the port to output the secondary monitor's video. Select between HDMI and DisplayPort. The default setting is "DisplayPort."

If HDMI® is selected for the Secondary/Touch Panel Monitor, the Monitor Output Connector will be set to DisplayPort.

### Resolution

Specifies the maximum resolution for the secondary monitor's video. Choose between 4096x2160 and 1920x1080. The default is "1920x1080."

It is not possible to set the maximum resolution of both the main and secondary monitors to 4096x2160.

If the maximum resolution of the secondary monitor is set to 4096x2160, the maximum resolution of the main monitor will be set to 1920x1080.

## Multi-input Display Setting

Select the video output when "Video Input CH2 Enabled" is ON and there are two video inputs.

- If "Dual Stream" is selected for the "3D Format" setting in "Recording Settings," the "Video Input Configuration" cannot be selected.

### Appearance

Display Main Channel Video Only:

Displays video output only from the video input set in the "Main Channel."

Picture-by-Picture:

Initial video output is displayed side by side.

Picture-in-Picture (Position):

Initial video output is displayed overlapping.

The video from the sub-channel will be positioned in the bottom left corner.

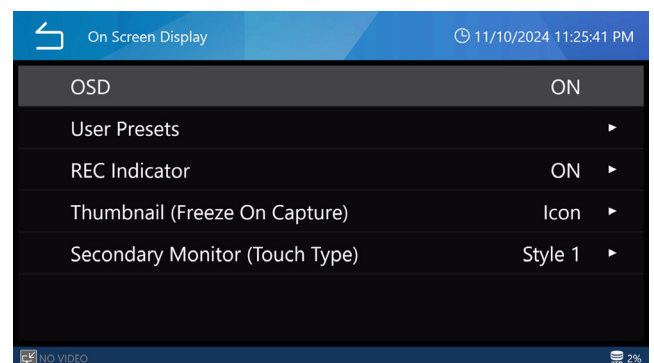
The default is "Picture-in-Picture (Lower Left)."

### Main Channel Assignment

Select CH 1 Video Input or CH 2 Video Input.

The default is "CH 1 Video Input."

## On Screen Display



Use these settings to specify what is displayed on the screen and how.

### OSD

Select the OSD information to display on the screen.

ON: Displays all OSD information.

ON (Icons only): Displays the icon and thumbnail image during video recording.

OFF: Does not display OSD information.

The default setting is "ON"

## User Presets

Patient information shown on the screen can be customized. Custom margin and text alignment can only be set for an external monitor.

### Font Size

This sets the font size used for patient information shown on the built-in screen and external monitor.

Small	Display small characters.
Medium	Display medium-sized characters (default).
Large	Display large characters.

### Custom Margin

This sets the margin on the external monitor around the text display area as a percentage. This setting is only available when "Text Alignment" is off.

Setting range: 0–80% (default: 1%)

### Text Alignment

This sets the position of the text display area on external monitors. Use this setting to customize which information is shown in the text display area of an external monitor.

ON	Customize patient information shown.
OFF	Show all patient information (default).

If set to "ON", the following information can be shown or not shown: Patient ID, Patient Name, D.O.B., Gender, Date & Time, Performing Physician, Procedure, Number of Images. Select "ON" (shown) or "OFF" (not shown) for each item.

### Patient ID

If you want to display it, set it to ON, and if you don't want to display it, set it to OFF.

The default setting is ON.

### Patient Name

If you want to display it, set it to ON, and if you don't want to display it, set it to OFF.

The default setting is ON

### D.O.B.

If you want to display it, set it to ON, and if you don't want to display it, set it to OFF.

The default setting is ON

### Gender

If you want to display it, set it to ON, and if you don't want to display it, set it to OFF.

The default setting is ON

### Date & Time

If you want to display it, set it to ON, and if you don't want to display it, set it to OFF.

The default setting is ON

### Modality

If you want to display it, set it to ON, and if you don't want to display it, set it to OFF.

The default setting is ON

### Number of Image

If you want to display it, set it to ON, and if you don't want to display it, set it to OFF.

The default setting is ON

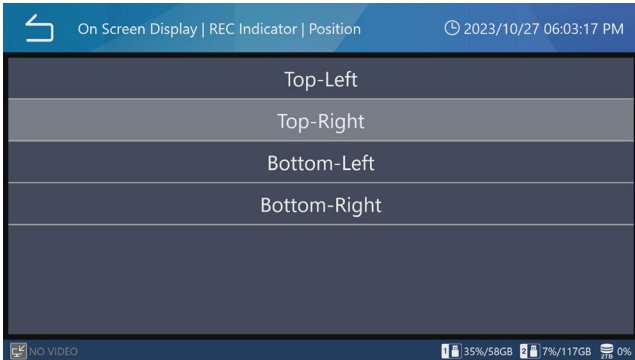
## REC Indicator

### Appearance

- ON Show icons and recording time during recording.
- OFF Do not show icons and recording time.

### Position

This sets the position of the icons shown on the display.



## Thumbnail (Freeze On Capture)

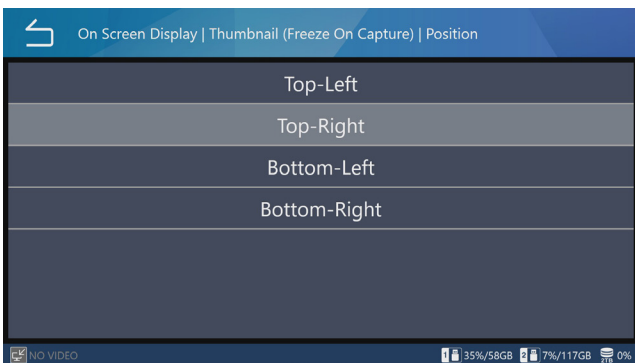
This sets what is shown on an external monitor after a photo is captured and how long it is shown.

### Appearance

- OFF Do not show an icon or thumbnail.
- Icon Show a photo icon (default).
- Small Show a small thumbnail.
- Medium Show a medium-sized thumbnail.
- Large Show a large thumbnail.

### Position

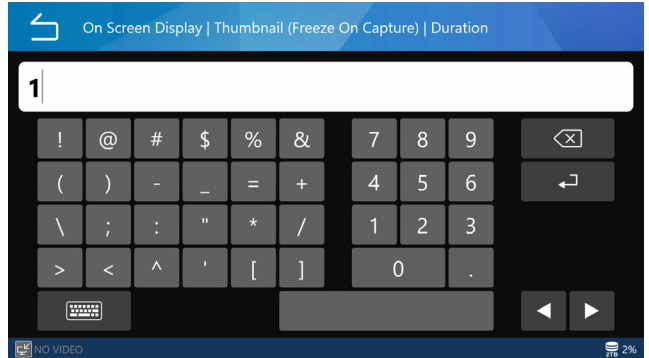
This sets the position of the thumbnail and icon shown on the display.



## Duration

This sets the time that the thumbnail or icon is shown after a photo is captured.

Setting range: 1–10 seconds (default: 1 second).



## Secondary Monitor (Touch Type)

### GUI

Switches the operation screen when using the external touch panel.

The operation screen can be selected from two modes: Style 1 and Style 2.

The default setting is "Style 1".

For details of the operation screen, refer to page 23, "Sub-Touch Panel Monitor".

### Patient Information

Sets the display of patient information on the sub-touch panel monitor screen.

ON: Displays patient information.

OFF: Does not display patient information.

The default setting is "ON".

### Position

Sets the position of patient information to be displayed on the sub-touch panel monitor screen.

#### When Style 1 is selected:

- Top left
- Top right
- Bottom left (default)
- Bottom right

#### When Style 2 is selected:

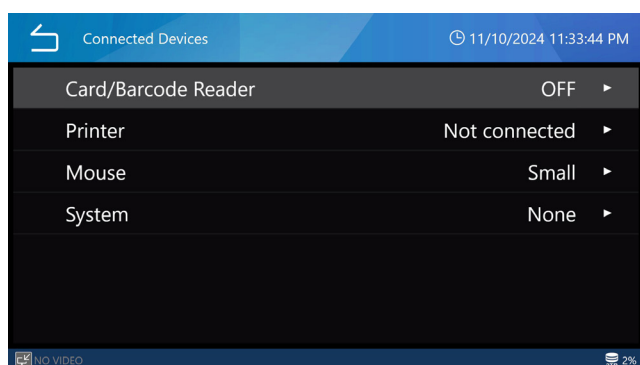
- Top left (default)
- Bottom right

## Connected Devices

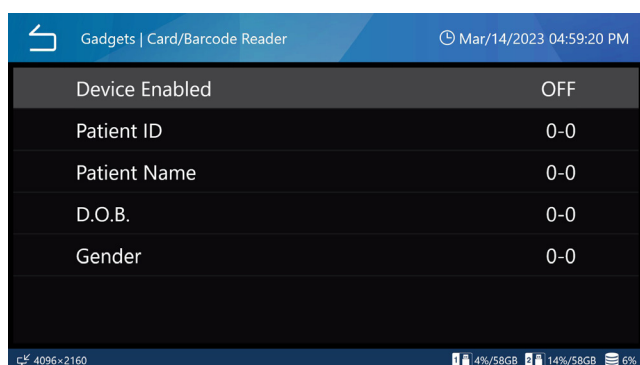
Configure settings for devices connected to this product.

### Card/Barcode Reader

Card and barcode readers can be used to enter patient information. Use the following settings to specify the character ranges to read from magnetic cards or with barcode readers.



When the unit reads a card or barcode, the setting screens show the data.



### Device Enabled

ON Enable card/barcode reader.

OFF Disable card/barcode reader (default).

### NOTE

Select "OFF" if using a USB keyboard. When "ON", input using a USB keyboard is only possible when the on-screen keyboard is shown.

### Ranges read

#### Patient ID, Patient Name, Date Of Birth, Gender

Select each item and enter the start position and number of characters to read (default: 0-0).

- The maximum number of characters is 32.
- An item is not read if the number of characters is set to "0".

#### Printer

Printer driver must be installed to use the printer. Please contact us for details.

#### Paper

Select the paper size.

#### Number of Copies

Set the number of copies to print.

#### Number per page

Select the paper orientation and number of copies to be printed.

#### Auto Print

Sets ON/OFF for automatic printing.

#### Logo

Sets logo printing ON/OFF.

#### Logo File

Loads logo data from USB1.

#### Header

Sets the characters to be printed on the header.

#### Footer 1 to Footer 5

Selects information to be printed in footer 1 to footer 5.

#### Mouse

Configure the settings for connecting a mouse.

#### Pointer Size

Set the mouse pointer size to either "Small," "Medium," or "Large."

The default setting is "Small."

#### Auto Hide Pointer

If the mouse is not operated for the set time, the pointer will be hidden.

The pointer will reappear when the mouse is operated again.

Setting this to "0 seconds" will keep the pointer always visible.

The default setting is "30 seconds."

#### System

This is used when integrating with other systems.

The default setting is "None."

### Language

This sets the language of the user interface. The default setting is “English”.

English

Deutsch

Français

Italiano

Español

Português (Portugal)

Português (Brazil)

Türkçe

日本語

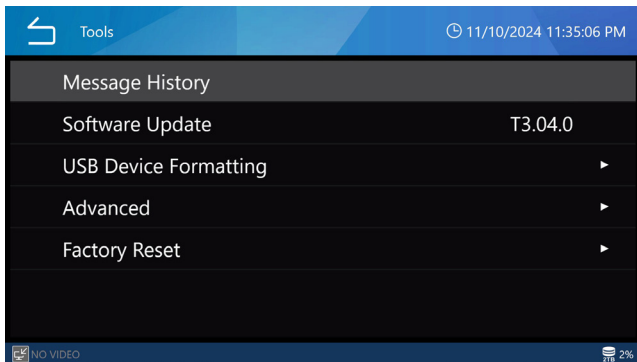
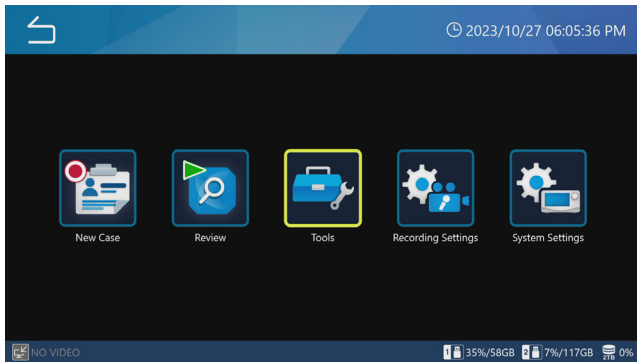
中文

한국



## Using the “Tools” menu

The “Tools” menu can be used to conduct various operations related to system maintenance.



The following menu items on the “Tools” screen can be selected when logged in as an Administrator or when “User Login” is disabled:

- Software Update
- Advanced
- Factory Reset

## Message History

This shows the most recent 30 warnings output by the UR-NEXT 4K.

Example:

⚠ 2022/3/1 11:50:01

No video input.

⚠ 2022/5/29 18:32:54

ERROR

No media.

## Software Update

Use this to update the firmware of the UR-NEXT 4K.

**1 Copy the firmware update file to a USB storage device that has been formatted by this unit.**

**2 Connect that USB storage device to USB 1 or USB 2.**

**3 Tap “SystemUpdate”.**

The UR-NEXT 4K searches for firmware update files on the connected USB storage devices.

**4 Select the update version.**

This starts the update.

### IMPORTANT NOTICE

Do not interrupt the power during an update. Once the process completes, the unit restarts automatically.

## USB Device Format

Use this to format a USB storage device connected to the unit.

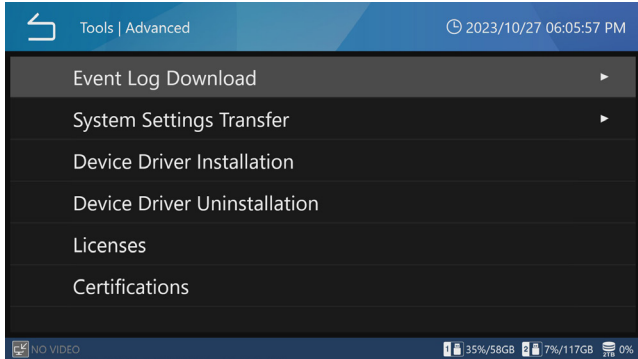
Format USB 1	Format the device connected to USB 1.
Format USB 2	Format the device connected to USB 2.

A confirmation dialog appears. Tap “OK” to start formatting.

### IMPORTANT NOTICE

Formatting a USB storage device erases all data recorded on it.

Advanced



**Event Log Download**

Use this to write the log files of the UR-NEXT 4K to a USB storage device.

USB 1	Write the log files to the device connected to USB 1.
USB 2	Write the log files to the device connected to USB 2.
Log Range	Set the range of the log files to be written:
Today	log files for this day
1 Week	log files for the preceding week to date
1 Month	log files for the preceding month to date
1 Year	log files for the preceding year to date
All	all available log files

If a downloaded log file already exists on the USB storage device, the new file will overwrite it.

When downloading completes, the previous screen appears.

**System Settings Transfer**

Use this to export settings to and load settings from USB storage devices.

Export to	
USB 1	Export settings to the storage device connected to USB 1.
USB 2	Export settings to the storage device connected to USB 2.
Import from	
USB 1	Load settings from the storage device connected to USB 1.
USB 2	Load settings from the storage device connected to USB 2.

Once the process completes, the unit restarts automatically.

**NOTE**

The user information set in “User Account Management” is not included in the “System Setting Transfer” content.

**Device Driver Installation**

Install the device driver on the product.  
Please contact us for details.

**Device Driver Uninstallation**

Uninstall the device driver from the product.  
Please contact us for details.

**Licenses**

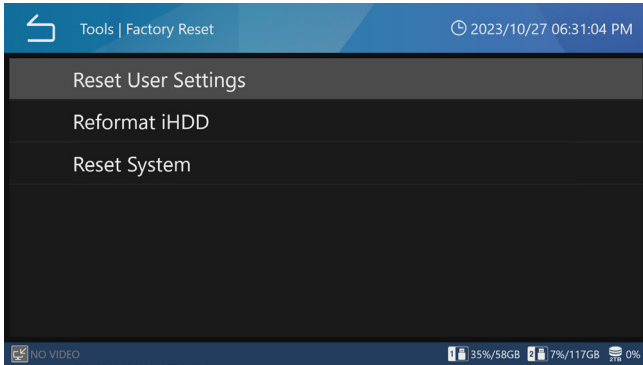
This shows license information for software used in this unit.

**Certifications**

This shows certifications of this unit.

## Factory Reset

This restores the unit to its original settings.



The user information configured in “User Account Management” will not be cleared even if you perform Reset User Settings, Reformat HDD, or Reset System.

### Reset User Settings

This restores the user settings to their defaults. A confirmation dialog appears.

Tap “OK” to reset the settings.

Once the process completes, the unit restarts automatically.

### Reformat Internal HDD

Use this to reformat the internal HDD. A confirmation dialog appears.

Tap “OK” to start formatting.

#### IMPORTANT NOTICE

Reformatting the HDD erases all videos and photos recorded on it.

Once the process completes, the unit restarts automatically.

### Reset System

This restores the unit to its default settings. A confirmation dialog appears.

Tap “OK” to reset all the settings and reformat the internal HDD.

#### IMPORTANT NOTICE

Resetting the system erases all videos and photos recorded on the internal HDD.

Once the process completes, the unit restarts automatically.

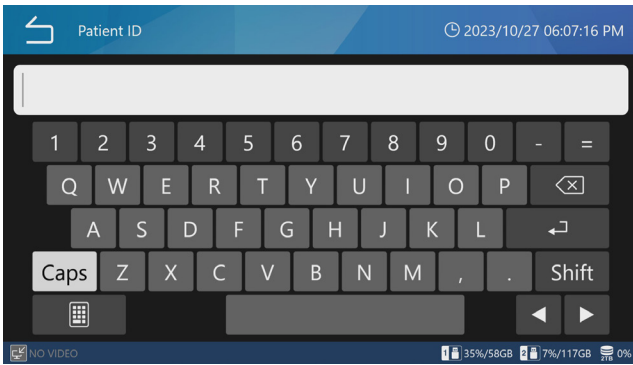
# Text input

---

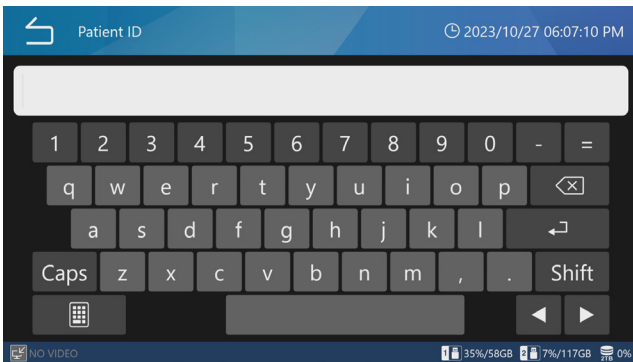
## Text input

For inputting user names and patient information, any characters can be entered using either the on-screen keyboard or a USB keyboard. The types of characters that can be entered with a USB keyboard may vary based on the selected Language setting. All characters and symbols are inputtable. However, please note that the characters usable for login passwords are limited to those that can be entered with the on-screen keyboard.

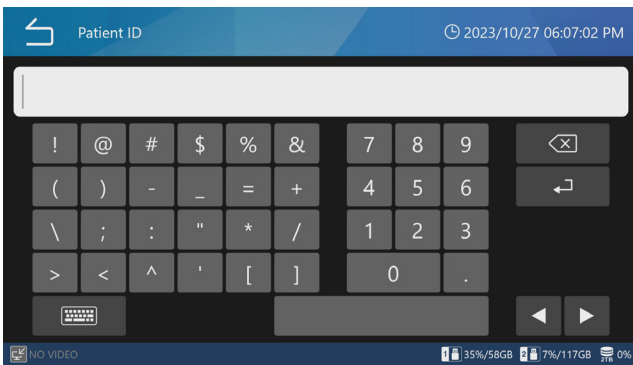
### Alphanumeric characters (uppercase)



### Alphanumeric characters (lowercase)



### symbols



## Error messages and warnings

Message	Meaning	Response/details
Invalid Password.	The password is incorrect.	Input the correct password.
No video input.	No video signal is being input.	Check the video input and video input connectors.
Failed to load the file.	A problem occurred when loading a file.	If this occurs when using a USB storage device, replace it with one that is working properly. If a similar message appears even after replacement, the unit itself might be malfunctioning. Contact the retailer where you purchased the unit. If this occurs when using the hard disk, it might be malfunctioning. Contact the retailer where you purchased the unit.
Failed to write the file.	A problem occurred when writing a file.	
Failed to copy the file.	A problem occurred when copying a file.	
The source file not found.	The selected file might be broken.	
Not enough iHDD space available.	The internal HDD has run out of free space.	Format the internal HDD.
An error occurred on iHDD.	The internal HDD might be malfunctioning.	Contact the retailer where you purchased the unit.
Failed to format.		
Format was cancelled.	Internal HDD formatting has been canceled.	The formatting of the internal HDD has been canceled.
No recordings found.	No recording data exists.	Try the operation again after recording.
Video recording in progress.	This operation cannot be executed during video recording.	Try the operation again after video recording completes.
No recording allowed while reservation list is displayed.	This operation cannot be executed when the reservation list is shown.	Try the operation again after the reservation list is closed.
Photo capture failed.	The time between capturing photos was too short.	Increase the time between capturing photos.
	An error occurred during recording.	Something might be malfunctioning. Contact the retailer where you purchased the unit.
No photo capture allowed.	Photos cannot be captured while another task is being conducted.	Conduct the operation after the other operation completes or when the home screen is open.
Recording has reached the maximum number of files.	This would exceed the maximum number of 1000 recordings in the same exam/surgery.	Press the CASE OPEN/CLOSE button to return to the home screen. Then, press the CASE OPEN/CLOSE button again to start a new Case.
No MENU display allowed while recording.	This operation cannot be executed during video recording.	Try the operation again after video recording completes.
Failed to change video recording quality.	An internal error occurred while setting the video recording quality.	Try the operation again several times. If a similar message appears, the unit itself might be malfunctioning. Contact the retailer where you purchased the unit.
Unable to play.	The video file might be corrupted.	If this occurs when using a USB storage device, use a properly-functioning USB storage device. If this occurs when using the hard disk, contact the retailer where you purchased the unit.
No video recording allowed.	Videos cannot be recorded while another task is being conducted.	Conduct the operation after the other operation completes or when the home screen is open.
Update file not found.	An update file was not found.	Check the update file on the USB storage device before conducting the operation.
Unable to update.	The update file might be corrupted.	
Network transfer failed.	An error occurred during the process of transferring to the network.	Confirm that network settings, network cables and hubs and server settings, for example, are correct.
Server connection failed.	An error occurred when connecting to a server.	
SMB Server 1 connection failed.	An error occurred when connecting to an SMB server.	

## Error messages and warnings

Message	Meaning	Response/details
Unable to access shared folder in SMB Server 1.	An error occurred with the shared name for the SMB server.	Confirm that the shared name in the image server settings of this unit and the shared folder settings on the SMB server are correct.
An error occurred while loading from SMB Server.	An error occurred with loading a file on an SMB server.	Confirm that a problem is not occurring on the SMB server side. Confirm that no issues with the server log or network malfunctions are occurring, for example.
An error occurred while loading to SMB Server.	An error occurred with writing a file on an SMB server.	Confirm that a problem is not occurring on the SMB server side. Confirm that no issues with the server log or network malfunctions are occurring, for example.
Unable to connect to SMB Server 1.	An error occurred when connecting to an SMB server.	Confirm that the user name and password in the image server settings of this unit and the user name and password settings on the SMB server are correct.
A problem occurred while communicating with server.	An error occurred during transmission with the server.	Confirm that network settings, network cables and hubs and server settings, for example, are correct.
Communication with server has been interrupted.	Transmission with the server was interrupted.	
Unable to connect to NTP Server.	An error occurred when connecting to an NTP server.	
Space used up completely.	The USB storage device has run out of open recordable space.	Replace with a different USB storage device that has enough open space.
Space running out.	The USB storage device has reached the capacity warning for open recordable space.	
No recording is possible.	An error occurred when writing to a storage device used to record with an older model.	Writing is not possible, because the storage device was used to record with an older model. Use a different storage device.
Media is not formatted.	The USB storage device was not formatted by this unit.	Connect a USB storage device that has been formatted by this unit and is working properly.
Failed to format.	The USB storage device might be broken.	Use a properly-functioning USB storage device.
An error occurred during writing.		
Read error.	Loading a file from USB failed (read error).	An error occurred during reading. Since reading from the USB storage device failed, try reading again manually.
Write error.	Writing a file to USB failed.	An error occurred during writing. Since writing to the USB storage device failed, try writing again manually.
The IP Address already in use.	The set IP address is being used by another device.	Change the IP address of this unit or the other device. Do not use the same address.
Failed to change network settings.	An error occurred during a network process.	Confirm that network settings, network cables and hubs and server settings, for example, are correct.
Not allowed.	Execution failed for an item selected while another operation was active.	Conduct the operation after the current operation completes.
No ID entered.	Recording was started without inputting an ID.	Input an ID.
Recording not started yet.	List display operation was conducted when recording had not been conducted.	Try the operation again after recording completes.
The value entered is out of range.	The number input is outside the possible range for the setting.	Set the value within the setting range.
Invalid Date and/or Time.	The input value cannot be set.	Use a value that can be set.
Too many characters.	The number input is outside the possible range for the setting.	Set the value within the setting range.
Invalid IP address.	The input value cannot be set.	Use a value that can be set.

<b>Message</b>	<b>Meaning</b>	<b>Response/details</b>
System error	Something might be malfunctioning.	Contact the retailer where you purchased the unit.
Hardware error		
Failed to encode the video.	Failed to start video recording.	Stop video recording once, and then start video recording. If the error message appears again, reboot the unit and start recording.
Unable to stop recording. Recording length is too short.	Video recording cannot be stopped for 2 seconds after video recording starts.	Stop video recording with the STOP button after 2 seconds or more have passed since the video recording started.
Failed to update the patient info management file.	Failed to update management information for video and photos.	Possible malfunction. Contact the retailer where you purchased the unit.
The source file not found.	The source file could not be found when copying or transferring image data.	An attempt was made to copy or transfer proxy image data for an image file that has not been proxy recorded. Set [USB Storage] USB 1 Video Mode/USB 2 Video Mode and [Network] File Server 1/ File Server 2 Video Mode to Original.
Export or transfer of recordings failed.	File transfer to the USB media or network destination could not be completed.	Check if there's any issue with the USB media. Ensure that there are no mistakes in the network settings. Verify if the network connection is functioning properly by checking on a computer or similar device.

# Maintenance and warranty

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## Recommended inspections

Check the following items before use each day. Doing so will help you find problems quickly and prevent trouble.

### Inspection items

- Is the power cord properly connected?
- Are the various connectors properly connected?

We recommend regular inspections of the equipment to maintain its functionality and increase safety. Please contact the retailer where you purchased the unit for information about maintenance inspections, including regular inspections, and maintenance contracts as well as other services.

## Cleaning the unit

For your safety, disconnect the power plug from the outlet before cleaning.

- If the top cover or other surfaces are dirty, wipe them with a soft cloth slightly dampened with disinfectant ethanol. Then wipe them again with a cloth that has been dampened with water and wrung out well. Do not wipe with chemical cleaning cloths, paint thinner or other chemical agents. Doing so could damage the surface.
- Regularly remove dirt and dust that has adhered to the unit.

### IMPORTANT NOTICE

- Do not spray ethanol or other liquids directly on the unit.
- Do not use aerosol cleaners as they could cause dust and other matter to accumulate inside the unit.
- Avoid letting rubber or plastic items touch the unit for long amounts of time. Doing so could damage the cabinet.

## Troubleshooting

In the following cases, please check the items listed before requesting repair.

### The unit does not turn on.

- ➔ Confirm that the power plug is connected. (Make sure that it is properly connected to an outlet and has not become disconnected.)

### The unit turns on but there is no image output.

- ➔ Confirm that the input/output connectors on the back of the unit are connected properly and that the cables being used are not damaged.  
Verify that the input has been properly selected.
- ➔ Press the power button to turn the unit off. Then turn the power on again and check if video is output.

### Recording to the internal HDD is not possible

- ➔ A power outage, for example, during operation may have caused data to become corrupted. Copy image data you still need from the internal HDD to a USB storage device or transfer it to network storage. Then, follow the instructions on page 75 to reformat the internal HDD.



### Warranty explanation

- The warranty period for this product is one year from the date of purchase.
- Be aware that repairs will require payment in the following cases even during the warranty period.
  - 1) Malfunction or damage due to misuse
  - 2) Malfunction or damage caused by modifications or repairs conducted by any party other than our company or a service person designated by our company
  - 3) Malfunction or damage caused by dropping, transportation or similar handling after product delivery
  - 4) Malfunction or damage caused by fire, earthquake, water, lightning or other natural disaster
  - 5) Malfunction or damage caused by external factors, including power supplies and equipment environmental conditions, that deviate from the operation requirements of this product
  - 6) Malfunction or damage if the product was not purchased from our company or an agent designated by our company
- We offer paid service after the conclusion of the warranty period. For details, please contact the retailer where you purchased the unit.
- Be aware that our company will bear no responsibility for any secondary damages resulting from the operation of this unit or related to data.
- Be aware that our company will bear no responsibility if data captured by this unit is deleted as a result of misoperation or unexpected incident, for example.
- Information is given about products in this manual only for the purpose of example and does not indicate any guarantees against infringements of third-party intellectual property rights and other rights related to them. TEAC Corporation will bear no responsibility for infringements on third-party intellectual property rights or their occurrence because of the use of these products.
- The service lifetime of this product is six years.

### Disposal

When disposing of this product and its accessories, follow the regulations of the local, regional and national governments in order to assure appropriate and safe disposal.

# Specifications

## Display/Recordable Devices

Built-in LCD	7-inch touch panel (capacitive method)
Recordable devices	
Internal HDD	2 TB
External USB storage devices	
USB memory/HDD/optical Disc Drive	FAT32/ NTFS/exFAT
Resolution HDMI® model	4096 × 2160/3840 × 2160/ 1920 × 1080/1600 × 1200/ 1600 × 900/1280 × 1024/ 1280 × 960/1280 × 800/ 1280 × 720/1024 × 768
SDI model	4096 × 2160/3840 × 2160/ 1920 × 1080/1280 × 720

## Video / Audio input signals

HDMI®	CH1, CH2 (HDMI® model)
SDI	12G/6G/3G-SDI, 6G/3G-SDI 3G-SDI × 2 (SDI model)
Audio (analogue)	MIC (3.5-mm TRS stereo mini jack)

## Video/Audio output signals

HDMI®, DisplayPort	(selectable)
Audio (analogue)	LINE (3.5-mm TRS stereo mini jack)
Compressed formats	
H.264	4K, FHD
H.265	4K, FHD
Video data processing	
Video	H.264, H.265
Still image	JPEG, PNG, TIFF
File formats	
Video	MP4, TS
Still image	JPG, PNG, TIFF
Interfaces	
USB 3.2 (Gen1) × 2 (front)	
	For recording device connection
USB 3.2 (Gen1) × 4 (back)	
	For keyboard, barcode reader, card reader, printer, touch monitor connection
LAN	100Base-TX/1000Base-T (RJ45) × 2

## General

Power supply	AC 100–240 V ±10%, 50/60 Hz 1.45–0.66 A
Placement for operation	Level surface
Shelf life	5 years
Operating environment	
Temperatures	5–40 °C
Humidity	30–80%RH (no condensation)
Maximum wet bulb temperature	29 °C
Atmospheric pressure	750–1040 hPa
Ambient illuminance	500 Lx or higher
Noise Level	55 dB or less
Storage environment	
Temperatures	–20 to 60 °C
Humidity	5–80%RH (no condensation)
Maximum wet bulb temperature	29 °C
Atmospheric pressure	600–1040 hPa
Transportation environment	
Temperatures	–30 to 60 °C
Humidity	5–90%RH (no condensation)
Maximum wet bulb temperature	29 °C
Atmospheric pressure	600–1040 hPa
Weight	About 4.3 kg
External dimensions (W × H × D, excluding protrusions)	239 mm × 137 mm × 243 mm

## Safety Standard/Certification/Registration

Safety standards	IEC 60601-1 CSA 60601-1 EN 60601-1
EMC	IEC 60601-1-2 EN 60601-1-2
Certifications	FCC ICES-003 NRTL/C CB
Registration	FDA

## Specifications

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### Medical Equipment Specification

Protection against electric shock. . . . . Class I device  
Protection against harmful intrusion of water . . . . Ordinary  
Degree of safety in the presence of a flammable anesthetic  
mixture with air or with oxygen or nitrous oxide  
Not suitable for use in the presence of a flammable  
anesthetic mixture with air or with oxygen or nitrous oxide  
Operation mode. . . . . Continuously operating equipment

## Software license information

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The software used in this product includes software that TEAC Corporation has received permission to use from third parties either directly or indirectly. We request that you read the notice about this software without fail.

The package list can be checked on the unit (page 74).

# Limits for electromagnetic compatibility (EMC)

## Important EMC notices for use in medical environments


- The UR-NEXT 4K is intended for use in a professional healthcare facility environment.
- The UR-NEXT 4K needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in these instructions for use.
- If the UR-NEXT 4K is used adjacent to or stacked with other equipment, it should be observed to verify normal operation in the configuration in which it will be used.
- Portable and mobile RF communications equipment such as cellular phones can affect the UR-NEXT 4K.
- The UR-NEXT 4K may malfunction due to static electricity. Do not connect or disconnect USB drives during operation.

Guidance and manufacturer's declaration – electromagnetic emissions		
The UR-NEXT 4K is intended for use in the electromagnetic environment specified below. The customer or the user of the UR-NEXT 4K should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 32	Class A	The UR-NEXT 4K may be used in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, provided the following notice is heeded:  <b>IMPORTANT NOTICE:</b> This device conforms to the CISPR32 class A standard. This class could cause radio interference in residential environments.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	

List of cables used for EMC tests	
Type of cable	Specifications
AC mains cable	2 m, non-shielded
HDMI IN port cable (HDMI® model)	5 m, shielded
SDI IN port cable (SDI model)	3 m, shielded
HDMI OUT port cable	5 m, shielded
Ethernet cable	3 m, shielded
DISPLAY PORT cable	3 m, shielded
COM port cable	1.5 m, shielded
MIC IN port cable	1.8 m, shielded
AUDIO OUT port cable	1.8 m, shielded
TRIGGER 1 port cable	4 m, shielded
TRIGGER 2 port cable	4 m, shielded

<b>Guidance and manufacturer's declaration - electromagnetic immunity</b>			
The UR-NEXT 4K is intended for use in the electromagnetic environment specified below. The customer or the user of the UR-NEXT 4K should assure that it is used in such as environment.			
<b>Immunity test</b>	<b>IEC 60601 test level</b>	<b>Compliance level</b>	<b>Electromagnetic environment-guidance</b>
Electrostatic discharge (ESD)  IEC 61000-4-2	±8 kV contact  ±15 kV air	±8 kV contact  ±15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst  IEC 61000-4-4	±2 kV for power supply lines  ±1 kV for input/output lines	±2 kV for power supply lines  ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge  IEC 61000-4-5	±1 kV differential mode  ±2 kV common mode	±1 kV differential mode  ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines  IEC 61000-4-11	0 % $U_T$ (100 % dip in $U_T$ ) for 1 cycle  70 % $U_T$ (30 % dip in $U_T$ ) for 25 cycles  0 % $U_T$ (100 % dip in $U_T$ ) for 5 s (50 Hz: 10 cycles, 60 Hz: 12 cycles)	0 % $U_T$ (100 % dip in $U_T$ ) for 1 cycle  70 % $U_T$ (30 % dip in $U_T$ ) for 25 cycles  0 % $U_T$ (100 % dip in $U_T$ ) for 5 s (50 Hz: 10 cycles, 60 Hz: 12 cycles)	Mains power quality should be that of a typical commercial or hospital environment. If the user of the UR-NEXT 4K requires continued operation during power mains interruptions, it is recommended that the UR-NEXT 4K be powered from an uninterruptible power supply or a battery.  When 70% UT for 25 cycles, the power could restart multiple times.
Power frequency (50/60 Hz) magnetic field  IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at least characteristic of a typical location in a typical commercial or hospital environment.
Radiated fields in close proximity  IEC61000-4-39	134.2 kHz Pulse modulation 2.1 kHz (Duty 50%)  13.56 MHz Pulse modulation 50 kHz (Duty 50%)	65 A/m    7.5 A/m	When use near an RFID system is expected, maintaining a distance of at least 15 cm from the RFID reader is desirable.
NOTE: $U_T$ is the AC mains voltage prior to application of the test level.			

## Limits for electromagnetic compatibility (EMC)

Guidance and manufacturer's declaration - electromagnetic immunity			
The UR-NEXT 4K is intended for use in the electromagnetic environment specified below. The customer or the user of the UR-NEXT 4K should assure that it is used in such as environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	150 kHz – 80 MHz (outside ISM bands c) 3 Vrms 150 kHz – 80 MHz (in ISM bands c) 6 Vrms	3 Vrms  6 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the UR-NEXT 4K, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.  <b>Recommended separation distance</b>  $d = 1.2 \sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.7 GHz	3 V/m	$d = 2.0 \sqrt{P}$ 80 MHz to 2.7 GHz  Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey <sup>a</sup> , should be less than the compliance level in each frequency range <sup>b</sup> . Interference may occur in the vicinity of equipment marked with following symbol:  
NOTE 1: At 80 MHz, the higher frequency range applies. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
<sup>a</sup> Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the UR-NEXT 4K is used exceeds the applicable RF compliance level above, the UR-NEXT 4K should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the UR-NEXT 4K. <sup>b</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m. <sup>c</sup> The ISM (industrial, scientific and medical) bands between 150 kHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz; and 40.66 MHz to 40.70 MHz.			

### Guidance and manufacturer's declaration - electromagnetic immunity

The UR-NEXT 4K is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. Portable RF communications equipment should be used no closer than 30 cm (12 inches) to any part of the UR-NEXT 4K. Otherwise, degradation of the performance of this equipment could result.

Immunity test	Band <sup>a</sup>	Service <sup>a</sup>	Modulation	IEC 60601 test level	Compliance level
Proximity fields from RF wireless communications equipment  IEC 61000-4-3	380–390 MHz	TETRA 400	Pulse modulation 18 Hz	27 V/m	27 V/m
	430–470 MHz	GMRS 460 FRS 460	FM ±5 kHz deviation 1 kHz sine	28 V/m	28 V/m
	704–787 MHz	LTE Band 13, 17	Pulse modulation 217 Hz	9 V/m	9 V/m
	800–960 MHz	GSM 800/900 TETRA 800 iDEN 820 CDMA 850 LTE Band 5	Pulse modulation 18 Hz	28 V/m	28 V/m
	1,700–1,990 MHz	GSM 1800 CDMA 1900 GSM 1900 DECT LTE Band 1, 3, 4, 25 UMTS	Pulse modulation 217 Hz	28 V/m	28 V/m
	2,400–2,570 MHz	Bluetooth WLAN 802.11 b/g/n RFID 2450 LTE Band 7	Pulse modulation 217 Hz	28 V/m	28 V/m
	5,100–5,800 MHz	WLAN 802.11 a/n	Pulse modulation 217 Hz	9 V/m	9 V/m

NOTE: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

<sup>a</sup> For some services, only the uplink frequencies are included.

# TEAC



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