



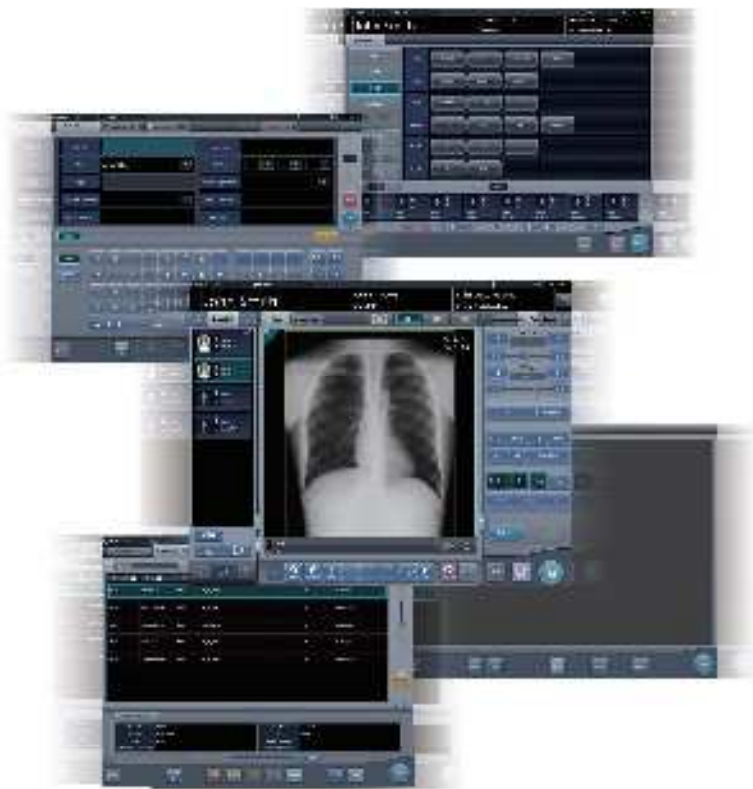
KONICA MINOLTA

DIRECT DIGITIZER

CS-7

Version 1.30

Operation Manual



CE 0197



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EN 15

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Introduction

Introduction

The CS-7 is a software program for installation on a PC. It performs image processing of X-ray images received from an AeroDR SYSTEM or REGIUS system.

The CS-7 adds patient data received from RIS etc. and sends diagnosis images to PACS etc. Furthermore, the CS-7 can send requests for exposure conditions to the X-ray device and receive irradiation results.

This operation manual describes instructions on the basic functions for operation of this device. Those operating this device for the first time should read this manual beforehand.

Also, store this manual close to this device after reading it through, so it can be used as a guide to allow optimum operating conditions.

*** If the pages of the operation manual are smudged and illegible, replace it with a new one. (There is a fee for this service.)**

IMPORTANT

- For United States of America, this device is not intended to use for Mammography.
- One Shot stitching exposure function can only be used in some countries.
 - This function cannot be used in the United States or Canada.
 - This function cannot be used in the EU, EFTA member countries, Switzerland or Turkey.
- In this manual, "this device" refers to a collective term indicating CS-7 software and PC with the software installed.

Summary of usability specifications (for IEC/EN 62366)

(1) Medical purposes

- Provision of disease and injury diagnostic images.

(2) Patient groups

- No patient population exists who uses or is in contact with the device.
- Patient population for the X-ray images read is not specified.

(3) Parts of body or organizations to which the device is mounted or that interact with the device

- No appropriate points. (Device does not come in contact with the patient.)

(4) Operating principle

- This device CS-7 is a software program for installation and use in commercially available PCs. Commercially available PCs consist of a PC main body and an LCD monitor. This device receives X-ray image information from the reader device (REGIUS series, DR Detector) and connects it with patient information, which will be output after processing into diagnosable images by an operator.

(5) Significant physical characteristics

- Refer to "12.1 Specifications".

(6) Significant performance characteristics

- Refer to "12.1 Specifications".

(7) User of this device

- No special training is required to use this device. The intended users of this device are as follows.
 - A professional in good health with specialist knowledge/qualifications who has fully understood the content of this document. (Such as a doctor or radiological technologist)

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 - The erasure, corruption, or unwanted disclosure of data stored within this device, including personal and sensitive patient information.
 - Malfunction of the device or accidents occurring as a result of the malfunction of the device
 - Infection of other products upon connection with the device, or damages arising therefrom.

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Windows 10 is an abbreviation for Microsoft Windows 10 Enterprise 2015 LTSB.

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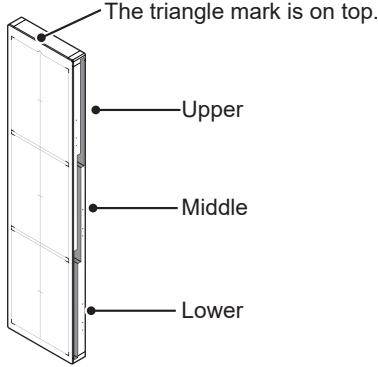
Option/license

For certain functions of this device, separate options and licenses are needed. For details regarding options and licenses, contact Konica Minolta service representatives.

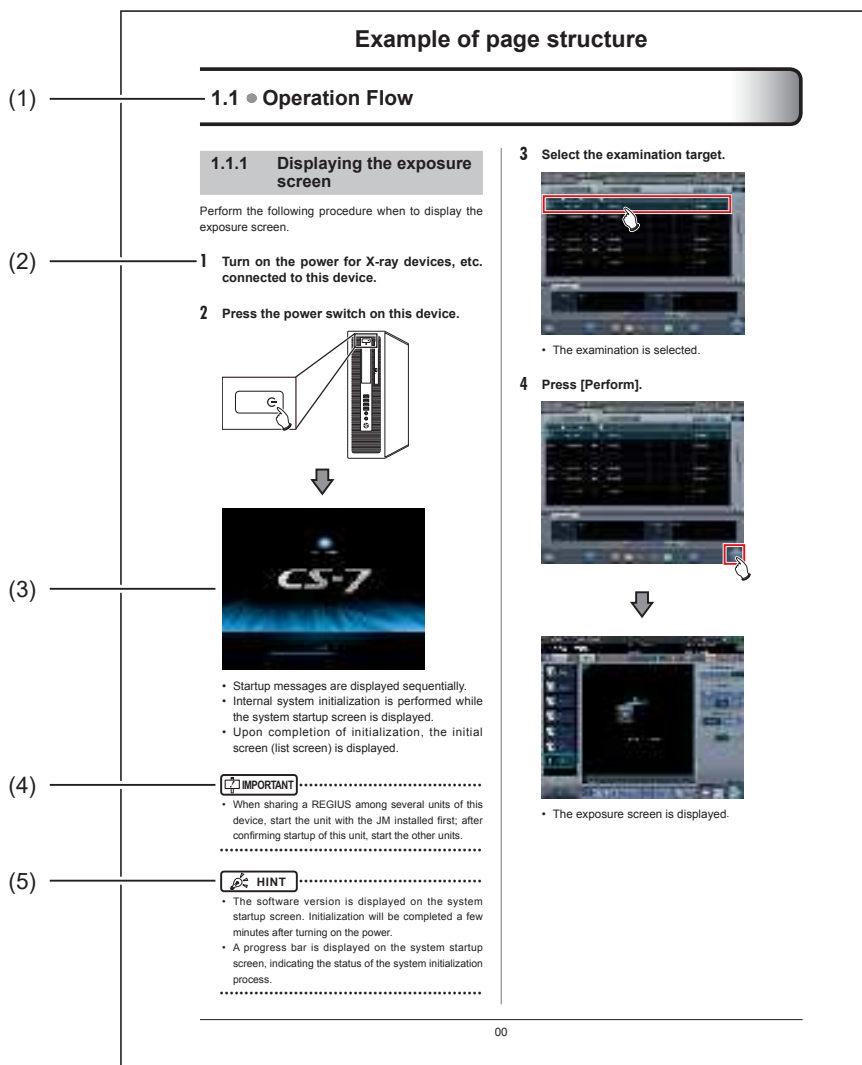
Term description



The meanings of terms used in this operation manual are as follows:

Terms	Description
AeroDR SYSTEM	<ul style="list-style-type: none"> Collective term indicating DR Detector, AeroDR Interface Unit, AeroDR Interface Unit2, AeroDR Generator Interface Unit, AeroDR Generator Interface Unit2, AeroDR Battery Charger, AeroDR Battery Charger2, AeroDR Access Point, etc. Collective term indicating AeroDR SYSTEM, AeroDR SYSTEM 2 and SKR3000.
DR Detector	Collective term indicating AeroDR 1417HQ, AeroDR 1417S, AeroDR 1717HQ, AeroDR 1012HQ, AeroDR 2 1417HQ, AeroDR 2 1417S and AeroDR 3 1417HD.
AeroDR Interface Unit	Supplies power to the AeroDR Generator Interface Unit, AeroDR Generator Interface Unit2, and access point, and supplies power to and charges the battery of the DR Detector when wired cables are used. It also has a hub function.
AeroDR Interface Unit2	<ul style="list-style-type: none"> Supplies power to the access point, and supplies power to and charges the battery of the DR Detector when wired cables are used. It also has a hub function. Relays signals between the X-ray device, the DR Detector, and the CS-7.
AeroDR Generator Interface Unit	Relays signals between the X-ray device, the DR Detector, and this device.
AeroDR Generator Interface Unit2	Relays signals between the X-ray device, the DR Detector, and this device.
AeroDR Battery Charger	Charges the DR Detector. It also has the registration function for the DR Detector.
AeroDR Battery Charger2	Charges the DR Detector. It also has the registration function for the DR Detector.
Access point	Collective term indicating AeroDR Access Point and a general-purpose access point.
I/F Cable	Use with the DR detector wired connection. It also includes the DR detector charging and registration functions.
AeroDR UF Cable	In the case of capturing images with the wall stand and table, register the DR detector direction.
AeroDR Portable RF Unit	Receives an image data from the DR Detector and transfers it to this device. Also, this unit interfaces with the portable X-ray device.
AeroDR Portable RF Unit2	<ul style="list-style-type: none"> Interfaces with the mobile X-ray device. Charges or registers the DR Detector when using the AeroDR Battery Charging KIT and AeroDR I/F Cable2.
AeroDR Portable UF Unit	Receives an image data from the DR Detector and transfers it to this device.
AeroDR Stitching System	Used when performing stitching exposures using the DR Detector.
Calibration	Processing for calibrating the characteristics of the DR Detector for each pixel
CR	An acronym for computed radiography
DR	An acronym for digital radiography
JM	An acronym for job manager
REGIUS	Collective term indicating the REGIUS series (Excluding "REGIUS SIGMA" and "REGIUS SIGMA2"). When indicated individually, they are shown as "REGIUS 110", "REGIUS 110HQ", "REGIUS 210", "REGIUS 190", and "REGIUS 170".
REGIUS SIGMA/SIGMA2	Used as the collective terms for "REGIUS SIGMA" and "REGIUS SIGMA2".
CR cassette	Used as the collective terms for the cassettes in the REGIUS series and REGIUS SIGMA/SIGMA2.

Terms	Description
RIS	Abbreviation for Radiology Information System A system to manage reservation and result of examinations and treatment that use radiology equipment
Host	A server to save image information
X-ray device	An X-ray exposure device constructed of an X-ray generator device, an operation panel, and so on
HS processing	Image processing to reduce noise Used to reduce the noise while maintaining the definition of an image.
F processing	Image processing for adjusting the sharpness of an image Used to maintain the sharpness of each image depending on the exposure body part.
E processing	Image processing for compressing the dynamic range Depending on the body part, used to provide a suitable diagnostic image even with high contrast images.
IG	An acronym for Intelligent-Grid. This is a function that corrects scattered X-ray radiation.
Exposure body part	This is the exposure body part, such as head, neck, and chest.
Exam. Tag	A button that has registered exposed body parts, size, direction, etc. It is positioned on the body part selection screen.
Exposure condition	Indicates conditions relating to exposure in general such as exposure device, exposure method, exposure setting, and positioning.
Exposure setting	Indicates the tube voltage, X-ray tube current, exposure time, etc. displayed on the console of the X-ray device.
Wired cable	Collective term indicating I/F Cable and AeroDR UF Cable.
Aero Sync	This is a mode in which exposure is performed without being synchronized with the X-ray device.
Stitching holder	Collective term indicating the holder used for One Shot stitching exposure. The holder can load two or three DR Detectors.
Upper, Middle, Lower	<p>The positions of slots containing the stitching holder DR Detectors are labeled as upper, middle, and lower.</p>  <p>The diagram shows a vertical rectangular stitching holder with three horizontal slots. A triangle mark is at the top. Labels 'Upper', 'Middle', and 'Lower' point to the three slots from top to bottom.</p>

Structure of pages



Number	Item	Description	Icon
(1)	Item heading	Describes the titles of described content.	-
(2)	Operation procedure	The operating procedure is described in sequential numerical steps.	-
(3)	Screen display	Shows a screen on which operations are performed.	-
(4)	Important items	Describes important items for operation. Be sure to read them.	
(5)	Hint	Describes important information.	

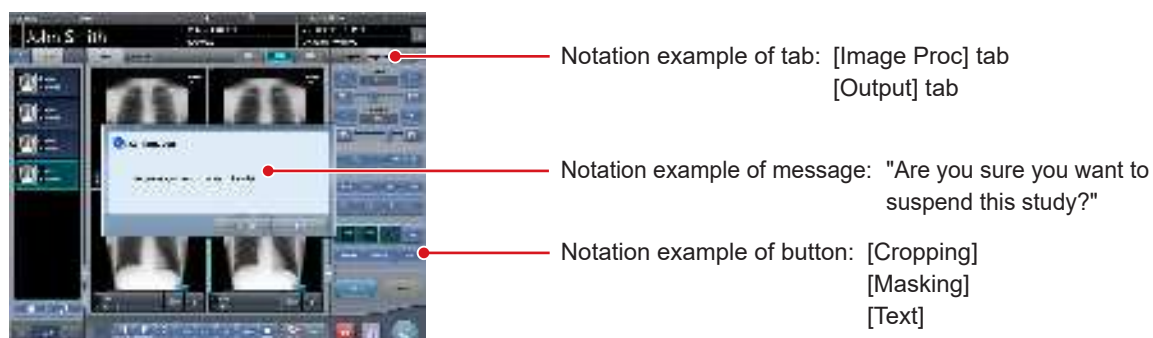
Screen display

Note that explanatory screens may be omitted from this manual when not needed.



Characters and icons displayed on the screen

Characters and icons displayed on the screen are shown with []. Messages displayed on such as the confirmation screen are shown with " ".



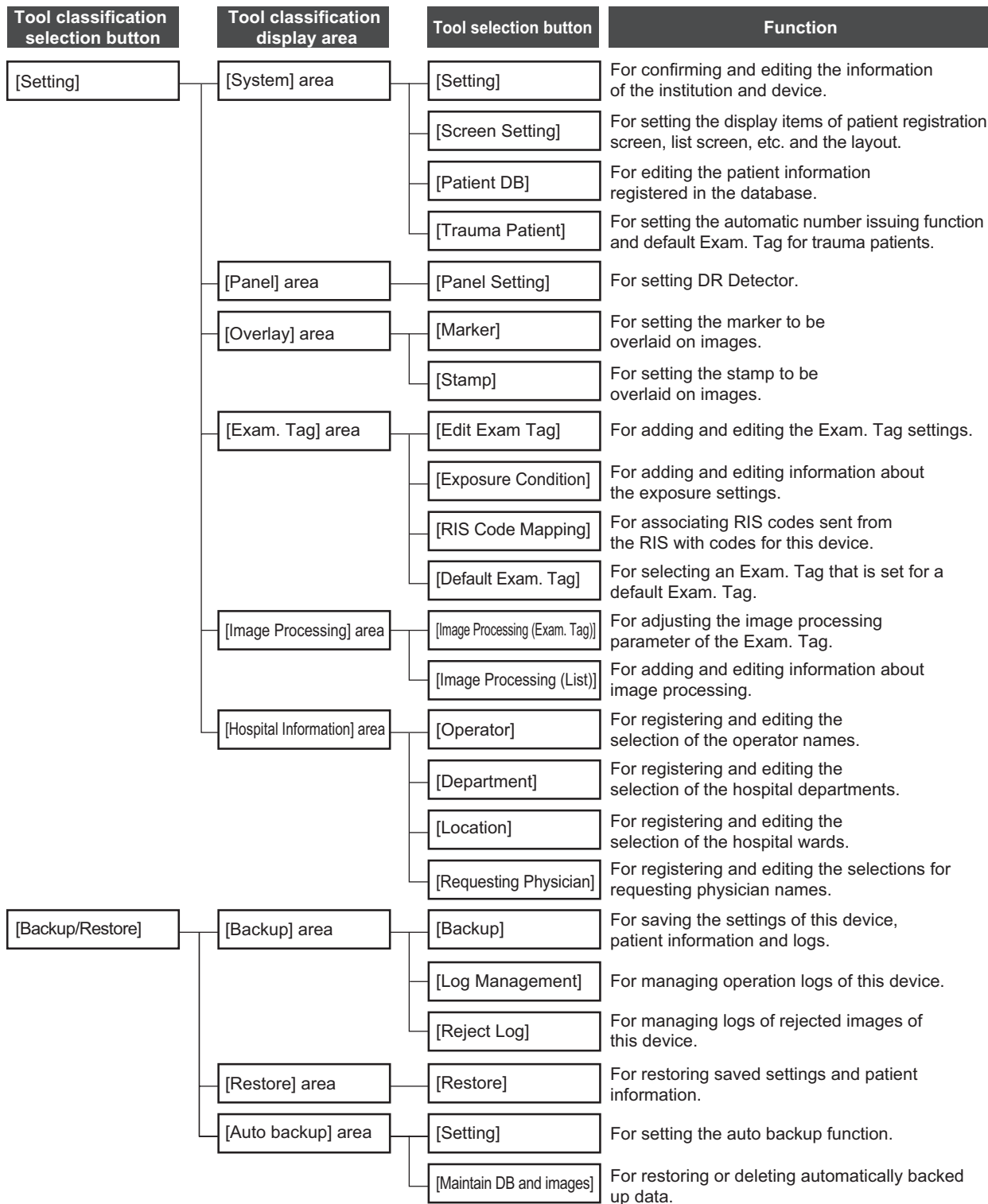
Notation of operation methods

This manual describes main operation methods as follows.

Notation	Description
Press	Operation to touch the screen or click with a mouse to operate operation targets such as buttons.
Select	Operation to select from several options such as from a pull-down menu or tabs.
Input	Operation to enter any string using a keyboard or the input panel displayed on the screen.
Drag	Operation to move an operation target while touching or clicking it.
Drop	Operation to release the operation target being dragged by quitting touching it or releasing the button being clicked.

Items to be set with the user tool

Items to be set with user tool are shown in the following diagram.
 More information about the user tool is described in the "CS-7 User Tool Operation Manual".



Tool classification selection button	Tool classification display area	Tool selection button	Function
[Adjustment]	[System] area	[Date and Time]	For setting the date and time.
		[Touch Panel]	For adjusting the touch panel.
	[Panel] area	[Calibration]	For conducting the calibration of the DR Detector.
	[CS-7] area	[Update]	For updating this device.
		[Release Notes]	For displaying the version of this device and updated contents.
	[LongLen Unit] area	[Adjustment]	For adjusting the AeroDR Stitching Unit.
	[REGIUS Σ] area	[Information Notification Setting]	For setting the notification procedure of the communication control information.
		[Error History]	For displaying the error history screen.
		[Fractional Masking]	For setting fractional masking.
	[Analysis]	[Image Quality] area	[QA/QC]
[Statistics Analysis] area		[Statistics Analysis]	For aggregating and taking the statistics of exposure history.
		[Setting]	For setting the dedicated application for aggregating and taking the statistics of exposure history.
[Quality Management] area		[Raw Image Output]	For outputting raw images to media.
		[AFSSAPS Tool]	For outputting raw images to the host.
[Test] area		[Drop/Impact PanelCheck]	For performing the DR Detector test.
		[Error Panel]	For displaying DR Detectors in which an error was detected.
[AeroRemote]		[Service] area	[Quick Repair]
	[Revert to before replacement]		For reverting the DR Detector settings to the settings before replacement.
[Manual]	[User Manual] area	[Operation Manual]	For displaying an operation manual.
		[User Tool Operation Manual]	For displaying a user tool operation manual.
		[PDA Operation Manual]	For displaying a PDA operation manual.
		[Other]	For displaying other manuals.
	[Other Manual] area	[Other 2] - [Other 5]	For displaying other manuals.

Chapter 1

Safety Precautions & Warnings

This chapter describes precautions and warnings
to ensure safe use of this device.

1.1 • Symbols relating to safety

1.1.1 Safety alert symbol



This is the "safety alert symbol". This symbol alerts you to matters and/or operations potentially hazardous to yourself and other people. Read these messages and follow the instructions carefully.

1.1.2 Warning notice (signal words)

Signal words indicate a degree of potential hazards in the use of the product.

Signal words include the following three types, which are used according to risk of damage caused by danger and the severity of damage:

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also be used to indicate a hazardous situation where only physical damage is likely to occur.

1.1.3 Description of graphic symbols



Indicates the off position for the main power switch of this device.



Indicates the on position for the main power switch of this device.



Indicates the power on or standby position.



Indicates that the AC power is being used.



Indicates that hazardous voltage is being used, and caution is required.

CE 0197

It means conformity with the Medical Devices Directive 93/42/EEC.
0197 is Notified Body number.
EC Directive 93/42/EEC does not cover animal use. So, the notified body whose identification number is 0197 is not responsible for animal use.

1.2 • Safety precautions

Read all safety precautions thoroughly before using this device.

Be sure to observe the safety precautions described in this section.

1.2.1 Precautions before usage



WARNING

- EMC Statement - CS-7 is designed to provide reasonable protection against harmful interference in a typical medical installation. The personal computer of CS-7 generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If CS-7 does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the operator is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving device.
 - Increase the separation between the equipment.
 - Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
 - Consult the manufacturer or field service technician for help.



CAUTION

- If the pages of the operation manual are smudged and illegible, replace it with a new one. (There is a fee for this service.)
- Use this device outside of the patient environment.
- This device conforms with the METI guidelines to reduce harmonic emissions caused by electrical and electronic equipment for household and general use.
- The operators (hospitals and clinics) hold responsibility for the usage and maintenance of this device. Do not use this device unless you are a physician or certified person under law.
- Before using this device, confirm that this device is operating normally.
- When a problem occurs with this device, turn the power off, attach an appropriate sign, such as "malfunction", on this device, and contact Konica Minolta technical representatives.



CAUTION

- This device is not explosion-proof, so do not use any flammable or explosive gas near this device.
- For the basic operation of the personal computer, display monitor, and optional parts for this device, refer to their operation manuals.
- Please follow the rules and regulations of your relevant authorities in the disposal of this product, accessories, options, consumables, media and their packing materials.



This symbol means: Do not dispose of this product together with your household waste!

Please refer to the information of your local community or contact our dealers regarding the proper handling of end-of-life electric and electronic equipments.

Recycling of this product will help to conserve natural resources and prevent potential negative consequences for the environment and human health caused by inappropriate waste handling.

1.2.2 Precautions for usage



WARNING

- Check the following additional information for images and patients and use in operation and treatment.
 - The input patient information is correct.
 - The input patient information has the intended result.
 - When patient information is acquired from other devices, it is the patient in question.
 - The patient being examined matches the patient information shown on the display monitor.
 - When sending the image to the output device or media, the patient information is correct.
 - Before treatment, the image on the output device or on the media matches the patient information.
 - The result is correct when image replacement and supplemental information edit (image laterality/patient orientation) is performed in the exposure screen.



WARNING

- Image processing functions must be used by qualified persons with specialized knowledge of image diagnosis equipment and image processing. In addition, sufficiently confirm the results of image processing.
- Do not perform diagnosis with the images displayed on this device.
- Risk of misidentification of patients may occur if modifications to patient information for examinations or examination information acquired from a higher system such as a Radiology Information System (RIS) are made. When the information is modified, notify the system administrator of the modification without delay, and in addition, make sure that the patient information and/or examination information are correctly modified on output devices such as PACS to which this device sent the image information and examination information.
- Konica Minolta will not be liable for the loss of important data such as patient information arising from the introduction of this system. Important data require separate assurance of security, backup, etc.
- When lightning is likely to occur, stop work and unplug the power plug from the wall outlet. When it thunders before unplugging the power plug do not touch the device, including any of the cables. Doing so may cause a fire or electric shock.
- If there is any smoke, odor, or abnormal sound, it may cause a fire if use is continued, so immediately turn the power switch off, unplug the power plug from the wall outlet, and contact Konica Minolta technical representatives.
- Take the following precautions when using this device and software.
 - Konica Minolta or a contractor designated by Konica Minolta will install the software of this device.
 - Do not disassemble or modify this device.
 - Do not connect any devices that were not purchased from Konica Minolta.
 - Do not install software purchased from other companies.
 - Do not uninstall software that has already been installed.
 - Take precautions to prevent infection from computer viruses.
 - Do not change the setting for the OS (operating system), or delete folders or files.
 - Do not operate Windows Explorer unless specified.
 - Do not use the DVD drive for other purposes.
 - Confirm that the hard disk access lamp is out before removing disks.
 - Do not turn the power switch off or pull out the power cable while the system is operating.



WARNING

- Take note of the following to reduce the risk of fire, electric shock, or electrical leakage:
 - Always use the specified cables such as a power cable.
 - Use wall outlet with the correct rating as a power source.
 - Connect the power plug to the wall outlet properly without any slack.
 - Use a power source with a ground wire.
 - If you do not plan to use this device for an extended period of time, unplug the power plug.
 - The supplied power cable is dedicated for this device, so do not use it elsewhere.
 - Avoid exposure to liquids such as water.
 - Make sure that foreign material, such as pieces of metal or wires, does not get inside.
 - Do not handle the power plug with wet hands.
 - Do not let dirt or dust adhere to the power plug.
 - Do not use extension cables.
 - Do not place many loads on a single electrical outlet.
 - Do not damage the power cable. Also, do not use damaged cables.
 - Do not block the ventilating openings.

**CAUTION**

- Take the following precautions when performing exposure using this device.
 - Check whether or not the patient needs extra care before performing exposure.
 - Check the patient information before performing exposure.
- Turn the power off after finishing the work to maintain stable operation. If the power to the system is kept on continuously for 24 hours out of necessity, turn the power off and on once a week.
- To use functions that share image data, integrate the pending reason and other settings for this device.
- Use with suitable settings for image processing parameters. To use functions that share image data, set the same values for the image processing parameters of this device.
- Do not use devices that emit electromagnetic waves such as mobile phones, PHS, or pocket pagers near this device.
- Do not use continuously for extended periods of time. If you need to use the device continuously for extended periods, take a 10 to 15 minute break every hour to give your eyes and hands a break.
- Take note of the reception status for radios and TVs near this device, since interference may occur in them when this device is in use.
- Check the touch positions on the touch panel when starting this device, turning on the display monitor, or unplugging and plugging in the USB cable, etc. When the touch position and the cursor position are out of sync, or the cursor does not move even when touched, leave it for about two minutes, or check the USB cable connections and restart this device and the display monitor.
- Be sure to check the image orientation of images received from medical imaging devices (CR, DR, etc.).
- Shut down this device after confirming that the hard disk access lamp is out. Also, when turning on again, do so after 10 seconds have elapsed.

1.2.3 Precautions for installing, moving, and storing**WARNING**

- Take the following precautions when moving this device.
 - Do not subject to shock or vibration.
 - Do not start moving until the power is turned off, and operation has stopped completely.
 - Do not move with the power cable or any other cable connected.

**CAUTION**

- Because connections of the X-ray device can only be made by Konica Minolta or its designated contractors, contact Konica Minolta or its designated contractors.
- Contact Konica Minolta or dealers specified by Konica Minolta to install or move this device.
- Take note of the following when installing or storing this device.
 - Do not install or store in a location where it may be adversely affected by atmospheric pressure, temperature, humidity, ventilation, sunlight, dust, salt-air, or air containing sulfur.
 - Do not install or store in a location where it is not stable, ventilation is insufficient, the difference in light-dark is great, electromagnetic waves are generated, or where subjected to vibration or shock.
 - Do not install or store in a location where chemical agents are used or stored.
 - Do not lay this device on its back, upside down or directly on the floor.
 - Do not connect or disconnect the interface cable while the power cable is connected.
 - Do not use an interface cable other than the specified one.
 - Do not damage the interface cable. Also, do not use damaged interface cables.
 - Do not leave packing materials around.
 - Do not subject this device to strong shocks or vibration by dropping it, etc.

1.2.4 Precautions regarding care and maintenance of this device



WARNING

- Do not remove the lithium batteries.
- Turn the power off and remove the power plug from the wall outlet.



CAUTION

- Perform the maintenance and inspection periodically. Also, contact Konica Minolta technical representatives for cleaning of the inside.
- Immediately after turning the power off, be careful of hot components inside this device.
- Install the power cable, interface cable, etc. securely.
- Do not rub or strike this device with hard objects as it will cause damage.

1.2.5 Precautions regarding CD/DVD use



WARNING

- The optical head of the CD/DVD device discharges a laser, so take care not to look in the object lens of the optical head.



CAUTION

- Take the following precautions to prevent reading errors etc.
 - Do not subject to impact.
 - Do not touch disk surfaces.
 - Place in cases when storing.
 - Do not place in locations with a lot of dust.
 - Do not place in locations with high temperature and high humidity.
 - Do not place in direct sunlight.
- Attach labels to CD/DVD surfaces and cases so that the recorded content can be identified.
- The types of media supported by this device are CD-R and DVD-R only. Also, please note that it is possible that when saving on media other than the following, writing errors or reading errors may occur. Please be forewarned.
 - TDK Co. CD-R 1-48 speed supported <for data>
 - Mitsubishi Kagaku Media Co. CD-R 1-48 speed supported <for data>
 - Mitsubishi Kagaku Media Co. DVD-R 1-16 speed supported <for data>
- If dust adheres to the object lens of the optical head in the CD/DVD drive, it is possible that writing errors and reading errors may occur. In such case, remove the dust with a commercial DVD lens cleaner.

1.2.6 Precautions regarding display monitor use



WARNING

- If the LCD monitor shows the same image for extended periods of time, it will burn onto the screen.



CAUTION

- Use with screen brightness and contrast at a suitable level. Also, do not turn brightness up too high when using in a dark room.
- The backlight for the LCD monitor will deteriorate over time and will gradually grow darker. Check that the display monitor is at a suitable level of brightness before using this device.
- View more than 80 cm from the display monitor.
- Use in a bright room is recommended due to eye fatigue being cumulative when used in a dark room.
- When small dots of light and dark appear on the image in the LCD monitor, check whether it is a defect in the LCD monitor or the image information before using.
- The 23-inch multi-touch monitor (RadiForce MS235WT) cannot be operated while the user is wearing gloves.
- If you use Windows 10, do not swipe the touch screen from the edge to the center. Otherwise, Windows settings screen will appear, and forcible shutdown of this system or unintentional altering of its settings may occur.

1.2.7 Notice relating to information security



WARNING

- Systems infected by computer viruses, worms and other malicious software potentially harmful to computers (hereunder referred to as "malware") may result in the erasure, corruption or unwanted disclosure of data stored within this device, including personal and sensitive patient information. Infections by malware may also result in malfunction of the device, as well as causing the infection to spread to other products.
- This device may only be used in combination with software confirmed to be safe and compatible, and installed according to predetermined installation procedures.
- The introduction of the latest security updates to the Operating System, as well as providing for anti-virus software and updating virus definition files on a regular basis, are considered effective in preventing the infection of the system by malware. Please refer to a Konica Minolta service representative for details.
- To prevent the infection of the device by malware, notice the following things:
 - Do not connect the device to equipment not purchased from Konica Minolta, or equipment not certified for connection to the device.
 - Do not install software purchased from other companies.
 - Do not uninstall software that has already been installed.
 - Do not change the setting for the OS (operating system) or files and application software associated with the OS, or delete folders or files thereof.
 - Always confirm external storage media to be free of malware prior to use.
 - Use the device in a safe network environment incorporating adequate security measures for the prevention of malware infection.
 - Refrain from any hazardous activity leading to potential vulnerability against malware infection.
- Take precautions not to allow others to see the device screen displaying sensitive patient information. Privacy protection display filters should not be used as such filters may adversely affect the appearance of displayed images.
- Take precautions not to allow others to operate the device.



WARNING

- Be sure to implement the following cyber-security measures:
 - Provide for an adequate level of information security measures within the facility using this device, and other facilities connected to the facility via networks.
 - Isolate the device from the connected network immediately upon infection by malware, concurrently prohibiting the use of the infected device.
 - Upon infection of the device by malware, or the potential infection thereof, promptly contact Konica Minolta service representative.
- Manage the account information (user name, ID, etc.), password and other sensitive information as follows:
 - Use a combination of upper- and lower-case alphabet and numeric characters to prevent easy identification by malicious parties.
 - Do not leave records of sensitive information to avoid uncertified disclosure.
 - Passwords should consist of at least eight characters.
 - Passwords should be assigned with expiration dates, and changed on a regular basis.

1.2.8 Precautions for each function



WARNING

Precautions on stitching combination processing

- Adjust the combination position by using the markers as supplementary standards in addition to body parts of the subject. It is also recommended that you arrange the measure in the combined image part during exposure to simplify the confirmation of the combined parts.

Precautions for One Shot stitching exposure

- One Shot stitching exposure outputs the combined picture by correcting the images' overlapping part captured by DR panel. Depending on the capturing conditions, lateral stripes or decrease in contrast might occur in a correction area, or decrease in contrast might also occur if a structure horizontally long overlaps with the correction area. Make sure the correction area and the parts in an examination are not overlapping.
- Make sure to observe the number of DR panels that are loaded in the stitching holder through the exposure screen before conducting the exposure.

Precautions for image measurements

- Sometimes the exposure orientation causes accidental errors with regard to the actual length of the subject. Use while taking into account any error between image and measured results.

Precautions when running HS processing

- The noise is reduced by HS processing, and you can expect signals that are unclear due to noise to become clearer, but signals that do not exist will not be visible.
- When reviewing whether to reduce dosage by means of HS processing, consider lowering the signal component by means of reducing dosage and always check whether images are suitable for diagnosis.

**WARNING****Precautions when applying scattered radiation correction (IG) processing**

- It is expected that scattered radiation correction processing will remove scattered radiation components and thus enhance subject contrast; however, it does not ensure that the same image quality as that which is generated when a grid is used will be obtained.
- Applying scattered radiation correction processing will not have any effect if the desired image is not contained in the original signals.
- Applying the scattered radiation correction processing may result in unnatural images. In particular, applying this processing to images for which grids were used may increase the contrast too sharply. Make sure to perform image verification to confirm if the application of this processing is suitable for diagnosis.
- Preset a tube voltage value that is close to the actual exposure conditions as the image processing parameter of the Exam. Tag.

Precautions on magnetic card reader

- Check that patient information read from a magnetic card is consistent with the information written in the magnetic card.
- Do not connect multiple magnetic card readers to a single device. It may cause malfunctions.
- Do not change the settings of the dip switch on the bottom of the magnetic card reader.

Precautions on bar code reader

- The reading window discharges a laser, so take care not to look in the laser or point the laser toward the eye. In addition, perform periodic inspection of the reading window.
- Laser is discharged during disassembly. Do not disassemble.

Precautions on blackening process for areas outside the exposure field

- In the blackening process for areas outside the exposure field, if the distance between the edge of the X-ray exposure field and the edge of the cassette is 3 cm or less, the masking function may fail to recognize the masking field. When using a collimator, set the edge of the X-ray exposure field to be sufficiently distant from the edge of the cassette. In addition, use preview on the [Output] tab or [Overlay] tab to check that the masking area is appropriately set before the image is output, and modify the masking area on the viewer screen if needed.

**CAUTION****Notes on the chest wall blackening process**

- Recognition of unexposed areas on the breast may be lost in the chest wall blackening process. Use preview on the [Output] tab or [Overlay] tab to check that the chest wall blackening area is not in the diagnosis area before the image is output, and set the chest wall blackening process to OFF on the viewer screen if needed.

Precautions on mammogram

- For United States of America, this device is not intended to use for Mammography.
- Use upon confirming that missing regions in images on the reception area and exposure field exceeding the reception area are within the allowable range. Also, make sure that additional information such as stamps do not overlap with the breast area in images.
- Confirm that additional information such as markers and stamps is not superimposed on the breast area.
- When displaying two mammograms on two frames, fine-tune and check the horizontal positions of the images.

Precautions for the use of the highlight function for the tube/gauze

- If the tube/gauze is difficult to identify on the image, adjust the highlight level. When the tube/gauze is highlighted too much, lower the highlight level.

Precautions when merging study images

- When studies are merged, their patient and study information are updated.

Precautions on the lung lack/motion blur detection function

- In images showing lesions, foreign substances, etc., lung lack or motion blur may be detected even when none exist.

Precautions on multi-study function

- Be careful since, in order for patient information to be determined automatically from the four information variables (patient ID, name, date of birth, and sex), a patient will not be treated as the same patient if the four variables differ.

**CAUTION****Precautions for Web/Remote Desktop Linkup**

- Do not use the Web/Remote Desktop Linkup for the following purposes:
 - Diagnosis of illnesses, prevention of illness, monitoring, treatment, or pain relief.
 - Diagnosis of injuries or physical disabilities, monitoring, treatment, pain relief, or corrective procedures.
 - Physiological or anatomical examinations, substitutions or corrections.
 - Control of conception.
 - Diagnosis, treatment, alleviation, or prevention of human or animal illness, abnormal physical conditions, or diagnostic signs of such illnesses or conditions.
 - Healing, modification, or adjustment of human or animal physical functions or anatomy.
 - Diagnosis of pregnancy.
 - Care for humans or animals during pregnancy, while delivering, or after birth, including for natal care and non-medicinal birth control.

Precautions on the login control mode

- Be careful of password management.

Precautions on REGIUS plates

- Frequency and duration of use of the REGIUS plates* are automatically monitored when they are scanned by the reader. The replacement schedule may not be properly managed if the plate is not used for an extended period of time. Therefore, use of the REGIUS plates as evenly as possible is recommended. (* Photostimulable phosphor plate for Konica Minolta computed radiography)

Precautions on high precision monitors

- Since a high precision monitor has a different aspect ratio from that of the exposure and viewer screens, when you enlarge, reduce, or move an image on the exposure or viewer screens, an image of a different area may be displayed on such a monitor.
- High precision mammographies are not displayed.

Precautions on the AeroDR Stitching Unit

- Always ensure the exposure ready LED (blue) of the AeroDR Stitching Unit is lit before performing an exposure. Additionally, do not press the first stage of the exposure switch until the exposure ready LED (blue) is lit.

**CAUTION****Precautions on a stitching cassette**

- There are small differences in magnification of images made with REGIUS plates which are adjacent within a stitching cassette. For this reason, overlapping parts of images made with REGIUS plates which are adjacent do not completely match. (When the exposure distance is 1.5 m, misalignment in the horizontal direction will be approximately 0.5 mm at maximum.)

Precautions on the grid

- For grid during exposure, use 34-40 lp/cm. When exposing with a grid other than specified, sometimes moire cannot be eliminated.
 - * For the DR Detector, the grid to be used is specified. Refer to the AeroDR Operation Manual for details.
- The grid removal process reduces the response of the frequency components that make up the grid image. The principle of this process is that the grid image uses a specific range of spatial frequencies. Therefore, part of the signal components of images other than the grid image may also be reduced if these images have signal components near the frequency range of the grid image. When you have performed exposure using a grid, check whether the images obtained by removing the grid are suitable for diagnosis.

Precautions when changing the exposure device

- When changing the device (for example, a wall stand reader to a table reader), different exposure conditions may have been set for the same body part depending on the settings of the body part that is created or edited by the user master. Therefore, carefully check both the body part and its exposure conditions before starting the examination.

Precautions when the image is used on a device other than the one used for output

- When using the image on another device for the purpose of measurement etc., check the consistency between the devices before use. In particular, care must be taken when decreasing the image size because some correction may be applied to the image depending on the reduction ratio.

Precautions on changing the reading area

- If annotation has been set for the image, changing the reading area will disable the annotation setting. Set annotation again.

**CAUTION****Precautions when sending exposure setting**

- When sending exposure setting to an external X-ray device, check the exposure conditions on the X-ray device. Be especially careful of X-ray exposure settings when performing an exposure on a small child.

Precautions when delivering an image from this device to other devices

- Confirm that additional information such as set annotation is correct.

Precautions for exposure with the DR Detector

- Before exposure, confirm on the screen of this device that the DR Detector is registered in the exposure room. Also, perform exposure after confirming that the DR Detector to be used for exposure has been selected.
- Do not leave the DR Detector in the vicinity of a heating device such as a heated carpet etc.

Precaution on exposure dose

- After exposure, S values are displayed in the image display areas of this device. Check that the S values indicate the appropriate dosage for exposed images.

Precautions when performing exposure in Aero Sync mode

- Confirm that the device is ready for exposure through its display before performing exposure.
- Confirm that a confirmation is sounded from the device after the start of exposure.
- Do not let the DR Detector vibrate or receive shock until the preview image is displayed.
- Confirm that the DR Detector's battery level is full before performing exposure.
- Use within the range of the pre-checked exposure conditions.
- Be aware that the exposure procedure must be changed in some cases when the settings are changed for the Aero Sync button or initial detection level. Be sure to press the Aero Sync button after changing the Aero Sync button setting from OFF to ON.
- If the Aero Sync button or initial detection level has not been set appropriately, a malfunction may occur due to the DR Detector being subjected to impact. Make sure values are changed appropriately.

Chapter 2

Product Overview

This chapter describes the overview of this device.

2.1 • Overview of this device

This section describes the functions and system configuration example.

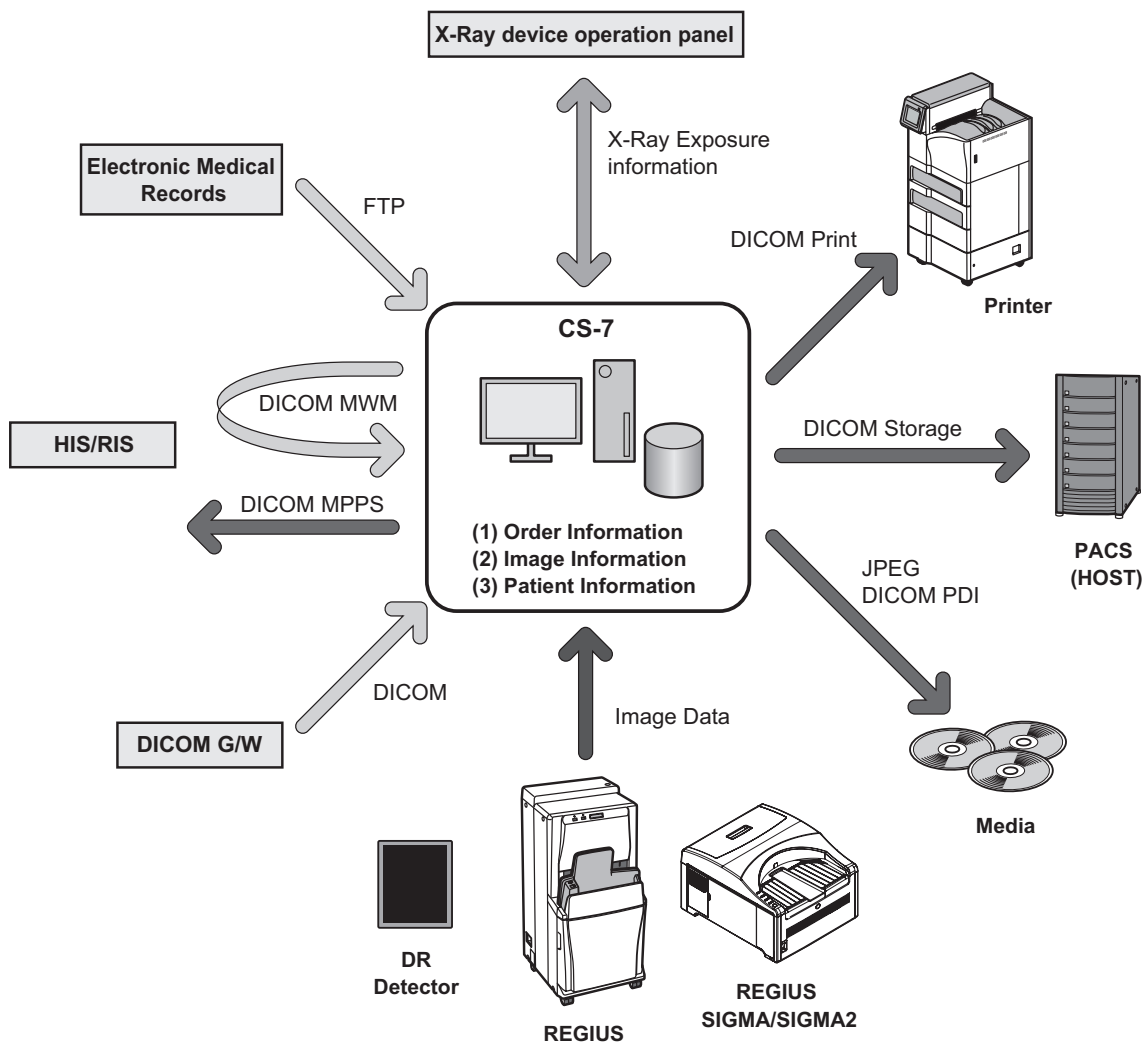
2.1.1 Functions

This device is a DIRECT DIGITIZER used with an image diagnosis device, medical imaging device and image storage device connected via the network.

This device digitally processes patient images collected by the medical imaging device to provide image and patient information.

2.1.2 System configuration example

The system configuration example is as shown below.



 **HINT**

- This device is intended to be connected to DR Detector or to REGIUS, REGIUS SIGMA/SIGMA2 as an input device, and to printer or PACS as an output device.
 - For details on how to use DR Detector and REGIUS, REGIUS SIGMA/SIGMA2, refer to their respective operation manuals.
 - 7 DR Detectors can be connected to this device.
 - 15 REGIUS series can be connected to this device.
 - Only a single REGIUS SIGMA/SIGMA2 unit can be connected to this device.
 - A REGIUS series unit and a REGIUS SIGMA/SIGMA2 unit cannot be connected to this device at the same time.
-

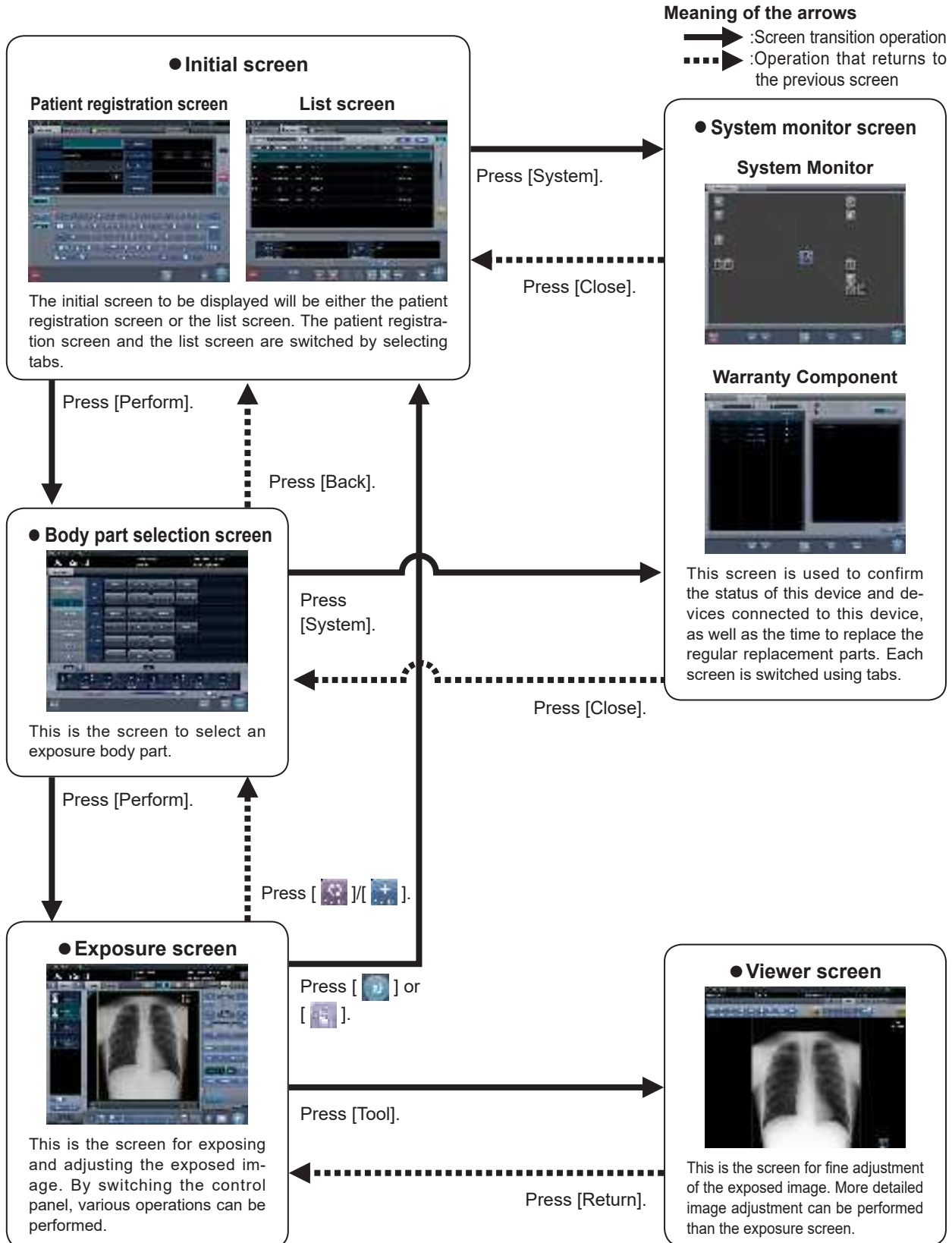
Chapter 3

Description of Each Screen

This chapter describes the screen structure of this device,
and the function of each button on the screen, etc.

3.1 • Screen connections

The following describes the connection between various screens and how they transition. For details, see the corresponding page in the manual for each screen.



3.2 • Patient registration screen

3.2.1 Structure of patient registration screen

This is the screen for inputting the patient information. The patient registration screen is displayed when the [PatientReg.] tab is selected from the main tabs.



Number	Name	Functions
(1)	Application bar	Date and time, operator name, exposure room name, icons of devices connected to this device are displayed. When the [] icon is displayed in the leftmost position of the application bar, pressing the date and time display area hides the screen.
(2)	Sorting tab	There are 2 types of tab, the main tab and the sub tab. [PatientReg.] tab, [OrderList] tab and [Completed] tab are displayed in the main tab. In setting, one more sub tab can be added. When all tabs cannot be displayed within the screen, tab scroll buttons [] are displayed.
(3)	Input item area	This is the area to input patient information. Some items require input with the input panel (keyboard).
(4)	Display/hide button (Input panel)	Displays or hides the input panel display.
(5)	Tool bar area	[System]: The system monitor screen is displayed. [Web/Remote Desktop Linkup]: The screen of the HOST or RIS linked to the Web/Remote Desktop is displayed. [Perform]: Runs the examination of the selected patient. [Mammo Print ON] and [Mammo Print OFF]: This either enables mammogram printing (normal print mode) or enables the print composer. Setting this to [ON] enables mammogram printing of the exposure screen (normal print mode). Setting this to [OFF] enables the print composer. The device switches between [ON] and [OFF] every time the button is pressed.

3.2 Patient registration screen

Number	Name	Functions
(6)	Scroll button	Pressing [] displays the next patient information, and pressing [] displays the previous patient information.
(7)	Clear button	The input patient information disappears.
(8)	Search button	Search begins with the input patient information.
(9)	trauma button	Automatically issues a number in emergency case in order to start the examination. This is displayed when the automatic emergency number issuing function is turned on with the user tool.

IMPORTANT

- Creating too many tabs makes it difficult to find the target tab and lowers the operability. Do not add more tabs than necessary.

HINT

- Display of the [System] icon changes according to the device status and other conditions. The meanings of the icons to be displayed are listed below.



The icon turns red when an error occurs in this device or in devices connected to it.



The icon turns yellow when it is time to replace the regular replacement parts.

- The [Web/Remote Desktop Linkup] icon displays the registered RIS, HOST, or other name.

3.2.2 Details of application bar

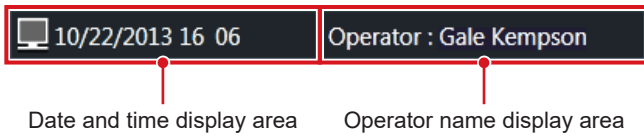
The date and time, operator name, exposure room name, icons of devices connected to this device, and so on are displayed in the application bar.



Date and time/operator name display area

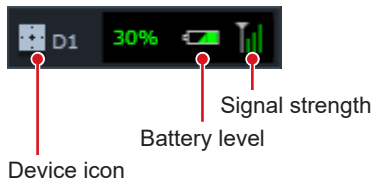
The current date and time is displayed in the date and time display area, and the operator name is displayed in the operator name display area.

When the [] icon is displayed on the left side of the date and time display area, press the date and time display area to hide it.

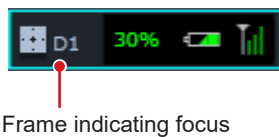


Device information display area

The device information display area of the application bar displays the device icons as well as the states (battery level and signal strength) of the DR Detectors registered in this device.



When an image display area has focus, a frame is displayed around the device information that corresponds to the image display area.



● Device icon display

Icon	Device name
	Wall stand reader
	Table reader
	DR Detector
	AeroDR Stitching Unit

● DR Detector battery level display

Status	Battery level				
	Low				High
Not being charged					
Charging					
Color of icon	Red		Yellow	Green	

● DR Detector signal strength display

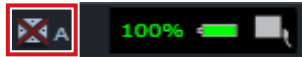
Out of range	Wireless condition			Wired connection
	Bad	Good		

IMPORTANT

- When the signal strength antenna indicator displays one or fewer bars, cycle time will take longer or wireless communication may not be possible. It is recommended that this function is used when the signal strength antenna indicator displays two or more bars.

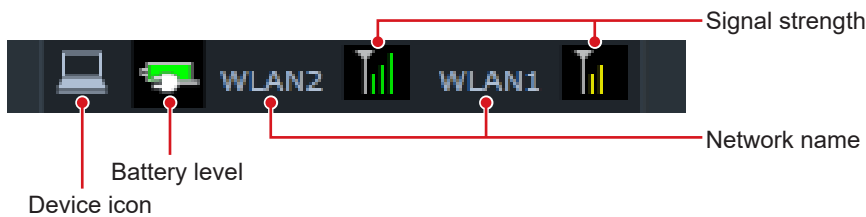
HINT

- When there is a problem with connection or when the power is turned off, the device icon is displayed in gray.
- When the image could not be received after exposure due to communication error, etc., the device icon is displayed with a yellow border.
- The following device icon is displayed for DR Detectors in which an error was detected by the drop/impact panel check tool.



Device information display area when using the portable X-ray device

When this device is operated with the portable X-ray device, the network connection status, etc. are displayed on the application bar.



● Battery level display of this device (when using the portable X-ray device)

Status	Battery level					
	Low					High
Not being charged						
Charging						
Color of icon	Red	Yellow	Green			

● Signal status display of this device (when using the portable X-ray device)

	Out of range	Wireless condition		
		Bad	Good	
Icon				
Color of icon	—	Red	Yellow	Green

IMPORTANT

- When the signal strength antenna indicator displays one or fewer bars, cycle time will take longer or wireless communication may not be possible. It is recommended that this function is used when the signal strength antenna indicator displays two or more bars.
- If the battery charge drops to 5% or less, the system may enter a sleep state. If the battery icon turns red or the message that the battery level is low appears, please charge this device. If this device cannot be charged right away, shut down this device.

HINT

- The network name displayed when operating this device with the portable X-ray device is set during installation.

3.3 • List screen

This is the screen where a list of examinations is displayed. When tabs other than the [PatientReg.] tab are selected on the sorting tab, the screen is always the list screen.



Number	Name	Functions
(1)	Application bar	Date and time, operator name, exposure room name, icons of devices connected to this device are displayed.
(2)	Sorting tab	There are 2 types of tab, the main tab and the sub tab. [PatientReg.] tab, [OrderList] tab and [Completed] tab are displayed in the main tab. In setting, one more sub tab can be added. When all tabs cannot be displayed within the screen, tab scroll buttons [] are displayed.
(3)	List display area	Examinations registered on each sorting tab are displayed.
(4)	Filter items	Keyword input column for refined display for the patient displayed in the tab.
(5)	Display item	Item names of examination information. Press [] displaying the item names, and lists can be sorted with the item names. [] means ascending order and [] means descending order. Combinations of up to 3 items can be specified for sorting.
(6)	Examination	Examinations registered with the tab are displayed. Focus is displayed in selected examinations.
(7)	Filter button	Refined display with input keywords for filtered items.
(8)	Clear button	The input keyword for filtered items disappears.
(9)	Scroll bar/scroll buttons	Drag the scroll bar to scroll a list up and down. Pressing [] scrolls the screen by line, and pressing [] scrolls by page.
(10)	trauma button	Automatically issues a number in emergency case in order to start the examination. This is displayed when the automatic emergency number issuing function is turned on with the user tool.

IMPORTANT

- Creating too many tabs makes it difficult to find the target tab and lowers the operability. Do not add more tabs than necessary.

3.3 List screen



Number	Name	Functions
(11)	Display/hide button (Examination information display area)	Displays or hides the examination information display area.
(12)	Patient/Exam.Info tab	The tab is displayed when the examination information display area is displayed.
(13)	Examination information display area	The details of the examination are displayed.
(14)	Scroll bar/scroll buttons	Drag the scroll bar to scroll a list left and right. Pressing [← →] scrolls the screen by frame, and pressing [⏪ ⏩] scrolls by page.
(15)	Tool bar area	<p>The operation button is displayed for a focused examination.</p> <p>[System]: The system monitor screen is displayed.</p> <p>[Web/Remote Desktop Linkup]: The screen of the HOST or RIS linked to the Web/Remote Desktop is displayed.</p> <p>[Delete]: Deletes the selected examination.</p> <p>[Modify]: Displays the information modification screen for the selected examination.</p> <p>[Refer]: Displays the examination history of the selected examination.</p> <p>[Append]: Adds the Exam. Tags to the completed examinations.</p> <p>[Refresh]: When connected to a higher system, refreshes lists.</p> <p>[Guard]: Disables deletion of the selected examination. Press again and protection is canceled.</p> <p>[Merge]: Combines the selected studies and moves images.</p> <p>[Perform]: Performs the selected examination.</p> <p>[Mammo Print ON] and [Mammo Print OFF]: This either enables mammogram printing (normal print mode) or enables the print composer. Setting this to [ON] enables mammogram printing of the exposure screen (normal print mode). Setting this to [OFF] enables the print composer. The device switches between [ON] and [OFF] every time the button is pressed.</p>

 **HINT**

- The [Web/Remote Desktop Linkup] icon displays the registered RIS, HOST, or other name.

3.4 • Body part selection screen







This is the screen to select the body part.




Number	Name	Functions
(1)	Application bar	Date and time, operator name, exposure room name, icons of devices connected to this device are displayed.
(2)	Patient information display area	Patient name, patient ID, date of birth, sex, etc. are displayed. The emergency mark is displayed for emergency patients, and the medical warning mark is displayed for pregnant patients or other patients who need extra care during X-ray exposure.
(3)	Favorite tab	When the set tab is selected, body part is displayed in the body part display area linked to the selected tab.
(4)	Body part display area	The exposure body part is displayed. With a maximum of 2 pages, each page can display up to 8 buttons at the same time.
(5)	Switching button (Body part display area)	Switches the pages of the body part display area. Maximum is 2 pages.
(6)	Exam. Tag display area	Exam. Tag for the selected body part is displayed.
(7)	Exam. Tag	This is the button to determine exposure conditions for the body part.
(8)	Switching button (Exam. Tag display area)	When there are multiple pages for the Exam. Tag display area, move pages by pressing [] or [].

3.4 Body part selection screen



Number	Name	Functions
(9)	Exam. Tags display area	Press the Exam. Tag to display the added Exam. Tags.
(10)	Exam. Tags	Exam. Tags and device icon are displayed.  : Displayed when the Exam. Tags are changed on the exposure screen.  : Displayed when the Exam. Tags are added on the exposure screen.
(11)	Delete button	Deletes the selected Exam. Tags (focused Exam. Tags).
(12)	Scroll bar/scroll buttons	Drag the scroll bar to scroll the Exam. Tags display area left and right. Pressing [ ] scrolls the exposure body part list by frame, and pressing [ ] scrolls pages.
(13)	Append and move buttons	Moves the focus to the added Exam. Tag.
(14)	Tool bar area	During registration in the Exam. Tags display area, operation buttons are displayed for the focused examination. [System]: The system monitor screen is displayed. [Schedule]: Reserves the selected Exam. Tags (focused Exam. Tags). Pressing [Schedule] reserves the examination and displays the list screen. [Back]: Displays the list screen without reserving the examination. [Perform]: The exposure screen is displayed.
(15)	Tool bar area	Displayed when the exposure screen transitions to the Body Part Selection screen. [OK]: Displays the exposure screen. [Cancel]: Returns the display to the previous screen.

 **HINT**

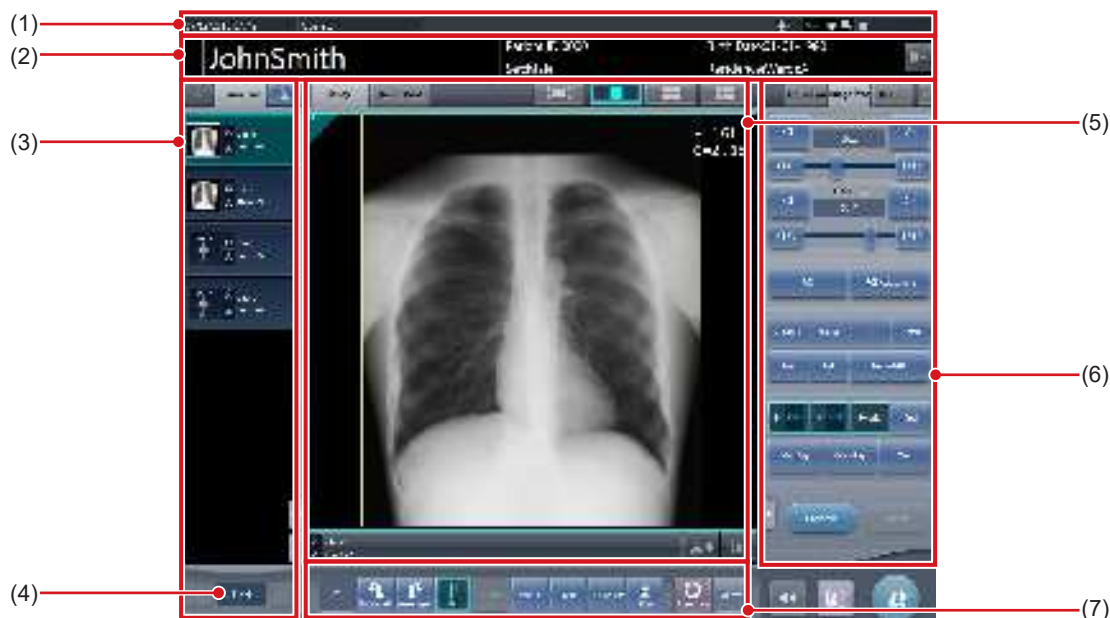
- When exposed, the exposed image thumbnails and Exam. Tags are displayed in the Exam. Tags display area.
- [Schedule] is not displayed in the tool bar area when the body part selection screen is displayed from the exposure screen.
- When moving the focus to the added Exam. Tag, press the move-to-add button, [].







3.5 • Exposure screen

This is the screen to perform exposure.

3.5.1 Structure of the exposure screen





The exposure screen consists of several areas. Here, each area is described.



Number	Name	Functions
(1)	Application bar	Date and time, operator name, exposure room name, icons of devices connected to this device are displayed.
(2)	Patient information display area	Patient name, patient ID, date of birth, sex, etc. are displayed. The emergency mark is displayed for emergency patients, and the medical warning mark is displayed for pregnant patients or other patients who need extra care during X-ray exposure. []: The patient information editing screen is displayed ([]) is not displayed when exposing with the multi-study).
(3)	Study display area	The order list or body part selection is displayed. The displayed details can be switched using tabs. Pressing [ ] can move the display on an order by order basis. Pressing [] moves the display to the starting order while pressing [] displays the last order.
(4)	Currently selected order No./Number of orders	Displays the currently specified order of studies and the total number of studies.
(5)	Work area	Displays exposure conditions and exposed images, etc. The displayed details can be switched with tabs.
(6)	Control panel	Used when performing some operation on the image display area that has focus. The operation panel switches automatically depending on the content in the image display area that has focus, and it can also be switched by selecting tabs.
(7)	Tool bar	Displays various functions, and a shortcut to the control panel, etc.

3.5 Exposure screen



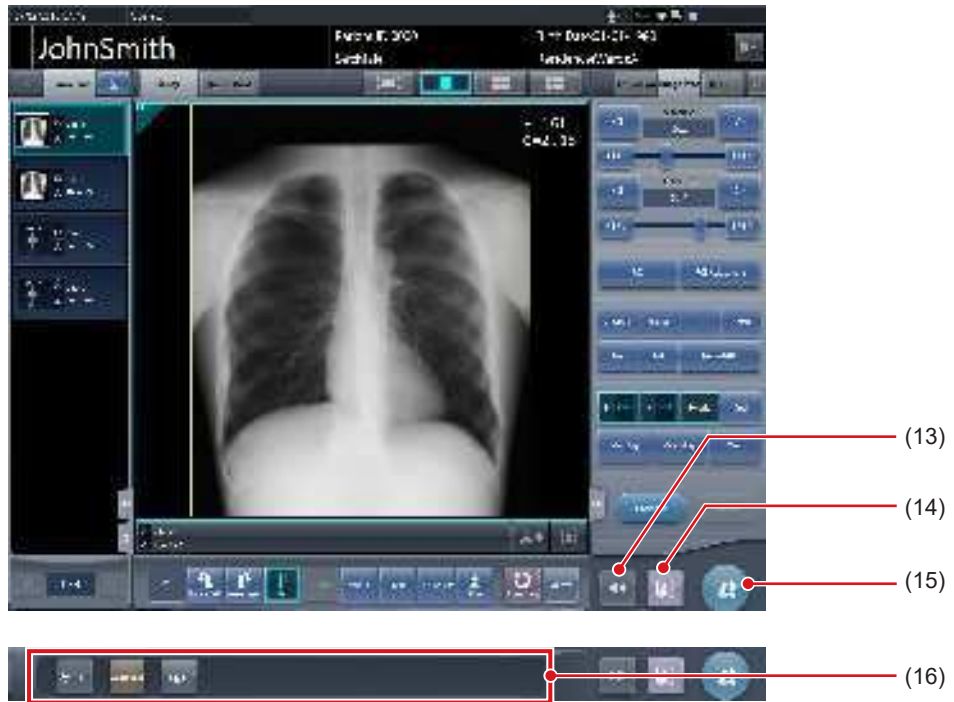
Number	Name	Functions
(8)	Function button	<p>[Rotate Left]: Turns the image to the left.</p> <p> HINT</p> <ul style="list-style-type: none"> The image is rotated by 90 degree to the left from the 360 degree position. <p>[Rotate Right]: Turns the image to the right.</p> <p> HINT</p> <ul style="list-style-type: none"> The image is rotated by 90 degree to the right from the 0 degree position. <p>[Flip]: Flips the image. When the image is flipped, the icon is in the selected state.</p> <p>[< Prev.]: Displays the previous image.</p> <p>[Next >]: Displays the next image.</p> <p>[Text]: The viewer screen is displayed. You can add an annotation.</p> <p>[ROI Adjust]: The viewer screen is displayed. You can change the ROI area.</p>
(9)	Status display	Displays the current rotation status by the angle value.
(10)	Extended area display button	<p>Function buttons more than the maximum number of function buttons that can be placed are stored. The stored function buttons pop up when the extended area display button is pressed.</p> <p>The following function buttons are set by default.</p> <p>[S/G Drag]: Switches to the operation mode used to adjust the S/G value. Pressing it again cancels the operation mode for adjustment. You can adjust the S and G values by dragging the image while the operation mode for adjustment is turned on.</p> <p>[Invert]: Inverts the black and white colors of the image.</p>
(11)	Exam. Tag button	<p>Changes or adds the Exam.Tag. The Exam. Tag buttons can be switched by pressing and holding this button.</p> <p> : Changes the Exam. Tag.</p> <p> : Adds the Exam. Tag.</p>
(12)	Viewer button	The viewer screen is displayed.

 **HINT**

- The patient information display area can be small-sized by setting. Emergency and medical warning marks are not displayed in the small-sized area.
- The Reject Image button may be displayed on the tool bar depending on the setting.



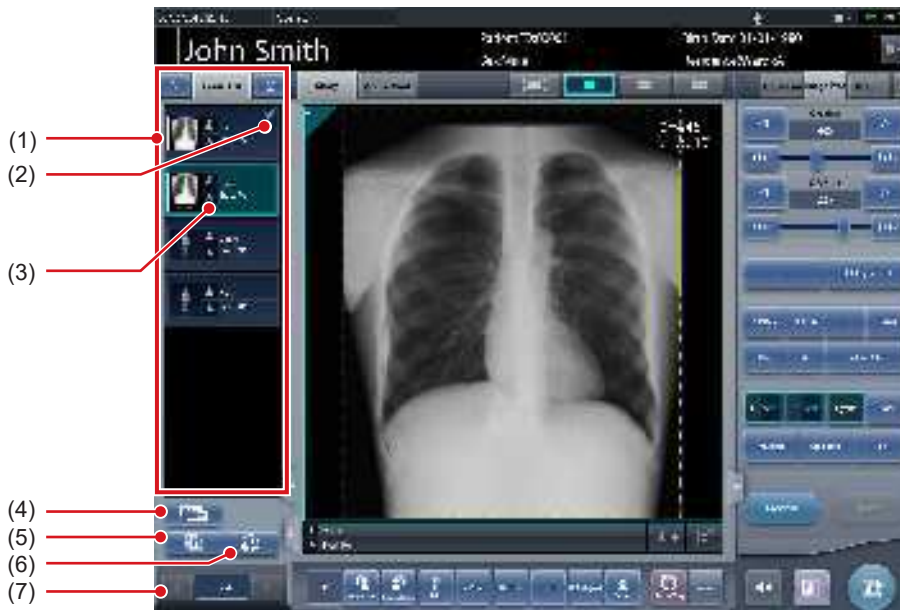
- The tool bar may also be displayed vertically on the right of the work area.
 - Both of the Exam.Tag buttons may be displayed simultaneously depending on the setting.
 - For the [Rotate Left] and [Rotate Right] buttons, you can configure the setting to switch whether to display both the buttons or display either one. If either one is displayed, hold down the button to switch to the other button.
 - The types and locations of function buttons can be configured using the user tool.
-



Number	Name	Functions
(13)	Display/hide button	Switches whether to display or hide the tool bar displayed at the bottom of the screen.
(14)	Pause button	Pauses the examination that has focus.
(15)	Examination completion button	Completes the examination and returns to the list screen.
(16)	Tool bar	[System]: The system monitor screen is displayed. [Additional]: Supplemental information edit screen is displayed. [Log off]: Logs off. Will appear only in login mode.

3.5.2 Examination display area

In the display area, order lists and Exam. Tags are displayed. Switching of displays is performed by selecting tabs.



Number	Name	Functions
(1)	Examination list	Displays reserved Exam. Tags.
(2)	Output mark	Check marks are displayed in the output image.
(3)	Exam. Tags	For Exam. Tags, exposure body part, exposure method and flip/rotate status are displayed.
(4)	Condition copy button	Copies the selected Exam. Tags.
(5)	Image copy button	Copies the selected image.
(6)	Image exchange button	Replaces the selected image.
(7)	Switching button (Exam. Tags)	Scrolls through the displayed Exam. Tags.

HINT

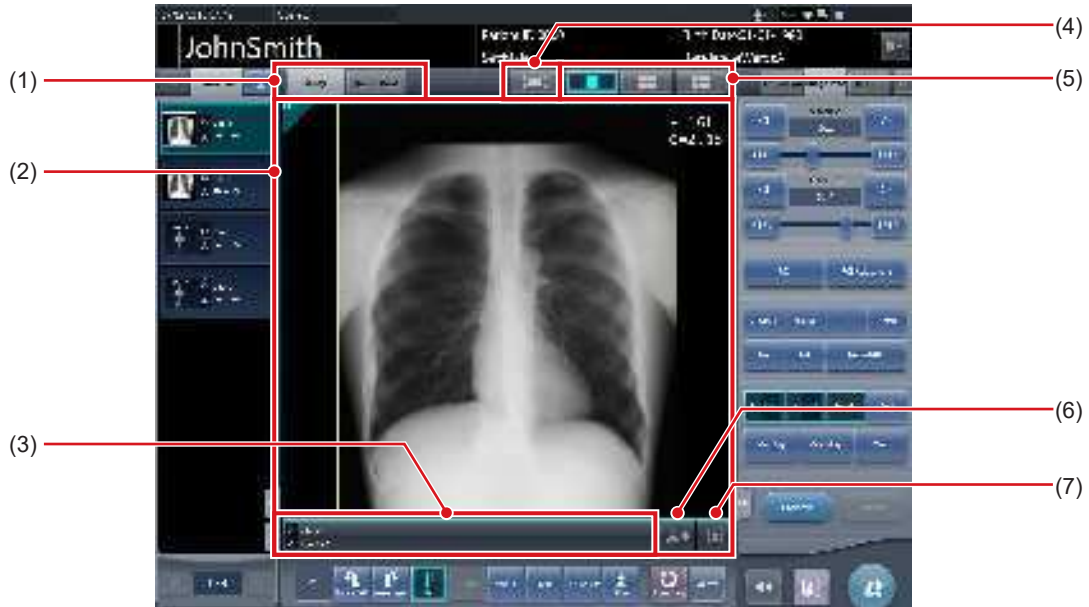
- You can change the width of the examination display area by dragging it. For more details, contact Konica Minolta technical representatives.









- The Exam. Tag group names and Exam. Tag names can be displayed in colored characters. More information is described in the "CS-7 User Tool Operation Manual".
-

3.5.3 Work area

In the work area, examination content (Exam. Tags and exposed images) and previews when sent to the host are displayed. Display of the examination content and the previews is switched by selecting tabs.



Number	Name	Functions
(1)	Study/Queue Cont. tab	Switches the display between the study content and the output preview.
(2)	Image display area	Displays exposed images after exposure, or exposure setting before exposure. When the [Queue Cont.] tab is selected, previews at the time of output are displayed.
(3)	Exam. Tags display area	Displays flip mark, output format, and Exam. Tags, etc. The meaning of the icons are listed below.  : Not flipped  : Flipped  : A format  : AB format
(4)	Full-Screen button	Displays captured images on the full screen.
(5)	Screen display format switching button	Changes screen display format.
(6)	Output button	Outputs exposed images to the preset output destination. After output, the icon changes to [].
(7)	Reject button	Sets an exposed image as rejected. After setting the image rejected, the icon changes to [].

3.5 Exposure screen

HINT

- In the output preview, images are displayed in the order of transmission.



- In the output preview, rejected images are not displayed.
- The screen display format has a single-image format and a multiple-image format to display multiple screens in alignment. Single-image format is suitable for checking details of the image. Multiple-image format is suitable for comparing multiple images.

1×1 display screen



2×2 display screen



3×2 display screen



- The Reject button may also be displayed on the tool bar depending on the setting.
- If the 23-inch multi-touch monitor (RadiForce MS235WT) is used, the image display area is expanded to display a large view.



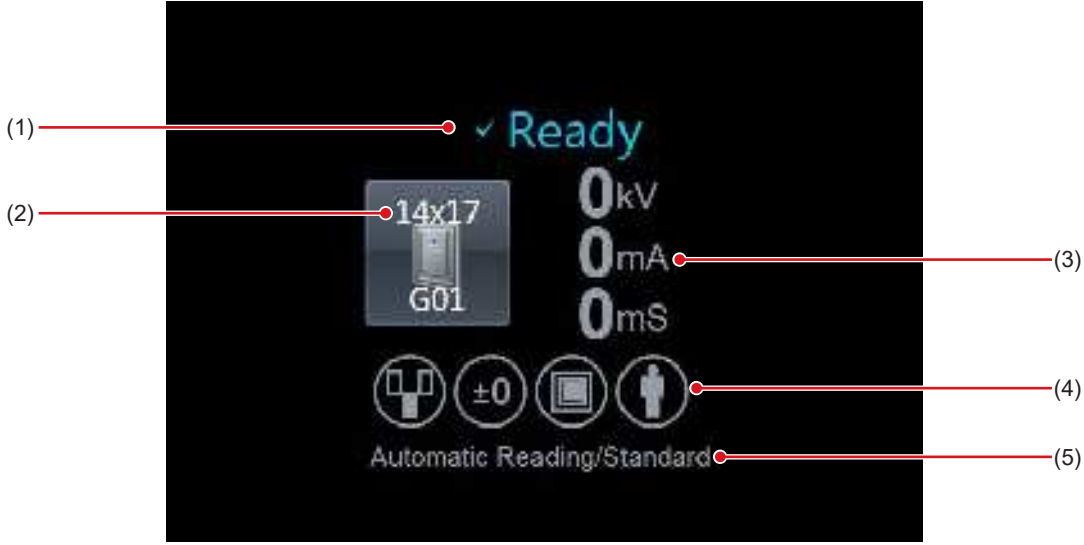
- The host output size and printer output size can be displayed in the image display area depending on the setting.



- If the image is trimmed, the actual output size is displayed in the host output size and printer output size.

3.5.4 Work area (not during exposure)

For work areas when unexposed, the type of exposure device, status, irradiation information, exposure conditions, etc. are displayed.



Number	Name	Functions
(1)	Status	Status of the DR Detector is displayed. This is not displayed when exposing with the CR cassette.
(2)	Device icon	The exposure device icon and the size of the DR Detector is displayed.
(3)	Exposure information	The exposure information during the exposure is displayed.
(4)	Exposure condition icon	Exposure condition is displayed as an icon.
(5)	Reading conditions	Reading conditions such as reading size, reading direction and resolution are displayed. When set to automatic reading, [Automatic Reading] is displayed.

IMPORTANT

- When using AeroDR 3 1417HD and a CR cassette, be sure to check the resolution displayed in the reading conditions when exposure.

.....

3.5 Exposure screen

HINT

- The design of the device icon varies depending on the type of an DR Detector used.



AeroDR 3 1417HD



AeroDR 1417HQ
AeroDR 1417S
AeroDR 2 1417HQ
AeroDR 2 1417S



AeroDR 1717HQ



AeroDR 1012HQ

- The I/F Cable3 that connects to AeroDR 3 1417HD can also be used as a substitute for the AeroDR UF cable. For this reason, depending on the settings, the AeroDR 3 1417HD device icon may change to the wall stand and table reader icon.
- Display of the device icon changes according to the device status. The meanings of the status to be displayed are listed below.



Exposure is enabled.



The DR Detector is not registered or the DR Detector is loaded in the wall stand and table.
This icon is also displayed when the DR Detector is turned off.



Error occurs while communicating, or system is not immediately available.

- The device icon color can be changed for each DR Detector depending the settings.

The available color types are as follows:



Blue



Orange



Light Blue



Pink

Each DR Detector retains the color setting information. If the same color is specified for multiple DR Detectors, the following icon is displayed to indicate the duplication.



For information regarding details on the color setting, contact Konica Minolta technical representatives.

- Displayed contents of the exposure setting and exposure condition icon are different depending on the manufacturer and model of the connected X-ray device.
- The maximum exposure time can be displayed on the right side of the reading conditions, depending on the settings. For more details, contact Konica Minolta technical representatives.
- The host output size and printer output size can be displayed in the image display area depending on the setting. If the image size is undetermined, [Unspecified] is displayed for the size.



3.5.5 Types of control panels

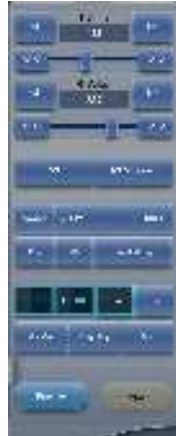
On the control panel, adjustment items for exposure and a screen to adjust exposed images are displayed. Control panels basically switch automatically according to the operation objective and circumstances, but sometimes you need to switch them manually. The types of control panels are as follows.



Exp.Info: Exposure conditions



Image Proc: Image processing



Acquisition



AeroSync



QUICK



Exp.Info: Irradiation results



Output (For host)



Output (For printer)



Overlay (For host)



Overlay (For printer)



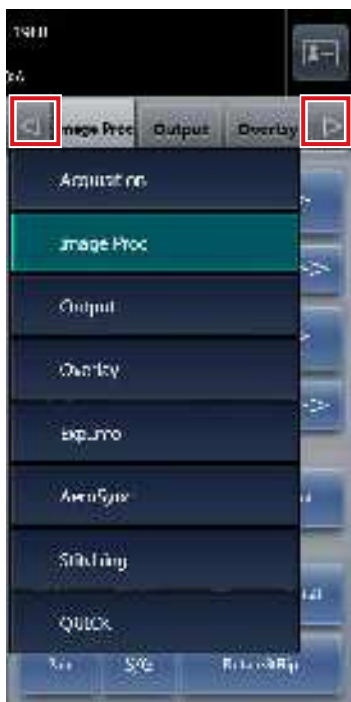
3.5 Exposure screen

HINT

- Up to three tabs are displayed on the control panels. If a desired tab is not displayed, press [< >] displayed on the tab and scroll it until the desired one is displayed.



- Hold down [< >] displayed on the tab for one second or longer to display the drop-down list of tabs. If you select a tab name from the list, the selected tab is displayed.



- You can fix the display of the desired tab.
.....

3.5.6 Control panel (Exp.Info: Exposure conditions)

This is the control panel to perform setting of the X-ray device irradiation information (exposure conditions).



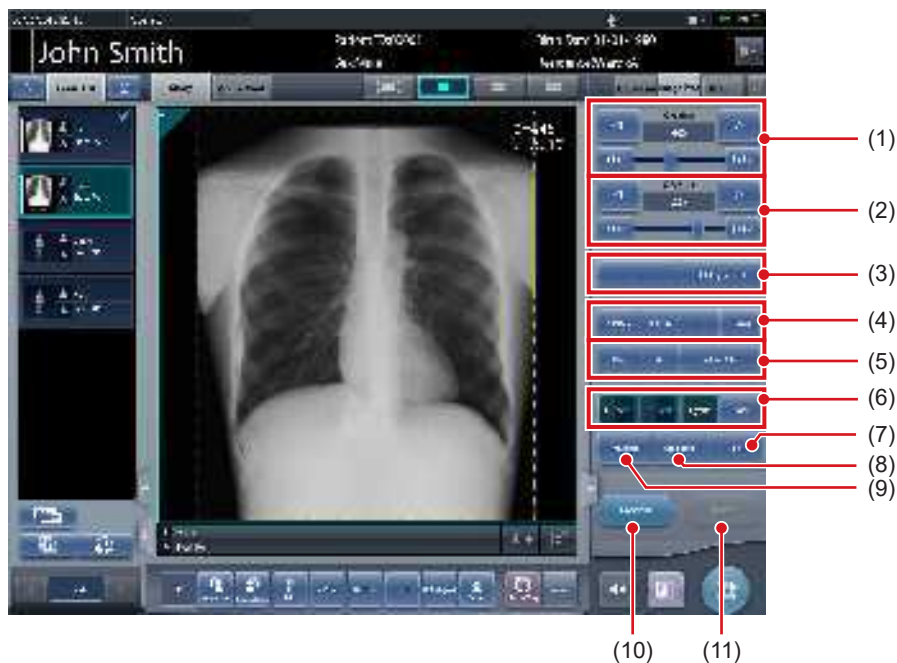
Number	Name	Functions
(1)	X-ray tube device temperature	Displays the temperature of X-ray tube.
(2)	Mode	Can switch between 2 point mode and 3 point mode. According to the switching, the display of "mA", "mS", and "mAs" changes.
(3)	kV, mA, mS, mAs setting button	Set the value of "kV", "mA", "mS", and "mAs" with [+] and [-] buttons.
(4)	PATIENT SIZE	Set the body type of patient.
(5)	FOCUS	Adjusts the size of focus area.
(6)	AEC button	Switches the mode of automatic exposure.
(7)	DENSITY button	Adjust the dosage of radiation by pressing [+] and [-] buttons or moving the slider.
(8)	Filter selection button	Select from the menu. The selection range varies according to the type.
(9)	SID display	Displays focal point - detector distance (cm).
(10)	Collimator Height/Width adjustment results	Displays the results of adjusting the height and width of collimator.

HINT

- Items and content displayed by control panels vary according to the device type and the maker of connected X-ray devices.
- The connected X-ray device exposure conditions will be displayed for every exposure conditions set key. The displayed exposure conditions can be altered before exposure.
- X-ray exposure conditions can also be set from the operation panel of a connected X-ray device.

3.5.7 Control panel (Image Proc: Image processing)

This is the control panel to adjust images after exposure. Basic image adjustments such as change of S/G value, etc. can be made.



Number	Name	Functions
(1)	S Value slider/button	Adjusts the S value. Pressing [] increases or decreases the S value step by step. Pressing [] increases or decreases the S value in multiples of the preset value. The S value can also be adjusted by dragging the slider.
(2)	G Value slider/button	Adjusts the G value. Pressing [] increases or decreases the G value step by step. Pressing [] increases or decreases the G value in multiples of the preset value. The G value can also be adjusted by dragging the slider.
(3)	ROI/ROI Adjustment buttons	Press [ROI] and ROI is displayed. Press again and it is released. Press [ROI Adjustment] and the viewer screen is displayed.
(4)	ZOOM+/ZOOM-/FIT/Detail buttons	Changes the display method of the image that has focus. [ZOOM+]: Switches to the zoom-in mode. Pressing it again cancels the zoom-in mode. Pressing the image in the zoom-in mode enlarges the display 1 step at a time. [ZOOM-]: Switches to the zoom-out mode. Pressing it again cancels the zoom-out mode. Pressing the image in the zoom-out mode reduces the display 1 step at a time. [FIT]: Displays the enlarged (or reduced) image to fit in the frame size (size of the image display area). [Detail]: The viewer screen is displayed and the exposed image is displayed zoomed in.

Number	Name	Functions
(5)	Pan/S/G/Rotate&Flip buttons	They change screen display format. [Pan]: Switches to the pan mode. Press it again to cancel the pan mode. You can move a desired image by dragging it while the pan mode is turned on. [S/G]: Switches to the operation mode used to adjust the S/G value. Pressing it again cancels the operation mode for adjustment. You can adjust the S and G values by dragging the image while the operation mode for adjustment is turned on. [Rotate&Flip]: Press this button to display the screen to rotate and flip an image.
(6)	E process/F process/Hybrid/Tool buttons	Performs the process when pressed.
(7)	Text button	The viewer screen is displayed. Place the annotation.
(8)	Cropping button	The viewer screen is displayed, so set the effective image area manually.
(9)	Masking button	The viewer screen is displayed, so set the masking area manually.
(10)	Preview button	Displays a preview image in which the set output conditions are reflected.
(11)	Reset button	Returns to the state when image was displayed.

3.5.8 Control panel (Acquisition)

This is the control panel to perform setting of automatic read and reading conditions.



Number	Name	Functions
(1)	Automatic Reading button	Change the automatic read settings of the DR Detector. [Size/Pos.]: The reading size, reading direction, and reading position are automatically set. [Position]: The reading position is automatically set. Select the reading size/direction using the Reading Size button/Reading Direction button. [OFF]: Turns the automatic reading settings off. Select the reading size/direction/position using the Reading Size button/Reading Direction button/Reading Position button.
(2)	Reading Size button	Specify the reading size.
(3)	Reading Direction button	Specify the reading orientation (portrait/landscape).
(4)	Reading Position button	Specify the reading position.
(5)	Resolution button	Specify the reading resolution when using the AeroDR 3 1417HD and a CR cassette.
(6)	Maximum Exposure Time button	Change the maximum exposure time. [Maximum Exposure Time]: displays the current maximum exposure time. [Default]: sets the value set to the Exam. tag. [Longer]: sets the time that is one stage longer than the value set to the Exam. tag.

IMPORTANT

- In the case of CR cassettes, "Standard" (175µm) or "High" (87.5µm) can be selected. The resolution in the case of Exam. Tag for mammograms is however 87.5µm for "Standard" and 43.75µm for "High".
- In the case of AeroDR 3 1417HD, "Standard" (200µm) or "High" (100µm) can be selected. Confirm the operational environment of this device before setting to "High" (100µm) because its image size is 3 times larger than those of AeroDR 1417HQ, AeroDR 1417S, AeroDR 1717HQ, AeroDR 1012HQ, AeroDR 2 1417HQ, or AeroDR 2 1417S.
- In the case of AeroDR 1417HQ, AeroDR 1417S, AeroDR 1717HQ, AeroDR 1012HQ, AeroDR 2 1417HQ, or AeroDR 2 1417S, the resolution is set to "Standard" (175µm). It is not possible to select the resolution.
- In some cases the maximum exposure time is fixed by the X-ray device and is not displayed. For more details, contact Konica Minolta technical representatives.
- The maximum exposure time of the One Shot stitching exposure using the maximum exposure time button differs from that of normal exposure.

HINT

- You can display Maximum Exposure Time button by setting it using the service tool. For more details, contact Konica Minolta technical representatives.
- After performing an exposure, the reading conditions set when the exposure was performed are displayed in white, bold characters.



3.5.9 Control panel (Aero Sync)

When exposing via Aero Sync mode, use this control panel to perform various operations and configure various settings.



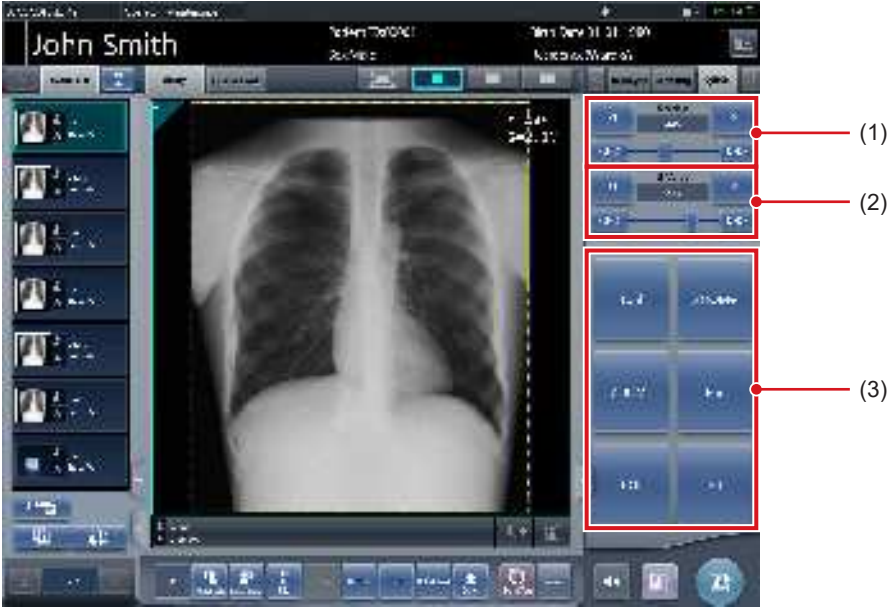
Number	Name	Functions
(1)	X-ray detection level switching area	Select the X-ray detection level during exposure. This may not be displayed depending on the type of DR Detector used.
(2)	Message/Button area	<p>Messages and buttons are displayed in this area depending on the operation status.</p> <p>When the [AeroSync Button] is set to ON on the system monitor screen</p> <p>Exposure permission waiting screen The device is waiting for permission for exposure. The screen changes to the ready-to-expose screen if you press [AeroSync].</p> <p>Ready-to-expose screen The screen is locked as it is ready to be captured. To cancel exposure, press [Cancel], then the screen returns to the exposure permission waiting screen.</p> <p>When the [AeroSync Button] is set to OFF on the system monitor screen</p> <p>Ready-to-expose screen The screen is locked as it is ready to be captured. To suspend exposure, press [Pause], then the screen returns to the exposure permission waiting screen.</p> <p>Exposure resumption waiting screen The device is waiting for exposure to be resumed. The screen changes to the ready-to-expose screen if you press [Restart].</p>

IMPORTANT

- The X-ray detection level switching area may not be displayed depending on the type of DR Detector used.

3.5.10 Control panel (QUICK)

This control panel can customize the button types and their layouts according to the function used. This control panel is mainly used for image adjustments when operating this device using a portable X-ray device.



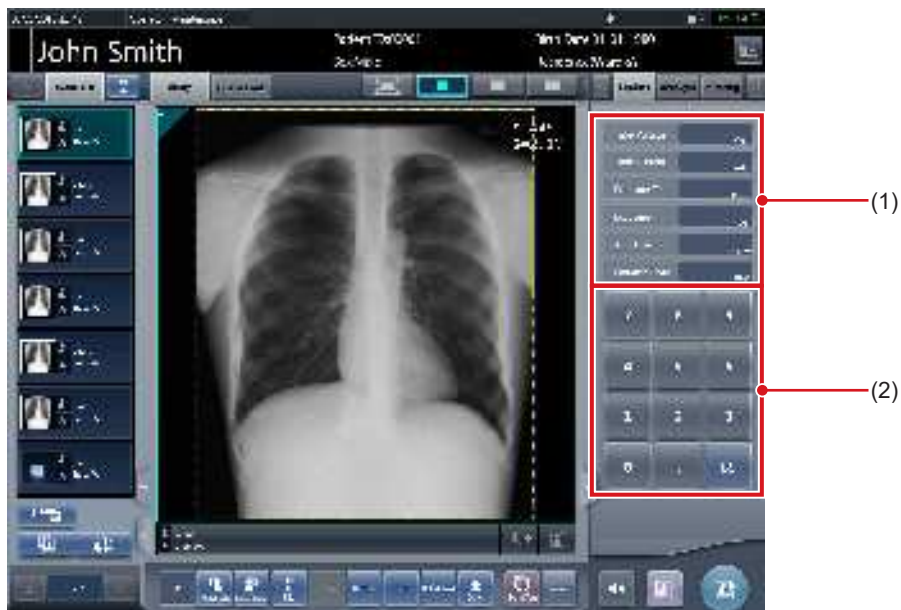
Number	Name	Functions
(1)	S Value slider/button	Adjusts the S value. Pressing [] increases or decreases the S value step by step. Pressing [] increases or decreases the S value in multiples of the preset value. The S value can also be adjusted by dragging the slider.
(2)	G Value slider/button	Adjusts the G value. Pressing [] increases or decreases the G value step by step. Pressing [] increases or decreases the G value in multiples of the preset value. The G value can also be adjusted by dragging the slider.
(3)	Custom area	Select a button from among [ZOOM+], [ZOOM-], [Pan], [Fit], [ROI], [Text], [ROI Adjustment], [Rotate&Flip], [E Process], [F Process], [H Process], [Tool], [Masking], [Cropping], [Contrast Invert], [Tube/Gauze], [S/G Value], [Preview], [Detection display] and [IG] displayed depending on the setting to display each function. The button types and layout can be customized according to which functions you use. [Contrast Invert]: Reverses black and white on the output image.

HINT

- Contrast invert is a function for checking the image on the screen. It has no effect on the output.
- The S Value slider/button and G Value slider/button are always displayed.
- In the custom area, you can display the shortcut to the control panel.

3.5.11 Control panel (Exp.Info: Irradiation results)

This is the control panel to perform setting of the X-ray device irradiation information (irradiation results).



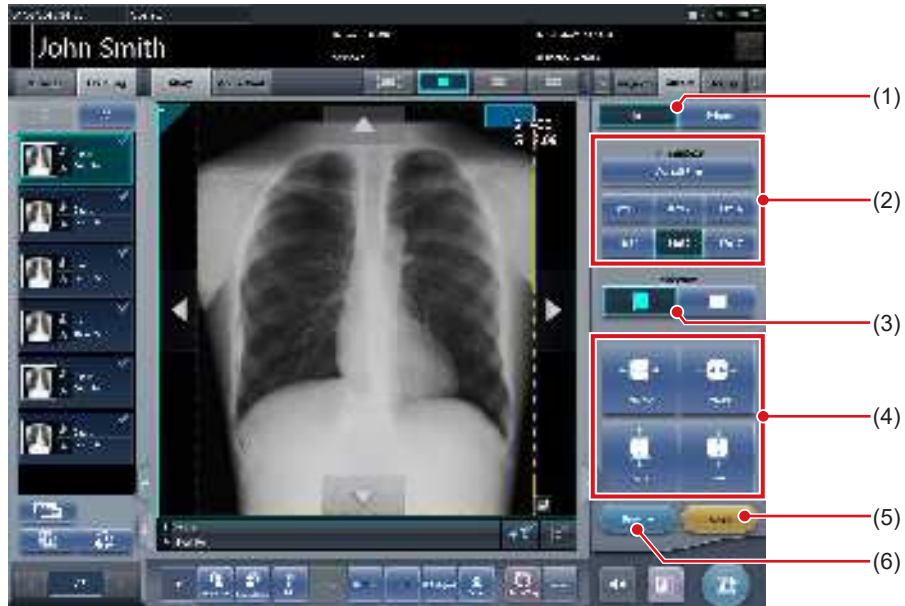
Number	Name	Functions
(1)	Irradiation result value	Displays irradiation result value.
(2)	Numerical keypad	Numerical keypad for inputting result values.

HINT

- If irradiation results could not be acquired from the X-ray device, the values are not displayed.
- Use this control panel when resetting of irradiation results is necessary after exposure.

3.5.12 Control panel (Output - for host)

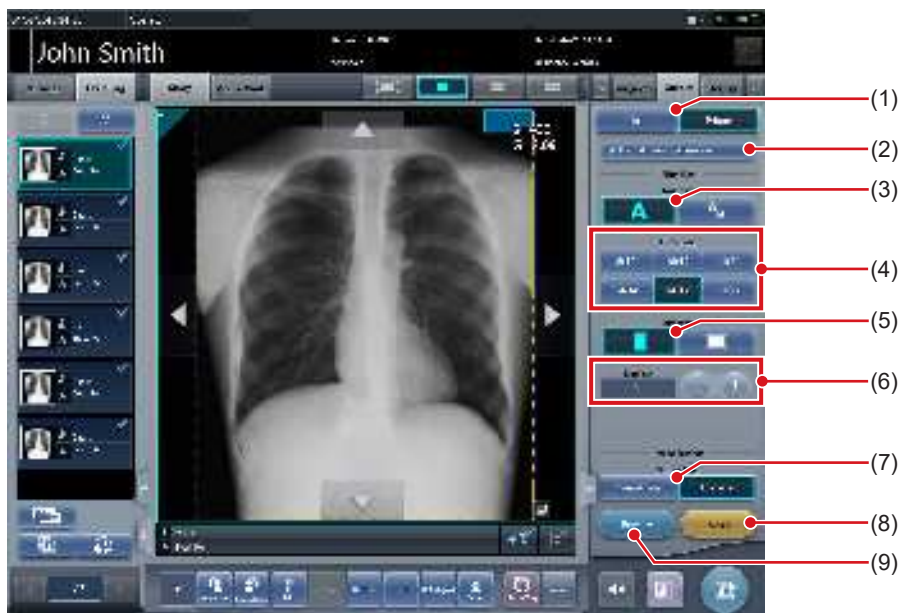
This is the control panel to perform setting of host output conditions.



Number	Name	Functions
(1)	Host/Printer switch button	Switches output conditions for host and for printer.
(2)	TrimmingSize button	Select the trimming size.
(3)	direction button	Switches the orientation between portrait and landscape when trimming.
(4)	Size adjustment button	Adjusts size of trimming frame. Each time you press each button for the width and height, the size of the trimming frame changes.
(5)	Reset button	Returns to the state when image was displayed. Only trimming size is reset.
(6)	Preview button	Displays a preview image in which the set output conditions are reflected.

3.5.13 Control panel (Output - for printer)

This is the control panel to perform setting of printer output conditions.



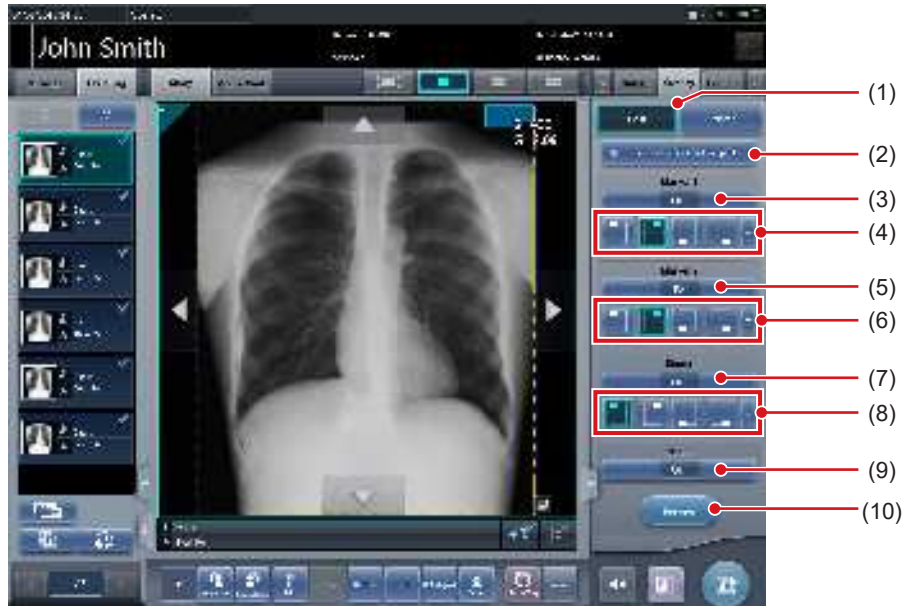
Number	Name	Functions
(1)	Host/Printer switch button	Switches output conditions for host and for printer.
(2)	Hosts also send the same size	Press this button when sending the same output conditions set for printer for host.
(3)	Format button	Select the format for output. Select from A format and AB format.
(4)	Film Size button	Select the film size.
(5)	Direction button	Switches the orientation between portrait and landscape when outputting.
(6)	Number	Set the number of output with [+] and [-]. It can be set in the range from 1 to 9.
(7)	Output Type button	Select the output type.
(8)	Reset button	Returns to the state when image was displayed. Film Size and number of sheets are reset.
(9)	Preview button	Displays a preview image in which the set output conditions are reflected.

HINT

- If [Reset] is pressed while pressing [Hosts also send the same size], the image (trimming size) to be sent by the host is also reset.

3.5.14 Control panel (Overlay - for host)

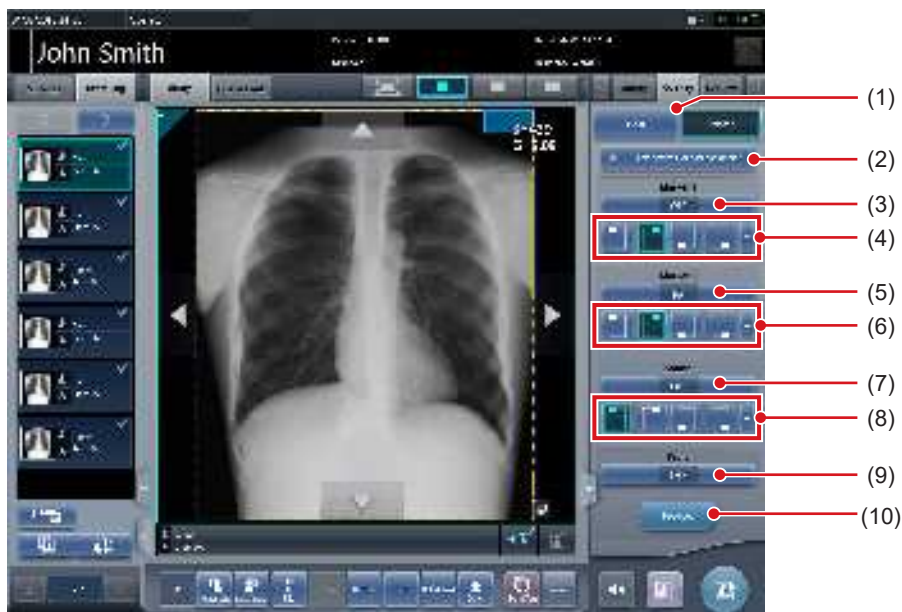
This is the control panel to perform setting of host overlay.



Number	Name	Functions
(1)	Host/Printer switch button	Switches overlay for host and for printer.
(2)	Same settings for host and printer	Press this button when sending the same overlay conditions set for host to printer. Not displayed when the printer is not registered as the output device.
(3)	Marker 1 selection button	Set the marker to display.
(4)	Marker 1 position button	Set the position of the marker to display.
(5)	Marker 2 selection button	Set the marker to display.
(6)	Marker 2 position button	Set the position of the marker to display.
(7)	Stamp selection button	Set the stamp to display.
(8)	Stamp position button	Set the position of the stamp to display.
(9)	Scale selection button	Select type of scale or grid.
(10)	Preview button	Displays a preview image in which the set overlay content is reflected.

3.5.15 Control panel (Overlay - for printer)

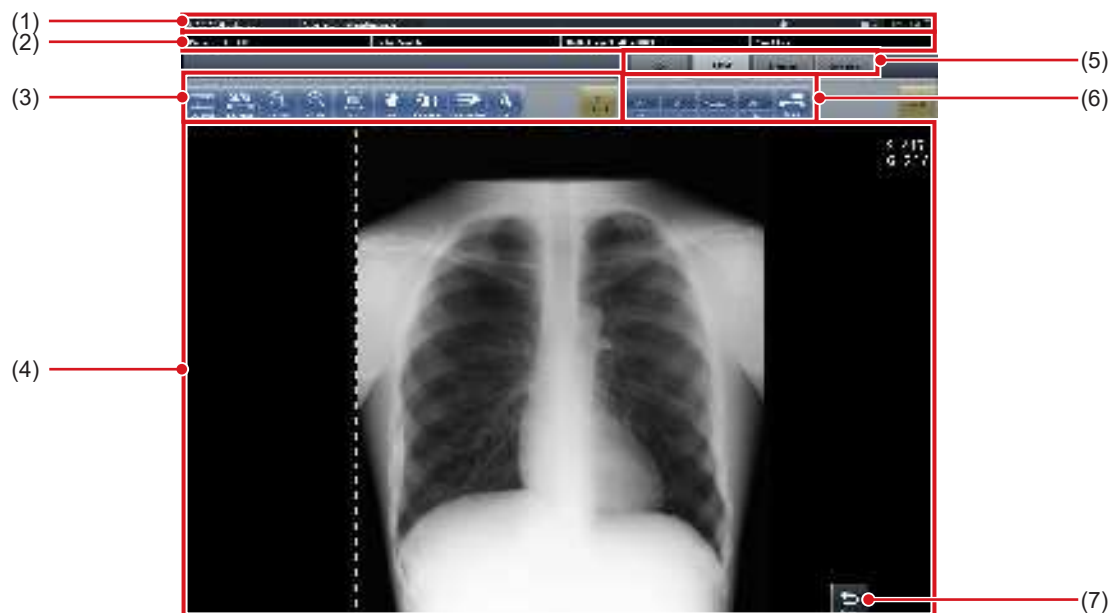
This is the control panel to perform setting of printer overlay.



Number	Name	Functions
(1)	Host/Printer switch button	Switches overlay for host and for printer.
(2)	Same settings for host and printer	Press this button when sending the same overlay conditions set for printer to host. Not displayed when the host is not registered as the output device.
(3)	Marker 1 selection button	Set the marker to display.
(4)	Marker 1 position button	Set the position of the marker to display.
(5)	Marker 2 selection button	Set the marker to display.
(6)	Marker 2 position button	Set the position of the marker to display.
(7)	Stamp selection button	Set the stamp to display.
(8)	Stamp position button	Set the position of the stamp to display.
(9)	Scale selection button	Select type of scale or grid.
(10)	Preview button	Displays a preview image in which the set overlay content is reflected.

3.6 • Viewer screen

This is the screen to perform image adjustment. More detailed image adjustment can be performed than the image adjustment on the exposure screen.



Number	Name	Functions
(1)	Application bar	Date and time, operator name, exposure room name, icons of devices connected to this device are displayed.
(2)	Patient information display area	Patient name, patient ID, date of birth, and sex, etc. are displayed.
(3)	Tool bar (a)	<p>[S/G Drag]: Adjust the S and G values by dragging the image.</p> <p>[S/G Value]: Adjusts S value and G value.</p> <p>[ZOOM+]: Switches to the zoom-in mode. Pressing it again cancels the zoom-in mode. Pressing the image in the zoom-in mode enlarges the image 1 step at a time.</p> <p>[ZOOM-]: Switches to the zoom-out mode. Pressing it again cancels the zoom-out mode. Pressing the image in the zoom-out mode reduces the image 1 step at a time.</p> <p>[Fit]: Displays the enlarged (or reduced) image to fit in the frame size (size of the image display area).</p> <p>[Pan]: Moves the image.</p> <p>[Rotate&Flip]: Rotates/flips the image.</p> <p>[Grid Suppression]: Performs grid removal.</p> <p>[Text]: Annotation is added/edited.</p> <p>[ALL Reset]: Resets all operations and restores the system to the status in which the image was displayed.</p>
(4)	Image display area	Images to adjust are displayed.
(5)	Tool bar tab	Switches various adjustment functions.
(6)	Tool bar (b)	Tools related to the selected tool bar tab are displayed.
(7)	Return button	Returns to the previous screen.

 **HINT**

- The Return button may be displayed within the tool bar (a) depending on the setting. For more details, contact Konica Minolta technical representatives.

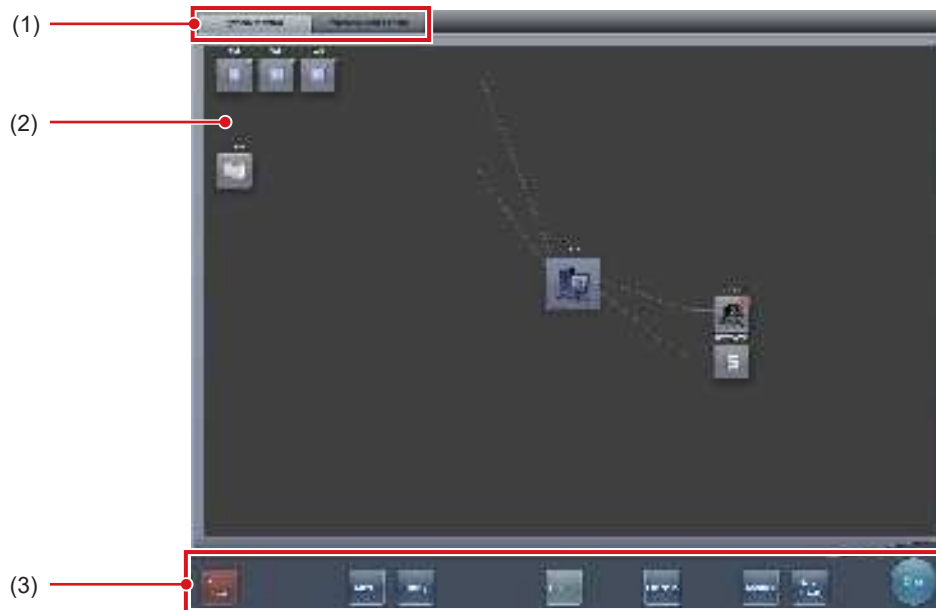


3.7 • System monitor screen

3.7.1 System Monitor

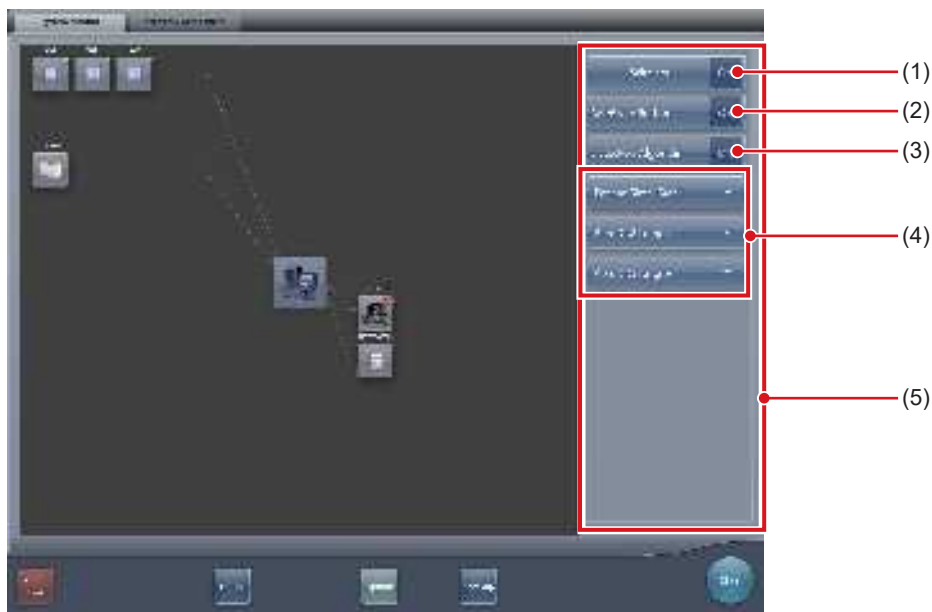
This is the screen to confirm status of this device and machinery connected to this device. The button display area is shown or hidden depending on the setting.



● System Monitor (Button display area is hidden)



Number	Name	Functions
(1)	Function switching tab	Switches between the [System Monitor] and [Warranty Component] tabs.
(2)	Devices connected to this device	Displays icons of device, etc. connected to this device.
(3)	System menu	<p>Starts a utility or shuts down the system. This is displayed regardless of tabs being selected.</p> <p>[Shut down]: Shuts down this device.</p> <p>[Media]: The media output screen is displayed.</p> <p>[Utility]: Starts utilities. This button is not displayed if the user authorization of the logged-in operator is "Technologist".</p> <p>[Update]: Refreshes information.</p> <p>[Checkup]: Displays the checkup setting screen.</p> <p>[Manual]: The "CS-7 Operation Manual" is displayed. This button is not displayed if the manual file is not deployed.</p> <p>[TeamViewer]: Displays the TeamViewer startup button.</p> <p>[Close]: Exits the system monitor screen, and the previous screen is displayed.</p>

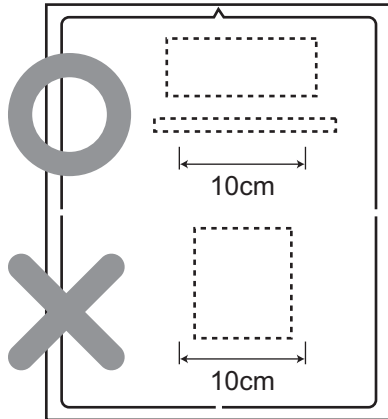
● System monitor (Button display area is shown)



Number	Name	Functions
(1)	Wireless button	Switches the wireless communication of the DR Detector between allowed and prohibited.  : This is displayed when the wireless communications allowed.  : This is displayed when the wireless communication is prohibited.
(2)	AeroSync button	Displayed only in Aero Sync mode. Sets whether or not the AeroSync button is to be operated when starting examination or exposure. Turn this on when [Large] is selected.
(3)	Detection Algorithm button	Displayed only in Aero Sync mode. Turn it on when enabling detection selection processing.
(4)	Initial detection level	Sets the X-ray detection level at the time of starting examination or exposure. The buttons shown differ depending on the type of DR Detector used.
(5)	Button display area	This area displays the wireless button, Aero Sync button, detection algorithm button, and initial detection level.

IMPORTANT

- Switch the wireless communications function from off to on while the DR Detector is in the wired connection condition.
- If the AeroSync button, or initial detection level is set inappropriately, malfunction may be caused by a shock to the DR Detector. Make sure values are changed appropriately.
- Be aware that the procedure for exposure must be changed in some cases when the settings are changed for the AeroSync button, or initial detection level. Be sure to press the AeroSync button after changing the button setting from OFF to ON.
- If the setting for the initial detection level is changed while an examination is in progress, the setting is not applied until the examination is complete.
- The detection selection processing is a function that reduces malfunctions caused by impacts applied to the DR Detector. When enabling detection selection processing, an area 10 cm or longer in length in the crosswise direction of the DR Detector must be irradiated by X-rays. You can enable detection selection processing when the above condition is met.



- The settings for the initial detection level and detection algorithm may not need to be configured depending on the type of DR Detector used.

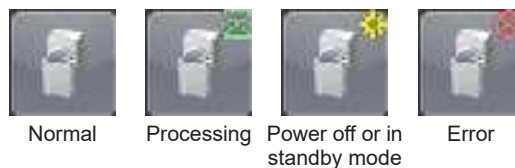
HINT

- Perform shutdown of this device on this screen.
- The display of the device icon changes as follows depending on device status.

AeroDR



REGIUS 170/190/210



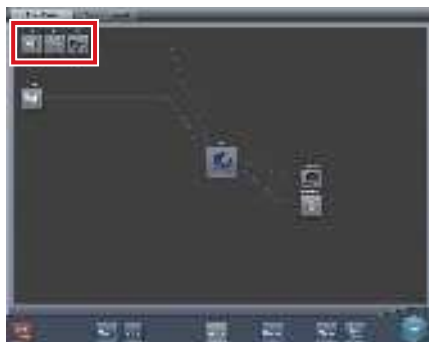
REGIUS 110/110HQ



REGIUS SIGMA/SIGMA2



- When the AeroDR UF cable is connected to the DR Detector, the DR Detector icons change to the icons for the device configured with the AeroDR UF cable.



- During manual display, the following manual display dialog is displayed. This dialog can be moved to any desired position.



- The wireless button, AeroSync button, detection algorithm button, and initial detection level can be shown or hidden depending on the setting. For more details, contact Konica Minolta technical representatives.

3.7.2 Warranty Component

This is the screen to check type and status of regular replacement parts when the time for replacement comes.



Number	Name	Functions
(1)	Function switching tab	Switches between the [System Monitor] and [Warranty Component] tabs.
(2)	Display selection menu	Selects the type of replacement unit or replacement unit status.
(3)	Replacement unit list	Displays the reader name, replacement unit, and status.
(4)	ON/OFF switching button (Replacement Notice)	Switches the replacement notification function on/off.
(5)	Unit usage status display	Displays the usage status and replacement estimation of the replacement unit chosen from the list.
(6)	Edit button	Used by service engineers to edit the information about the replacement unit. This button is not displayed in the log-in mode.
(7)	System menu	Starts a utility or shuts down the system. This is displayed regardless of tabs being selected. [Media]: The media output screen is displayed. [Utility]: Starts utilities. This button is not displayed if the user authorization of the logged-in operator is "Technologist". [Update]: Refreshes information. [Checkup]: Displays the checkup setting screen. [Manual]: The "CS-7 Operation Manual" is displayed. This button is not displayed if the manual file is not deployed. [TeamViewer]: Displays the TeamViewer startup button. [Close]: Exits the system monitor screen, and the previous screen is displayed.

Chapter 4

General Operations

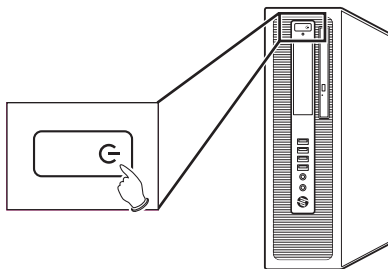
This chapter describes general operation methods of this device.

4.1 • Startup and shutdown

4.1.1 Startup of this device

Perform the following procedure when starting up this device.

- 1 Turn on the power for X-ray devices, etc. connected to this device.
- 2 Press the power switch on this device.



- Startup messages are displayed sequentially.
- Internal system initialization is performed while the system startup screen is displayed.
- Upon completion of initialization, the initial screen (patient registration screen or list screen) is displayed, and this device is ready for operation.

Patient registration screen



List screen



IMPORTANT

- When sharing a REGIUS among several units of this device, start the unit with the JM installed first; after confirming startup of this unit, start the other units.

HINT

- The software version is displayed on the system startup screen. Initialization will be completed a few minutes after turning on the power.
- A progress bar is displayed on the system startup screen, indicating the status of the system initialization process.



- During startup processing, if startup could not be completed for any reason, an error message will be displayed, and the system will transition to shutdown processing.
- The patient registration screen will be displayed by default. For the second startup and thereafter, the screen displayed at the last shutdown will be displayed.
- In cases where a device like REGIUS is connected to this device and the power is linked, when the power for this device is turned on, the power for connected devices is also turned on.
- The position of the power switch varies according to the personal computer you are using. Refer to the product operation manual for details.

4.1.2 Shutdown of this device

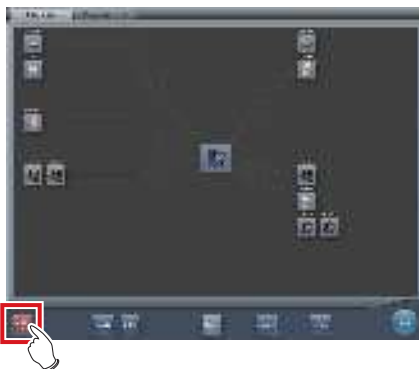
Perform the following procedure from the initial screen when shutting down this device.

1 Press [System].



- The system monitor screen is displayed.

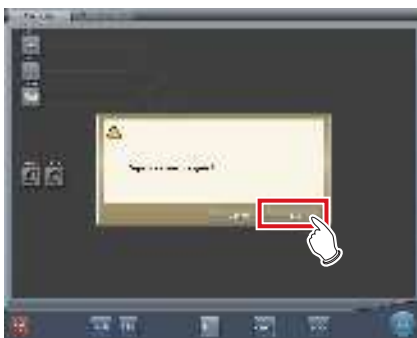
2 Press [Shut down] on the system monitor screen.



- A confirmation screen is displayed.

3 Press [OK].

- To cancel the system shutdown, press [Cancel], and then press [Close] on the system monitor screen. Shutdown operation will be aborted and the screen will return to the previous screen.



- The shutdown screen will be displayed, and shutdown processing of this device will be carried out. After a short time, the power will be automatically turned off.

4 Turn off the power for X-ray devices, etc. connected to this device.

IMPORTANT

- When turning the power of this device off, always follow the above procedure. Do not turn off the power with the power switch. Doing so may result in data loss or damage to the system software.
- When sharing a REGIUS among several units of this device, shut down all units connected to the JM before turning off the power of the unit with the JM installed.
- When shutdown coordination is set on this device and the DR Detector, the DR Detector is not turned off automatically if the AeroDR Interface Unit, AeroDR Interface Unit2, AeroDR Portable RF Unit, AeroDR Portable RF Unit2, AeroDR Portable UF Unit, and small-size access point are turned off before this device is turned off.

HINT

- In cases where a device like REGIUS is connected to this device and the power is linked, when the power for this device is turned off, the power for connected devices is also turned off, or it shifts to sleep status.
- If this device has been continuously operated for one week without being turned off, a message prompting for this device restart is displayed. Restart this device by following the message.

4.1.3 Link to connected devices

Startup and shutdown of devices connected to this device can be linked.

Devices that can be linked, and processing details are as follows.

● **Connected devices and link details**

Connected devices	Details to link
DR Detector	The DR Detector stops, linked to the shutdown processing of this device.
REGIUS 110, REGIUS 110 HQ, REGIUS 170, REGIUS 190, REGIUS 210	Each device recovers from sleep or transitions to sleep, linked to the startup/shutdown processing of this device.

4.2 • Login control

4.2.1 Login screen

It is possible to set a login screen that requires input of user name and password when starting operations of this device, or when resuming operations after returning from screen saver.

Login screen



HINT

- When the automatic login function is used, you are automatically logged in when this device starts up and the initial screen can be displayed.
- If LDAP login authentication has been enabled, the domain input field is displayed on the login screen.



4.2.2 Login


When using login mode, log in with the following procedure.

- 1 Input user ID and password, then press [Login].

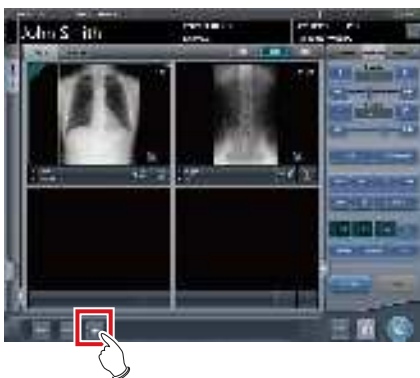


- The initial screen is displayed.

4.2.3 Logoff

Logoff is performed when switching users and so forth. Press [] to display the tool bar that is displayed at the bottom of the screen, then follow the procedure described below to log off.

1 Press [Logoff].



- Logging off.
- After logoff, the login screen is displayed.

HINT

- [Logoff] cannot be pressed until an image is acquired from a reader device and the actual image is displayed.
- When [Logoff] is pressed during an examination, a message stating that the examination is paused is displayed. Press [OK] on the confirmation screen to log off, pausing the examination.

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4.2.4 Switch of operators

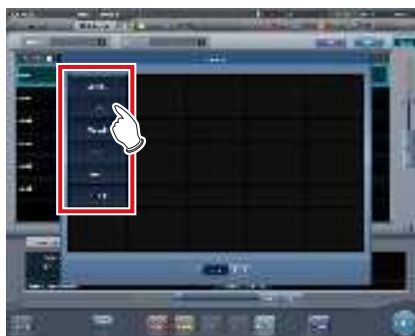
When 2 or more operator names are registered, their names can be switched. Operator names can be switched only when the automatic login function is enabled.

1 Press [Operator] in the application bar.



- The operator name selection screen is displayed.

2 Press the operator name to switch to it.



- The operator names are switched.

HINT

- When using certain settings, the login user name and the operator name can be synchronized.

.....

4.2.5 Access right of operators

Available functions are limited depending on authorization level of the operator. Operation details for each authorization are as follows.

✓: Can be operated

Target screen and operation	Authorization	Administrator	Super user	Technologist
System monitor screen • Display or hide [Media] on the system menu.		✓	✓	✓
System monitor screen • Display or hide [Shut down] on the system menu.		✓	✓	✓
System monitor screen • Hide [Utility] on the system menu.		✓	✓	
User tool screen • Enable "user management function" and "user log management" as user tools.		✓		

IMPORTANT

- When logged in with the automatic login function, authorization becomes "Administrator".

4.2.6 Operation history

Operation history of operators is recorded. The following contents will be recorded.

Recorded contents	
Date when an event occurred	Access right of the operator logged in when the event occurred
Time when the event occurred	Event that occurred
User name logged in when the event occurred	Details of the event
Operator name logged in when the event occurred	-

HINT

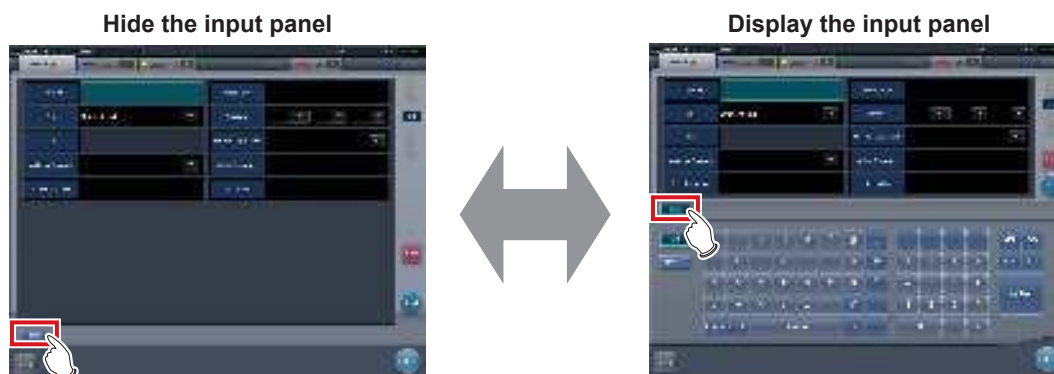
- Operation history is available only for an operator with "Administrator" authorization.
- Refer, save, and delete can be performed with "user tool".

4.3 • Input panel display

There are 2 types of input panel displayed on the screen, and you can input characters by pressing buttons. You can input alphanumeric characters.

● Display the input panel

Press the button for switching the input panel display.



The display switches every time the button for switching the input panel display is pressed.

● Input alphanumeric

Press [ABC] or [QWERTY].



Letters are displayed in alphabetical order, or in the order on a keyboard.

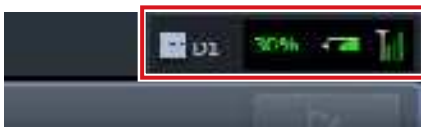
4.4 • Registration of the DR Detector

The DR Detector will be automatically registered when it is inserted into an AeroDR Battery Charger/AeroDR Battery Charger2 or connected to an Wired cable.

1 Insert the DR Detector into the AeroDR Battery Charger/AeroDR Battery Charger2. Alternatively, connect the DR Detector to an Wired cable.

- The DR Detector is registered.

2 Check registration of the DR Detector in the icon display of the application bar.



- When registered normally, the DR Detector icon is displayed in the application bar.

Chapter 5



Sequence of Examination

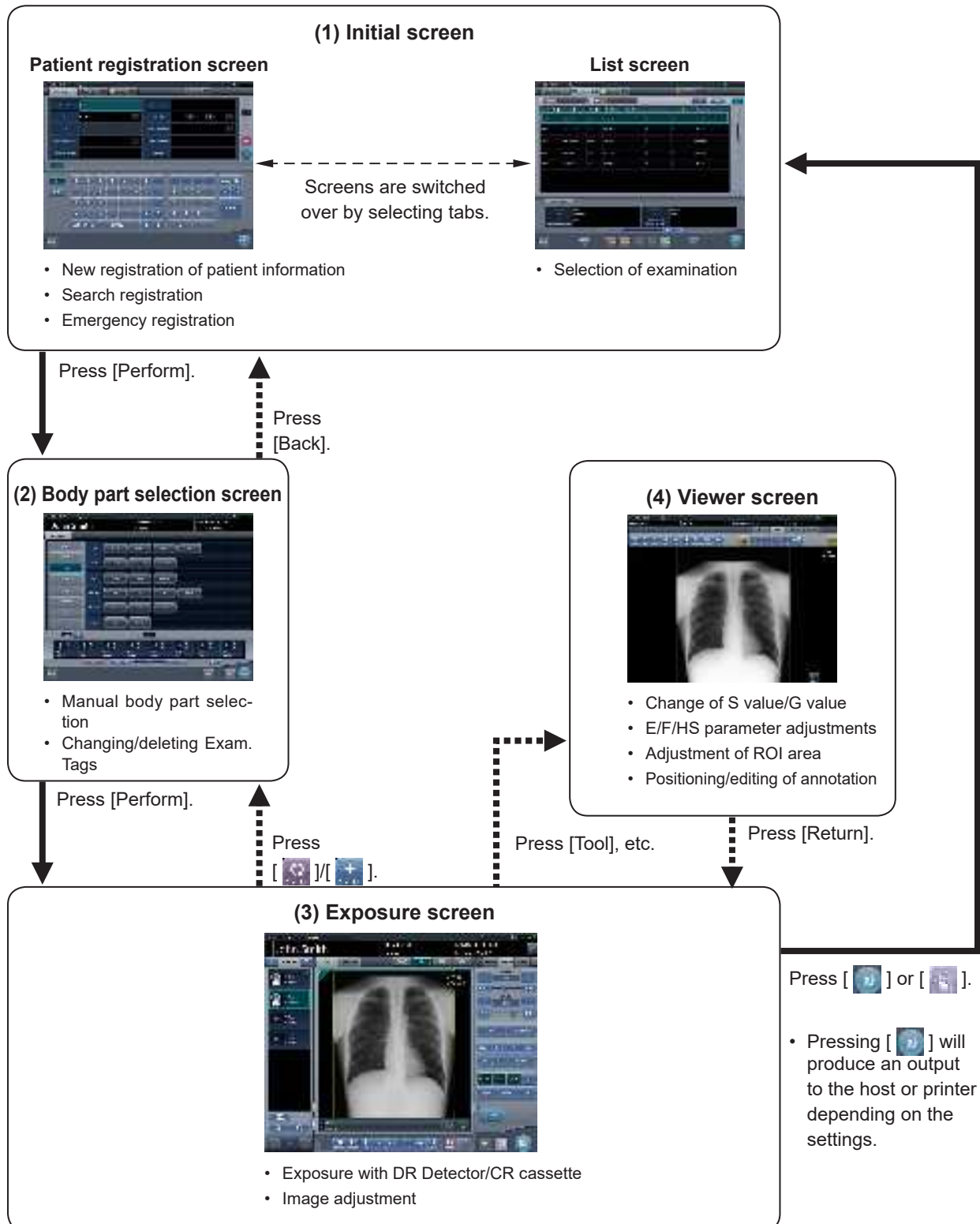
This chapter describes the operation steps for examination procedures performed with this device.

5.1 • Screen transition of examinations

The following describes the screen transition from examination registration to examination end and the typical operations performed in each screen.

Meaning of the arrows

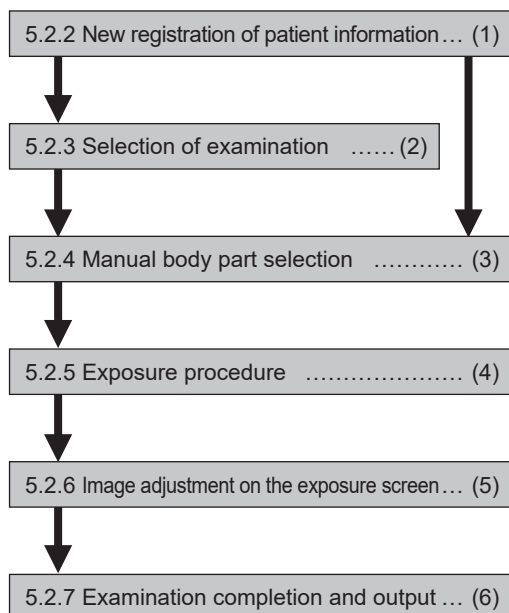
-  : Screen transition operation
-  : Operation that returns to the previous screen or an operation that can be omitted



5.2 • Exposure procedure with DR Detector (Basic connection)

5.2.1 Exposure procedure flow

The following describes the basic flow of exposure procedure using the DR Detector. See each item for detailed procedures.



Number	Task
(1)	Perform a new patient registration in the patient registration screen.
(2)	Select the examination target in the list screen.
(3)	Set the exposure body part and exposure condition.
(4)	Press the exposure switch.
(5)	Adjust the exposed images after exposure. Change the S value/G value, move the ROI area, etc.
(6)	When all exposures are finished, the examination is completed. Image is simultaneously and automatically output upon examination completion. (depending on the settings)

5.2.2 New registration of patient information

New registration of patient information is performed with the patient registration screen. Select the [PatientReg.] tab on the initial screen to display the patient registration screen.

1 Press the column for the patient ID.



2 Press the input panel, and input the patient ID.




3 Press [Enter].



4 Input patient name, sex and date of birth.

- After each inputting item, press [Enter].
- If you press [Enter], the cursor will move to the next item.

HINT

- If the length of an entry exceeds the dimensions of the display pane of the item or if the entry spreads across multiple lines, the long-sentence comment pop-up button  is displayed.

5 Press [Perform].



- Registration is performed in the patient database of this device, and the exposure screen or the body part selection screen is displayed.

HINT

- Because input of "Sex", "Pregnancy" are displayed with selection buttons instead of the input panel, press the selection buttons.
- When entering "Institution Residence", "Hospital Department" and "Requesting Physician", select the names from the pull-down menu or selection button, or input them directly with the keyboard.



- With the input item as a search key, search the patient database for this device, or a higher system.
 - When there is a patient ID that matches, name, sex and age are displayed.
- When there is no patient ID that matches, the cursor moves to the following input field.

5.2.3 Selection of examination

When the examination is registered, it can be selected on the list screen. Select a tab other than the [PatientReg.] tab on the initial screen to display the list screen.

1 Select the examination target.



- Focus is set on the examination.

2 Press [Perform].



- The exposure screen or the body part selection screen is displayed.



HINT

- Before selecting the examination, press [Refresh], check if the list is the newest version available and then select the examination.
- The exposure screen or the body part selection screen can be displayed by double-clicking the examination target.
- If Patient ID is read by a barcode reader, examination target can be selected. You can also transition to the exposure screen at the same time the barcode is read, depending on the setting.

5.2.4 Manual body part selection

When making advanced settings of exposure body part and Exam. Tags for each exposure, select body part manually with the following procedure.

1 Select the tab.



- Linking to the selected tab, the exposure body part available with the tab are displayed automatically.

2 Select the exposure body part.



- The Exam. Tags corresponding to the selected exposure body part will be displayed.

3 Select an Exam. Tag.





- The selected Exam. Tag is added to the Exam. Tags display area. By repeating from step 1, Exam. Tags can be added.

4 When finished selecting/adding the Exam. Tags, press [Perform].



- The exposure screen is displayed.

HINT

- When only reserving an examination, after adding the Exam. Tag, press [Schedule]. After reservation is performed, the initial screen is displayed.
 - Returning to the initial screen by pressing [Schedule] does not set study date and time of image supplemental information automatically.
 - It is also possible to register multiple exposure methods in 1 Exam. Tag. Register these methods when installing.
 - If you have set to register the Exam. Tags automatically, the body part selection screen is not displayed. The display transitions to the exposure screen.
-

5.2.5 Exposure procedure

The exposure procedure is as follows:
This section shows an example case of exposing several body parts under the following conditions.

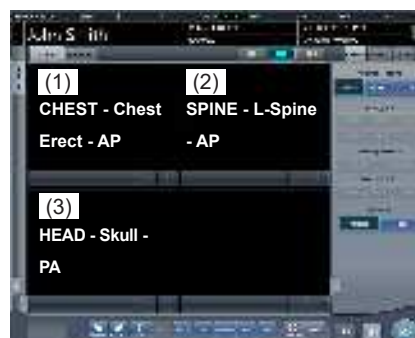
Exposure device

- Wall stand × 1
- DR Detector × 1
- * Assume that the wall stand uses the AeroDR UF Cable, and the DR Detector is inserted into the AeroDR Battery Charger.

Exposure conditions and order of exposure

- (1) CHEST - Chest Erect - AP
- (2) SPINE - L-Spine - AP
- (3) HEAD - Skull - PA

The exposure sequence and the positions in which exposure images are displayed are as shown below.



- * The exposure sequence (1) - (3) is displayed for ease of explanation, and is not displayed on the actual screen.

IMPORTANT

- Always check the patient information and exposure conditions before exposure.
- The DR Detector is precision equipment, and therefore impact or vibration during radiography or image transfer may affect the image quality. Be careful when handling the DR Detector during and just after radiography.
- If an image is displayed when an exposure is not performed, this may be a detection error due to noises, etc. Perform rejected image (deletion of images) and repeat exposure.
- If you have performed an exposure when "Ready" was not displayed, repeat an exposure after approximately one minute.

- In the event of a communication error and depending on the timing at which the error has occurred, images may not be displayed and the DR Detector may not contain any images that have not been transferred (the same status as that observed when no exposures have been carried out). If this is the case, suspend the study and display the exposure screen from the list screen. This operation may successfully recover the images.

1 Remove the DR Detector from the AeroDR Battery Charger.



- In (1), "Panel not detected" is displayed until the DR Detector is inserted into the wall stand.

2 Insert the DR Detector into the wall stand.



- Until the DR Detector is inserted into the wall stand and exposure becomes ready, "Preparing" is displayed in image display area (1).



- When the DR Detector inserted into the wall stand is ready to start exposure, "Ready" is displayed.

IMPORTANT

- When using the AeroDR 3 1417HD, click the modality icon before making an exposure and select the AeroDR 3 1417HD. Selecting the AeroDR 3 1417HD icon allows the exposure time to be selected.

3 Take the 1st image.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch



- The exposed image is displayed in image display area (1), and the focus moves to (2).

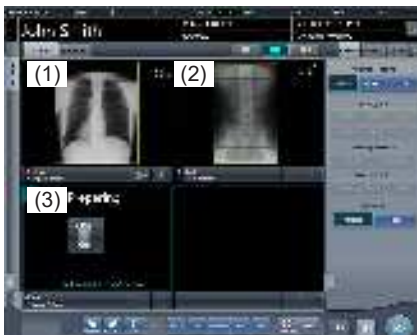
4 Take the 2nd image.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



- The exposed image is displayed in image display area (2), and the focus moves to (3). At this stage, because the DR Detector is inserted in the wall stand, exposure of (3) is not possible.

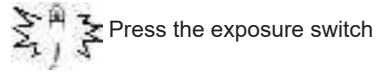
5 Remove the DR Detector from the wall stand, and prepare for exposure with a stand-alone DR Detector.



- When the DR Detector is removed from the wall stand, "Preparing" is displayed in image display area (3).

6 Take 3rd image.

- Press the exposure switch after "Ready" is displayed in image display area (3).
- Configure the X-ray device settings and check the exposure setting before making an exposure.



- The exposed image is displayed in image display area (3). The focus remains on image display area (3).

IMPORTANT

- When linked with the X-ray device, because the selected exposure conditions at the time of X-ray exposure are linked to the irradiation results, always check the exposure conditions before X-ray exposure.
 - Depending on the type of X-ray device, several seconds may elapse before notification of the irradiation results. For this type of model, take care because sometimes irradiation results are not reflected correctly if the exposure conditions are changed immediately after X-ray irradiation.
-

HINT

- Linking to the insertion/removal of the DR Detector into/from the wall stand, the icons inside the application bar change as follows.



When the DR Detector is inserted into the wall stand



When the DR Detector is removed from the AeroDR Battery Charger

- Movement of focus for the image display area is linked to the state of insertion/removal of the DR Detector into/from the wall stand.
- When interlock switch is released after receiving the exposure timing from an X-ray apparatus, the DR Detector is enabled to allow an operator to press the exposure switch of the X-ray apparatus. A warning sounds when the interlock cannot be released (cannot press the exposure switch).
- X-ray exposure information is acquired automatically when linked to the X-ray device.
- The exposure field is automatically recognized, and displayed on the screen as the effective image area. If automatic recognition of the exposure field has failed, set it manually by pressing [Cropping] in the [Image Proc] tab.
- The exposure field automatic recognition function can be set for each body part, and the fixed effective image area can be selected.
- Configure irradiation fields of at least 5x5 cm for the following areas.

Infant hip/Front view of lumbar/Side view of lumbar/Radial position of lumbar/Front view of head/Towne view of the head/Turkey saddle/Cheekbone axis/Temporomandibular joint/Front view of jawbone/Side view of jawbone/Front view of the child chest/Side view of the child chest/Progress observation of child chest/Front view of infant chest/Side view of infant chest and abdomen/Progress observation of infant chest and abdomen/Newborn chest/Newborn skeleton/Front view of cervix/Side view of cervix/Radial position of cervix/Cervix opening/Ribs/Side view of sternum/Radial position of sternum/Clavicle/Shoulder joint/Scapula/Sternoclavicular joint/Hips/Limbs (excluding radial position of heel bone)

Configure settings for other areas so that at least one edge of the irradiation field is at least 15 cm.

If these conditions are not satisfied, irradiation fields sometimes cannot be detected, which would require reimaging.

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5.2.6 Image adjustment on the exposure screen

Performs adjustment of exposed images. Basic image adjustments such as S value/G value, position of ROI area, etc. can be made on the exposure screen.

● Change of S value/G value

Change of S value/G value is performed with the following procedure.

1 Select the image for image adjustment.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Adjust the image.



- Pressing [] increases or decreases the value step by step.

IMPORTANT

- Calculate the EI value (Exposure Index: Index to indicate the exposure dose to detector specified in IEC62494-1) based on Reference signal value in the grayscale processing and then overlay-display the difference DI (Deviation Index) between the value and predefined target TI (Target Exposure Index). And, it is also output to DICOM tag at the time of output to host.

.....

HINT

- The S value and G value are automatically adjusted to the appropriate values at the time of exposure. Adjust them manually as required.
- Change of S value/G value can also be performed on the viewer screen. After selection of the image for image adjustment, press the image once more to switch to the viewer screen. When more advanced image adjustment is required, perform image adjustment on the viewer screen where larger images are displayed.
- Dragging the control panel slider or pressing [S | G] increases or decreases the S value/G value in multiples of the preset value. In addition, when you press the [S/G] button on the control panel, the S value/G value can be adjusted by dragging the image.
- Use the user tool to set the drag operation to increase or decrease the S/G values and specify the degree of change that can be obtained from [S | G]. You can also select the setting so that the S/G values can be adjusted by simply dragging the image or dragging it using both mouse buttons without pressing the [S/G] button.

● Change of parameters

Change of the parameters is performed with the following procedure.

1 Select an image whose parameters you want to change.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [E] or [F] you want to change.



- Images that were automatically altered by the E process or F process are displayed.
- When [E] or [F] is pressed again, the original images are displayed.

IMPORTANT

- In the case of a pneumoconiosis examination, a warning message is displayed when parameters are changed.

HINT

- The parameter options available on the exposure screen are only ON and OFF. Perform detailed adjustments on the viewer screen.

● **Change of ROI area position**

Change of ROI area position is performed with the following procedure.

1 Select an image whose ROI area you want to change.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [ROI].



- The ROI area is displayed.

3 Move the ROI area.



- When any part of the image is clicked, the ROI area moves to the center of the clicked part.
- The following operations will cancel the ROI mode.
 - Pressing [ROI] again
 - Pressing another button

IMPORTANT

- When ROI area movement is performed after changing S value/G value, the changed S value/G value is reset, and the S/G value becomes optimized after ROI area movement.

HINT

- Perform detailed position change of ROI area on the viewer screen.

● **Zooming in and out**

Zoom in/out of exposed images is performed with the following procedure.

1 Select an image to zoom in/out.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [ZOOM+] or [ZOOM-].



3 Press any part of the image.



- Zooming in/out is displayed, centering on the clicked part.
- Every time you press a part of the image, the image is gradually zoomed in/out.
- If you focus on another image or perform any other operations, the image will return to its original size.

IMPORTANT

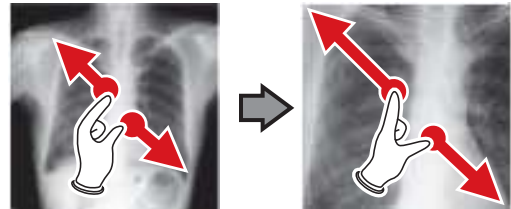
- Effects of resizing are not reflected at the time of output.
-

HINT

- When a multi-touch monitor is used, zoom in/out can be performed with the following operations. In this case [ZOOM+] or [ZOOM-] do not need to be pressed.

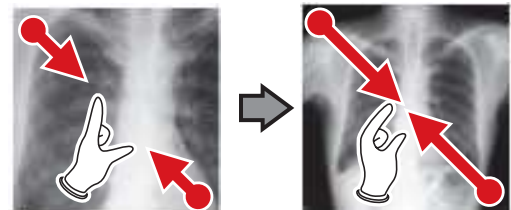
Zoom in

Simultaneously press 2 points with the thumb and index finger and spread the 2 points (spread the fingertips) to zoom in on the image.



Zoom out

Simultaneously press 2 points with the thumb and index finger and move to close the 2 points (close the fingertips) to zoom out on the image.



- You can also zoom in or out from/to an image by rotating the mouse wheel up and down on the focused image.
 - Use the user tool to set the amount of change associated with rotating the mouse wheel.
-

5.2.7 Examination completion and output

When all exposures are finished, end the examination and perform output.

1 Press [OK].



- When the examination is finished, exposed images are batch output to a preset output destination.



- The display returns to the initial screen.

IMPORTANT

- Always check the X-ray irradiation results before finishing the examination.
- When the examination ends and no exposure images exist, the examination itself is deleted. At this time, a confirmation screen is displayed on whether to delete the examination.





- Press [OK] to delete the examination itself.
- Press [Cancel] to return to the previous screen.
- * A message "No images are captured. Cannot complete study." may be displayed depending on the settings. In such cases, press the [Pause] button or [Termination] button. Either of the two buttons is displayed depending on the settings.

HINT

- If there is an unexposed image, a confirmation screen is displayed.



- Press [OK] to complete the examination by deleting data for the unexposed portion and display the initial screen.
- Press [Cancel] to return to the previous screen.
- When outputting to a host, the output destination can be switched between the predetermined host and a backup host. Furthermore, when the output conditions are different for each backup destination, recalculation of output size is performed.
- Depending on the setting at the time of installation, on the edge of the output film (the output image when output to a host) a mark is added showing whether the image is flipped or not.
 -  : Flipped
 -  : Not flipped
- If the AeroDR 3 1417HD is used to perform an exposure with a reading resolution of 100µm, the resolution can be converted to 175µm and output, depending on the settings during setup.

5.3 • Exposure with DR Detector (Aero Sync mode)

IMPORTANT

- With Aero Sync mode exposure, X-rays with default intensity that reached the DR Detector are detected, and image acquisition is started. Select any one of the following X-ray detection levels during exposure according to the model or conditions of the DR Detector to be used.
 - Small
Used for general imaging such as that of the chest and limb bones.
 - Med
This is effective for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Be careful not to subject the DR Detector to strong shocks during exposure.
 - Large
This is more effective than the medium detection level for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Request that the patient stands still for as long as possible during exposure.
 - Extra Large
Exposures can be performed at a level higher than [Large]. This is effective for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Be careful not to subject the DR Detector to strong shocks during exposure.
- [Extra Large] is displayed when using either the AeroDR 3 1417HD, AeroDR 2 1417HQ or AeroDR 2 1417S.
- The control panel display [AeroSync] and items that can be selected differ depending on the type of DR Detector.

AeroDR 1417HQ/
AeroDR 1717HQ/
AeroDR 1012HQ:



AeroDR 2 1417HQ,
AeroDR 2 1417S:



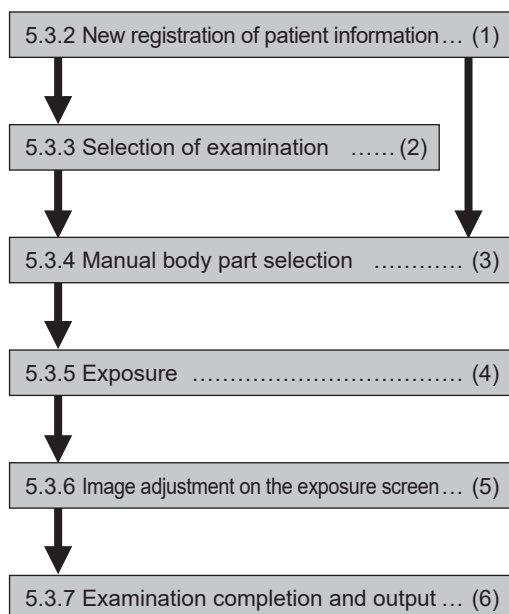
AeroDR 3 1417HD:



- If there are any radioactive substances remaining in the patient's body after nuclear medicine testing or some other reason, the AeroDR 2 1417HQ and the AeroDR 2 1417S may recognize that X-rays were emitted and start image transfer. When the image is transferred, change the X-ray sensitive setting of the image processing controller to "Large" before performing exposure. If you change the X-ray sensitivity to "Large", make sure that all of the following conditions are met before performing exposure. If you perform exposure under other conditions, you may not be able to get an image.
 - On the DR Detector, set up an area (2 cm x 2 cm or larger) on which the X-rays are emitted directly.
 - Emit the X-rays onto the entire DR Detector.
 - Emit the X-rays by using a tube current of 140 mA or higher or a tube voltage of 90 kV or higher.
- If there are any radioactive substances remaining in the patient's body after nuclear medicine testing or some other reason, the AeroDR 3 1417HD may recognize that X-rays were emitted and start image transfer. When the image is transferred, change the X-ray sensitive setting of the image processing controller to "Large" or "Med" before performing exposure. If you change the X-ray sensitivity to "Large", make sure that all of the following conditions are met before performing exposure. If you perform exposure under other conditions, you may not be able to get an image.
 - Emit the X-rays onto the entire DR Detector.
 - Emit the X-rays by using a tube current of 140 mA or higher or a tube voltage of 90 kV or higher.
- Once the X-ray detection level is selected, it is kept until an examination is completed if it is not changed. If you want to return it to the initial detection level for each exposure, contact Konica Minolta technical representatives.

5.3.1 Exposure flow

The following describes the basic flow of exposure using the DR Detector. See each item for detailed procedures.



Number	Task
(1)	Perform a new patient registration in the patient registration screen.
(2)	Select the examination target in the list screen.
(3)	Set the exposure body part and exposure condition.
(4)	Perform exposure.
(5)	Adjust the exposed images after exposure. Change the S value/G value, move the ROI area, etc.
(6)	When all exposures are finished, the examination is completed. Image is simultaneously and automatically output upon examination completion. (depending on the settings)

5.3.2 New registration of patient information

New registration of patient information is performed with the patient registration screen. Select the [PatientReg.] tab on the initial screen to display the patient registration screen.

1 Press the column for the patient ID.



2 Press the input panel, and input the patient ID.



3 Press [Enter].



4 Input patient name, sex and date of birth.

- After each inputting item, press [Enter].
- If you press [Enter], the cursor will move to the next item.

HINT

- If the length of an entry exceeds the dimensions of the display pane of the item or if the entry spreads across multiple lines, the long-sentence comment pop-up button [...] is displayed.
-

5 Press [Perform].



- Registration is performed in the patient database of this device, and the exposure screen or the body part selection screen is displayed.

HINT

- Because input of "Sex", "Pregnancy" are displayed with selection buttons instead of the input panel, press the selection buttons.
- When entering "Institution Residence", "Hospital Department" and "Requesting Physician", select the names from the pull-down menu or selection button, or input them directly with the keyboard.



- With the input item as a search key, search the patient database for this device, or a higher system.
 - When there is a patient ID that matches, name, sex and age are displayed.
 - When there is no patient ID that matches, the cursor moves to the following input field.
-

5.3.3 Selection of examination

When the examination is registered, it can be selected on the list screen. Select a tab other than the [PatientReg.] tab on the initial screen to display the list screen.

1 Select the examination target.



- Focus is set on the examination.

2 Press [Perform].



- The exposure screen or the body part selection screen is displayed.



HINT

- Before selecting the examination, press [Refresh], check if the list is the newest version available and then select the examination.
- The exposure screen or the body part selection screen can be displayed by double-clicking the examination target.
- If Patient ID is read by a barcode reader, examination target can be selected. You can also transition to the exposure screen at the same time the barcode is read, depending on the setting.

5.3.4 Manual body part selection

When making advanced settings of exposure body part and exposure method for each exposure, select body part manually with the following procedure.

1 Select the tab.



- Linking to the selected tab, the exposure body part available with the tab are displayed automatically.

2 Select the exposure body part.



- The Exam. Tags corresponding to the selected exposure body part will be displayed.

3 Select an Exam. Tag.





- The selected Exam. Tag is added to the Exam. Tags display area. By repeating from step 1, Exam. Tags can be added.

4 When finished selecting/adding the Exam. Tags, press [Perform].



- The exposure screen is displayed.

HINT

- When only reserving an examination, after adding the Exam. Tag, press [Schedule]. After reservation is performed, the initial screen is displayed.
- Returning to the initial screen by pressing [Schedule] does not set study date and time of image supplemental information automatically.
- It is also possible to register multiple exposure methods in 1 Exam. Tag. Register these methods when installing.
- If you have set to register the Exam. Tags automatically, the body part selection screen is not displayed. The display transitions to the exposure screen.

5.3.5 Exposure

The exposure procedure in Aero Sync mode is as follows.

Prepare for exposure using Aero Sync mode according to the following procedure. The procedure varies depending on the setting of the [AeroSync Button] on the system monitor screen.

IMPORTANT

- Always check the patient information and exposure conditions before exposure.
- Available X-ray detection level varies depending on the DR Detector model.
- In the event of a communication error and depending on the timing at which the error has occurred, images may not be displayed and the DR Detector may not contain any images that have not been transferred (the same status as that observed when no exposures have been carried out). If this is the case, suspend the study and display the exposure screen from the list screen. This operation may successfully recover the images.

HINT

- The procedure is explained with the use of the Aero-DR 3 1417HD as an example.

• When the [AeroSync Button] is OFF

1 Prepare the DR Detector.



- When the DR Detector is ready to start exposure, "Ready" is displayed.
- A message "Ready" is displayed in the message/button area, then the screen is locked.
- To change the X-ray detection level, press [Pause] to enable modification. After changing the detection level, press [Restart], then the message "Ready" is displayed.

IMPORTANT


- A malfunction may be caused by a shock to the DR Detector. In such cases, set [AeroSync Button] to ON on the system monitor screen.
- To prevent incorrect operations, always check that "Ready" is displayed.
- Conditions for changing the detection level vary depending on the X-ray device being used. If a survey has been carried out when the system was installed, follow the survey results.
- When using the AeroDR 3 1417HD, click the modality icon before making an exposure and select the AeroDR 3 1417HD.

HINT

- The X-ray detection level can be set when making an exposure. Refer to "5.3 Exposure with DR Detector (Aero Sync mode)" for information on the X-ray detection levels that can be set.
- When importing examination information from the higher system and when exposure body part information is not imported, select the exposure body part. When pressing [Perform] on the body part selection screen, the exposure screen is displayed.
- When you move the focus in the image display area on the exposure resumption waiting screen to capture an image of another body part, not the ready-to-expose screen but the exposure resumption waiting screen is displayed.

2 Perform exposure.

- Configure the X-ray device settings and check the exposure setting before making an exposure.

 Press the exposure switch



- As soon as the exposed image is transferred, the image is displayed in the image display area.

IMPORTANT

- When the "Ready" is displayed, immediately perform exposure.
- Do not let the DR Detector vibrate or receive shock until the exposed image is displayed.
- If image acquisition started without performing exposure, this may result in incorrect detection due to noise, etc. Perform rejecting (image deletion) and repeat exposure.
- If image acquisition does not start after exposure, the voltage may not be enough. Check the exposure conditions and repeat exposure.
- When exposure is done while "Ready" is not displayed, have an interval of 1 minute or more before repeating exposure.

● When the [AeroSync Button] is ON

1 Prepare the DR Detector.



- A message "Waiting for permission" is displayed in the image display area.

HINT

- If the information about the body part is not imported while importing examination information from the higher system, select the body part to be imaged. Then press [Perform] on the body part selection screen to display the exposure screen.
- When the AeroDR power management level is set to [3], [4] or [5], "Waiting to start shooting" is displayed instead of "Waiting for permission".

2 After positioning the patient, check the X-ray detection level, then press [AeroSync].

- If the control panel does not switch to [AeroSync], press the [AeroSync] tab.
- Change the X-ray detection level as needed.
- After checking the X-ray detection level, press [AeroSync].



- A message "Ready" is displayed in the message/button area. The screen is locked.
- The screen is locked. To return to the previous screen to change the position of the patient, etc., press [Cancel].

IMPORTANT

- To prevent incorrect operations, always press [AeroSync] and check that "Ready" is displayed.
 - Conditions for changing the detection level vary depending on the X-ray device being used. If a survey has been carried out when the system was installed, follow the survey results.
 - When the AeroDR power management level is set to [3], [4] or [5], it may take some time until the exposure becomes ready after you have pressed [Aero Sync]. In this case, [Standby] button instead of [Cancel] button is displayed in the message/button area.
 - After pressing [AeroSync], do not touch the wired connector of the DR Detector until the image transfer process completes.
 - When using the AeroDR 3 1417HD, click the modality icon before making an exposure and select the AeroDR 3 1417HD.
-

HINT

- The X-ray detection level can be set when making an exposure. Refer to "5.3 Exposure with DR Detector (Aero Sync mode)" for information on the X-ray detection levels that can be set.
-

3 Perform exposure.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch



- As soon as the exposed image is transferred, the image is displayed in the image display area.

IMPORTANT

- When the "Ready" is displayed, immediately perform exposure.
 - Do not let the DR Detector vibrate or receive shock until the exposed image is displayed.
 - If image acquisition started without performing exposure, this may result in incorrect detection due to noise, etc. Perform rejecting (image deletion) and repeat exposure.
 - If image acquisition does not start after exposure, the voltage may not be enough. Check the exposure conditions and repeat exposure.
 - When exposure is done while "Ready" is not displayed, have an interval of 1 minute or more before repeating exposure.
 - When linked with the X-ray device, because the selected exposure conditions at the time of X-ray exposure are linked to the irradiation results, always check the exposure conditions before X-ray exposure.
 - Depending on the type of X-ray device, several seconds may elapse before notification of the irradiation results. For this type of model, take care because sometimes irradiation results are not reflected correctly if the exposure conditions are changed immediately after X-ray irradiation.
-

5.3.6 Image adjustment on the exposure screen

Performs adjustment of exposed images. Basic image adjustments such as S value/G value, position of ROI area, etc. can be made on the exposure screen.

● Change of S value/G value

Change of S value/G value is performed with the following procedure.



1 Select the image for image adjustment.







- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Adjust the image.



- Pressing [ ] increases or decreases the value step by step.

HINT

- The S value and G value are automatically adjusted to the appropriate values at the time of exposure. Adjust them manually as required.
- Change of S value/G value can also be performed on the viewer screen. After selection of the image for image adjustment, press the image once more to switch to the viewer screen. When more advanced image adjustment is required, perform image adjustment on the viewer screen where larger images are displayed.
- Dragging the control panel slider or pressing [ ] increases or decreases the S value/G value in multiples of the preset value. In addition, when you press the [S/G] button on the control panel, the S value/G value can be adjusted by dragging the image.
- Use the user tool to set the drag operation to increase or decrease the S/G values and specify the degree of change that can be obtained from [ ]. You can also select the setting so that the S/G values can be adjusted by simply dragging the image or dragging it using both mouse buttons without pressing the [S/G] button.

● Change of parameters

Change of the parameters is performed with the following procedure.

1 Select an image whose parameters you want to change.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [E] or [F] you want to change.





- Images that were automatically altered by the E process or F process are displayed.
- When [E] or [F] is pressed again, the original images are displayed.

IMPORTANT

- In the case of a pneumoconiosis examination, a warning message is displayed when parameters are changed.
-

HINT

- The parameter options available on the exposure screen are only ON and OFF. Perform detailed adjustments on the viewer screen.
-

● Change of ROI area position

Change of ROI area position is performed with the following procedure.

1 Select an image whose ROI area you want to change.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [ROI].



- The ROI area is displayed.

3 Move the ROI area.



- When any part of the image is clicked, the ROI area moves to the center of the clicked part.
- The following operations will cancel the ROI mode.
 - Pressing [ROI] again
 - Pressing another button

IMPORTANT

- When ROI area movement is performed after changing S value/G value, the changed S value/G value is reset, and the S/G value becomes optimized after ROI area movement.
-

HINT

- Perform detailed position change of ROI area on the viewer screen.

.....

●Zooming in and out

Zoom in/out of exposed images is performed with the following procedure.

1 Select an image to zoom in/out.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [ZOOM+] or [ZOOM-].



3 Press any part of the image.



- Zooming in/out is displayed, centering on the clicked part.
- Every time you press a part of the image, the image is gradually zoomed in/out.
- If you focus on another image or perform any other operations, the image will return to its original size.

IMPORTANT

- Effects of resizing are not reflected at the time of output.

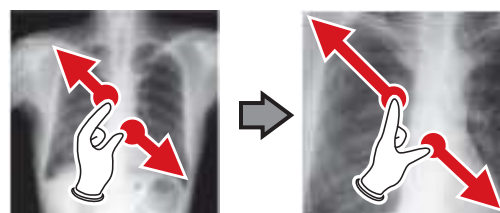
.....

HINT

- When a multi-touch monitor is used, zoom in/out can be performed with the following operations. In this case [ZOOM+] or [ZOOM-] do not need to be pressed.

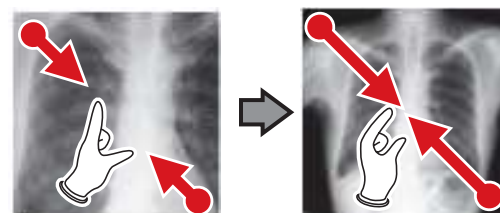
Zoom in

Simultaneously press 2 points with the thumb and index finger and spread the 2 points (spread the fingertips) to zoom in on the image.



Zoom out

Simultaneously press 2 points with the thumb and index finger and move to close the 2 points (close the fingertips) to zoom out on the image.



- You can also zoom in or out from/to an image by rotating the mouse wheel up and down on the focused image.
 - Use the user tool to set the amount of change associated with rotating the mouse wheel.
-

5.3.7 Examination completion and output

When all exposures are finished, end the examination and perform output.

1 Press [OK].



- When the examination is finished, exposed images are batch output to a preset output destination.



- The display returns to the initial screen.

IMPORTANT

- Always check the X-ray irradiation results before finishing the examination.
- When the examination ends and no exposure images exist, the examination itself is deleted. At this time, a confirmation screen is displayed on whether to delete the examination.





- Press [OK] to delete the examination itself.
- Press [Cancel] to return to the previous screen.
- * A message "No images are captured. Cannot complete study." may be displayed depending on the settings. In such cases, press the [Pause] button or [Termination] button. Either of the two buttons is displayed depending on the settings.

HINT

- If there is an unexposed image, a confirmation screen is displayed.

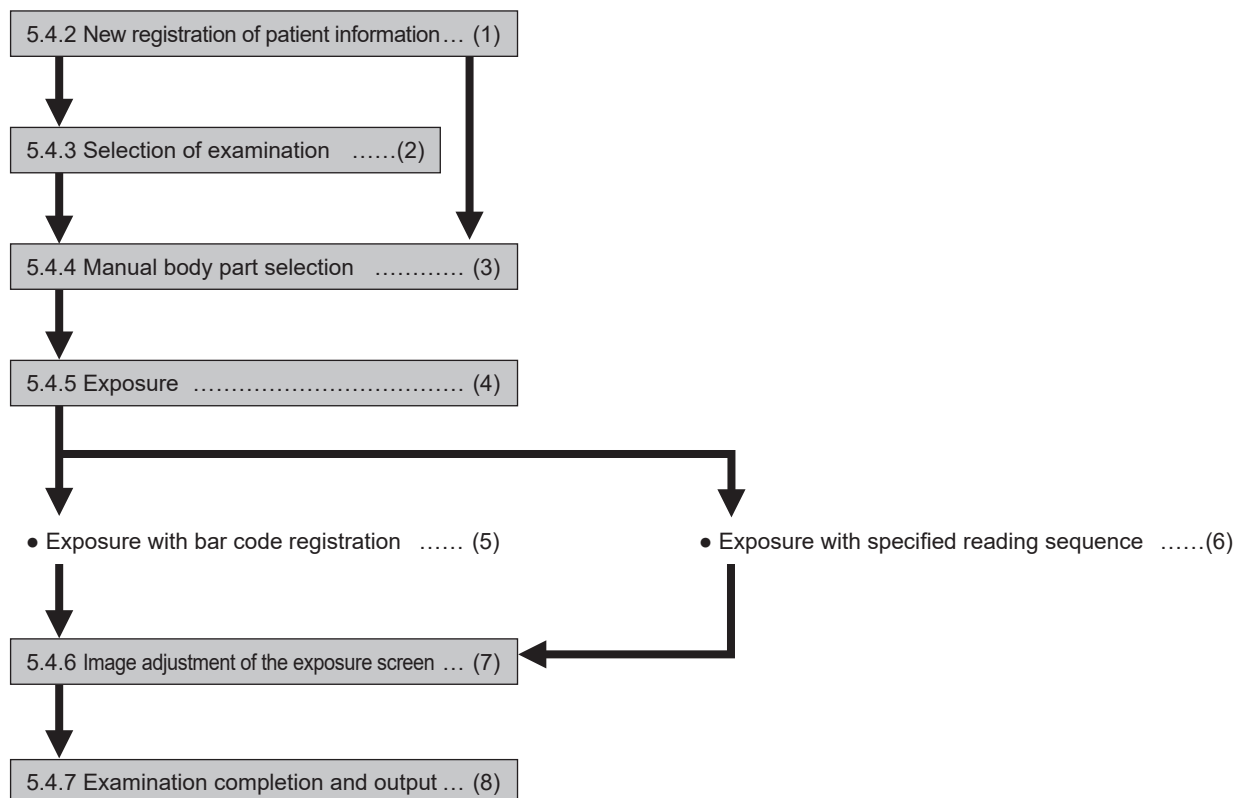


- Press [OK] to complete the examination by deleting data for the unexposed portion and display the initial screen.
- Press [Cancel] to return to the previous screen.
- When outputting to a host, the output destination can be switched between the predetermined host and a backup host. Furthermore, when the output conditions are different for each backup destination, recalculation of output size is performed.
- Depending on the setting at the time of installation, on the edge of the output film (the output image when output to a host) a mark is added showing whether the image is flipped or not.
 -  : Flipped
 -  : Not flipped
- If the AeroDR 3 1417HD is used to perform an exposure with a reading resolution of 100µm, the resolution can be converted to 175µm and output, depending on the settings during setup.

5.4 • Exposure with CR cassette

5.4.1 Exposure flow

The following describes the flow of basic exposure using CR cassette. See each item for detailed procedures.



Number	Task
(1)	Perform a new patient registration in the patient registration screen.
(2)	Select the examination target in the list screen.
(3)	Perform exposure with the CR cassette.
(4)	Set the exposure body part and exposure condition.
(5)	Perform exposure with bar code registration. Perform bar code registration on the exposure screen.
(6)	Perform exposure with a specified reading sequence. Specify the reading sequence on the exposure screen.
(7)	After exposure and reading the CR cassette with REGIUS or REGIUS SIGMA/SIGMA2, adjust the exposed image. Change the S value/G value, move the ROI area, etc.
(8)	When all exposures are finished, the examination is completed. Image is simultaneously and automatically output upon examination completion. (depending on the settings)

5.4.2 New registration of patient information

New registration of patient information is performed with the patient registration screen. Select the [PatientReg.] tab on the initial screen to display the patient registration screen.

1 Press the column for the patient ID.



2 Press the input panel, and input the patient ID.



3 Press [Enter].



4 Input patient name, sex and date of birth.

- After each inputting item, press [Enter].
- If you press [Enter], the cursor will move to the next item.

HINT

- If the length of an entry exceeds the dimensions of the display pane of the item or if the entry spreads across multiple lines, the long-sentence comment pop-up button [...] is displayed.
-

5 Press [Perform].



- Registration is performed in the patient database of this device, and the exposure screen or the body part selection screen is displayed.

HINT

- Because input of "Sex", "Pregnancy" are displayed with selection buttons instead of the input panel, press the selection buttons.
- When entering "Institution Residence", "Hospital Department" and "Requesting Physician", select the names from the pull-down menu or selection button, or input them directly with the keyboard.



- With the input item as a search key, search the patient database for this device, or a higher system.
 - When there is a patient ID that matches, name, sex and age are displayed.
 - When there is no patient ID that matches, the cursor moves to the following input field.
-

5.4.3 Selection of examination

When the examination is registered, it can be selected on the list screen. Select a tab other than the [PatientReg.] tab on the initial screen to display the list screen.

1 Select the examination target.



- Focus is set on the examination.

2 Press [Perform].



- The exposure screen or the body part selection screen is displayed.

HINT

- Before selecting the examination, press [Refresh], check if the list is the newest version available and then select the examination.
- The exposure screen or the body part selection screen can be displayed by double-clicking the examination target.
- If Patient ID is read by a barcode reader, examination target can be selected. You can also transition to the exposure screen at the same time the barcode is read, depending on the setting.

.....

5.4.4 Manual body part selection

When making advanced settings of exposure body part and exposure method for each exposure, select body part manually with the following procedure.

1 Select the tab.



- Linking to the selected tab, the exposure body part available with the tab are displayed automatically.

2 Select the exposure body part.



- The Exam. Tags corresponding to the selected exposure body part will be displayed.

3 Select an Exam. Tag.





- The selected Exam. Tag is added to the Exam. Tags display area. By repeating from step 1, Exam. Tags can be added.

4 When finished selecting/adding the Exam. Tags, press [Perform].



- The exposure screen is displayed.

- HINT**
- When only reserving an examination, after adding the Exam. Tag, press [Schedule]. After reservation is performed, the initial screen is displayed.
 - Returning to the initial screen by pressing [Schedule] does not set study date and time of image supplemental information automatically.
 - It is also possible to register multiple exposure methods in 1 Exam. Tag. Register these methods when installing.
 - If you have set to register the Exam. Tags automatically, the body part selection screen is not displayed. The display transitions to the exposure screen.
-

5.4.5 Exposure

For exposure when CR cassettes are used, there are 2 types, bar code registration and specified reading sequence.

- IMPORTANT**
- Always check the patient information and exposure conditions before exposure.
-

- HINT**
- Registration of the CR cassette is performed on the exposure screen with any of the exposure methods.
-

● Exposure with bar code registration
When CR cassettes are managed with bar codes, perform exposure with the following procedure.

- IMPORTANT**
- Exposure with bar code registration is not available when using a REGIUS SIGMA/SIGMA2 CR cassette.
-

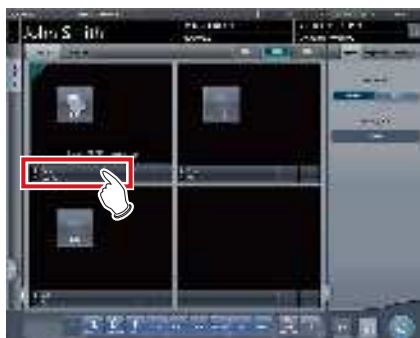
1 Place focus on image display area that the CR cassette is to be registered.



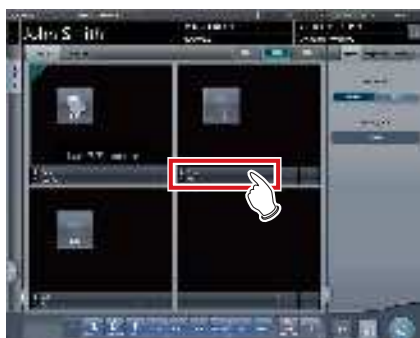
● **Exposure with specified reading sequence**

When exposing with the specified reading sequence, perform exposure with the following procedure.

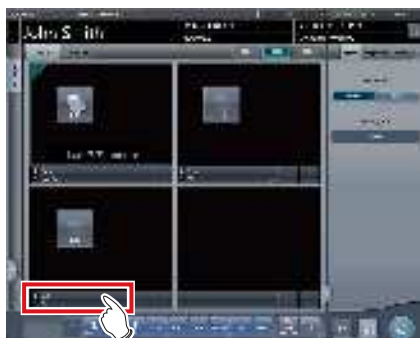
1 In the sequence to perform exposure, the reading sequence is specified by pressing the Exam. Tags display area in sequence.



• The first exposure is registered.



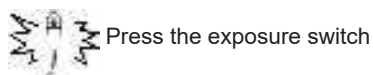
• The second exposure is registered.



• The third exposure is registered.

2 Perform exposure for the first image.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



3 Read CR cassette.



- When the first image is displayed, the "First" marker disappears, what was "Second" up to that point changes its marker to "First", and what was "Third" up to that point changes its marker to "Second". (The numbers will move up in turn.)
- By continually carrying out steps 2 through 3, the remaining exposures are performed and CR cassettes are read.



- When all the exposures are finished and CR cassettes are read, the numbers will disappear.

HINT

- X-ray exposure information is acquired automatically when linked to the X-ray device.
- The reading sequence can also be specified with the order list. With the reading sequence, press Exam. Tags in order.



- When pressing Exam. Tags for examinations whose reading sequence has been specified, the reading sequence specification is canceled. When several reading sequences are being specified, the reading sequence after the deleted examination is moved up.
- Exposure with specified reading sequence is suitable when this device is connected with 1 REGIUS.
- When REGIUS SIGMA/SIGMA2 is connected, the following dialog window appears during the image reading process.



.....

5.4.6 Image adjustment on the exposure screen

Performs adjustment of exposed images. Basic image adjustments such as S value/G value, position of ROI area, etc. can be made on the exposure screen.

● Change of S value/G value

Change of S value/G value is performed with the following procedure.

1 Select the image for image adjustment.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Adjust the image.



- Pressing [] increases or decreases the value step by step.

HINT

- The S value and G value are automatically adjusted to the appropriate values at the time of exposure. Adjust them manually as required.
- Change of S value/G value can also be performed on the viewer screen. After selection of the image for image adjustment, press the image once more to switch to the viewer screen. When more advanced image adjustment is required, perform image adjustment on the viewer screen where larger images are displayed.
- Dragging the control panel slider or pressing [S] [G] increases or decreases the S value/G value in multiples of the preset value. In addition, when you press the [S/G] button on the control panel, the S value/G value can be adjusted by dragging the image.
- Use the user tool to set the drag operation to increase or decrease the S/G values and specify the degree of change that can be obtained from [S] [G]. You can also select the setting so that the S/G values can be adjusted by simply dragging the image or dragging it using both mouse buttons without pressing the [S/G] button.

● Change of parameters

Change of the parameters is performed with the following procedure.

1 Select an image whose parameters you want to change.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [E] or [F] you want to change.



- Images that were automatically altered by the E process or F process are displayed.
- When [E] or [F] is pressed again, the original images are displayed.

IMPORTANT

- In the case of a pneumoconiosis examination, a warning message is displayed when parameters are changed.

HINT

- The parameter options available on the exposure screen are only ON and OFF. Perform detailed adjustments on the viewer screen.

● **Change of ROI area position**

Change of ROI area position is performed with the following procedure.

1 Select an image whose ROI area you want to change.



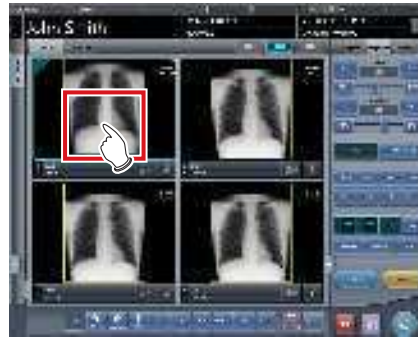
- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [ROI].



- The ROI area is displayed.

3 Move the ROI area.



- When any part of the image is clicked, the ROI area moves to the center of the clicked part.
- The following operations will cancel the ROI mode.
 - Pressing [ROI] again
 - Pressing another button

IMPORTANT

- When ROI area movement is performed after changing S value/G value, the changed S value/G value is reset, and the S/G value becomes optimized after ROI area movement.

HINT

- Perform detailed position change of ROI area on the viewer screen.

● **Zooming in and out**

Zoom in/out of exposed images is performed with the following procedure.

1 Select an image to zoom in/out.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [ZOOM+] or [ZOOM-].



3 Press any part of the image.



- Zooming in/out is displayed, centering on the clicked part.
- Every time you press a part of the image, the image is gradually zoomed in/out.
- If you focus on another image or perform any other operations, the image will return to its original size.

IMPORTANT

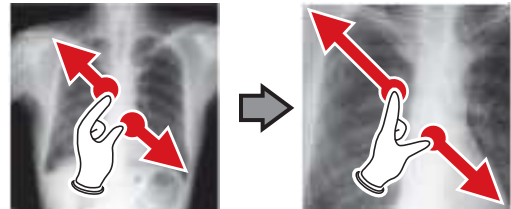
- Effects of resizing are not reflected at the time of output.
-

HINT

- When a multi-touch monitor is used, zoom in/out can be performed with the following operations. In this case [ZOOM+] or [ZOOM-] do not need to be pressed.

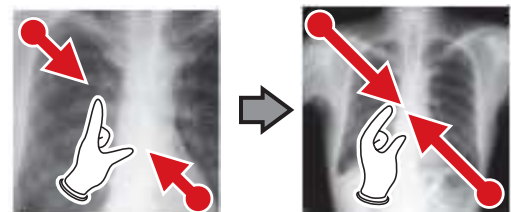
Zoom in

Simultaneously press 2 points with the thumb and index finger and spread the 2 points (spread the fingertips) to zoom in on the image.



Zoom out

Simultaneously press 2 points with the thumb and index finger and move to close the 2 points (close the fingertips) to zoom out on the image.



- You can also zoom in or out from/to an image by rotating the mouse wheel up and down on the focused image.
 - Use the user tool to set the amount of change associated with rotating the mouse wheel.
-

5.4.7 Examination completion and output

When all exposures are finished, end the examination and perform output.

1 Press [].



- When the examination is finished, exposed images are batch output to a preset output destination.



- The display returns to the initial screen.

IMPORTANT

- Always check the X-ray irradiation results before finishing the examination.
- When the examination ends and no exposure images exist, the examination itself is deleted. At this time, a confirmation screen is displayed on whether to delete the examination.



- Press [OK] to delete the examination itself.
- Press [Cancel] to return to the previous screen.
- * A message "No images are captured. Cannot complete study." may be displayed depending on the settings. In such cases, press the [Pause] button or [Termination] button. Either of the two buttons is displayed depending on the settings.


HINT

- If there is an unexposed image, a confirmation screen is displayed.



- Press [OK] to complete the examination by deleting data for the unexposed portion and display the initial screen.
- Press [Cancel] to return to the previous screen.
- When outputting to a host, the output destination can be switched between the predetermined host and a backup host. Furthermore, when the output conditions are different for each backup destination, recalculation of output size is performed.
- Depending on the setting at the time of installation, on the edge of the output film (the output image when output to a host) a mark is added showing whether the image is flipped or not.

 : Flipped

 : Not flipped

Chapter 6

Functions of each screen

This chapter describes the functions of each screen of this device.

6.1 • Functions of the patient registration screen

6.1.1 Search registration

You can search for patient information in the patient database of this device or a higher system and then register it.

1 Input patient name, ID, etc.



- Search results are displayed.

2 Press [Perform].



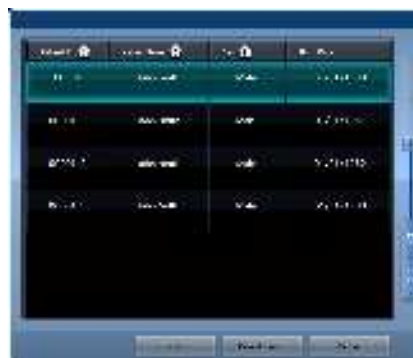
- Registration is performed in the patient database of this device, and the exposure screen or the body part selection screen is displayed.

IMPORTANT

- Items that can be searched are "Patient ID" and "Patient Name".
- When searched with "Patient ID", only completely matching patient IDs can be searched, and when searched with "Patient Name", partially matching names can also be searched.
- Search will be performed when the cursor moves from items that can be searched, or [Search] is pressed.
- A search is performed once for each patient data input. When running the search again, do so after clearing the patient data being input by pressing [Clear].

HINT

- Reading patient information by barcode reader after focusing on the patient ID enables you to display the information for that patient. You can also transition to the exposure screen at the same time the barcode is read, depending on the setting.
- When there are multiple search results, a list of examination results is displayed. Select the target search from the list and press [OK] to register the examination. Press [Patient Search] to display the search result of the selected examination. Pressing [Cancel] returns to the previous screen.



- When searching a higher system, examination results can also be acquired, depending on the settings selected.
- When examination data is acquired, the corresponding examination is displayed.

6.1.2 Emergency registration

When patient details are unknown at the time of an emergency, the examination can be performed after performing patient registration with emergency registration.

1 Press the field for the patient ID.



2 Input an arbitrary ID.



3 Press [Enter].



- Registration as an emergency patient is performed in the patient database of this device, and the exposure screen or the body part selection screen is displayed.

IMPORTANT

- When a patient is registered as an emergency patient, a mark indicating emergency patient is displayed in the patient information display area.



HINT

- The ID input in step 2 is set during installation.

6.2 • Functions of the list screen

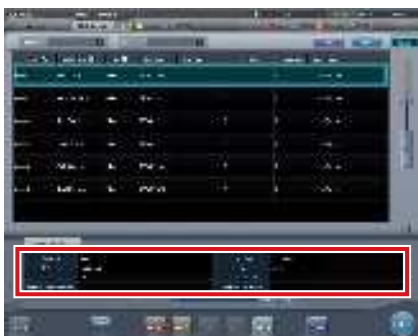
6.2.1 Display of details of examination

The details of examinations can be displayed on the list screen.

- 1 Select the examination to display its details.



- 2 Press [+].

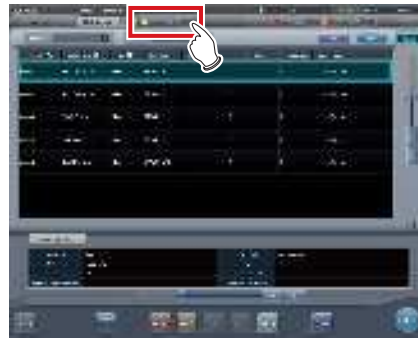


- The details of the examination are displayed on the examination information display area.

6.2.2 Display of examination history

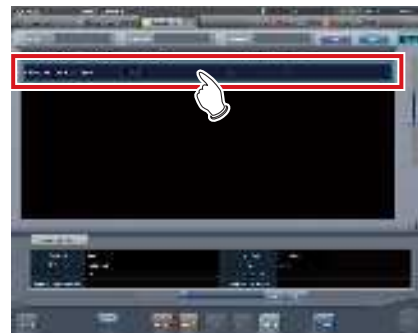
The history of finished examinations can be displayed.

- 1 Select the [Completed] tab.



- A list of finished examinations is displayed.

- 2 Select an examination to display its history.



- 3 Press [Refer].





- The images for the examination history are displayed.

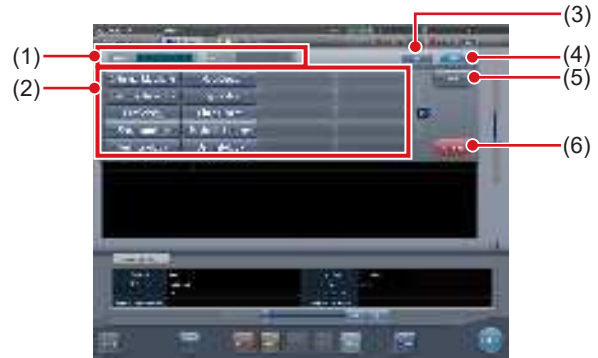
- HINT**
- The examination history screen can also be displayed by double-clicking an examination which refers to a history.
 - Images of the displayed examination can be re-adjusted and output again.
-

6.2.3 Display of examinations with refined search

Conditions can be refined for examinations displayed on the list screen.

● Screen structure

This is the screen for refined display of the examination.



Number	Name	Functions
(1)	Filter conditions input column	Inputs/displays filter conditions. Use the input panel/selection buttons/keyboard to input the conditions.
(2)	Input panel/Selection buttons	Selects filter conditions. You can select multiple conditions.
(3)	Clear button	Clears the input filter conditions.
(4)	Filter button	Performs filtering with the input filter conditions.
(5)	Blank button	Filters the examinations for which the conditions are not input when filter conditions are selected.
(6)	Selection cancellation button	Cancels all the selection buttons. This button is displayed only when selection buttons are displayed.

- HINT**
- The keyboard may be displayed as shown below.



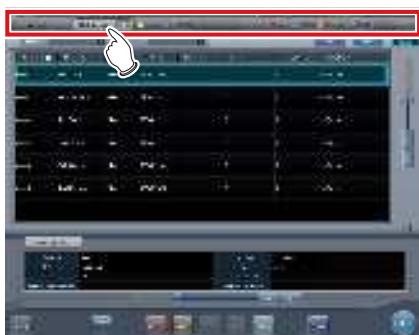
- You can perform filtering by examination date using the study list, examination history, pending, media, examination sharing, or reason for pending tab. If filtering is performed, the following calendar appears.



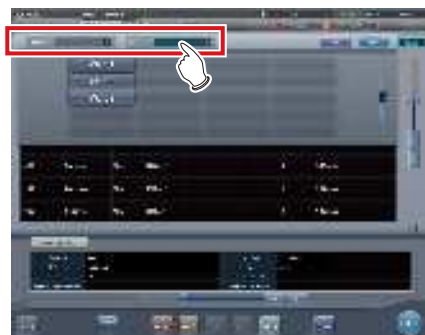
- Only the study list tab displays filtering condition [Exposure Date] as [Study Date].

● Procedure for refined display

1 Select the tab to display the refined search.



2 Input a keyword under refinement.



- Press [Clear] if you have input the wrong keyword, or to search with another keyword.

3 Press [Filter].



- Only narrowed down examinations are displayed as the search result.

HINT

- When an accession number or patient ID is read from a bar code, the focus will automatically move to the corresponding examination information.

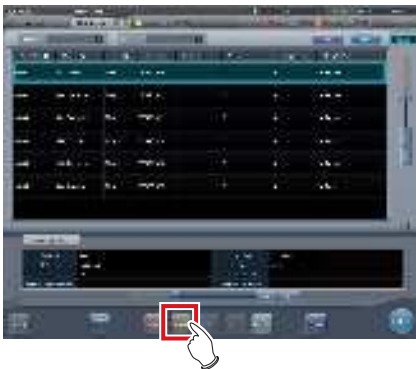
6.2.4 Modification of examination information

After registration of an examination, the examination information can be modified.

1 Select an examination to modify.



2 Press [Modify].



- The patient information is displayed.

3 Select the item to be modified and input the necessary information.

- After selecting the item to be modified, input the necessary information.
- If you press [Enter], the cursor will move to the next item.



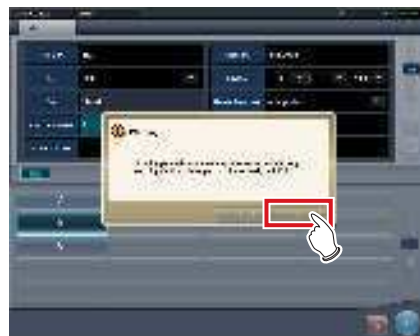
4 Press [OK].



- A confirmation screen is displayed.

5 Press [OK].

- Press [Cancel] to return to the previous screen.



- The modified content is reflected, and display returns to the list screen.

6.2.5 Deletion of examinations

When registered incorrectly, the examination information can be deleted after the examination is registered.

1 Select an examination to delete.



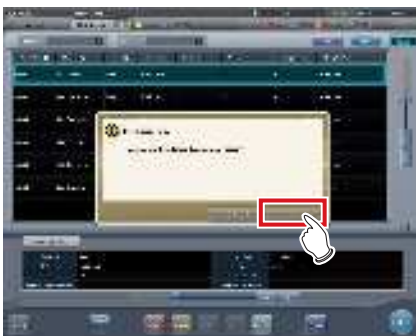
2 Press [Delete].



- A confirmation screen is displayed.

3 Press [OK].

- Press [Cancel] to return to the previous screen.



- The examination is deleted.

HINT

- Deletion of examination is possible only when there is no exposure.

.....

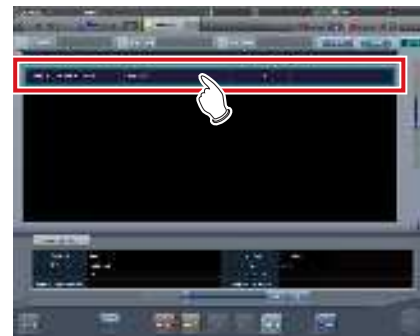
6.2.6 Addition of Exam. Tags to completed examinations

Exam. Tags can be added to completed examinations.

1 Select the [Completed] tab.



2 Select the examination to which to add Exam. Tags.



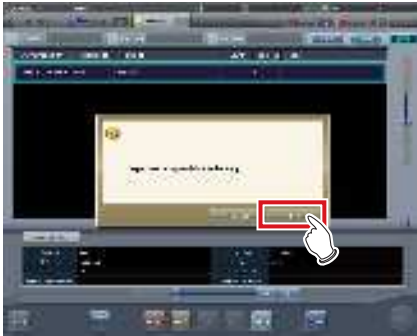
3 Press [Append].



- A confirmation screen is displayed.

4 Press [OK].

- Press [Cancel] to return to the previous screen.



- The Body Part Selection screen is displayed.

5 Set the Exam. Tags.



- The Exam. Tag is added. + is displayed for the added Exam. Tag.

6 Press [OK].

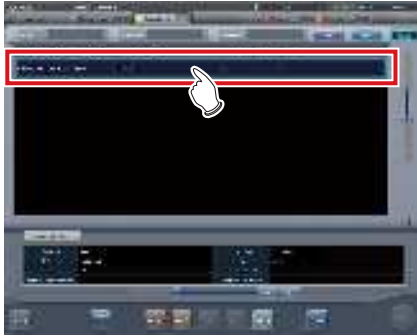


- The exposure screen is displayed.

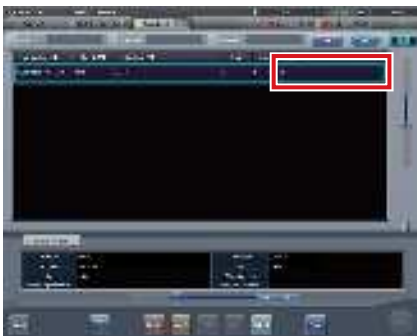
6.2.7 Protection of examinations

As hard disk space decreases, examinations are automatically deleted beginning with the oldest one. Examinations can be protected so that they are not automatically deleted.

1 Select an examination to protect.



2 Press [Guard].



- For protected examinations, "G" is displayed for the [Guard] items on the list screen.

HINT

- Pressing [Guard] again while selecting a protected examination will cancel protection.

6.3 • Functions of the body part selection screen

6.3.1 Change of Exam. Tags

When the body part is selected manually, Exam. Tags can be changed.

1 Select the Exam. Tag to change.




2 Press the Exam. Tag to be changed.



- The Exam. Tag is changed.

 **HINT**

-  is indicated to the changed Exam. Tags.

.....

6.3.2 Deletion of Exam. Tags

When the body part is selected manually, Exam. Tags can be deleted.

1 Select the Exam. Tag to delete.



2 Press [Delete].



- The Exam. Tag is deleted.

 **HINT**

- The Exam. Tags of exposed images cannot be deleted.

.....

6.3.3 Change of order of Exam. Tags

When body part selection is performed manually, the order of Exam. Tags can be changed.

1 Drag and drop the Exam.Tags.



- A white line is displayed at the position where the order can be changed.





- The order of Exam. Tags is changed.

6.4 • Functions of the exposure screen

6.4.1 Modification and addition of Exam. Tags

You can change or add an Exam. Tag during exposure.

• Switching between Exam. Tag buttons

- 1 Hold down [] or [] for one second or longer.



- Both [Exam.Tag] buttons are displayed in the pop-up window.

- 2 Press [] or [].

HINT

- The selected [Exam.Tag] button will be displayed again in your next operation.
-

• Modifying the Exam. Tag

- 1 Select the Exam.Tag to change the target body part and press [].




- The body part selection screen is displayed, and the selected Exam. Tag is focused.

- 2 Change the Exam. Tag.





- The Exam. Tag is changed.  is displayed for the changed Exam. Tag.

3 Press [OK].



- The Exam.Tag on the exposure screen is changed.

● Adding the Exam. Tag


1 Press [+].



- The Body Part Selection screen is displayed.

2 Set the Exam. Tags.



- The Exam. Tag is added.  is displayed for the added Exam. Tag.

3 Press [OK].



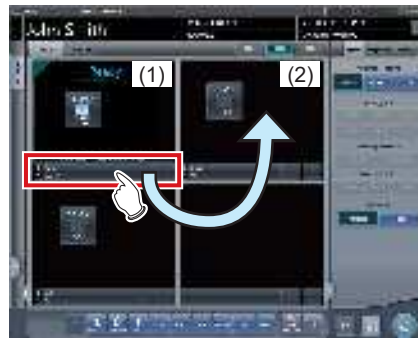
- The Exam.Tag is added to the exposure screen.

6.4.2 Change of order of exposures

During exposure, the order of exposures can be changed.

* Numbers (1), (2) displayed on the screen are shown for ease of explanation, and not displayed on the actual screen.

- 1 Drag the Exam.Tags display area whose order of exposure you want to change, and drop it into the image display area at a desired location.**



- Order of exposure is changed.

6.4.3 Copy of Exam. Tags

During exposure, the Exam. Tags can be copied.

IMPORTANT

- After image stitching, the stitch Exam. Tag cannot be copied.
 - The auto stitch Exam. Tag copy allows copying of each group.
-

1 Select the Exam. Tags you want to copy from the order list.



2 Press [COPY].



- A confirmation screen is displayed.

HINT

- A confirmation message is displayed depending on your settings.
 - The [COPY] button is displayed if it has been set with the service tool. If the [COPY] button is not displayed, contact Konica Minolta technical representatives.
-

3 Press [OK].



- The Exam. Tags are copied.

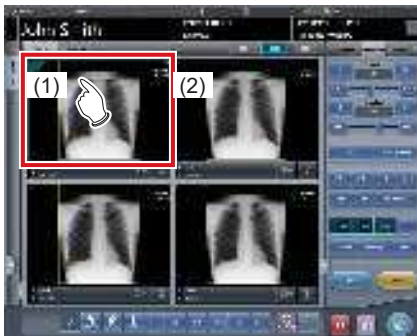
6.4.4 Reject (deletion of images)

After exposure, unwanted images can be rejected (deleted).

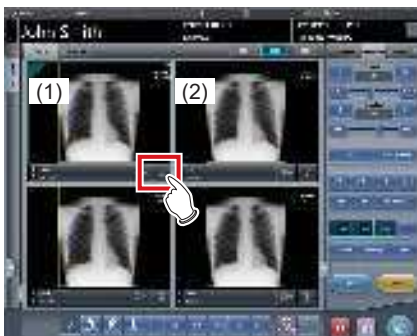
The following procedure explains assuming that 2 images have been exposed.

* Numbers (1), (A), (2) displayed on the screen are shown for ease of explanation, and not displayed on the actual screen.

1 Select the image to delete.

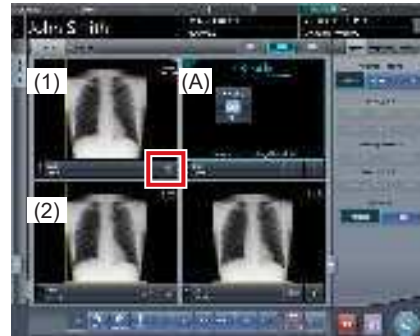


2 Press [REJECT].



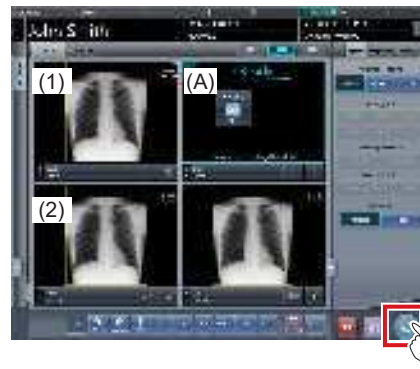
- "Expose again?" is displayed.

3 Press [OK] or [Cancel].



- Pressing [OK] copies Exam.Tags (1) to frame (A), enabling you to perform reject and repeat exposure. Further, frame (2) moves to the bottom left.
- Pressing [Cancel] only performs reject.
- In each case, image (1) is the target of reject, and display [REJECT] is changed to [OK].

4 Press [OK].



- The image in (1) is deleted.

IMPORTANT

- Standard reject method is explained in the previous steps.
- It is possible to immediately delete the rejected image or save the images that are reject target. These are setup at installation.

HINT

- When the CR cassette is registered with the bar code, the bar code information will also be deleted when an image is lost. Perform bar code registration again.
- Function to save or delete rejected images is set at installation.
- When the Reject Image button is displayed on the tool bar, the reject image mark is indicated.



- [] and [] replace each other depending on the focused image.

6.4.5 Cancellation of reject (deletion of images)

Even when reject is performed, until the examination is ended, reject can be cancelled.

1 Press [] for the rejected image.



- A confirmation screen is displayed.

2 Press [OK].

- Press [Cancel] to return to the previous screen.



- [] changes to [].

IMPORTANT

- Perform cancellation of reject before the examination is completed. Be careful because reject cannot be cancelled after the examination is completed.

HINT

- The function to cancel reject is set during installation.

6.4.6 Copying an image

You can copy exposed images (orders) using the following procedure.

IMPORTANT

- You cannot copy the following images.
 - The image of an order that has not been exposed
 - The image of an order that was not successfully acquired from the reading device
 - Images created by stitching exposure
 - A copied image
 - A rejected image
- When 128 orders are displayed in the order list, you cannot copy images.
- The image information transmitted to a higher system will not include the information of a copied image.
- Images cannot be copied when they are being referred to by the examination history.
- Copied images cannot be registered in the statistics/summary database.

1 Select the image you want to copy from the order list.



2 Press [COPY].



- The confirmation screen is displayed.

HINT

- You can display [COPY] by setting it using the service tool. When [COPY] is not displayed, contact Konica Minolta technical representatives.
- You cannot press [COPY] while the image is being read.

3 Press [OK].



- The image is copied.

HINT

- A mark is displayed for a copied image in the order list and the image display area indicating it is a copy.

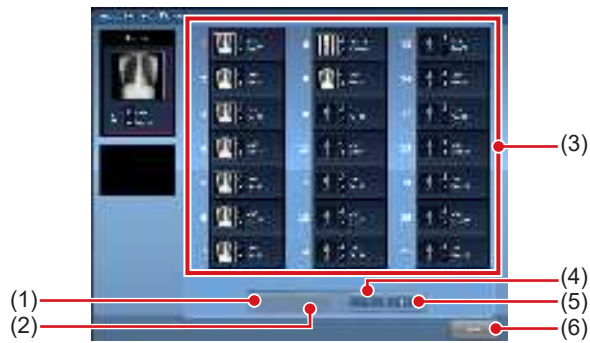


6.4.7 Replacing an image

You can replace an exposed image (order) with other images.

● **Screen structure**

This is the screen used for selecting the image to be replaced.



Number	Name	Functions
(1)	First page button	Moves the display to the first list of images to be replaced.
(2)	Previous button	Moves the display to the previous list of images to be replaced.
(3)	Image to be replaced	Displays the order image to be replaced.
(4)	Next button	Moves the display to the next list of images to be replaced.
(5)	Last page button	Moves the display to the final list of images to be replaced.
(6)	Cancel button	Closes the screen.

● **Image exchange procedure**

IMPORTANT

- An image cannot be replaced while the following operations are taking place.
 - Exposure
 - Acquisition of an image from the reading device
- Replacement with the following images is not available.
 - The image of an order that was not successfully acquired from the reading device
 - An image of the order that is waiting for image retransmission
 - Images created by stitching exposure
 - A rejected image
 - A copied image
 - An image exposed as a mammogram and an image exposed as anything other than a mammogram (an image exposed as mammogram can be used to replace another image exposed as a mammogram)
 - An image exposed with a CR cassette and an image exposed with an DR Detector.

1 Select the replacing image from the order list.



2 Press [].





- The image exchange screen is displayed.

IMPORTANT

- Select a replacing image from the exposed order images.

HINT

- You can display [] by setting it using the service tool. When [] is not displayed, contact Konica Minolta technical representatives.

3 Select an order image to be replaced.



- A confirmation screen is displayed.

4 Press [OK].



- The images are replaced with each other.

HINT

- If you select an order that has not been exposed as the image to be replaced, this replacement process is identical to the one used to move the image to a destination.

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6.4.8 Change of exposure devices

During exposure, the exposure device can be changed.

1 Press the device icon of the frame where you want to change the exposure device.

- The wall stand is registered in this example.



- Device icons registered in this device are displayed.

2 Select a device icon to change.

- In this example, the DR Detector is selected.



- The exposure device is changed.

6.4.9 Switching from the DR Detector to the CR cassette

When exposing with an DR Detector, it is possible to switch to exposure with CR cassette.

1 Move focus to the unexposed image display area to be exposed by the DR Detector.



2 Read bar code of the CR cassette.



- The bar code number is displayed in the Exam. Tags display area.

3 Perform exposure using the registered CR cassette.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch

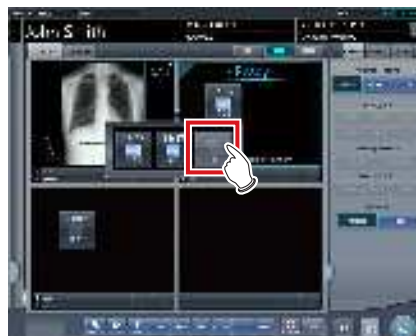
4 The image is read with the REGIUS or REGIUS SIGMA/SIGMA2.



- The exposed image is displayed.

HINT

- The device can also be switched to CR cassette by pressing the device icon in the unexposed image display area.



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6.4.10 Switching from the CR cassette to the DR Detector

When exposing with a CR cassette, it is possible to switch to exposure with an DR Detector.

- 1 Move focus to the unexposed image display area to be exposed by the CR cassette.



- 2 Press the device icon.



- Device icons registered in this device are displayed.

- 3 Select the device in which the DR Detector is inserted.



- 4 Perform exposure.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch



- The exposed image is displayed.

6.4.11 Switching of DR Detectors

When exposing with an DR Detector, it is possible to switch to exposure with another DR Detector. The following procedure describes an example of exposure under the following conditions.

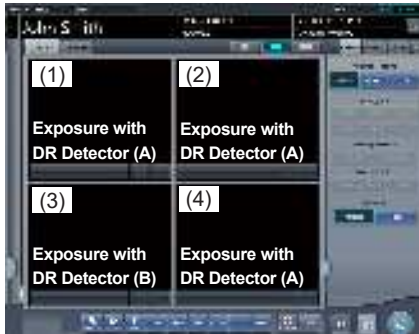
Exposure device

The devices to be used for exposure are as follows.

- DR Detector (A) × 1
- DR Detector (B) × 1
- DR Detector (C) × 1

Exposure sequence

The relationship between the exposure sequence and the DR Detector to be used is as follows.

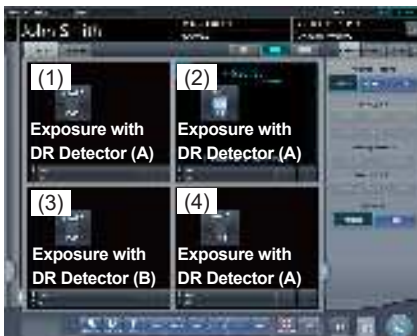


* The exposure sequence ((1) - (4)) and DR Detector (A)(B)(C) are displayed for ease of explanation, and are not displayed on the actual screen.

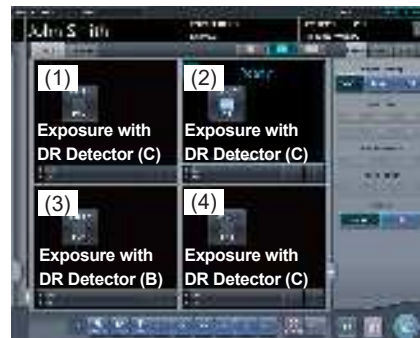
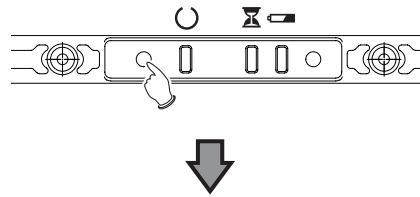
Circumstances

Performing exposure with DR Detector (C) that had been planned to be performed with DR Detector (A).

1 Set focus on any of the image areas (1), (2) or (4) registered with DR Detector (A).



2 Press the selection switch for DR Detector (C).



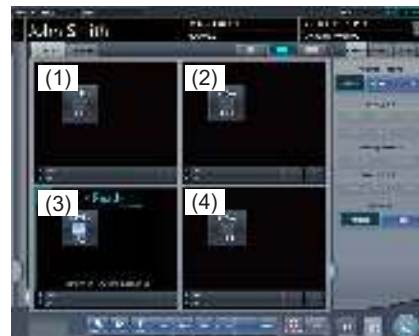
- DR Detector (A) used in exposure of (1), (2) and (4) switches to DR Detector (C).

HINT

- The device can also be switched to a different DR Detector by pressing the device icon in the unexposed image display area.



- In Step 2, when the selection switch for DR Detector (B) is pressed, the cursor moves to frame (3) to expose with DR Detector (B).



.....

6.4.12 Status of devices

The device status can be displayed in the image display area where no exposed image is displayed.

1 Set focus on unexposed image display area.



- Status of devices is displayed.

● Meaning of the device status

When using an DR Detector

Display	Description
Entry...	Registering. This is displayed while the DR Detector is being registered in this device through roaming.
Preparing	Waiting for switch to response mode and reset to finish.
Connecting...	Connecting.
Processing...	Processing. This is displayed when images are being read.
Starting	Status after turning on the DR Detector until exposure is ready.
Waiting	Waiting. Selecting the frame in which "Waiting" is displayed shifts the mode to "Ready".
Sleep Mode	The DR Detector is sleeping. Selecting the frame in which "Sleep Mode" is displayed shifts the mode to "Ready".
Ready	Exposure is ready.

Display	Description
Error	Error is occurring.
Panel not detected	Status where exposure conditions for examination are not set yet, and no DR Detector is inserted in either wall stand and table.
Please check panel	For reasons such as no DR Detector is inserted in the wall stand and table, or power is off, exposure is not possible with the DR Detector.
Charging...	This is displayed when the DR Detector is being charged due to a low battery level.
Please Charge	This is displayed when the DR Detector's battery level is low but the DR Detector is not being charged.
Reading...	Images are being read. HINT • This is displayed when performing exposure in Aero Sync mode.
Waiting for permission	Waiting for exposure permission. Pressing [AeroSync] shifts the mode to "Ready". HINT • This is displayed when performing exposure in Aero Sync mode.
Waiting to start shooting	Waiting to start shooting. Pressing [AeroSync] shifts the mode to "Ready". This is displayed when the AeroDR power management level is set to [3], [4] or [5]. HINT • This is displayed when performing exposure in Aero Sync mode.
Stitching System is not connected	This is displayed when this device is not connected to the AeroDR Stitching Unit. Check the connection.
Please do the height detection	This is displayed when the height of the AeroDR Stitching Unit is not detected. Perform height detection.
Please detect radiation field	This is displayed when the irradiation field of the AeroDR Stitching Unit is not detected. Perform irradiation field detection.
Exposed	This is displayed when the number of stitching exposures is less than the scheduled number.

When using a CR cassette

Display	Description
Waiting for preparation	Status where cassettes cannot be loaded. This is displayed when CR cassettes cannot be read continuously.

HINT

- With the REGIUS, REGIUS SIGMA/SIGMA2, items determined by the inserted CR cassette, "Reading Size", "Reading Direction", and "Reading Position" are not displayed.
 - The following are displayed in the image display area where no exposure has been performed.
 - Device icon
 - Exposure conditions (resolution, size, direction, position)
 - A confirmation screen is displayed when the image processing related to "Pneumoconiosis" is changed.
-

6.4.13 Edit of image supplemental information

After exposure, image supplemental information can be edited.

1 Select images to edit their supplemental information.

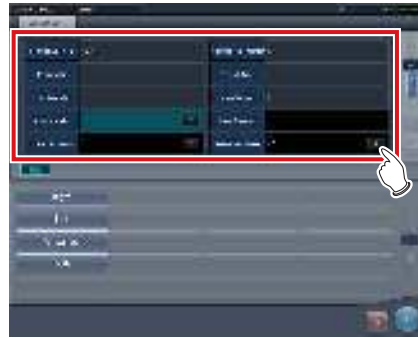


2 Press [Additional].



- The image supplemental information editing screen is displayed.

3 Edit the image supplemental information.



4 Press [OK].



- The supplemental information is added and the exposure screen is displayed.

IMPORTANT

- Input the patient orientation in the form of [Row orientation][Line orientation].
 - For the values available for the [Row orientation] and [Line orientation], refer to the options of the Patient orientation (Row) and Patient orientation (Line) on the Exam. Tag edit tool screen.
 - To display the Patient orientation (Row) and Patient orientation (Line), select the property edit tab on the Exam. Tag edit tool screen, and select the Exam. Tag master for the master/sub master selection.
 - For the details of the Patient orientation (Row) and Patient orientation (Line), refer to the DICOM Standard.
-

6.4.14 Edit of patient information

Patient information can be modified.

1 Select the patient whose patient information is to be modified on the list screen, and press [Perform] or [Modify].

- When [Modify] is pressed
→ Go to step 3



- The exposure screen is displayed.

2 Press [F5].



- The patient information editing screen is displayed.

3 Edit the patient information.



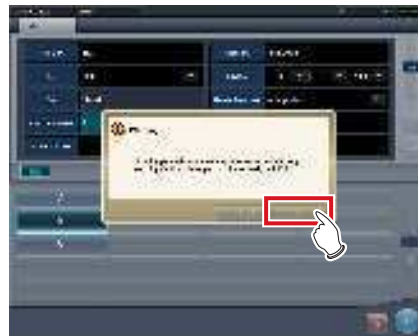
4 Press [OK].



- A confirmation screen is displayed.

5 Press [OK].

- Press [Cancel] to return to the previous screen.



- The edited content is reflected, and the exposure screen is displayed.

6.4.15 Switch of screen display of the exposure screen

On the exposure screen, the screen display format can be changed.

1 Press any of the (1) to (3) work area zoom tabs.



- When the (1) work area zoom tab is pressed, the examination display area is hidden and the work area is enlarged. You can press the tab again to display the examination display area.



- When the (2) work area zoom tab is pressed, the tool bar is hidden and the work area is enlarged. You can press the tab again to display the tool bar.




- When the (3) work area zoom tab is pressed, the control panel is hidden and the work area is enlarged. You can press the tab again to display the control panel.

6.4.16 Switch of screen display format



The display format of the exposure screen can be switched to "2×2 display" or "3×2 display" as necessary for the examination.

1 Press [] or [].



- Pressing [] switches the display format to 2×2.



- Pressing [] switches the display format to 3×2.
- Press [] to return the display format to 1×1.

6.4.17 Full-screen image display

Captured images can be displayed on the full screen.

● Full-screen display

1 Select the image to be displayed on the full screen.



2 Press the [] icon.





- The image is displayed on the full screen.

● **Canceling full-screen display**

1 Press [].



- The display returns to the normal image.

- HINT**
- You can operate the Full-Screen Display using [] depending on settings. The display of [] is disabled by default. If you want to use this function, contact Konica Minolta technical representatives.
 - While the Show Full Screen View is displayed, an oblong image can be rotated to display it. However, the image will not be able to be rotated if its height and width are the same.
 - You can enable Full-Screen Display or return to the original display by double-clicking the image display area using the mouse.
 - You can double-click only by using a mouse in the image display area.
 - Double click can be substituted with double touch in the Exam. Tags display area.
-

6.4.18 Rotation and flip of display

Exposed images can be rotated and flipped.

1 Select an image to rotate and flip.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [Rotate&Flip].



- The selection screen is displayed.

3 Select the item to apply.





- The rotation/flip is reflected in the image.

HINT

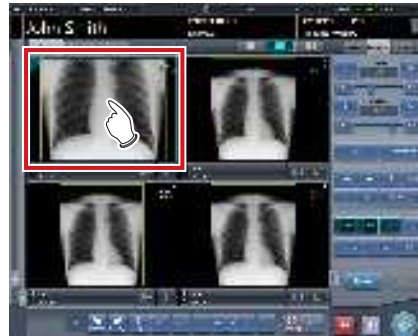
- When [Flip OFF] and [Flip ON] are displayed on the upper right portion of the selection screen, select the rotating image after pressing [Flip ON] when flipping and rotating 1 image.
- Set to hide/unhide [Flip OFF] and [Flip ON] during installation.



6.4.19 Panning of an image

When an image that is larger than the size of the image display area is displayed, the image can be panned.

1 Select an image to pan.



2 Press [Pan].



3 Drag the image to pan.





- The image can be panned by dragging it.

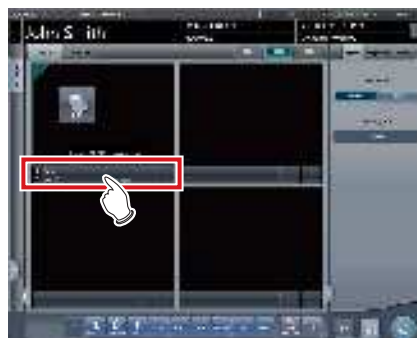
HINT

- You can also select the setting that can move an image by simply dragging the image or dragging it while simultaneously operating both buttons without pressing [Pan].
-

6.4.20 Deletion of registration of CR cassette registered with bar code

When exposing with CR cassette, the registration of a CR cassette registered with bar code can be cancelled.

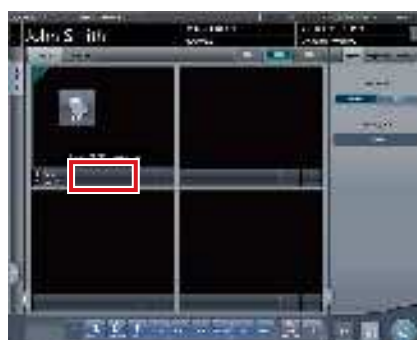
- 1 Press the Exam. Tag display area of the CR cassette registration to be deleted.**



- A confirmation screen is displayed.

- 2 Press [OK].**

- Press [Cancel] to return to the previous screen.



- The bar code registration is deleted.

6.4.21 Hold of the examination

In the course of exposure, an examination can be paused.

1 Press [Hold].



- A confirmation screen is displayed.

2 Press [OK].

- Press [Cancel] to return to the previous screen.



- Returns to the list screen.

HINT

- [Hold] cannot be pressed until this image is displayed.
- For the examinations on hold, "Suspend" is displayed in the status field of the list screen.
- The Exam. Tags for the examination on hold cannot be deleted, in order to prevent incorrect operations.

.....

6.4.22 Overlay

"Marker 1", "Marker 2", "Stamp", and "Grid/Scale" can be overlaid on the exposed image.

1 Select the [Overlay] tab.



- The screen switches to the control panel of overlay.

2 Input the overlay by operating the control panel.

- When inputting a marker, or stamp
→ Go to step 3
- When inputting a grid/scale
→ Go to step 6

3 Press either [Marker 1], [Marker 2] or [Stamp].



- The screen corresponding to the pressed button will be displayed.

4 Press an item to display.



- The overlay is displayed.

5 Select the display position for marker, or stamp.

- For both marker and stamp select 1 of the 4 corners.
→ Go to step 8



6 Press [Scale].



- The selection screen is displayed.

7 Press either [Measure1], [Measure2] or [Grid].

- Press [OFF] to quit the display.



- A grid or scale is displayed.

8 Press [Preview].





- The preview is displayed.
- Press [OK], and the preview disappears.

IMPORTANT

- Confirm that the overlay is reflected at the output destination.
- The grid/scale markings (Grid/Measure 1/Measure 2) are not measurement functions. Do not use them to measure images.

.....

HINT

- The set characters and stamp are as follows.

Marker type	Characters
Marker 1	R, L
Marker 2	A→P, P→A, R→L, L→R, RAO, LAO, RPO, LPO, C→C, M→L, M→R

Stamp
Set at installation.

Grid/scale type	Details
Grid	Displays approx. 50mm square grid
Measure 1	Displays a scale around an image. The scale interval at life size output is approx. 10mm. Based on this, the scale interval also reduces according to the zoom out ratio when zooming out.
Measure 2	Displays a scale on the right center and bottom center of an image. The scale interval at life size output is approx. 10mm. Based on this, the scale interval also reduces according to the zoom out ratio when zooming out.

* Grid and scale cannot be displayed at the same time.
.....

6.4.23 Highlight function for the tube/gauze

This function highlights the tube and/or gauze in captured images.

IMPORTANT

- The highlight function for the tube/gauze is available for the images of the following body parts.

Front view of the chest	Side view of the chest
Front view of the abdomen	Side view of the abdomen
Front and side views of the head	Towne view of the head
Front view of the child chest	Side view of the child chest
Infant chest and abdomen	Newborn chest
Auditory organ	Cervical division
Side view of the lumbar spine	Cystography
Maniphalanx bones - Overall view	Tarsal
Toe	Toe phalanges - Overall view

- When the highlight function for the tube/gauze is not OFF, the [E process], [F process], [Hybrid], [Tool], and [IG] buttons cannot be operated on the [Image control] or [QUICK] tabs on the control panel. Also, the E, F, and HS parameters cannot be changed on the viewer screen.
 - In the case where the S/G value etc. were changed after the level of the highlight function for the tube/gauze has been changed, when the function is turned off after that, the image returns to that before the level was changed, and consequently the S/G value etc. return to the former values.
-

HINT

- When an image with a highlighted tube/gauze is shared with this device which is not licensed for the highlight function, the image will be displayed with the highlighted tube/gauze, but you cannot change the highlight level or deactivate the highlight function with this unlicensed device.
-

● Highlight display of the tube/gauze

1 Select the [QUICK] tab.



2 Press the [Tube/Gauze] button.



HINT

- The highlight function for the tube/gauze is turned on and off every time you press the [Tube/Gauze] button.



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● Changing the highlight level

1 Press the [Tube/Gauze] button for 1 second or more.



- The highlight level change dialog box is displayed.

2 Press [OFF] or the button of the level to be changed on the highlight level change dialog box.



- The highlight level is changed.

● **Select the output of highlighted tube/gauze image**

Switch the output settings of highlighted tube/gauze image.

IMPORTANT

- This function is available for the host output only.
-

1 Long press the [Tube/Gauze] button more than 1 second.



- The highlighting level change dialog is displayed.

2 Change the image output settings on the highlighting level change dialog.

- When the [Tube/Gauze ON & OFF] is pressed, both the normal and highlighted images are output during host output.
- When the [Tube/Gauze ON Only] is pressed, only the highlighted image is output during host output.



HINT

- The order of normal and highlighted image output can be changed. For more details, contact Konica Minolta technical representatives.
-

6.4.24 Automatic 1×1 display function

When examining with a 2×2 display screen or a 3×2 display screen, they can be changed to a 1×1 display screen automatically when the exposed image is received.

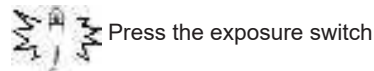
The following procedure describes an example of what happens when, while having the screen display set to 2×2, exposure is carried out with the automatic 1×1 display function enabled. The exposure order and body parts are as follows.



- * Numbers (1), (2) displayed on the screen are shown for ease of explanation, and not displayed on the actual screen.

1 Perform exposure (1).

- Set up the X-ray device before exposure. Perform exposure after checking the exposure settings.



- Changes to 1×1 display and begins reception.

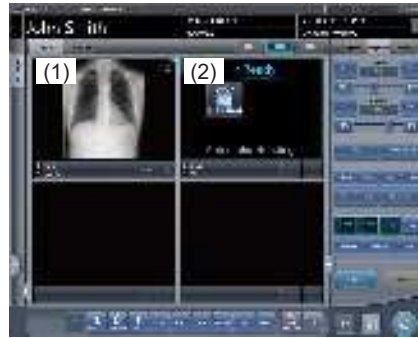


- The button is displayed in the Exam. Tags display area.



- When reception of exposed images is finished (images are displayed), the button displays a countdown in seconds.
- Before the countdown reaches 0, if any operation is performed on the image, the countdown is stopped, and the button changes to display "NEXT".

2 Press [NEXT].



- Returns to the 2×2 display screen and the focus moves to the next unexposed frame.

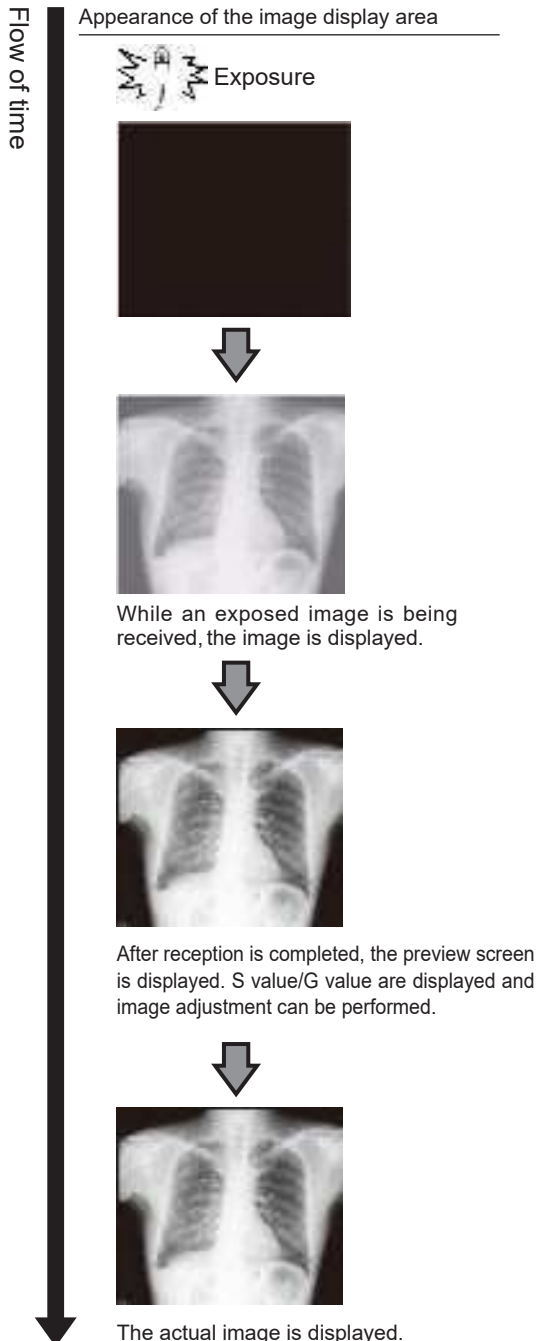
HINT

- When the button countdown reaches 0, the previous screen will be displayed and the focus will move to the next Exam. Tags.

.....

6.4.25 Image preview

When an image is being received, a preview image is displayed in the image display area. Appropriate gradient processing is automatically performed for each exposed image, and density and contrast are automatically adjusted to be suitable for checking.



HINT

- When the actual image is displayed, focus automatically moves to the next exposure frame. When that exposure is the final one, the focus does not move.
- Even during image preview, image adjustment can be performed. While the preview image is displayed, select the [Image Proc] tab on the control panel, and adjust the image. During image adjustment, focus does not move to another frame.

6.4.26 Scattered Radiation Correction (IG)

Scattered radiation can be corrected automatically when an exposed image is received.

IMPORTANT

- This function can be used only when Scattered Radiation Correction is set to ON in the Exam. Tag.
- The S value after scattered radiation correction is calculated for the image whose scattered radiation was corrected. Therefore, it is larger than the S value of the image before scattered radiation correction.
- Use scattered radiation correction with a tube voltage within the range of 50 to 130 kV.
- Before performing scattered radiation correction, verify that the tube voltage for the Exam. Tag matches the actual exposure conditions. If the actual tube voltage is lower, the contrast may be weaker. If the actual tube voltage is higher, the contrast may be stronger.
- The available scattered radiation correction grid ratios include 3:1, 6:1, 8:1, 3:1 → 6:1, and 3:1 → 8:1.
- Use scattered radiation correction under the same exposure conditions as when using grids. When using exposure conditions without grids, contrast may improve, but image quality may be different than when correction is performed under exposure conditions using grids.
- Scattered radiation correction cannot be used when highlight function for the tube/gauze is turned on. After performing scattered radiation correction, turn on the catheter end/gauze enhancement function.

● Scattered Radiation Correction

1 Set the [IG] button to [ON].



2 Perform exposure.



- The exposed image whose scattered radiation has been corrected is displayed in the image display area.

IMPORTANT

- Turning off the [IG] button will turn off image scattered radiation correction. S/G and other values will return to the values calculated for the image before scattered radiation correction.
-

● Adjustment of the scattered radiation correction parameter

1 Press and hold the [IG] button.



- The scattered radiation correction parameter dialog is displayed.

2 Select the correction level.



- The scattered radiation correction level is changed.

6.5 • Exposure Screen ([Output] Tab) Functions

This section describes the procedure for outputting images from the exposure screen and the operation performed when the [Output] tab is selected on the control panel of the exposure screen.

6.5.1 Individual output



Once examination is finished, exposed images can be not only batch output, but also output individually.

1 Select an image to output.



2 Press [Output].



- The device icon of the output destination (host (electronic medical record)/printer) is displayed.
- [] changes to [] indicating that output is done.



HINT

- The output destination device icon is lit in green during output.
- When an error occurs during output, the output destination device icon is lit in red. Output is resumed when the cause of error is solved.
- During output, when adjustment is performed on the image being output, the results of image adjustment during output are not reflected.
- The device icon of the host is displayed also when the electronic medical record is specified as the output destination.

6.5.2 Additional output

Images already output can be output again.

1 Press [OK] after displaying the image to output again.



- The output destination selection screen is displayed.
- The output destination selection screen is displayed with the previously transmitted destination selected.

2 Select the output destination.



- It is possible to select multiple transmission destinations.

3 Press [OK].

- When not outputting, press [Cancel].



- Images are re-output.

6.5.3 Change of host (electronic medical record) output conditions

The conditions of images output to a host (electronic medical record) can be changed.

1 Select the [Output] tab.



2 Select an image to output.



3 Press [Host].



4 Change the trimming size.



Icon/Function name	Functions
TrimmingSize	Select the cropping size. Set the trimming size type during installation.
	Select the direction (portrait or landscape) of the output.
	Adjust the cropping width. The width changes every time the button is pressed.
	Adjust the cropping height. The height changes every time the button is pressed.
	Returns to the state when image was displayed.

HINT

- You can long press and drag the trimming frame. The trimming frame is highlighted when selected, and the original position is shown by dotted lines.



.....

5 Press [].



- The image is output to the host (electronic medical record), and [] is displayed in the image display area.
- [] changes to [] indicating that output is done.

HINT

- The same procedure applies when outputting to an electronic medical record.

.....

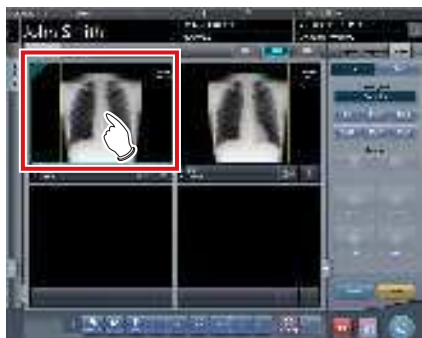
6.5.4 Change of printer output conditions

The conditions of images output to a printer can be changed.

1 Select the [Output] tab.



2 Select an image to output.




3 Press [Printer].



4 Change the output conditions.



- Setting items are as follows.

Item	Options
Format	<p>A format Outputs 1 image on 1 sheet.</p> <p>AB format Outputs 2 images in alignment left-right or top-bottom 1 by 1.</p>
Film size	Only sizes that can be set in the printer such as 8×10, 10×12, 11×14, 14×14, and 14×17 can be displayed.
Direction	<p>Horizontal output</p> <p><input type="checkbox"/> A format Only 1 image can be output.</p> <p><input type="checkbox"/> AB format The A image is displayed on top and the B image is on the bottom.</p> <p><input type="checkbox"/> The A image is displayed on the left and the B image is on the right.</p> <p>Vertical output</p> <p><input type="checkbox"/> A format Only 1 image can be output.</p> <p><input type="checkbox"/> AB format The A image is displayed on top and the B image is on the bottom.</p> <p><input type="checkbox"/> The A image is displayed on the left and the B image is on the right.</p>
Number	1-9
Output type	<p>Overall size Print an image after reducing the size so that the image size is full size for the film to be printed. When the film size is larger than the image, print the image at the same magnification.</p> <p>Life size Print the image at the same magnification. When the read image is larger than the output area of the film, parts outside the output area are cut off.</p>
	Returns to the state when image was displayed.

6.5.5 Printer output in A format

1 image can be output in 1 sheet of film.

1 Select the [Output] tab.



2 Press [Printer].



3 Select an image to output.



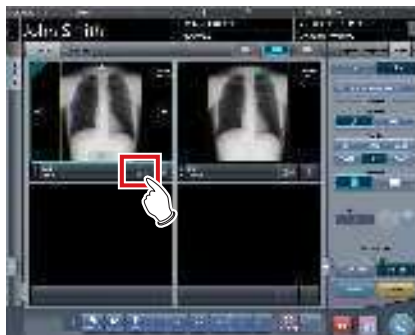
4 Select [A] in [Format].






5 Change [Film Size], [Direction], etc.



6 Press [Done].





- The image is output to the printer, and [] is displayed in the image display area.
- [] changes to [] indicating that output is done.

6.5.6 Printer output in AB format

2 different images can be output in 1 sheet of film.

1 Select the [Output] tab.



2 Press [Printer].



3 Select an image (first one) to output.



4 Select [] from [Format].





5 Change [Film Size], [Direction], [Output Type], etc.




6 Select an image (2nd one) to output.



- After selecting the images, select [] from [Format] following Steps 4 to 5, and change the [Film Size], [Direction], and [Output Type].
- Set the [Film Size], [Direction], and [Output Type] the same as the selected image in the first sheet.

7 Press [] of the first image to be output.



- The icon will change to [] which denotes pair waiting status.



8 Press [] of the 2nd image to be output.



- A confirmation screen is displayed.

9 Press [OK].



- The images are output to the printer, and [] is displayed in each image display area.
- [] changes to [] indicating that output is done.

IMPORTANT

- When outputting in AB format, be careful of the following.
 - Images are outputting as a pair only when the format, film size, and film orientation of the 2 images to be output are the same. If there is no matching image, then only 1 image is output.

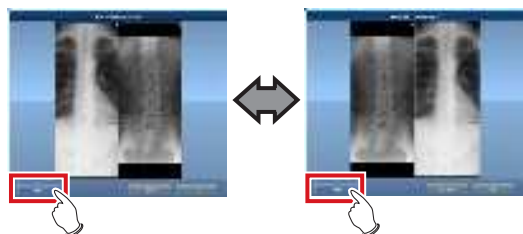
When there is a matching pair



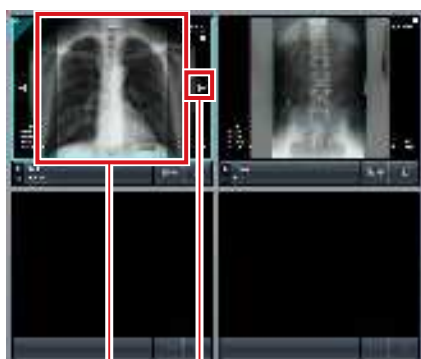
When there is no matching pair



- Images are assigned to a film in the order in which [] is pressed.
- While waiting for a pair, if the format, film size, or film orientation is changed, the waiting for a pair state is released.
- The confirmation screen displayed when outputting displays [Swap]. Pressing [Swap] replaces image positions left and right, or top and bottom.



- When [Cancel] is pressed on the confirmation screen displayed during output, pairing of the images is released.
- When [Life Size] is selected as [Output Type], a cropping frame is displayed on the image. The size of cropping frame changes automatically according to the film size, length, and width and height of the film output area. The cropping frame can be moved by pressing the cropping frame move button [], or by selecting the destination of the cropping frame.



Cropping frame move button
Cropping frame

.....

6.5.7 Sort of preview images (each image) for host output

Each preview image for host output can be sorted by image.

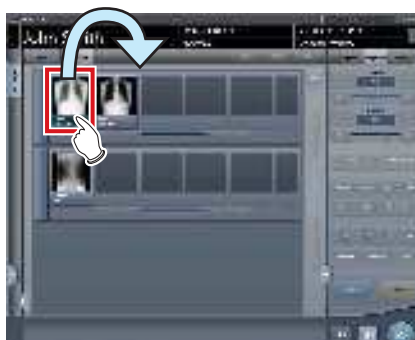
1 Select the [Queue Cont.] tab.



- Previews are displayed in the sequence of transmission to the host.
- A preview is displayed as 1 series per body part.

2 Drag and drop the image at a desired position to rearrange the image.

- A white line is displayed at a position where the order can be changed.



- The order is changed.

IMPORTANT

- If there is an image already sent to the host, then the order of images of the series cannot be changed.
- The order of images in another examination or across series cannot be changed.

HINT

- If there is an unexposed Exam. Tag, the device icon is displayed.

6.5.8 Sort of preview images (each series) for host output

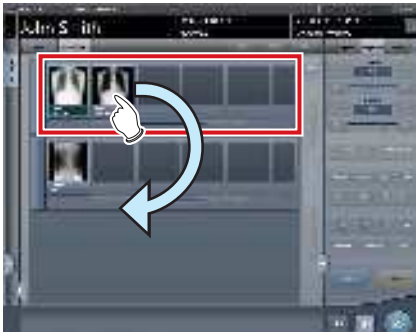
Exposed images can be arranged in 1 series by exposure body part. Preview images for host output can be sorted by series.

1 Select the [Queue Cont.] tab.



- Previews are displayed in the sequence of transmission to the host.
- A preview is displayed as 1 series per body part.

2 Drag the series to be changed and drop it into a desired position to rearrange the series.



- A white line is displayed at a position where the order can be changed.



- The order is replaced.

HINT

- If there is an unexposed Exam. Tag, the device icon is displayed.

6.5.9 Sort of preview images (transmitted) for host output

Preview images sent to the host are normally in a state that cannot be sorted. When it is necessary to sort preview images already sent to the host, they can be sorted with the following procedure.

1 Select the [Queue Cont.] tab.



- Previews are displayed in the sequence of transmission to the host.
- Transmitted series are displayed in gray.
- A preview is displayed as 1 series per body part.

2 Select a series already sent to the host.



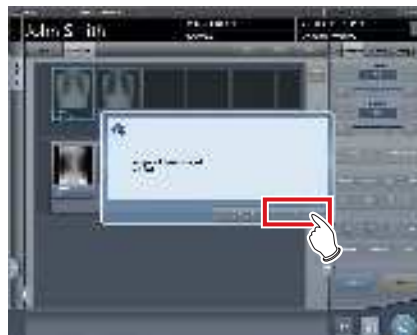
3 Press [Reset].



- A confirmation screen is displayed.

4 Press [OK].

- Press [Cancel] to return to the previous screen.



- The order of images can be changed in this state.

IMPORTANT

- Series that include unexposed images cannot be sorted.

.....

HINT

- If there is an unexposed Exam. Tag, the device icon is displayed.

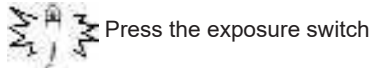
.....

6.5.10 Automatic output

Depending on settings, the examination results can be automatically output at the completion of the examination.

1 Perform exposure.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



- After reading the images, the remaining seconds for automatic output will be displayed on the output button.
- When the focus is moved, a countdown will begin.



- When the countdown reaches 0, the icon will change to [] and output will begin.

HINT

- Before the countdown reaches 0, if any operation is performed on the image, or when transitioned to a different screen, the number of seconds is reset to the initial value and the countdown is stopped.

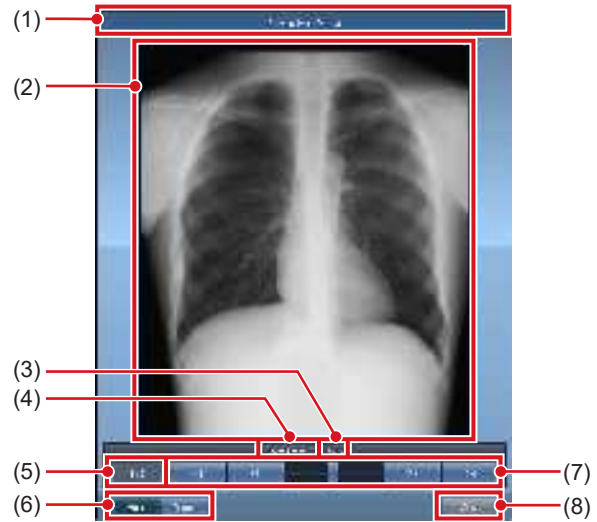
.....

6.5.11 Preview

You can preview the images to be output by pressing [Preview] on the [Image Proc], [Output], or other tabs.

● Screen structure

This screen is used for checking preview images.



Number	Name	Functions
(1)	Title bar	Displays [Preview Host Output] when a preview image for the host is shown. Displays [Preview Printer Output] when a preview image for the printer is shown.
(2)	Output preview image	Displays a preview of the image to be output.
(3)	Output size	Displays the output size of the preview image currently shown.
(4)	Exam. Tag	Displays the Exam. Tag of the preview image currently shown.
(5)	Number of images	Displays the number of images currently shown and the total number of images.
(6)	Host/Printer switch button	Press [Host] to display a preview image for host output, or [Printer] to display a preview image for printer output.
(7)	Scroll bar/scroll buttons	Drag the scroll bar to switch output preview images. Press [Left/Right] to switch images one by one. Press and hold it to scroll an image. Press [First/Last] to display the first or last image.
(8)	Close button	Closes the preview screen.

HINT

- If the image has been trimmed, the actual output size is displayed in [Size].

● Procedure for displaying previews

1 Press [Preview].



- The image is displayed on the preview screen.

2 Press [Close].



- The preview screen is closed.

HINT

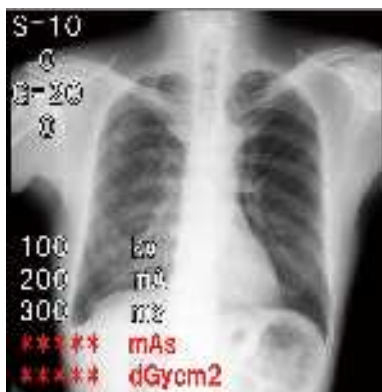
- When a rejected image is displayed, a reject icon appears in the image display area.



- A life-size stitched image with two or more combined output pages cannot be displayed on the preview screen.

6.6 • Exposure Screen ([Exp.Info] Tab) Functions

This section describes the operation performed when the [Exp.Info] tab is selected on the control panel of the exposure screen. X-ray irradiation information can be displayed on the image by the setting.



IMPORTANT

- When linked to the X-ray device, editing can only be made when X-ray irradiation results cannot be acquired from the X-ray device.
- Risk of misidentification of patients may occur if modifications to patient information are made. Be sure to read "Chapter 1 Safety Precautions & Warnings".

HINT

- When there are no X-ray irradiation results associated with an exposed image, result values are not displayed.
- Editing of X-ray irradiation results can be performed regardless of the existence of links to the X-ray device.
- Even if results were input before acquiring X-ray irradiation results, they are overwritten with the irradiation results acquired from the X-ray device when the image is read. If irradiation results could not be acquired from the X-ray device, then the values are not overwritten.

6.6.1 Change of X-ray irradiation information (results)

When it is necessary to change irradiation information (results) after exposure, irradiation information (results) can be changed with the following procedure.

1 Select an image to edit.



2 Press the [Exp.Info] tab.



3 Press the number part of the item you want to edit.



4 Input numerical values with the number pad.



- The input value is reflected.

6.6.2 Change of mammogram image X-ray irradiation information (results)

When it is necessary to change irradiation information (results) after mammography exposure, irradiation information (results) can be changed with the following procedure.

IMPORTANT

- For United States of America, this device is not intended to use for Mammography.

.....

1 Select an image to edit.



2 Press the [Exp.Info] tab.



3 Select anode and filter.



4 Press the number part of the item you want to edit.



5 Input numerical values with the number pad.



- The input value is reflected.

6.6.3 Replacement of X-ray irradiation information (results)

X-ray irradiation information (results) of the image exposed with the CR cassette can be replaced.

1 Press [Z] of the image to be replaced.



- The image display area is surrounded by a white frame.

2 Press [Z] of the image to be replaced.



- A confirmation screen is displayed.

3 Press [OK].

- Press [Cancel] to return to the previous screen.



- The X-ray irradiation information (results) is replaced.

HINT

- To quit replacement, press [Z] of the same frame again, or press any position other than [Z].
-

6.7 • Functions of the viewer screen

Before each operation, select the image to adjust and select the [Image Proc] tab on the control panel.

Image adjustment performed on the viewer screen
Changing E/F/HS parameters
Changing ROI area
Changing effective image area
Changing masking area
Modifying the S value/G value
Zooming in and out
Moving an image
Rotate&Flip display
Grid removal/Scattered radiation correction
Positioning of annotation
Adjusting an annotation
Creating/editing annotation characters

6.7.1 Change of E/F/HS parameters

The parameters can be changed.

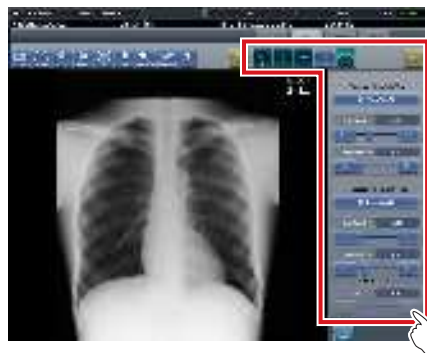
1 Press [Tool].

- There are 3 types of processing: E process, F process, and HS process.



- The viewer screen is displayed.

2 Select the process and change the parameter.



Icon	Functions
	Switches the E process [ON] and [OFF].
	Switches the F process [ON] and [OFF].
	Switches the Hybrid process [ON] and [OFF].
	Switches the HS process [ON] and [OFF].
	Performs fine adjustments.
	Resets operations performed in the tab.

3 Press [Return] after the change.



- Returns to the exposure screen.

HINT

- E/F/HS parameters can be changed individually.
 - The results of the changed parameter, such as E/F/HS, are automatically stored, and can also be reflected in following exposures.
-

6.7.2 Change of the ROI area

This device will automatically recognize the ROI and display in the image area. The ROI area can be changed manually as necessary.

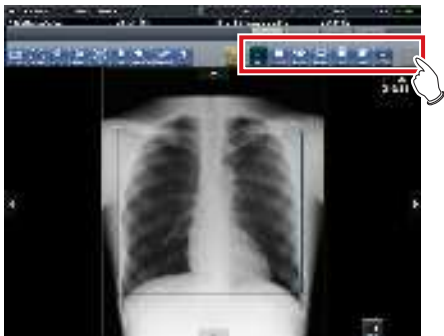
1 Press [ROI Adjustment].



- The viewer screen is displayed.

2 Change the ROI area.

- When an image is pressed in any location, ROI moves with the pressed part as the center.



Icon	Functions
	Switch between [ON] and [OFF] of ROI mode.
	Press any 2 points to specify the square with a diagonal line that connects the 2 points as the size of the ROI area.
	Adjust the width of the ROI area. The width changes every time you press these buttons.
	Adjust the height of the ROI area. The height changes every time you press these buttons.
	Switch between the displays of 2 ROIs when the image processing parameter has 2 ROIs.
	Resets operations performed in the tab.

3 Press [Return] after change.



- Returns to the exposure screen.

IMPORTANT

- When the ROI area is changed, the auto gradient process is performed again, and the optimized image is displayed.
-

6.7.3 Change of the effective image area

Although this device automatically recognizes the effective image area and displays it within the image area, the effective image area can be adjusted manually as necessary.

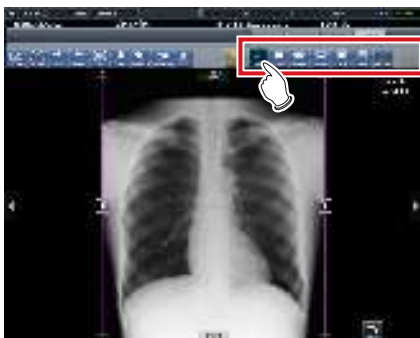
1 Press [Cropping].



- The viewer screen is displayed.

2 Change the effective image area.

- When an image is pressed in any location, the effective image area moves with the pressed part as the center.



Icon	Functions
	Switch between [ON] and [OFF] of the image processing temporarily.
	Press any 2 points to specify the square with a diagonal line that connects the 2 points as the size of the effective image area.
	Adjust the width of the effective image area. The width changes every time you press these buttons.
	Adjust the height of the effective image area. The height changes every time you press these buttons.

Icon	Functions
	To use a fixed size effective image area, set this option to [ON].
	Resets operations performed in the tab.

3 Press [Return] after change.



- Returns to the exposure screen.


IMPORTANT

- If image recognition fails and an inappropriate effective image area is set during automatic reading, the image may become white or black all over. When this happens, temporarily set the image processing to [OFF] and set the appropriate effective image area.
- Depending on the image information status, automatic reading may not be carried out properly, and part of the image may be missing. In this case, please change the effective image area manually.

HINT

- Depending on the printer, the output may be smaller than the effective image area. When this type of printer is used, specify the effective image area in advance assuming a smaller output.
- The effective image area can be changed by directly dragging the square mark on the frame border of the effective image area or its perimeter.

● **Using a fixed size effective image area**

If you want to use a fixed size effective image area, press []. Then the following buttons are displayed.

IMPORTANT

- This function does not support the stitching and mammogram images.
-



Number	Name	Functions
(1)	Fixed Size	Fixes the size of the effective image area. Select [8x10], [10x12], [11x14], [14x14], [14x17], or [17x17].
(2)	Direction	Switches the orientation of the effective image area between portrait and landscape.

HINT

- The fixed size effective image area can be moved by changing the position of the center point. If any part of the effective image area is moved outside the image display area, the position of the center point is adjusted automatically so that the effective image area is included in the display area.
 - If the effective image area is not included in the image display area after the orientation has been changed, the size-fixing setting is cleared and the size of the effective image area is reduced until it is included in the display area.
 - If the effective image area is manually resized, the size-fixing setting is cleared.
-

6.7.4 Change of the masking area

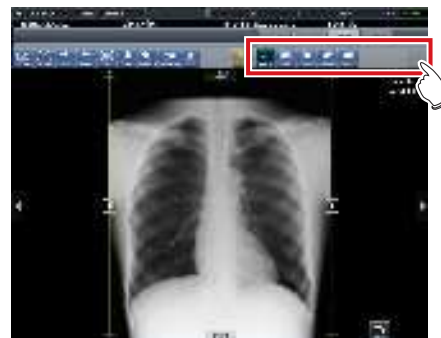
Although this device automatically recognizes the exposure field area and performs masking to display within the image area, the masking area can be changed manually when necessary.










1 Press [Masking].



- The viewer screen is displayed.

2 Change the masking area.



Icon	Functions
	Switch between [ON] and [OFF] of the masking area display.
	Specify a masking area by automatically recognizing the effective image area.
	Press any 2 points to specify a square with a diagonal line that connects the 2 points as the size of the masking area.
	Press any 4 points or more to specify a polygonal masking area.
	Press any 3 points to specify a round masking area.
	Switch between [ON] and [OFF] of the chest wall blackening process.
	Resets operations performed in the tab.
	This is displayed in the specified masking area. Drag to adjust the size of the masking area.
	Move the masking frame up, down, left and right.

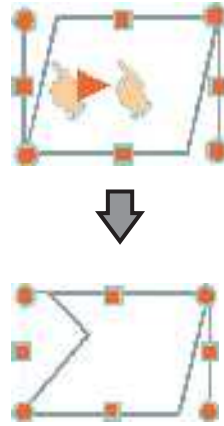
3 Press [Return] after change.



- Returns to the exposure screen.

HINT

- The masking area can be changed by directly dragging the square mark on the frame border of the masking area or its perimeter.
- After specifying a masking area, drag any point of the masking area to change the shape of the masking area.



- The results of masking recognition outside the exposure field can be confirmed on the viewer screen or the image display area of the exposure screen.
 - Depending on the image information status, automatic recognition of the exposure field area may not be carried out properly. In this case, please change the effective image area manually.
 - The accuracy of masking can be increased by paying attention to the following at exposure.
 - Place protective equipment as parallel to the edge of the exposure field as possible or place it so it does not overlap the exposure field edge.
 - Make sure that objects (clothes or subject area other than the target) other than the target body part for exposure are not included in the image.
 - Place the exposure target body part at the center of the exposure field as much as possible.
 - When split exposure is performed, provide an interval of at least 1cm between exposure fields before exposure.
 - When the fractional masking function is used on REGIUS SIGMA/SIGMA2, the masking area may occasionally be moved to the inside of the image.
-

6.7.5 Modifying the S value/G value

You can modify the S value/G value from the Viewer screen.

1 Press [S/G Value].



- The control panel for adjusting the S value/G value is displayed.

2 Adjusts the image.



- Pressing [] increases or decreases the value step by step.

HINT

- Dragging the control panel slider or pressing [] increases or decreases the S value/G value in multiples of the preset value. In addition, when you press the [S/G] button on the control panel, the S value/G value can be adjusted by dragging the image.
 - Use the user tool to set the drag operation to increase or decrease the S/G values and specify the degree of change that can be obtained from []. You can also select the setting so that the S/G values can be adjusted by simply dragging the image or dragging it using both mouse buttons without pressing the [S/G] button.
-

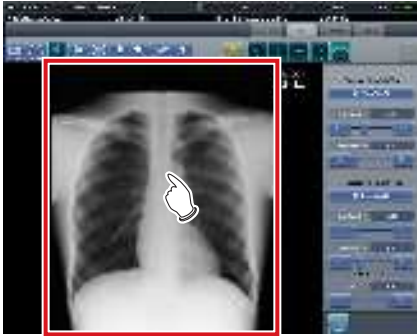
6.7.6 Zooming in and out

Zoom in or out from/to an image according to the following procedure.

1 Press [ZOOM+] or [ZOOM-].



2 Press any part of the image.



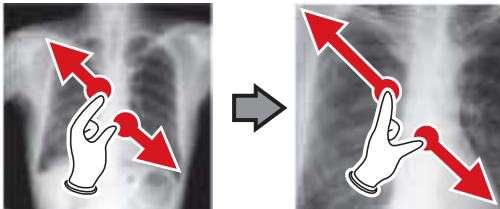
- Zooming in/out is displayed, centering on the pressed part.
- Every time you press a part of the image, the image is gradually zoomed in/out.

HINT

- When a multi-touch monitor is used, zoom in/out can be performed with the following operations. In this case [ZOOM+] or [ZOOM-] do not need to be pressed.

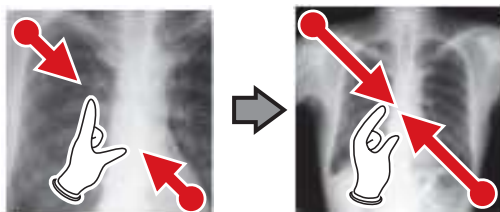
Zoom in

Simultaneously press 2 points with the thumb and index finger and spread the 2 points (spread the fingertips) to zoom in on the image.



Zoom out

Simultaneously press 2 points with the thumb and index finger and move to close the 2 points (close the fingertips) to zoom out on the image.



- You can also zoom in or out from/to an image by rotating the mouse wheel up and down on the image.
 - Use the user tool to set the amount of change associated with rotating the mouse wheel.
-

6.7.7 Moving images

Move an image according to the following procedure.

1 Press [Pan].



2 Drag the image.



- The image moves following the drag operation.

HINT

- You can also select the setting that can move an image by simply dragging the image or dragging it while simultaneously operating both buttons without pressing [Pan].
-

6.7.8 Rotate&Flip display

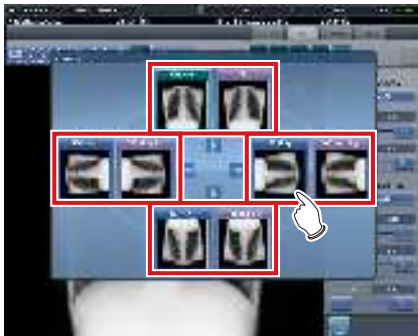
Rotate or flip image according to the following procedure.

1 Press [Rotate&Flip].



- The selection screen is displayed.

2 Select the target item to be changed.



- The rotation/flip is reflected in the image.

HINT

- To simultaneously rotate and flip an image, when [Flip OFF] and [Flip ON] are displayed on the selection screen at the top right, press [Flip ON] and then select an image to be rotated.
- You can select whether to display [Flip OFF] and [Flip ON] when installing the device.



- Only the options [Original], [180 deg.], [Flip], and [180 deg. Flip] can be selected for images composed of combined stitching images.

6.7.9 Grid removal/Scattered radiation correction

This device performs the automatic removal process of the grid, but the grid can be removed again manually as necessary.

Scattered radiation can also be corrected manually.

HINT

- Set the irradiation field size to at least 10x10 cm to use the grid. If the area is less than 10x10cm, automatic grid recognition may fail during the grid removal process.
-

● Grid removal

1 Select the image to remove the grid again.



2 Press one of [ROI Adjustment], [Masking], [Cropping], or [Viewer].



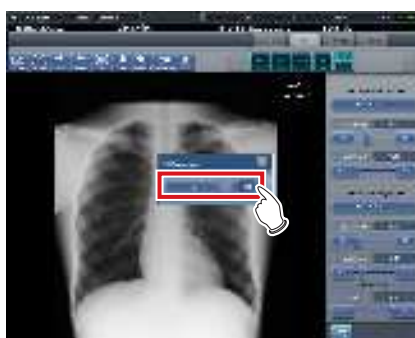
- The viewer screen is displayed.

3 Press [Grid Suppress].



- Control panel to adjust the parameters is displayed.

4 Remove the grid again.



- Select the grid direction and grid density.

HINT

- You can also remove the grid when correcting scattered radiation.
 - After grid is removed from One Shot stitching images, the system automatically returns to the exposure screen.
-

5 Press [Return] after the grid is removed again.



- Returns to the exposure screen.

● Scattered radiation correction

IMPORTANT

- This function is only available for images that are exposed on the DR Detector.
 - Scattered radiation correction cannot be applied to stitching images.
 - Scattered radiation correction is not available when the highlighted tube/gauze function is turned on. In this case, first turn the highlighted tube/gauze function off to apply scattered radiation correction, then turn the highlighted tube/gauze function on.
-

1 Select an image whose scattered radiation you want to correct.

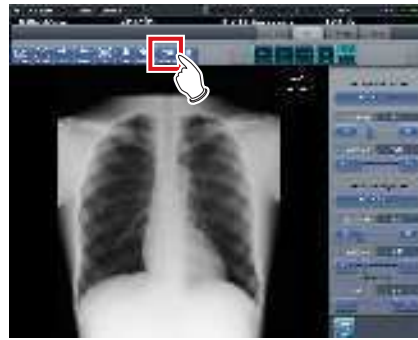


2 Press one of [ROI Adjustment], [Masking], [Cropping], or [Viewer].



- The viewer screen is displayed.

3 Press [Grid Suppress].



- Control panel to adjust the parameters is displayed.

4 Perform scattered radiation correction.



- Select ON or OFF for scattered radiation correction, then select the correction level.

5 Press [Return] when the scattered radiation correction process is complete.



- Returns to the exposure screen.

6.7.10 Positioning of annotation

Using the annotation function, arbitrary characters can be placed on an image.

1 Select an image on which you want to position an annotation.



- The control panel automatically switches to the [Image Proc] tab. If it does not switch, select the [Image Proc] tab manually.

2 Press [Text].

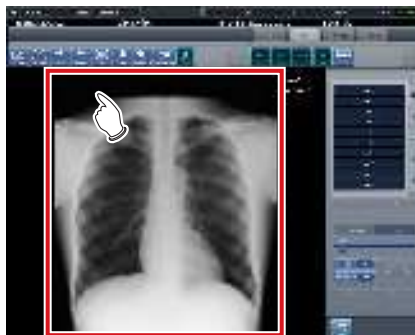


- The viewer screen is displayed.

3 Select the annotation to be positioned.



4 Select the place to position the annotation.



- Annotation is added.

5 Press [Return] after the placement of annotation is completed.

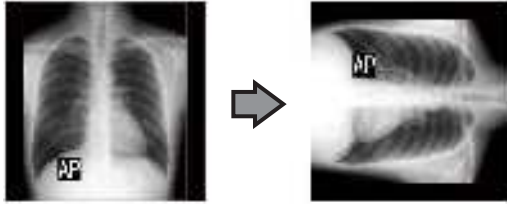


- Returns to the exposure screen.

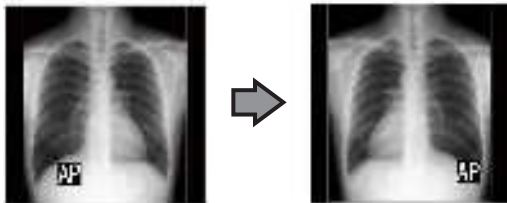
HINT

- You can also position an annotation by pressing either [ROI Adjustment], [Masking], [Cropping], or [Viewer], displaying the viewer screen, and pressing [Text].
- When you rotate or flip an image after positioning an annotation, the following operation is performed. The position of the annotation textbox is linked to the rotation or flip of the image, but the characters themselves do not rotate or flip.

Rotation example (90 degree rotation)



Flip example (left right flip)



- If you display the text box using any of the following methods, you can freely enter an annotation. Enter the annotation text using the keyboard.
 - Click anywhere on the image.
 - When you select an annotation in Step 3, click where characters are not registered.



- You can move the annotation you placed using the mouse.
.....

6.7.11 Adjustment of annotation

Annotations placed can be adjusted.

1 Select an annotation to adjust.



2 Adjust the annotation.



Icon	Functions
	Adjust the size of characters by moving the slider.
	Character color switches between black and white every time the button is pressed.
	Background color switches between white, black, and transparent every time the button is pressed.
	The character is rotated 15 degrees in the clockwise or counter-clockwise direction centering at the top left of the character every time each button is pressed.
	All positioned annotations are deleted.
	Selected annotations are deleted. HINT • The keyboard Delete key can also be used in the same way to delete annotations.



- The adjustment details are reflected.

HINT

- When placed annotations are double clicked, the annotation characters can be edited. An annotation can have up to 256 characters and can also contain line feeds.
 - Character content of a rotated annotation cannot be modified. Return the character to the unrotated state (0 degrees) once before modifying the character content.
 - When [Overall size] is selected as the output method after an annotation is positioned, the entire image and the character size of annotation are reduced together. When setting [Overall size] for outputting a large size image with a small film, you need to be careful by making the character size of the annotation larger. Also, even with the film with the same character size and output method, the character size will differ slightly depending on the setting of resolution.
 - Character color and background color are linked. When setting character color to "White", background color can be selected from either "Black" or "None". When setting character color to "Black", background color can be selected from either "White" or "None".
 - Settings of the font size, font color, and background color are saved even after the device is restarted.
-

6.7.12 Creating/editing of annotation characters

Characters to place in annotations can be created and edited.

- 1 Select a row with no annotation or select a row with characters to edit.**



- 2 Press [Edit].**



- The input screen is displayed.

- 3 Create or edit characters, and press [OK].**





- Content is reflected in the row selected in step 1.

 **HINT**

- Up to 10 annotations can be created per tab.
- Annotations registered in each tab can have up to 14 characters.
- To delete the selected characters, press [Delete] during step 2.



.....

6.8 • Functions of the system monitor screen

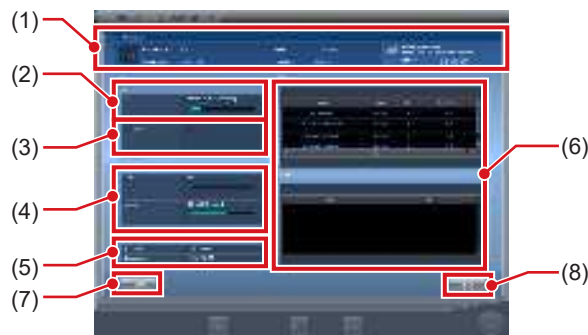
Status of this device and connected devices can be confirmed in the [System Monitor] tab of the system monitor screen.



- The system monitor screen is displayed when [System] is pressed on the initial screen or in the tool bar on the body part selection screen.
- If the network status is not displayed, press the [System Monitor] tab on the function switching tabs.
- The status of the selected device is displayed by selecting the icon on the screen.

6.8.1 System status

The status of this device can be confirmed.



Number	Name	Functions
(1)	System Information	Displays the name, serial number, version, and hospital ID of this device.
(2)	HDD	Displays maximum capacity of the hard disk and space in use.
(3)	Guarded Image	Displays the total number of guarded images.
(4)	CPU/Memory	Displays utilization for the CPU and memory. The extent of utilization is displayed in %.
(5)	Network Information	Displays the IP address and subnet mask.
(6)	Process, Service	Displays processes and services.
(7)	Detail button	Displays details of the network environment of this device.
(8)	Back button	Closes the screen.

● **Displays the UDI barcode.**

Use the following sequence to display the Unique Device Identification System (UDI) barcode used to identify CS-7 devices.

- 1 Press the image of this device in the CS-7 system information.**



- The UDI CODE screen appears.
- The date, UDI barcode, and serial number appear.

- 2 Press the [OK] button to close the screen.**



6.8.2 Device status

The status of REGIUS, REGIUS SIGMA/SIGMA2, X-ray device, AeroDR Generator Interface Unit, AeroDR Generator Interface Unit2, AeroDR Portable RF Unit, AeroDR Portable RF Unit2, sub monitor, and other devices connected to this device can be confirmed.



Number	Name	Functions
(1)	Device name Information	The device name, device type, error description are displayed.
(2)	Status	The IP address of a device, port number, ping status and device condition are displayed.
(3)	Ping button	Press to confirm the ping status.
(4)	Route button	Press to confirm Route information.
(5)	Back button	Closes the screen.

6.8.3 Status of the DR Detector

The status of the DR Detector can be confirmed.



Number	Name	Functions
(1)	Status of AeroDR	The name of the DR Detector, modality, error description, battery status, signal strength, and serial number are displayed.
(2)	Status	Status of wired or wireless connection for DR Detector, IP address, Ping status, and device status are displayed.
(3)	Ping button	Press to confirm the ping status.
(4)	Route button	Press to confirm Route information.
(5)	Unregister button	Releases the registration of the DR Detector.
(6)	Back button	Closes the screen.

6.8.4 Host status

The status of hosts connected to this device can be confirmed.



Number	Name	Functions
(1)	HOST	The host name and error description are displayed.
(2)	Status	Host IP address, port number, AE title, ping status, and device condition are displayed.
(3)	Ping button	Press to confirm the ping status.
(4)	Route button	Press to confirm Route information.
(5)	Number of reserved images	The number of images not sent to the host is displayed.
(6)	Output switch button	Switches between [ON] and [OFF] of host output. Outputs when set to [ON], and does not output to the host when set to [OFF] and the output reservation (queue) remains in this device. Switches between [ON] and [OFF] every time the button is pressed.
(7)	Output reservation list	Output reservations (queues) remaining in this device are displayed.
(8)	Delete button, Select All button, Clear All button	Deletes output reservations being displayed in the output reservation list. Select an output reservation displayed in the output reservation list and press [Delete] to delete. To delete all output reservations, press [Select All] and then press [Delete]. When [Clear All] is pressed, the selection is released.
(9)	Primary/Secondary button	To switch the output destination to backup, select [Secondary]. [Secondary] is displayed only for the number of connected devices.
(10)	Back button	Closes the screen.

IMPORTANT

- Change the output destination only after fully understanding the operation status of the system. It may cause output of an image to the same host twice, or may disable output to the image diagnosis host.
-

HINT

- To keep output reservations (queues) intentionally in this device, set the output reservation to [OFF]. Delete unwanted queues among the accumulated queues, then switch the setting to [ON] so that only necessary queues can be sent to the host.
-

6.8.5 Printer status

The status of printers connected to this device can be confirmed.



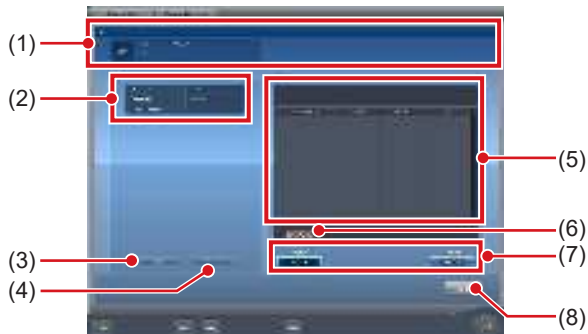
Number	Name	Functions
(1)	Printer	The printer name, printer type and error description are displayed.
(2)	Status	Printer IP address, port number, AE title, ping status, and device condition are displayed.
(3)	Ping button	Press to confirm the ping status.
(4)	Route button	Press to confirm Route information.
(5)	Number of reserved images	The number of images not sent to the printer is displayed.
(6)	Output switch button	Switches between [ON] and [OFF] of printer output. Outputs when set to [ON], and does not output to printer when set to [OFF] and the output reservation (queue) will remain in this device. Switches between [ON] and [OFF] every time the button is pressed.
(7)	Output reservation list	Output reservations (queues) remaining in this device are displayed.
(8)	Delete button, Select All button, Clear All button	Deletes output reservations being displayed in the output reservation list. Select a displayed output reservation and press [Delete] to delete. To delete all output reservations, press [Select All] and then press [Delete]. When [Clear All] is pressed, the selection is released.
(9)	Primary/Secondary button	To switch the output destination to backup, select [Secondary]. [Secondary] is displayed only for the number of connected devices.
(10)	Back button	Closes the screen.

HINT

- To keep output reservations (queues) intentionally in this device, set the output reservation to [OFF]. Delete unwanted queues among the accumulated queues, then switch the setting to [ON] so that only necessary queues can be printed.
-

6.8.6 Status of JM

The status of the JM connected to this device can be confirmed.



Number	Name	Functions
(1)	JM information	The JM name and error description are displayed.
(2)	Status	IP address, ping status of JM, and device status are displayed.
(3)	Ping button	Press to confirm the ping status.
(4)	Route button	Press to confirm Route information.
(5)	Job	In the case of bar code registration operation, displays the status of registered bar code (CR cassette). Displays registration date and time, REGIUS or REGIUS SIGMA/SIGMA2, bar code, and status.
(6)	Delete Reading button	Stops read status.
(7)	Standard/Backup button	Switches between standard JM and backup JM. When the standard JM is working normally, it is not possible to switch to the backup JM.
(8)	Back button	Closes the screen.

IMPORTANT

- Normally [Delete Reading] is not used. Use this when although an image is not being read, the message "This image is being prepared for reading, and cannot be viewed. View after reading is completed or cancelled." is displayed, and you cannot move to another screen.
-

6.8.7 Status of RIS-IN

The status of higher systems connected to this device can be confirmed.



Number	Name	Functions
(1)	RIS-IN information	The higher system name and error description are displayed.
(2)	Status	Higher system IP address, port number, AE title, ping status, and device condition are displayed.
(3)	Ping button	Press to confirm the ping status.
(4)	Primary/Secondary button	Switches between standard RIS-IN and backup RIS-IN when used normally. When the standard RIS-IN is working normally, it is not possible to switch to the backup RIS-IN.
(5)	Route button	Press to confirm Route information.
(6)	Back button	Closes the screen.

6.8.8 Status of RIS-OUT

The status of higher systems connected to this device can be confirmed.



Number	Name	Functions
(1)	RIS-OUT information	The higher system name and error description are displayed.
(2)	Status	Higher system IP address, port number, AE title, ping status, and device condition are displayed.
(3)	Ping button	Press to confirm the ping status.
(4)	Route button	Press to confirm Route information.
(5)	Untransmitted examinations	The number of untransmitted examinations is displayed.
(6)	Output switch button	Switches between [ON] and [OFF] of output to a higher system. Outputs when set to [ON], and does not output to a higher system when set to [OFF] and the output reservation (queue) remains in this device. Switches between [ON] and [OFF] every time the button is pressed.
(7)	Output reservation list	Output reservations (queues) remaining in this device are displayed.
(8)	Delete button, Select All button, Clear All button	Deletes output reservations being displayed in the output reservation list. Select a displayed output reservation and press [Delete] to delete. To delete all output reservations, press [Select All] and then press [Delete]. When [Clear All] is pressed, the selected state is released.
(9)	Primary/Secondary button	Switches between standard RIS-OUT and backup RIS-OUT when used normally. When the standard RIS-OUT is working normally, it is not possible to switch to the backup RIS-OUT.
(10)	Back button	Closes the screen.

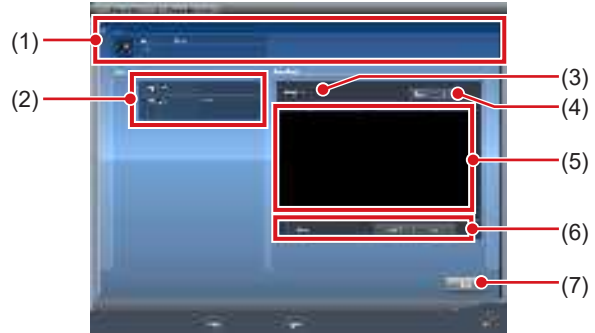
IMPORTANT

- Because examination status is not output to a higher system when the switch of output is [OFF], the higher system cannot manage examination status, and completed examinations may remain in a list. Do not set the switch of output to [OFF] except at the time of a higher system problem.

.....

6.8.9 EMR Image

The information (image) of electronic medical records connected to this device can be confirmed.



Number	Name	Functions
(1)	EMR Image	The electronic medical record name, type, and error description are displayed.
(2)	Status	Higher system output path, folder type, and device condition are displayed.
(3)	Image	The number of untransmitted images is displayed.
(4)	Output switch button	Switches between [ON] and [OFF] of output to an electronic medical record. Outputs when set to [ON], and does not output to an electronic medical record when set to [OFF] and the output reservation (queue) remains in this device. Switches between [ON] and [OFF] every time the button is pressed.
(5)	Output reservation list	Output reservations (queues) remaining in this device are displayed.
(6)	Delete button, Select All button, Clear All button	Deletes output reservations being displayed in the output reservation list. Select a displayed output reservation and press [Delete] to delete. To delete all output reservations, press [Select All] and then press [Delete]. When [Clear All] is pressed, the selected state is released.
(7)	Back button	Closes the screen.

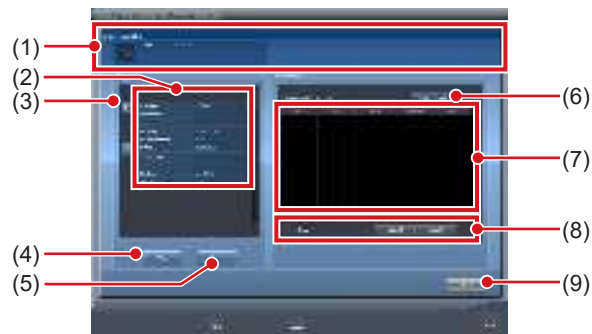
IMPORTANT

- Because exposed images information is not output to a higher system when the switch of output is [OFF], the higher system cannot display the exposed images. Do not set the switch of output to [OFF] except at the time of a higher system problem.

.....

6.8.10 Status of examination sharing (reception)

The status of examination sharing (reception) can be confirmed.



Number	Name	Functions
(1)	Study Sharing Request	Examination signal and error contents are displayed.
(2)	Terminal list	This device and terminals conducting examination sharing are displayed. IP address, host name and device condition are displayed.
(3)	Reception queue button	This is displayed for each terminal. If [ON], reception queue processing is conducted; if [OFF], it is not.
(4)	Ping button	Press to confirm the ping status.
(5)	Route button	Press to confirm Route information.
(6)	Queue switch button	Switches between [ON] and [OFF] of reception queue for all terminals. If [ON] is set, reception queue processing is conducted; if [OFF] is set, it is not. The device switches between [ON] and [OFF] every time the button is pressed.
(7)	Reception queue list	Reception queues for all terminals including this device are displayed.
(8)	Delete button, Select All button, Clear All button	Deletes queues displayed in the reception queue list. Select a displayed reception queue and press [Delete] to delete. To delete all reception queues, press [Select All] and then press [Delete]. Pressing [Clear All] cancels the selection.
(9)	Back button	Closes the screen.

6.8.11 Status of examination sharing (transmission)

The status of examination sharing (transmission) can be confirmed.



Number	Name	Functions
(1)	Study Sharing Request	Examination signal transmission and error contents are displayed.
(2)	Terminal list	This device and terminals conducting examination sharing are displayed. IP address, host name and device condition are displayed.
(3)	Transmission queue button	This is displayed for each terminal. If [ON], transmission queue processing is conducted; if [OFF], it is not.
(4)	Ping button	Press to confirm the ping status.
(5)	Route button	Press to confirm Route information.
(6)	Queue switch button	Switches between [ON] and [OFF] of transmission queue for all terminals. If [ON] is set, transmission queue processing is conducted; if [OFF] is set, it is not. The device switches between [ON] and [OFF] every time the button is pressed.
(7)	Transmission queue list	Transmission queues for all terminals including this device are displayed.
(8)	Delete button, Select All button, Clear All button	Deletes queues displayed in the transmission queue list. Select a displayed transmission queue and press [Delete] to delete. To delete all transmission queues, press [Select All] and then press [Delete]. Pressing [Clear All] cancels the selection.
(9)	Back button	Closes the screen.

Chapter 7

Various Functions

This chapter describes the functions of this device.

7.1 • Exposure with AeroDR Portable RF Unit

IMPORTANT

- When you restart this device, also restart the AeroDR Portable RF Unit.

7.1.1 Screen structure

• Detailed description of the application bar

The wireless LAN adapter can be reset using the radio wave status icon on the application bar.



Number	Name	Functions
(1)	Radio wave status	Resets the wireless LAN adapter. Press the radio wave status icon to display the dialog. Press [OK] to reset the wireless LAN adapter.






IMPORTANT

- Do not turn off the wireless LAN adapter while it is resetting.
- If you are using an external wireless LAN adapter, do not remove it while it is resetting.

● Detailed description of tool bar

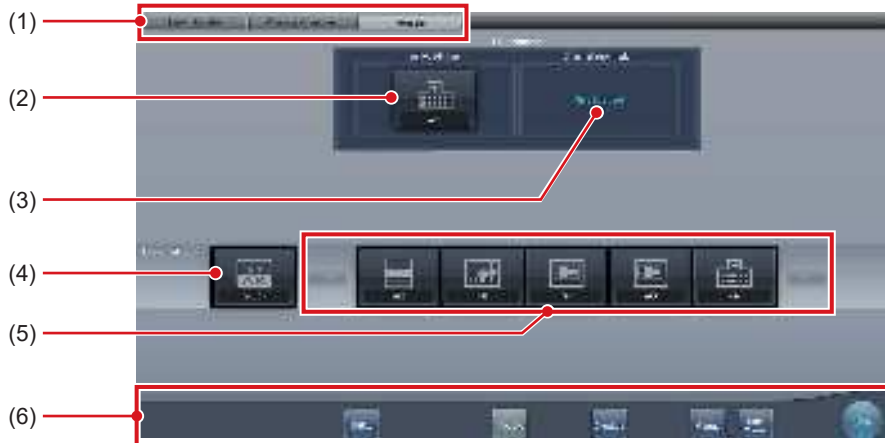
The display of following buttons in the tool bar area changes depending on the status of communication with the host.



Number	Name	Button display	State of the network and connected devices	Precautionary items
(1)	System button	 (Gray)	The network is disconnected or the output control of all RIS/HOST has been turned [OFF] manually. It is possible to continue exposures, but the data is not sent to RIS/HOST, it is stored in this device as data waiting to be sent.	<ul style="list-style-type: none"> After a study is completed, connect to the network, and send data waiting to be sent (it is sent automatically by connecting to the network).
		 (Blue)	The network is connected and there is no data waiting to be sent.	<ul style="list-style-type: none"> The network can be disconnected and the IP address can be switched. Sometimes a maximum 10 seconds elapses before the state of the button changes. When disconnecting the network and switching the IP address, stand by 10 seconds, and make sure that no white point is rotating around the button.
		 (Blue: rotating white point)	The network is connected and there is data waiting to be sent.	<ul style="list-style-type: none"> Do not disconnect the network or switch the IP address. When data waiting to be sent is in a device whose output is [ON], a white point is displayed rotating around the button, and is not displayed when the output is [OFF].
		 (Red)	A network connection error or data transmission error occurs in a connected device such as RIS/HOST in a state connected to the network, but without data waiting to be sent. Exposure can be continued but there will be a data transmission error.	<ul style="list-style-type: none"> The network can be disconnected and the IP address can be switched. Sometimes a maximum 10 seconds elapses before the state of the button changes. When disconnecting the network and switching the IP address, stand by 10 seconds, and make sure that no white point is rotating around the button. A device with a network connection error cannot send until the error is cleared. After the error is cleared, turn [OFF]/[ON] the output.
		 (Red: rotating white point)	A network connection error or data transmission error occurs in a connected device such as RIS/HOST in a state connected to the network, and with data waiting to be sent. Exposure can be continued but there will be a data transmission error.	<ul style="list-style-type: none"> Do not disconnect the network or switch the IP address. When data waiting to be sent is in a device whose output is [ON], a white point is displayed rotating around the button, and is not displayed when the output is [OFF]. A device with a network connection error cannot send until the error is cleared. After the error is cleared, turn [OFF]/[ON] the output.
(2)	Display/Hide button	Switches between display and hide of the tool bar. When the tool bar is hidden, the state of the network and connected devices is shown instead of the system button.		

● **System monitor screen (Portable)**

This is the screen for switching the AP information and channels built into the AeroDR Portable RF Unit.



Number	Name	Functions
(1)	Function switching tab	Switches between the [System Monitor], [Warranty Component], and [Portable] tabs.
(2)	Active AP Info	Displays the AP information selected through the AeroDR Portable RF Unit.
(3)	Channel Information	Displays the channel of the AP information selected through the AeroDR Portable RF Unit. If multiple pieces of channel information are displayed, DFS has been set and one of the channels is in use.
(4)	Auto CH button	Automatically selects the optimum channel.
(5)	Inactive AP List	AP information list registered in this device. Select an icon to switch to an AP information. If there are more than 7 AP information registered, press [Left] [Right] to scroll sideways.
(6)	System menu	Starts a utility or shuts down the system. This is displayed regardless of tabs being selected. [Utility]: Starts utilities. This button is not displayed if the user authorization of the logged in operator is "Technologist". [Update]: Refreshes information. [Checkup]: Displays the checkup setting screen. [Manual]: The "CS-7 Operation Manual" is displayed. This button is not displayed if the manual file is not deployed. [TeamViewer]: Displays the TeamViewer startup button. [Close]: Exits the system monitor screen, and the previous screen is displayed.

 **HINT**

- The [Portable] tab is displayed only when operating the AeroDR Portable RF Unit.

7.1.2 Exposure preparations

The exposure using the AeroDR Portable RF Unit is performed with the following procedure. The following procedure is for an example in which a wired connection is in operation between this device and a higher system.

IMPORTANT

- When this device is being used in the AeroDR Portable RF Unit, charge it when a notification that the battery level is low is displayed.
-

1 Register the DR Detector in this device that is to be used in AeroDR Portable RF Unit.

- For operation of the DR Detector, refer to "AeroDR Operation Manual".

HINT

- Confirm that the outputs of host, RIS-OUT and printer are [ON] on the system monitor screen ([System Monitor] tab).

In case of the host

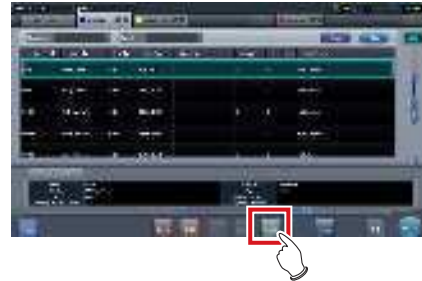


The device switches between [ON] and [OFF] every time [Output] is pressed.

- When using a RIS-OUT or printer, confirm the output is set to [ON] using the same procedure.
-

2 Import the examination information to be used for the exposure using the portable X-ray device.

- Confirm that an Ethernet cable is connected to this device.
- Press [Refresh] on the list screen on this device.



- The latest examination information is imported from the higher system by pressing the [Refresh] button.

HINT

- To input examination information manually, change the screen to the patient registration screen.
-

3 Remove the Ethernet cable that is connected to the DR Detector registration hub from the portable X-ray device hub.

HINT

- When the AeroDR Portable RF Unit is connected to this device through a wireless connection, remove the Ethernet cable from this device.
-

4 Unplug the power cable from the outlet when charging this device.

5 Complete the exposure preparations.

- Confirm that the AeroDR Portable RF Unit is shut down to complete the exposure and movement preparations.

HINT

- It is all right to keep power of this device and the DR Detector on.
-

7.1.3 Exposure

Prepare for exposure using the AeroDR Portable RF Unit according to the following procedure.

IMPORTANT

- Always check the patient information and exposure conditions before exposure.
 - Do not disconnect the Ethernet cable while the data is being transmitted.
 - The status of communication with the host is displayed on the [System] button. For detail, refer to "7.1.1 Screen structure".
-

1 When you arrive at the exposure location, turn on the power of the AeroDR Portable RF Unit.

- Turn on the power switch of the AeroDR Portable RF Unit, and check that the power LED (green) is on.
- For startup operation of the AeroDR Portable RF Unit, refer to "AeroDR Portable RF Unit Operation Manual".
- Confirm that the icon of the DR Detector to be used in exposure is displayed on the application bar.



IMPORTANT

- When the AP information channel is set to [Auto CH], press [Auto CH] on the system monitor screen (portable) and check the channel.
 - Wireless connection may take several minutes after the AeroDR Portable RF Unit is turned on.
-

2 Select the examination.



3 Press [Perform].



- The exposure screen is displayed.

IMPORTANT

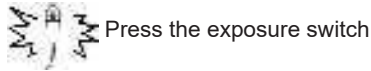
- When using the AeroDR 3 1417HD, click the modality icon before making an exposure and select the AeroDR 3 1417HD. Selecting the AeroDR 3 1417HD icon allows the exposure time to be selected.
-

HINT

- When importing examination information from the higher system and when exposure body part information is not imported, select the exposure body part. When pressing [Perform] on the body part selection screen, the exposure screen is displayed.
-

4 Perform exposure.

- Configure the portable X-ray device settings and check the exposure setting before making an exposure.



- The exposed image is displayed in the image display area.

IMPORTANT

- When performing an exposure, stay away from the patient as far as possible before pressing the exposure switch.
 - Do not let the DR Detector vibrate or receive shock until the exposed image is displayed.
 - If an image is displayed when an exposure is not performed, this may be a detection error due to noises, etc. Perform rejected image (deletion of images) and repeat exposure.
 - If you have performed an exposure when "Ready" was not displayed, repeat an exposure after approximately one minute.
-

5 Adjust the image.

- After exposure, adjust the image as required.



6 Press [F4].



- The exposure is completed, and the display returns to the initial screen.

IMPORTANT

- When consolidating image adjustment, press [F4] to pause the examination and return to the initial screen.
-

7 When exposure is finished, turn the AeroDR Portable RF Unit off.

- Turn off the power switch of the AeroDR Portable RF Unit, and check that the power LED (green/orange) is off.
- For shutdown operation of the AeroDR Portable RF Unit, refer to the "AeroDR Portable RF Unit Operation Manual".

HINT

- Image adjustment can be done on the exposure screen. However, if a more advanced image adjustment is required, perform image adjustment on the viewer screen. For details on the viewer screen, refer to "6.7 Functions of the viewer screen".
 - When moving the exposure location, turn off the AeroDR Portable RF Unit. After moving the exposure location, perform the procedure again from step 1.
 - It is all right to keep power of this device and the DR Detector on.
-

7.1.4 Change of the AP information

When the AP information needs to be changed because the exposure location has been moved, perform the following procedure.

The following procedure shows an example of a channel change from institution (1) to institution (2).

* The numbers ((1) and (2)) on the screen indicate AP information and AP information icons for institution (1) and (2). These are shown for ease of explanation, and not displayed on the actual screen.

IMPORTANT

- Make sure to check the following before changing the channel of the AP information.
 - The AeroDR Portable RF Unit is turned on.
 - The AeroDR Portable RF Unit has been turned on for 1 minute or more.
-

1 Press [System] to display the system monitor screen.

- [System] is displayed in the toolbar display area of the patient registration screen, list screen, body part selection screen, and exposure screen.



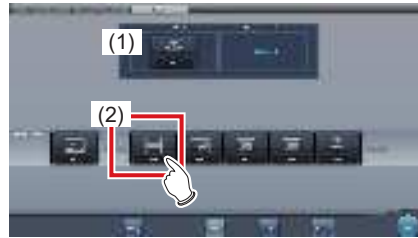
- The system monitor screen is displayed.

2 Press the [Portable] tab.



- The portable screen is displayed.

3 Select the icon of the AP information to be changed from the [Inactive AP List] icons.



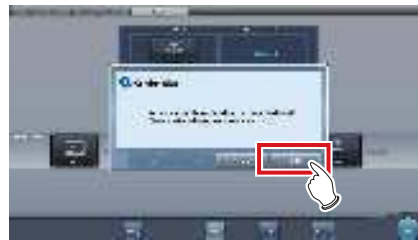
- A confirmation screen is displayed.

HINT

- When automatic channel selection is set, pressing [Auto CH] sets the optimum channel automatically.
-

4 Press [OK].

- Press [Cancel] to return to the previous screen.



- The AP information change process begins.
- The change process takes several minutes.





- When the change process is completed, a confirmation screen is displayed. Press [OK].



- Confirm that the icons and channels of the [Active AP Info] and [Channel Information] have changed.
- If multiple pieces of channel information are displayed, DFS has been set and one of the channels is in use.

5 Press [Close].



- The display returns to the initial screen.

IMPORTANT

- Do not turn off the AeroDR Portable RF Unit during the channel change process.

.....

HINT

- Set the icon type and name of the information icon during installation.

.....

7.1.5 Operations after exposure

When the exposure is completed, move the portable X-ray device and send the image data, etc. saved in this device to the higher system. The following procedure is for an example in which a wired connection is in operation between this device and a higher system.

1 Connect the Ethernet cable that is connected to the DR Detector registration hub, to the portable X-ray device hub.

- On connection, the icon of [System] will change.

IMPORTANT

- Do not disconnect the Ethernet cable while the data is being transmitted.
 - The status of communication with the host is displayed on the [System] button. For detail, refer to "7.1.1 Screen structure".
-

HINT

- When the AeroDR Portable RF Unit is connected to this device through a wireless connection, connect the Ethernet cable to this device.
-

2 Plug the power cable into the outlet to charge this device.

HINT

- Also charge the DR Detector, AeroDR Portable RF Unit, and portable X-ray device as required.
-

7.1.6 Change of the IP address of the connected institution network

The procedure to change the IP address of the institution network to which you are connecting is as follows. The procedure for switching from [Area1] to [Area2] is described below as an example.

1 Press [] on the list screen.



- The area selection button is displayed.

2 Press the area selection button.



- The area selection screen is displayed.

3 Press the button corresponding to the desired area name.

- Press [Cancel] to return to the previous screen.



- The area is switched, and the display returns to the list screen.

IMPORTANT

- When there is data which has not yet been transmitted, a confirmation screen appears.



→ Press [OK] to execute the change in IP address.

→ Press [Cancel] to close the area selection screen and return to the list screen. After transmitting the data, please change the IP address.

- When selecting areas using an external wired LAN adapter, make sure the external wired LAN adapter is attached before pressing the area selection button.
-

7.1.7 Other functions of AeroDR Portable RF Unit

Depending on the settings, RIS details can be checked by starting Internet Explorer. The procedure is explained using the list screen as an example.

- 1 Press [Web/Remote Desktop Linkup] on the patient registration screen or the list screen.



- Internet Explorer starts.



HINT

- URLs that can be displayed in Internet Explorer are only those beginning with http or https.

7.2 • Exposure with AeroDR Portable RF Unit2

IMPORTANT

- When you restart this device, also restart the access point.

7.2.1 Screen structure

● Detailed description of the application bar

The wireless LAN adapter can be reset using the radio wave status icon on the application bar.



Number	Name	Functions
(1)	Radio wave status	Resets the wireless LAN adapter. Press the radio wave status icon to display the dialog. Press [OK] to reset the wireless LAN adapter.






IMPORTANT

- Do not turn off the wireless LAN adapter while it is resetting.
- If you are using an external wireless LAN adapter, do not remove it while it is resetting.

● Detailed description of tool bar

The display of following buttons in the tool bar area changes depending on the status of communication with the host.



Number	Name	Button display	State of the network and connected devices	Precautionary items
(1)	System button	 (Gray)	The network is disconnected or the output control of all RIS/HOST has been turned [OFF] manually. It is possible to continue exposures, but the data is not sent to RIS/HOST, it is stored in this device as data waiting to be sent.	<ul style="list-style-type: none"> After a study is completed, connect to the network, and send data waiting to be sent (it is sent automatically by connecting to the network).
		 (Blue)	The network is connected and there is no data waiting to be sent.	<ul style="list-style-type: none"> The network can be disconnected and the IP address can be switched. Sometimes a maximum 10 seconds elapses before the state of the button changes. When disconnecting the network and switching the IP address, stand by 10 seconds, and make sure that no white point is rotating around the button.
		 (Blue: rotating white point)	The network is connected and there is data waiting to be sent.	<ul style="list-style-type: none"> Do not disconnect the network or switch the IP address. When data waiting to be sent is in a device whose output is [ON], a white point is displayed rotating around the button, and is not displayed when the output is [OFF].
		 (Red)	A network connection error or data transmission error occurs in a connected device such as RIS/HOST in a state connected to the network, but without data waiting to be sent. Exposure can be continued but there will be a data transmission error.	<ul style="list-style-type: none"> The network can be disconnected and the IP address can be switched. Sometimes a maximum 10 seconds elapses before the state of the button changes. When disconnecting the network and switching the IP address, stand by 10 seconds, and make sure that no white point is rotating around the button. A device with a network connection error cannot send until the error is cleared. After the error is cleared, turn [OFF]/[ON] the output.
		 (Red: rotating white point)	A network connection error or data transmission error occurs in a connected device such as RIS/HOST in a state connected to the network, and with data waiting to be sent. Exposure can be continued but there will be a data transmission error.	<ul style="list-style-type: none"> Do not disconnect the network or switch the IP address. When data waiting to be sent is in a device whose output is [ON], a white point is displayed rotating around the button, and is not displayed when the output is [OFF]. A device with a network connection error cannot send until the error is cleared. After the error is cleared, turn [OFF]/[ON] the output.
(2)	Display/Hide button	Switches between display and hide of the tool bar. When the tool bar is hidden, the state of the network and connected devices is shown instead of the system button.		

7.2.2 Exposure preparations

The exposure preparation of the AeroDR Portable RF Unit2 is performed according to the following procedure.

- 1 Prepare each device to perform exposure.**
 - For information on how to prepare each device to perform exposure, refer to "AeroDR Portable RF Unit2 Operation Manual".

- 2 Turn each device on.**

IMPORTANT

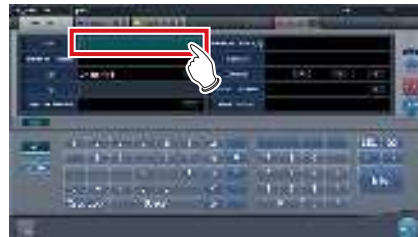
- After the access point has started, it may take some time to establish a wireless connection.
 - To register the DR Detector, connect this device to the AeroDR Portable RF Unit2 in wired mode.
-

- 3 Turn the mobile X-ray device on.**

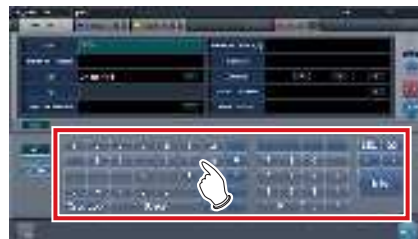
7.2.3 New registration of patient information

New registration of patient information is performed with the patient registration screen. Select the [PatientReg.] tab on the initial screen to display the patient registration screen.

- 1 Press the column for the patient ID.**



- 2 Press the input panel, and input the patient ID.**



- 3 Press [Enter].**



- 4 Input patient name, sex and date of birth.**

- After each inputting item, press [Enter].
- If you press [Enter], the cursor will move to the next item.

HINT

- If the length of an entry exceeds the dimensions of the display pane of the item or if the entry spreads across multiple lines, the long-sentence comment pop-up button [...] is displayed.
-

5 Press [Perform].



- Registration is performed in the patient database of this device, and the exposure screen or the body part selection screen is displayed.

HINT

- Because input of "Sex", "Pregnancy" are displayed with selection buttons instead of the input panel, press the selection buttons.
- When entering "Institution Residence", "Hospital Department" and "Requesting Physician", select the names from the pull-down menu or selection button, or input them directly with the keyboard.



- With the input item as a search key, search the patient database for this device, or a higher system.
- When there is a patient ID that matches, name, sex and age are displayed.
- When there is no patient ID that matches, the cursor moves to the following input field.

.....

7.2.4 Manual body part selection

When making advanced settings of exposure body part and exposure method for each exposure, select body part manually with the following procedure.

1 Select the tab.



- Linking to the selected tab, the exposure body part available with the tab are displayed automatically.

2 Select the exposure body part.



- The Exam. Tags corresponding to the selected exposure body part will be displayed.

3 Select an Exam. Tag.





- The selected Exam. Tag is added to the Exam. Tags display area. By repeating from step 1, Exam. Tags can be added.

4 When finished selecting/adding the Exam. Tags, press [Perform].



- The exposure screen is displayed.

HINT

- When only reserving an examination, after adding the Exam. Tag, press [Schedule]. After reservation is performed, the initial screen is displayed.
- Returning to the initial screen by pressing [Schedule] does not set study date and time of image supplemental information automatically.
- It is also possible to register multiple exposure methods in 1 Exam. Tag. Register these methods when installing.
- If you have set to register the Exam. Tags automatically, the body part selection screen is not displayed. The display transitions to the exposure screen.

7.2.5 Exposure

Prepare for exposure with the AeroDR Portable RF Unit2 according to the following procedure.

IMPORTANT

- Always check the patient information and exposure conditions before exposure.

1 Confirm that each device is ready for exposure.

IMPORTANT

- Check the wireless connection.
- If a wired connection is established between this device and the AeroDR Portable RF Unit2, disconnect the Ethernet cable that connects this device and the hub.

2 Perform exposure.

- Configure the mobile X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch

- The exposed image is displayed in the image display area.

IMPORTANT

- When performing an exposure, stay away from the patient as far as possible before pressing the exposure switch.
- Do not let the DR Detector vibrate or receive shock until the exposed image is displayed.
- If an image is displayed when an exposure is not performed, this may be a detection error due to noises, etc. Perform rejected image (deletion of images) and repeat exposure.
- If you have performed an exposure when "Ready" was not displayed, repeat an exposure after approximately one minute.
- When using the AeroDR 3 1417HD, click the modality icon before making an exposure and select the AeroDR 3 1417HD. Selecting the AeroDR 3 1417HD icon allows the exposure time to be selected.

3 Adjust the image.

- After exposure, adjust the image as required.



4 Press [F4].



- The exposure is completed, and the display returns to the initial screen.

IMPORTANT

- When consolidating image adjustment, press [F4] to pause the examination and return to the initial screen.
-

7.2.6 Operations after exposure

Operations after an exposure has been completed is performed according to the following procedure. After returning to the institution, output image data saved on this device to the host system. The following procedure is for an example in which a wired connection is in operation between this device and a higher system.

1 Turn all the devices off.

- For information on how to shut down each device, refer to "AeroDR Portable RF Unit2 Operation Manual".

2 Place each device in the carrying case.

- For information on how to store each device, refer to "AeroDR Portable RF Unit2 Operation Manual".

3 Return to the institution.

4 Connect this device to the institution network using an Ethernet cable.

- On connection, the icon of [System] will change.

IMPORTANT

- Do not disconnect the Ethernet cable while the data is being transmitted.
 - The status of communication with the host is displayed on the [System] button. For detail, refer to "7.2.1 Screen structure".
-

5 Charge this device and the DR Detector.

- For information about the operations of the DR Detector, refer to "AeroDR Operation Manual".

7.2.7 Change of the IP address of the connected institution network

Follow the steps below to obtain information from RIS in advance, or to switch the IP address when connecting to the institution network and outputting data to RIS after you return to the institution. The procedure for switching from [Area1] to [Area2] is described below as an example.

1 Press [F1] on the list screen.



- The area selection button is displayed.

2 Press the area selection button.



- The area selection screen is displayed.

3 Press the button corresponding to the desired area name.

- Press [Cancel] to return to the previous screen.



- The area is switched, and the display returns to the list screen.

IMPORTANT

- When there is data which has not yet been transmitted, a confirmation screen appears.



→Press [OK] to execute the change in IP address.

→Press [Cancel] to close the area selection screen and return to the list screen. After transmitting the data, please change the IP address.

- When selecting areas using an external wired LAN adapter, make sure the external wired LAN adapter is attached before pressing the area selection button.
-

7.2.8 Other functions of AeroDR Portable RF Unit2

After returning to the institution, you can check details of RIS by starting Internet Explorer depending on settings. The procedure is explained using the list screen as an example.

- 1 Press [Web/Remote Desktop Linkup] on the patient registration screen or the list screen.



- Internet Explorer starts.

 **HINT**

- URLs that can be displayed in Internet Explorer are only those beginning with http or https.

.....

7.3 • Exposure with AeroDR Portable UF Unit

IMPORTANT

- When you restart this device, also restart the AeroDR Portable UF Unit.
- With Aero Sync mode exposure, X-rays with default intensity that reached the DR Detector are detected, and image acquisition is started. Select any one of the following X-ray detection levels during exposure according to the model or conditions of the DR Detector to be used.
 - Small
Used for general imaging such as that of the chest and limb bones.
 - Med
This is effective for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Be careful not to subject the DR Detector to strong shocks during exposure.
 - Large
This is more effective than the medium detection level for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Request that the patient stands still for as long as possible during exposure.
 - Extra Large
Exposures can be performed at a level higher than [Large]. This is effective for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Be careful not to subject the DR Detector to strong shocks during exposure.
- [Extra Large] is displayed when using either the AeroDR 2 1417HQ or AeroDR 2 1417S.
- The control panel display [AeroSync] and items that can be selected differ depending on the type of DR Detector.

AeroDR 1417HQ/ AeroDR 1717HQ/ AeroDR 1012HQ:	AeroDR 2 1417HQ, AeroDR 2 1417S:
--	-------------------------------------

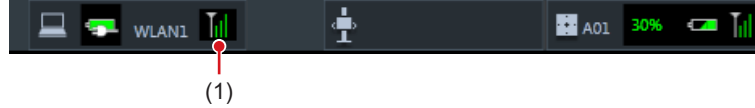


- If there are any radioactive substances remaining in the patient's body after nuclear medicine testing or some other reason, the AeroDR 2 1417HQ and the AeroDR 2 1417S may recognize that X-rays were emitted and start image transfer. When the image is transferred, change the X-ray sensitive setting of the image processing controller to "Large" before performing exposure. If you change the X-ray sensitivity to "Large", make sure that all of the following conditions are met before performing exposure. If you perform exposure under other conditions, you may not be able to get an image.
 - On the DR Detector, set up an area (2 cm x 2 cm or larger) on which the X-rays are emitted directly.
 - Emit the X-rays onto the entire DR Detector.
 - Emit the X-rays by using a tube current of 140 mA or higher or a tube voltage of 90 kV or higher.
- Once the X-ray detection level is selected, it is kept until an examination is completed if it is not changed. If you want to return it to the initial detection level for each exposure, contact Konica Minolta technical representatives.

7.3.1 Screen structure

● Detailed description of the application bar

The wireless LAN adapter can be reset using the radio wave status icon on the application bar.



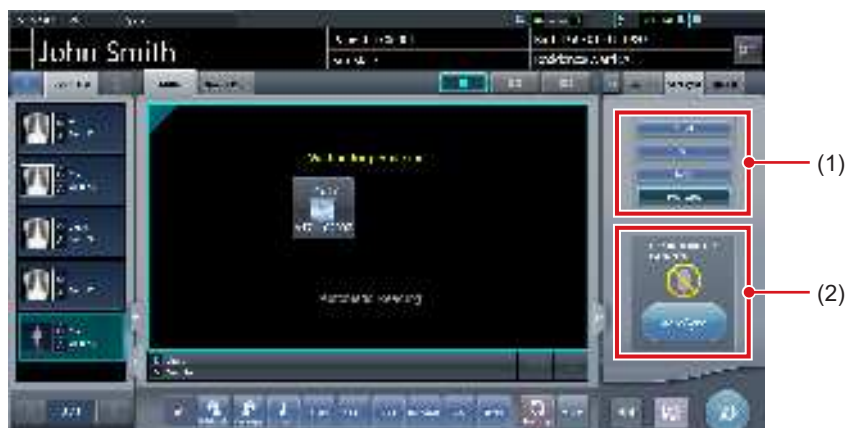
Number	Name	Functions
(1)	Radio wave status	Resets the wireless LAN adapter. Press the radio wave status icon to display the dialog. Press [OK] to reset the wireless LAN adapter.





IMPORTANT

- Do not turn off the wireless LAN adapter while it is resetting.
- If you are using an external wireless LAN adapter, do not remove it while it is resetting.

● **Exposure screen**

This is the control panel for performing exposure using the AeroDR Portable UF Unit.




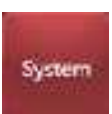



Number	Name	Functions
(1)	X-ray detection level switching area	Select the X-ray detection level during exposure.
(2)	Message/Button area	<p>Messages and buttons are displayed in this area depending on the operation status.</p> <p>When the [AeroSync Button] is set to ON on the system monitor screen</p> <p>Exposure permission waiting screen  The device is waiting for permission for exposure. The screen changes to the ready-to-expose screen if you press [AeroSync].</p> <p>Ready-to-expose screen  The screen is locked as it is ready to be captured. To cancel exposure, press [Cancel], then the screen returns to the exposure permission waiting screen.</p> <p>When the [AeroSync Button] is set to OFF on the system monitor screen</p> <p>Ready-to-expose screen  The screen is locked as it is ready to be captured. To suspend exposure, press [Pause], then the screen returns to the exposure permission waiting screen.</p> <p>Exposure resumption waiting screen  The device is waiting for exposure to be resumed. The screen changes to the ready-to-expose screen if you press [Restart].</p>

● Detailed description of tool bar

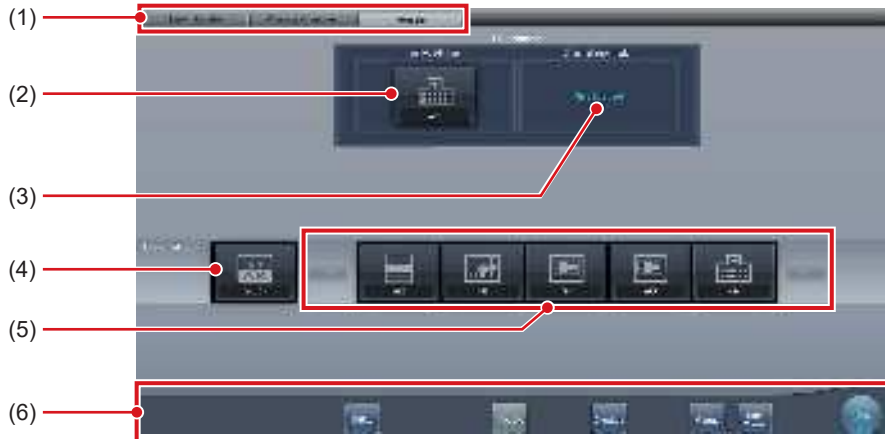
The display of following buttons in the tool bar area changes depending on the status of communication with the host.



Number	Name	Button display	State of the network and connected devices	Precautionary items
(1)	System button	 (Gray)	The network is disconnected or the output control of all RIS/HOST has been turned [OFF] manually. It is possible to continue exposures, but the data is not sent to RIS/HOST, it is stored in this device as data waiting to be sent.	<ul style="list-style-type: none"> After a study is completed, connect to the network, and send data waiting to be sent (it is sent automatically by connecting to the network).
		 (Blue)	The network is connected and there is no data waiting to be sent.	<ul style="list-style-type: none"> The network can be disconnected and the IP address can be switched. Sometimes a maximum 10 seconds elapses before the state of the button changes. When disconnecting the network and switching the IP address, stand by 10 seconds, and make sure that no white point is rotating around the button.
		 (Blue: rotating white point)	The network is connected and there is data waiting to be sent.	<ul style="list-style-type: none"> Do not disconnect the network or switch the IP address. When data waiting to be sent is in a device whose output is [ON], a white point is displayed rotating around the button, and is not displayed when the output is [OFF].
		 (Red)	A network connection error or data transmission error occurs in a connected device such as RIS/HOST in a state connected to the network, but without data waiting to be sent. Exposure can be continued but there will be a data transmission error.	<ul style="list-style-type: none"> The network can be disconnected and the IP address can be switched. Sometimes a maximum 10 seconds elapses before the state of the button changes. When disconnecting the network and switching the IP address, stand by 10 seconds, and make sure that no white point is rotating around the button. A device with a network connection error cannot send until the error is cleared. After the error is cleared, turn [OFF]/[ON] the output.
		 (Red: rotating white point)	A network connection error or data transmission error occurs in a connected device such as RIS/HOST in a state connected to the network, and with data waiting to be sent. Exposure can be continued but there will be a data transmission error.	<ul style="list-style-type: none"> Do not disconnect the network or switch the IP address. When data waiting to be sent is in a device whose output is [ON], a white point is displayed rotating around the button, and is not displayed when the output is [OFF]. A device with a network connection error cannot send until the error is cleared. After the error is cleared, turn [OFF]/[ON] the output.
(2)	Display/Hide button	Switches between display and hide of the tool bar. When the tool bar is hidden, the state of the network and connected devices is shown instead of the system button.		

● **System monitor screen (Portable)**

This is the screen for switching the AP information and channels built into the AeroDR Portable UF Unit.



Number	Name	Functions
(1)	Function switching tab	Switches between the [System Monitor], [Warranty Component], and [Portable] tabs.
(2)	Active AP Info	Displays the AP information selected through the AeroDR Portable UF Unit.
(3)	Channel Information	Displays the channel of the AP information selected through the AeroDR Portable UF Unit. If multiple pieces of channel information are displayed, DFS has been set and one of the channels is in use.
(4)	Auto CH button	Automatically selects the optimum channel.
(5)	Inactive AP List	AP information list registered in this device. Select an icon to switch to an AP information. If there are more than 7 AP information registered, press [Left] [Right] to scroll sideways.
(6)	System menu	Starts a utility or shuts down the system. This is displayed regardless of tabs being selected. [Utility]: Starts utilities. This button is not displayed if the user authorization of the logged in operator is "Technologist". [Update]: Refreshes information. [Checkup]: Displays the checkup setting screen. [Manual]: The "CS-7 Operation Manual" is displayed. This button is not displayed if the manual file is not deployed. [TeamViewer]: Displays the TeamViewer startup button. [Close]: Exits the system monitor screen, and the previous screen is displayed.

HINT

- The [Portable] tab is displayed when operating the AeroDR Portable UF Unit.

.....

7.3.2 Exposure preparations

Make the following preparations when exposing using the AeroDR Portable UF Unit. The following procedure is for an example in which a wired connection is in operation between this device and a higher system.

IMPORTANT

- When this device is being used in the AeroDR Portable UF Unit, charge it when a notification that the battery level is low is displayed.
 - Check the settings for the AeroSync button, and initial detection level on the system monitor screen.
-

1 Register the DR Detector in this device that is to be used in AeroDR Portable UF Unit.

- For operation of the DR Detector, refer to "AeroDR Operation Manual".

IMPORTANT

- When an DR Detector which does not support Aero Sync mode is used, an error message appears and registration will not be permitted.
-

HINT

- Confirm that the outputs of host, RIS-OUT and printer are [ON] on the system monitor screen ([System Monitor] tab).

In case of the host

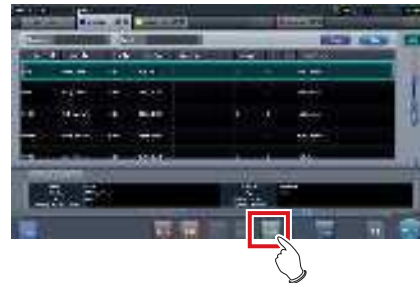


The device switches between [ON] and [OFF] every time [Output] is pressed.

- When using a RIS-OUT or printer, confirm the output is set to [ON] using the same procedure.
-

2 Import the examination information to be used for the exposure using the portable X-ray device.

- Confirm that an Ethernet cable is connected to this device.
- Press [Refresh] on the list screen on this device.



- The latest examination information is imported from the higher system by pressing the [Refresh] button.

HINT

- To input examination information manually, change the screen to the patient registration screen.
-

3 Remove the Ethernet cable connected to the DR Detector registration side hub from this device.

HINT

- When this device is connected to the AeroDR Portable UF Unit through wired connection, remove the Ethernet cable connected to the DR Detector registration side hub from the portable X-ray device side hub.
-

4 Unplug the power cable from the outlet when charging this device.

5 Complete the exposure preparations.

- Confirm that the AeroDR Portable UF Unit is shut down to complete the exposure and movement preparations.

HINT

- It is all right to keep power of this device and the DR Detector on.
-

7.3.3 Exposure

Prepare for exposure using the AeroDR Portable UF Unit according to the following procedure. The procedure varies depending on the setting of the [AeroSync Button] on the system monitor screen.

IMPORTANT

- Always check the patient information and exposure conditions before exposure.
 - Do not disconnect the Ethernet cable while the data is being transmitted.
 - The status of communication with the host is displayed on the [System] button. For detail, refer to "7.3.1 Screen structure".
 - Available X-ray detection level varies depending on the DR Detector model.
-

HINT

- This example shows a case in which the AeroDR 2 1417HQ or AeroDR 2 1417S is used.
-

● When the [AeroSync Button] is OFF

1 When you arrive at the exposure location, turn on the power of the AeroDR Portable UF Unit.

- Turn on the power switch of the AeroDR Portable UF Unit and confirm that the (green) power LED is ON.
- For startup operation of the AeroDR Portable UF Unit, refer to "AeroDR Portable UF Unit Operation Manual".
- Confirm that the icon of the DR Detector to be used in exposure is displayed on the application bar.



IMPORTANT

- When the AP information channel is set to [Auto CH], press [Auto CH] on the system monitor screen (portable) and check the channel.
 - It may take several minutes for wireless connection to start after turning on the AeroDR Portable UF Unit.
-

2 Select the examination.



3 Press [Perform].



- The exposure screen is displayed.
- A message "Ready" is displayed in the message/button area, then the screen is locked.
- To change the X-ray detection level, press [Pause] to enable modification. After changing the detection level, press [Restart], then the message "Ready" is displayed.

IMPORTANT

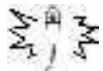
- A malfunction may be caused by a shock to the DR Detector. In such cases, set [AeroSync Button] to ON on the system monitor screen.
 - To prevent incorrect operations, always check that "Ready" is displayed.
 - Conditions for changing the detection level vary depending on the X-ray device being used. If a survey has been carried out when the system was installed, follow the survey results.
 - When using the AeroDR 3 1417HD, click the modality icon before making an exposure and select the AeroDR 3 1417HD.
-

HINT

- When importing examination information from the higher system and when exposure body part information is not imported, select the exposure body part. When pressing [Perform] on the body part selection screen, the exposure screen is displayed.
- When you move the focus in the image display area on the exposure resumption waiting screen to capture an image of another body part, not the ready-to-expose screen but the exposure resumption waiting screen is displayed.
- Refer to "7.3 Exposure with AeroDR Portable UF Unit" for information on the X-ray detection levels that can be set for exposures.

4 Perform exposure.

- Configure the portable X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch

- As soon as the exposed image is transferred, the image is displayed in the image display area.

IMPORTANT

- When performing an exposure, stay away from the patient as far as possible before pressing the exposure switch.
- When the "Ready" is displayed, immediately perform exposure.
- Do not let the DR Detector vibrate or receive shock until the exposed image is displayed.
- If image acquisition started without performing exposure, this may result in incorrect detection due to noise, etc. Perform reject (image deletion) and repeat exposure.
- If image acquisition does not start after exposure, the voltage may not be enough. Check the exposure conditions and repeat exposure.
- When exposure is done while "Ready" is not displayed, have an interval of 1 minute or more before repeating exposure.

5 Adjust the image.

- After exposure, adjust the image as required.



6 Press [Image Proc].



- The exposure is completed, and the display returns to the initial screen.

IMPORTANT

- When consolidating image adjustment, press [Image Proc] to pause the examination and return to the initial screen.

7 When exposure is finished, turn the AeroDR Portable UF Unit off.

- Turn off the power switch of the AeroDR Portable UF Unit and confirm that the power LED (green/orange) is OFF.
- For shutdown operation of the AeroDR Portable UF Unit, refer to the "AeroDR Portable UF Unit Operation Manual".

HINT

- Image adjustment can be done on the portable device's [Image Proc] tab. However, if a more advanced image adjustment is required, perform image adjustment on the [Image Proc] tab or the viewer screen. For details on the viewer screen, refer to "6.7 Functions of the viewer screen".
- When moving the exposure location, turn off the AeroDR Portable UF Unit. After moving the exposure location, perform the procedure again from step 1.
- It is all right to keep power of this device and the DR Detector on.

● When the [AeroSync Button] is ON

1 When you arrive at the exposure location, turn on the power of the AeroDR Portable UF Unit.

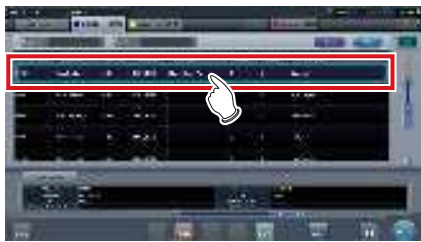
- Turn on the power switch of the AeroDR Portable UF Unit and confirm that the (green) power LED is ON.
- For startup operation of the AeroDR Portable UF Unit, refer to "AeroDR Portable UF Unit Operation Manual".
- Confirm that the icon of the DR Detector to be used in exposure is displayed on the application bar.



IMPORTANT

- When the AP information channel is set to [Auto CH], press [Auto CH] on the system monitor screen (portable) and check the channel.
 - It may take several minutes for wireless connection to start after turning on the AeroDR Portable UF Unit.
-

2 Select the examination.



3 Press [Perform].



- The exposure screen is displayed.
- A message "Waiting for permission" is displayed in the image display area.

HINT

- If the information about the body part is not imported while importing examination information from the higher system, select the body part to be imaged. Then press [Perform] on the body part selection screen to display the exposure screen.
 - When the AeroDR power management level is set to [3], [4] or [5], "Waiting to start shooting" is displayed instead of "Waiting for permission".
-

4 After positioning the patient, check the X-ray detection level, then press [AeroSync].

- If the control panel does not switch to [AeroSync], press the [AeroSync] tab.
- Change the X-ray detection level as needed.
- After checking the X-ray detection level, press [AeroSync].



- A message "Ready" is displayed in the message/button area. The screen is locked.
- The screen is locked. To return to the previous screen to change the position of the patient, etc., press [Cancel].

IMPORTANT

- To prevent incorrect operations, always press [AeroSync] and check that "Ready" is displayed.
- Conditions for changing the detection level vary depending on the X-ray device being used. If a survey has been carried out when the system was installed, follow the survey results.
- When the AeroDR power management level is set to [3], [4] or [5], it may take some time until the exposure becomes ready after you have pressed [Aero Sync]. In this case, [Standby] button instead of [Cancel] button is displayed in the message/button area.

HINT

- Refer to "7.3 Exposure with AeroDR Portable UF Unit" for information on the X-ray detection levels that can be set for exposures.

5 Perform exposure.

- Configure the portable X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch

- As soon as the exposed image is transferred, the image is displayed in the image display area.

IMPORTANT

- When performing an exposure, stay away from the patient as far as possible before pressing the exposure switch.
- When the "Ready" is displayed, immediately perform exposure.
- Do not let the DR Detector vibrate or receive shock until the exposed image is displayed.
- If image acquisition started without performing exposure, this may result in incorrect detection due to noise, etc. Perform reject (image deletion) and repeat exposure.
- If image acquisition does not start after exposure, the voltage may not be enough. Check the exposure conditions and repeat exposure.
- When exposure is done while "Ready" is not displayed, have an interval of 1 minute or more before repeating exposure.

6 Adjust the image.

- After exposure, adjust the image as required.



7 Press [P].



- The exposure is completed, and the display returns to the initial screen.

IMPORTANT

- When consolidating image adjustment, press [P] to pause the examination and return to the initial screen.

8 When exposure is finished, turn the AeroDR Portable UF Unit off.

- Turn off the power switch of the AeroDR Portable UF Unit and confirm that the power LED (green/orange) is OFF.
- For shutdown operation of the AeroDR Portable UF Unit, refer to the "AeroDR Portable UF Unit Operation Manual".

HINT

- Image adjustment can be done on the portable device's [Image Proc] tab. However, if a more advanced image adjustment is required, perform image adjustment on the [Image Proc] tab or the viewer screen. For details on the viewer screen, refer to "6.7 Functions of the viewer screen".
- When moving the exposure location, turn off the AeroDR Portable UF Unit. After moving the exposure location, perform the procedure again from step 1.
- It is all right to keep power of this device and the DR Detector on.

7.3.4 Change of the AP information

When the AP information needs to be changed because the exposure location has been moved, perform the following procedure.

The following procedure shows an example of a channel change from institution (1) to institution (2).

* The numbers ((1) and (2)) on the screen indicate AP information and AP information icons for institution (1) and (2). These are shown for ease of explanation, and not displayed on the actual screen.

IMPORTANT

- Make sure to check the following before changing the channel of the AP information.
 - The AeroDR Portable UF Unit is turned on.
 - The AeroDR Portable UF Unit has been turned on for 1 minute or more.
-

1 Press [System] to display the system monitor screen.

- [System] is displayed in the toolbar display area of the patient registration screen, list screen, body part selection screen, and exposure screen.



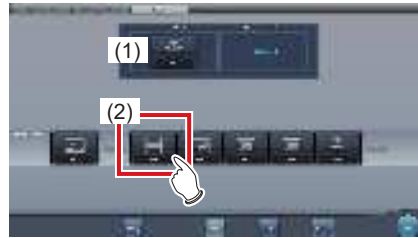
- The system monitor screen is displayed.

2 Press the [Portable] tab.



- The portable screen is displayed.

3 Select the icon of the AP information to be changed from the [Inactive AP List] icons.



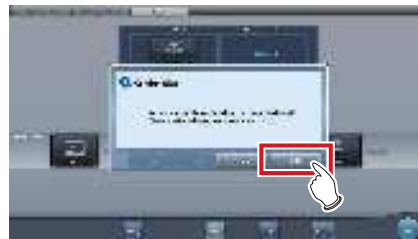
- A confirmation screen is displayed.

HINT

- When automatic channel selection is set, pressing [Auto CH] sets the optimum channel automatically.
-

4 Press [OK].

- Press [Cancel] to return to the previous screen.



- The AP information change process begins.
- The change process takes several minutes.





- When the change process is completed, a confirmation screen is displayed. Press [OK].



- Confirm that the icons and channels of the [Active AP Info] and [Channel Information] have changed.
- If multiple pieces of channel information are displayed, DFS has been set and one of the channels is in use.

5 Press [Close].



- The display returns to the initial screen.

IMPORTANT

- Do not turn off the AeroDR Portable UF Unit during the channel change process.

.....

HINT

- Set the icon type and name of the information icon during installation.

.....

7.3.5 Operations after exposure

When the exposure is completed, move the portable X-ray device and send the image data, etc. saved in this device to the higher system. The following procedure is for an example in which a wired connection is in operation between this device and a higher system.

1 Connect the Ethernet cable connected to the DR Detector registration side hub to this device.

- On connection, the icon of [System] will change.

IMPORTANT

- Do not disconnect the Ethernet cable while the data is being transmitted.
 - The status of communication with the host is displayed on the [System] button. For detail, refer to "7.3.1 Screen structure".
-

HINT

- When this device is connected to the AeroDR Portable UF Unit through wired connection, connect the Ethernet cable connected to the DR Detector registration side hub to the portable X-ray device side hub.
-

2 Plug the power cable into the outlet to charge this device.

HINT

- Also charge the DR Detector, AeroDR Portable UF Unit, and portable X-ray device as required.
-

7.3.6 Change of the IP address of the connected institution network

The procedure to change the IP address of the institution network to which you are connecting is as follows. The procedure for switching from [Area1] to [Area2] is described below as an example.

1 Press [] on the list screen.



- The area selection button is displayed.

2 Press the area selection button.



- The area selection screen is displayed.

3 Press the button corresponding to the desired area name.

- Press [Cancel] to return to the previous screen.



- The area is switched, and the display returns to the list screen.

IMPORTANT

- When there is data which has not yet been transmitted, a confirmation screen appears.



→ Press [OK] to execute the change in IP address.

→ Press [Cancel] to close the area selection screen and return to the list screen. After transmitting the data, please change the IP address.

- When selecting areas using an external wired LAN adapter, make sure the external wired LAN adapter is attached before pressing the area selection button.

.....

7.3.7 Other functions of AeroDR Portable UF Unit

Depending on the settings, RIS details can be checked by starting Internet Explorer. The procedure is explained using the list screen as an example.

- 1 Press [Web/Remote Desktop Linkup] on the patient registration screen or the list screen.



- Internet Explorer starts.



HINT

- URLs that can be displayed in Internet Explorer are only those beginning with http or https.

7.4 • Exposure with Unitless

IMPORTANT

- With Aero Sync mode exposure, X-rays with default intensity that reached the DR Detector are detected, and image acquisition is started. Select any one of the following X-ray detection levels during exposure according to the model or conditions of the DR Detector to be used.
 - Small
Used for general imaging such as that of the chest and limb bones.
 - Med
This is effective for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Be careful not to subject the DR Detector to strong shocks during exposure.
 - Large
This is more effective than the medium detection level for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Request that the patient stands still for as long as possible during exposure.
 - Extra Large
Exposures can be performed at a level higher than [Large]. This is effective for imaging of the abdomen or lumbar front of patients with thick bodies as well as in the case where the direct X-ray region does not enter the DR Detector due to the narrowed exposure field. Be careful not to subject the DR Detector to strong shocks during exposure.
- [Extra Large] is displayed when using either the AeroDR 3 1417HD, AeroDR 2 1417HQ or AeroDR 2 1417S.
- The control panel display [AeroSync] and items that can be selected differ depending on the type of DR Detector.

AeroDR 1417HQ/
AeroDR 1717HQ/
AeroDR 1012HQ:



AeroDR 2 1417HQ,
AeroDR 2 1417S:



AeroDR 3 1417HD:



- If there are any radioactive substances remaining in the patient's body after nuclear medicine testing or some other reason, the AeroDR 2 1417HQ and the AeroDR 2 1417S may recognize that X-rays were emitted and start image transfer. When the image is transferred, change the X-ray sensitive setting of the image processing controller to "Large" before performing exposure. If you change the X-ray sensitivity to "Large", make sure that all of the following conditions are met before performing exposure. If you perform exposure under other conditions, you may not be able to get an image.
 - On the DR Detector, set up an area (2 cm x 2 cm or larger) on which the X-rays are emitted directly.
 - Emit the X-rays onto the entire DR Detector.
 - Emit the X-rays by using a tube current of 140 mA or higher or a tube voltage of 90 kV or higher.
- If there are any radioactive substances remaining in the patient's body after nuclear medicine testing or some other reason, the AeroDR 3 1417HD may recognize that X-rays were emitted and start image transfer. When the image is transferred, change the X-ray sensitive setting of the image processing controller to "Large" or "Med" before performing exposure. If you change the X-ray sensitivity to "Large", make sure that all of the following conditions are met before performing exposure. If you perform exposure under other conditions, you may not be able to get an image.
 - Emit the X-rays onto the entire DR Detector.
 - Emit the X-rays by using a tube current of 140 mA or higher or a tube voltage of 90 kV or higher.
- Once the X-ray detection level is selected, it is kept until an examination is completed if it is not changed. If you want to return it to the initial detection level for each exposure, contact Konica Minolta technical representatives.

7.4.1 Screen structure

● Detailed description of the application bar

The wireless LAN adapter can be reset using the radio wave status icon on the application bar.



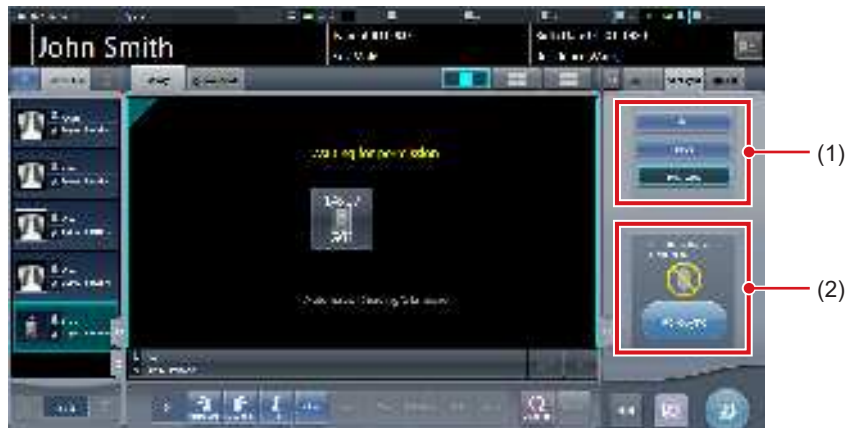
Number	Name	Functions
(1)	Radio wave status	Resets the wireless LAN adapter. Press the radio wave status icon to display the dialog. Press [OK] to reset the wireless LAN adapter.





IMPORTANT

- Do not turn off the wireless LAN adapter while it is resetting.
- If you are using an external wireless LAN adapter, do not remove it while it is resetting.

● **Exposure screen**

This is the control panel used for exposing with unitless.



Number	Name	Functions
(1)	X-ray detection level switching area	Select the X-ray detection level during exposure.
(2)	Message/Button area	<p>Messages and buttons are displayed in this area depending on the operation status.</p> <p>When the [AeroSync Button] is set to ON on the system monitor screen</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>Exposure permission waiting screen The device is waiting for permission for exposure. The screen changes to the ready-to-expose screen if you press [AeroSync].</p> </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;">  </div> <div> <p>Ready-to-expose screen The screen is locked as it is ready to be captured. To cancel exposure, press [Cancel], then the screen returns to the exposure permission waiting screen.</p> </div> </div> <p>When the [AeroSync Button] is set to OFF on the system monitor screen</p> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;">  </div> <div> <p>Ready-to-expose screen The screen is locked as it is ready to be captured. To suspend exposure, press [Pause], then the screen returns to the exposure permission waiting screen.</p> </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;">  </div> <div> <p>Exposure resumption waiting screen The device is waiting for exposure to be resumed. The screen changes to the ready-to-expose screen if you press [Restart].</p> </div> </div>




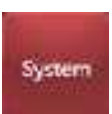

IMPORTANT

- If the icon indicating that unitless imaging is not available appears, restart the operating system (OS) for this device. Imaging cannot be performed until the OS is restarted.

● Detailed description of tool bar

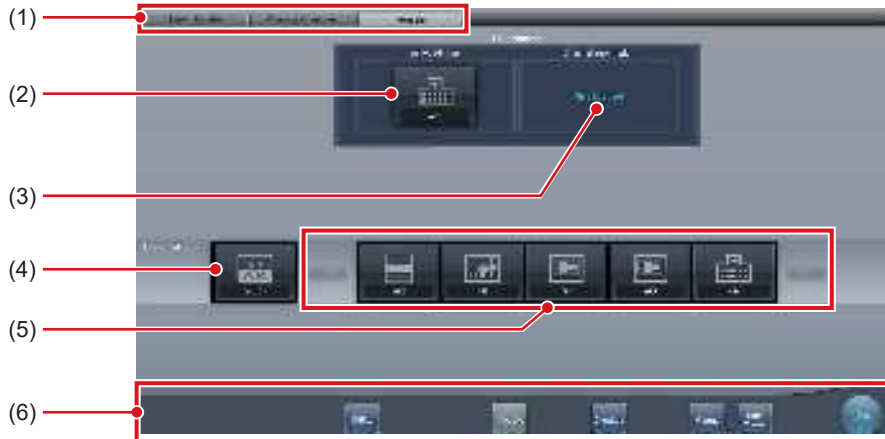
The display of following buttons in the tool bar area changes depending on the status of communication with the host.



Number	Name	Button display	State of the network and connected devices	Precautionary items
(1)	System button	 (Gray)	The network is disconnected or the output control of all RIS/HOST has been turned [OFF] manually. It is possible to continue exposures, but the data is not sent to RIS/HOST, it is stored in this device as data waiting to be sent.	<ul style="list-style-type: none"> After a study is completed, connect to the network, and send data waiting to be sent (it is sent automatically by connecting to the network).
		 (Blue)	The network is connected and there is no data waiting to be sent.	<ul style="list-style-type: none"> The network can be disconnected and the IP address can be switched. Sometimes a maximum 10 seconds elapses before the state of the button changes. When disconnecting the network and switching the IP address, stand by 10 seconds, and make sure that no white point is rotating around the button.
		 (Blue: rotating white point)	The network is connected and there is data waiting to be sent.	<ul style="list-style-type: none"> Do not disconnect the network or switch the IP address. When data waiting to be sent is in a device whose output is [ON], a white point is displayed rotating around the button, and is not displayed when the output is [OFF].
		 (Red)	A network connection error or data transmission error occurs in a connected device such as RIS/HOST in a state connected to the network, but without data waiting to be sent. Exposure can be continued but there will be a data transmission error.	<ul style="list-style-type: none"> The network can be disconnected and the IP address can be switched. Sometimes a maximum 10 seconds elapses before the state of the button changes. When disconnecting the network and switching the IP address, stand by 10 seconds, and make sure that no white point is rotating around the button. A device with a network connection error cannot send until the error is cleared. After the error is cleared, turn [OFF]/[ON] the output.
		 (Red: rotating white point)	A network connection error or data transmission error occurs in a connected device such as RIS/HOST in a state connected to the network, and with data waiting to be sent. Exposure can be continued but there will be a data transmission error.	<ul style="list-style-type: none"> Do not disconnect the network or switch the IP address. When data waiting to be sent is in a device whose output is [ON], a white point is displayed rotating around the button, and is not displayed when the output is [OFF]. A device with a network connection error cannot send until the error is cleared. After the error is cleared, turn [OFF]/[ON] the output.
(2)	Display/Hide button	Switches between display and hide of the tool bar. When the tool bar is hidden, the state of the network and connected devices is shown instead of the system button.		

● **System monitor screen (Portable)**

This is the screen for switching the AP information and channels built into the AeroDR Access Point 2.



Number	Name	Functions
(1)	Function switching tab	Switches between the [System Monitor], [Warranty Component], and [Portable] tabs.
(2)	Active AP Info	Displays the AP information selected through the AeroDR Access Point 2.
(3)	Channel Information	Displays the channel of the AP information selected through the AeroDR Access Point 2. If multiple pieces of channel information are displayed, DFS has been set and one of the channels is in use.
(4)	Auto CH button	Automatically selects the optimum channel.
(5)	Inactive AP List	AP information list registered in this device. Select an icon to switch to an AP information. If there are more than 7 AP information registered, press [Left] [Right] to scroll sideways.
(6)	System menu	Starts a utility or shuts down the system. This is displayed regardless of tabs being selected. [Utility]: Starts utilities. This button is not displayed if the user authorization of the logged in operator is "Technologist". [Update]: Refreshes information. [Checkup]: Displays the checkup setting screen. [Manual]: The "CS-7 Operation Manual" is displayed. This button is not displayed if the manual file is not deployed. [TeamViewer]: Displays the TeamViewer startup button. [Close]: Exits the system monitor screen, and the previous screen is displayed.

HINT

- The [Portable] tab is displayed when operating the AeroDR Access Point 2.

7.4.2 Exposure preparations

Make the following preparations when exposing using unitless. The following procedure is for an example in which a wired connection is in operation between this device and a higher system.

IMPORTANT

- When this device is being used in unitless, charge it when a notification that the battery level is low is displayed.
 - Check the settings for the AeroSync button, and initial detection level on the system monitor screen.
-

1 Register the DR Detector in this device that is to be used in unitless.

- For operation of the DR Detector, refer to "AeroDR Operation Manual".

IMPORTANT

- When an DR Detector which does not support Aero Sync mode is used, an error message appears and registration will not be permitted.
- The communication speed may be reduced when DR Detector images are transmitted simultaneously with host output.

If the communication speed is reduced, make sure there are no output reservations on the system monitor screen (system monitor tab) and then turn off host output. After all examinations are complete, turn host output back on.

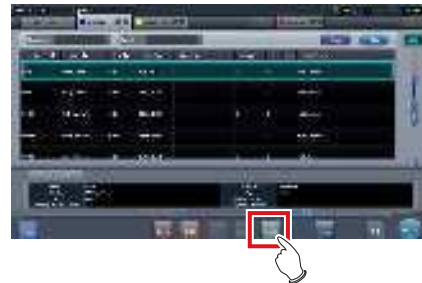


The device switches between [ON] and [OFF] every time [Output] is pressed.

.....

2 Import the examination information to be used for the exposure using the portable X-ray device.

- Confirm that an Ethernet cable is connected to this device.
- Press [Refresh] on the list screen on this device.



- The latest examination information is imported from the higher system by pressing the [Refresh] button.

HINT

- To input examination information manually, change the screen to the patient registration screen.
-

3 Remove the Ethernet cable connected to the DR Detector registration side hub from this device.

4 Unplug the power cable from the outlet when charging this device.

5 Complete the exposure preparations.

HINT

- It is all right to keep power of this device and the DR Detector on.
-

7.4.3 Exposure

Prepare for exposure using unitless according to the following procedure. The procedure varies depending on the setting of the [AeroSync Button] on the system monitor screen.

IMPORTANT

- Always check the patient information and exposure conditions before exposure.
- Do not disconnect the Ethernet cable while the data is being transmitted.
- The status of communication with the host is displayed on the [System] button. For detail, refer to "7.4.1 Screen structure".
- Available X-ray detection level varies depending on the DR Detector model.
- Use the PDA at a distance within 10 m of this device and the DR Detector.

HINT

- The procedure is explained with the use of the AeroDR 3 1417HD as an example.

● When the [AeroSync Button] is OFF

1 After arriving to the imaging location, confirm that the icon for the DR Detector used for imaging appears in the application bar.



2 Select the examination.



3 Press [Perform].



- The exposure screen is displayed.
- A message "Ready" is displayed in the message/button area, then the screen is locked.
- To change the X-ray detection level, press [Pause] to enable modification. After changing the detection level, press [Restart], then the message "Ready" is displayed.

IMPORTANT

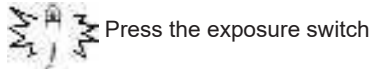
- A malfunction may be caused by a shock to the DR Detector. In such cases, set [AeroSync Button] to ON on the system monitor screen.
- To prevent incorrect operations, always check that "Ready" is displayed.
- Conditions for changing the detection level vary depending on the X-ray device being used. If a survey has been carried out when the system was installed, follow the survey results.
- When using the AeroDR 3 1417HD, click the modality icon before making an exposure and select the AeroDR 3 1417HD.

HINT

- When importing examination information from the higher system and when exposure body part information is not imported, select the exposure body part. When pressing [Perform] on the body part selection screen, the exposure screen is displayed.
- When you move the focus in the image display area on the exposure resumption waiting screen to capture an image of another body part, not the ready-to-expose screen but the exposure resumption waiting screen is displayed.
- Refer to "7.4 Exposure with Unitless" for information on the X-ray detection levels that can be set for exposures.

4 Perform exposure.

- Configure the portable X-ray device settings and check the exposure setting before making an exposure.



- As soon as the exposed image is transferred, the image is displayed in the image display area.

IMPORTANT

- When performing an exposure, stay away from the patient as far as possible before pressing the exposure switch.
- When the "Ready" is displayed, immediately perform exposure.
- Do not let the DR Detector vibrate or receive shock until the exposed image is displayed.
- If image acquisition started without performing exposure, this may result in incorrect detection due to noise, etc. Perform reject (image deletion) and repeat exposure.
- If image acquisition does not start after exposure, the voltage may not be enough. Check the exposure conditions and repeat exposure.
- When exposure is done while "Ready" is not displayed, have an interval of 1 minute or more before repeating exposure.

5 Adjust the image.

- After exposure, adjust the image as required.



6 Press [Perform].



- The exposure is completed, and the display returns to the initial screen.

IMPORTANT

- When consolidating image adjustment, press [Pause] to pause the examination and return to the initial screen.

HINT

- Image adjustment can be done on the portable device's [Image Proc] tab. However, if a more advanced image adjustment is required, perform image adjustment on the [Image Proc] tab or the viewer screen. For details on the viewer screen, refer to "6.7 Functions of the viewer screen".
- If you have to move to the imaging location, perform the procedure again from step 1 after arriving to the imaging location.
- It is all right to keep power of this device and the DR Detector on.

• When the [AeroSync Button] is ON

- 1 After arriving to the imaging location, confirm that the icon for the DR Detector used for imaging appears in the application bar.



- 2 Select the examination.



- 3 Press [Perform].





- The exposure screen is displayed.
- A message "Waiting for permission" is displayed in the image display area.

HINT

- If the information about the body part is not imported while importing examination information from the higher system, select the body part to be imaged. Then press [Perform] on the body part selection screen to display the exposure screen.
- When the AeroDR power management level is set to [3], [4] or [5], "Waiting to start shooting" is displayed instead of "Waiting for permission".

4 After positioning the patient, check the X-ray detection level, then press [AeroSync].

- If the control panel does not switch to [AeroSync], press the [AeroSync] tab.
- Change the X-ray detection level as needed.
- After checking the X-ray detection level, press [AeroSync].



- A message "Ready" is displayed in the message/button area. The screen is locked.
- The screen is locked. To return to the previous screen to change the position of the patient, etc., press [Cancel].

IMPORTANT

- To prevent incorrect operations, always press [AeroSync] and check that "Ready" is displayed.
- Conditions for changing the detection level vary depending on the X-ray device being used. If a survey has been carried out when the system was installed, follow the survey results.
- When the AeroDR power management level is set to [3], [4] or [5], it may take some time until the exposure becomes ready after you have pressed [Aero Sync]. In this case, [Standby] button instead of [Cancel] button is displayed in the message/button area.
- When using the AeroDR 3 1417HD, click the modality icon before making an exposure and select the AeroDR 3 1417HD.

HINT

- Refer to "7.4 Exposure with Unitless" for information on the X-ray detection levels that can be set for exposures.

5 Perform exposure.

- Configure the portable X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch

- As soon as the exposed image is transferred, the image is displayed in the image display area.

IMPORTANT

- When performing an exposure, stay away from the patient as far as possible before pressing the exposure switch.
- When the "Ready" is displayed, immediately perform exposure.
- Do not let the DR Detector vibrate or receive shock until the exposed image is displayed.
- If image acquisition started without performing exposure, this may result in incorrect detection due to noise, etc. Perform reject (image deletion) and repeat exposure.
- If image acquisition does not start after exposure, the voltage may not be enough. Check the exposure conditions and repeat exposure.
- When exposure is done while "Ready" is not displayed, have an interval of 1 minute or more before repeating exposure.

6 Adjust the image.

- After exposure, adjust the image as required.



7 Press [F4].



- The exposure is completed, and the display returns to the initial screen.

IMPORTANT

- When consolidating image adjustment, press [F4] to pause the examination and return to the initial screen.

.....

HINT

- Image adjustment can be done on the portable device's [Image Proc] tab. However, if a more advanced image adjustment is required, perform image adjustment on the [Image Proc] tab or the viewer screen. For details on the viewer screen, refer to "6.7 Functions of the viewer screen".
- When moving the exposure location, after moving the exposure location, perform the procedure again from step 1.
- It is all right to keep power of this device and the DR Detector on.

.....

7.4.4 Operations after exposure

When the exposure is completed, move the portable X-ray device and send the image data, etc. saved in this device to the higher system. The following procedure is for an example in which a wired connection is in operation between this device and a higher system.

1 Connect the Ethernet cable connected to the DR Detector registration side hub to this device.

- On connection, the icon of [System] will change.

IMPORTANT

- When a small access point is connected to this device, connect this device to the institution network after disconnecting the Ethernet cable connected to the small access point from this device.
- Do not disconnect the Ethernet cable while the data is being transmitted.
- The status of communication with the host is displayed on the [System] button. For detail, refer to "7.4.1 Screen structure".

.....

2 Plug the power cable into the outlet to charge this device.

HINT

- Also charge the DR Detector, AeroDR Portable UF Unit, and portable X-ray device as required.

.....

7.4.5 Change of the IP address of the connected institution network

Follow the steps below to obtain information from RIS in advance, or to switch the IP address when connecting to the institution network and outputting data to RIS after you return to the institution. The procedure for switching from [Area1] to [Area2] is described below as an example.

1 Press [] on the list screen.



• The area selection button is displayed.

2 Press the area selection button.



• The area selection screen is displayed.

3 Press the button corresponding to the desired area name.

- Press [Cancel] to return to the previous screen.



- The area is switched, and the display returns to the list screen.

IMPORTANT

- When there is data which has not yet been transmitted, a confirmation screen appears.



→Press [OK] to execute the change in IP address.

→Press [Cancel] to close the area selection screen and return to the list screen. After transmitting the data, please change the IP address.

- When selecting areas using an external wired LAN adapter, make sure the external wired LAN adapter is attached before pressing the area selection button.

.....

7.4.6 Change of the AP information

When the AP information needs to be changed because the exposure location has been moved, perform the following procedure.

The following procedure shows an example of a channel change from institution (1) to institution (2).

* The numbers ((1) and (2)) on the screen indicate AP information and AP information icons for institution (1) and (2). These are shown for ease of explanation, and not displayed on the actual screen.

IMPORTANT

- Make sure to check the following before changing the channel of the AP information.
 - The AeroDR Access Point 2 is turned on.
 - The AeroDR Access Point 2 Unit has been turned on for 1 minute or more.
-

1 Press [System] to display the system monitor screen.

- [System] is displayed in the toolbar display area of the patient registration screen, list screen, body part selection screen, and exposure screen.



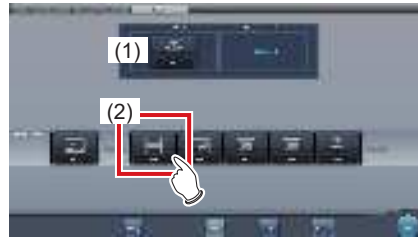
- The system monitor screen is displayed.

2 Press the [Portable] tab.



- The portable screen is displayed.

3 Select the icon of the AP information to be changed from the [Inactive AP List] icons.



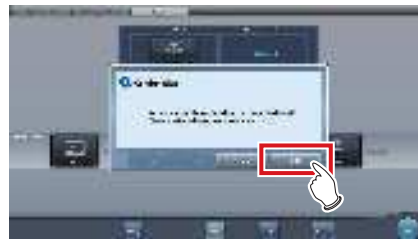
- A confirmation screen is displayed.

HINT

- When automatic channel selection is set, pressing [Auto CH] sets the optimum channel automatically.
-

4 Press [OK].

- Press [Cancel] to return to the previous screen.



- The AP information change process begins.
- The change process takes several minutes.





- When the change process is completed, a confirmation screen is displayed. Press [OK].



- Confirm that the icons and channels of the [Active AP Info] and [Channel Information] have changed.
- If multiple pieces of channel information are displayed, DFS has been set and one of the channels is in use.

5 Press [Close].



- The display returns to the initial screen.

IMPORTANT

- Do not turn off the AeroDR Access Point 2 during the channel change process.

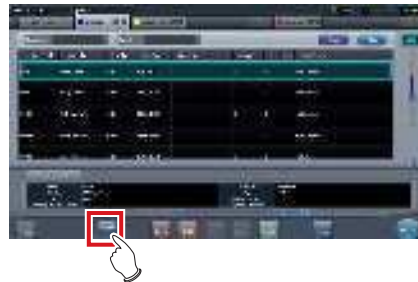
HINT

- Set the icon type and name of the information icon during installation.

7.4.7 Other functions of unitless

After returning to the institution, you can check details of RIS by starting Internet Explorer depending on settings. The procedure is explained using the list screen as an example.

1 Press [Web/Remote Desktop Linkup] on the patient registration screen or the list screen.



- Internet Explorer starts.

HINT

- URLs that can be displayed in Internet Explorer are only those beginning with http or https.



7.5 • Manual stitching exposure

7.5.1 Screen structure

● Exposure screen

This is the screen for manual stitching exposure.



Number	Name	Functions
(1)	Order list	List of exposures.
(2)	Combined image display area	The images for combination are displayed. Focus is displayed on selected images.
(3)	Standard gradation button	This button is for selecting the image which will be the image shade standard among the images displayed in the combined image display area. You can only select 1 image.  : Not selected  : Selected
(4)	Selection button (batch selection)	Gathers multiple exposure images associated with the images selected in the order list and displays them in the combined image display area.
(5)	Selection button (individual selection)	Displays the selected images in the order list in the combined image display area.
(6)	Delete button	Deletes the images selected in the combined image display area.
(7)	Combination sequence switch button	Moves the position of images selected in the combined image display area.
(8)	Stitching button	Combines the images displayed in the combined image display area. Press this button to display the stitching combination position adjustment screen.

Number	Name	Functions
(9)	Adjust button	Performs re-adjustment of the combination position. This button cannot be pressed when combined images are not displayed.

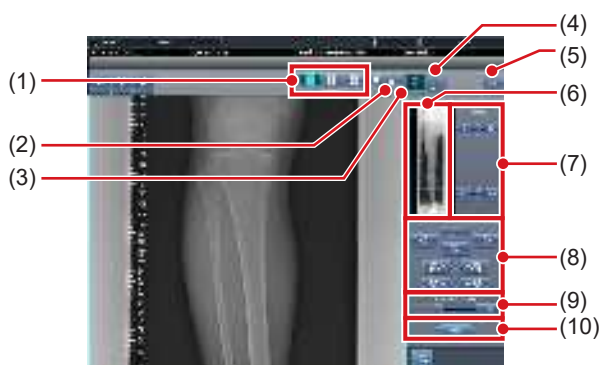





HINT





- Adjustments to the combination position of images that underwent stitching exposure are performed on the viewer screen (for stitching combination position adjustment). For details, refer to "7.5.3 Image combination".

● Viewer screen (for stitching combination position adjustment)

This is the screen for adjusting combined position of images taken manually with stitching exposure.



Number	Name	Functions
(1)	Display layout toggle button	Selects the screen display format from 1×1, 2×1, and 2×2 display options.
(2)	Overlap button	Changes the plate overlap sequence. Every time you press the button, the plate overlap sequence is sequentially changed and the display of the overlap button is changed. The changed overlap sequence is also reflected in the output image.  : Interchanges the plate overlap sequence (middle and bottom).  : Interchanges the plate overlap sequence (top and middle). When two plates are used, only [] is displayed.
(3)	Adjust button	Displays and hides the stitching adjustment panel.

Number	Name	Functions
(4)	Proportion button	Changes the displayed transmittance of the overlapped portion. Pressing this button sequentially changes the transmittance. A changed transmittance is not reflected in the output image.
(5)	Reset button	Resets the position of the moved image and the changed density to return them to their initial states.
(6)	Full preview	All images to be combined are displayed.
(7)	Part correction button	Adjust the density of the images by pressing [] or dragging the bar.
(8)	Move/rotate button	Moves the position of selected images and adjusts their angles.  : image position is moved toward each direction.  : image angles are adjusted.
(9)	Magnification Ratio button/ Magnification Ratio bar	Display images are magnified/shrunk by pressing [] or dragging the bar.
(10)	Apply button	Applies the adjusted image combination position.

IMPORTANT

- For details on the overlap button when carrying out exposure using the CR Stitching cassette, refer to "7.8.1 Screen structure".

.....

HINT

● **Moving/rotating an image during image combination**

- For image movement/rotation, the lower image becomes the work image. The movement/rotation action is as follows.





Moving

[]:
Moves the image to direction pressed

The image can also be moved by dragging the center of the image (horizontal stripe portion).



Rotating

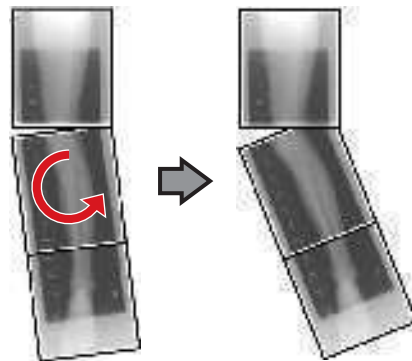
- []: Lowers the upper left edge of the image
- []: Raises the upper left edge of the image
- []: Lowers the upper right edge of the image
- []: Raises the upper right edge of the image



If you drag the left or right area of the image (horizontal stripe portion) vertically, you can move the upper edge up or down in the direction you are dragging it. If you drag it horizontally, you can move the image horizontally.

● **Linking 3 images**

- When combining 3 images, the lower image will also move/rotate if the central image is moved/rotated.



● **About image display**

- During the image combination, the combined parts (frame parts) displayed in the full preview are magnified and displayed in the image display area as frames.
- The display format and magnified displayed part are as follows:

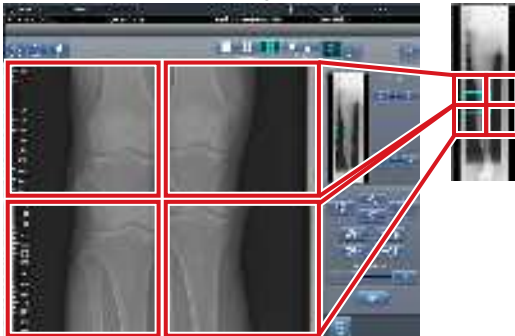
1×1 display



2×1 display



2×2 display



- A 2×2 display can only be selected when combining 3 images.
 - Set the plate overlap sequence during installation.
-

● **Control panel (Output - for host)**

This is the control panel to perform setting of host output conditions for combined stitching images.



Number	Name	Functions
(1)	Trimming size button	This button is used to select the trimming size. Set to hide/unhide trimming size button during installation.
(2)	[Split] button	This button is used to split combined images and output these images to hosts. The device switches between ON and OFF every time the button is pressed. Press and hold the button to select the size of each section.

● **Procedure to change the output size of split images**

- 1 Press the [Split] button for 1 second or more.



- The Split Output Size dialog box is displayed.

2 Press [OFF] or the button of the output size to be changed on the Split Output Size dialog box.



- The output size is changed.

HINT

- When output of split images is enabled, a frame appears on the image to indicate the area of the split image that will be output.



Split output frame
Trimming frame

- The size of the trimming frame changes in accordance with changes to the size of the image frame so that images are automatically split into the selected section size. Images can be split into a maximum of 3 sections.
 - If the split image is smaller than the trimming region, the entire combined image may not completely fit within the selected region.
 - If the configuration of the split images results in one image, the split processing is not applied, and the split output frame does not appear.
-

7.5.2 Exposure

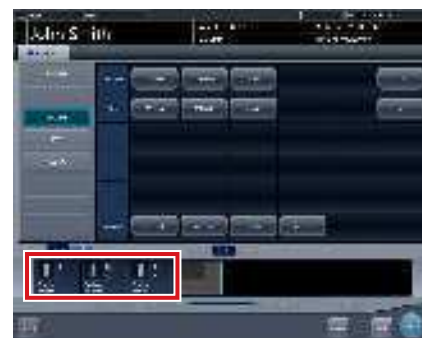
The manual stitching exposure method is as follows.

IMPORTANT

- For the stitching exposure images, make sure that the combined parts are combined in the correct positions.
 - If there is gap between combined images, manually adjust the image position of the combined parts using the viewer screen (for stitching combination position adjustment). It is also recommended that you arrange a measure in the combined image part during exposure to confirm the combined parts easier.
 - In stitching exposure, images can be combined when all the following conditions are met.
 - All exposures are done using DR Detectors (CR cassettes) of the same size
 - All exposures are done using an DR Detector or a CR cassette
 - Perform exposure after standardizing the read resolution
 - When performing the manual stitching exposure in AeroDR 3 1417 HD, only "Standard" (200µm) can be selected for "Resolution".
-

1 After transitioning from the initial screen to the exposure body part selection screen, select the Exam. Tag for stitching exposure.

- Select 2 or 3 Exam. Tags for stitching exposure.



- The selected Exam. Tags are displayed on the Exam. Tags display area.

HINT

- It is also possible to register multiple exposure body parts in 1 Exam. Tag.
-

2 Press [Perform].



- The exposure screen is displayed.

3 Perform exposure.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch



- Exposed image is displayed.
- Perform the subsequent exposures with same procedure.



7.5.3 Image combination

Combine the exposed images. The following procedure describes an example of combining 3 images.


IMPORTANT

- Adjust the combination position by using the markers as supplementary standards in addition to body parts of the subject.
It is also recommended that you arrange the measure in the combined image part during exposure to simplify the confirmation of the combined parts.
 - In stitching exposure, when plates overlap and are arranged so that there is no image loss in each plate's boundaries, there might be a slight gap in the marker position because of a minute difference in magnification. After taking this into account, confirm the combination position through the marker.
-



1 Select the images to be combined.

- Select the images to be combined from the order list and press [] or [].



- The selected images are displayed in the combined image display area.
- If you pressed [], continuously select the associated images (second and third).

HINT

- [] and [] can be pressed only when the Exam. Tag for stitching exposure is selected.
-

2 Press [Stitching].



- The viewer screen (for stitching combination position adjustment) is displayed.

3 Select the frame which will adjust the image combination position.



- Focus is applicable to the frame so you will be able to make adjustments.

IMPORTANT

- Adjust the density of each image in this step.



- If there are three images, adjust the density of the upper and lower images to that of the center image. If an image used as the density standard is changed, adjust the density so that it suits the changed image.
 - If there are two images, adjust the density of the upper image to that of the lower image. If the upper image is used as the density standard, adjust the density of the lower image based on the upper image.
-

HINT

- For the frame display format, 1×1, 2×1, and 2×2 display options can be selected.
 - A 2×2 frame display can only be selected when combining 3 images.
-

4 Adjust the image combination position.



- For details on how to operate the viewer screen (for stitching combination position adjustment), refer to "7.5.1 Screen structure".
- Select another frame and adjust the combination position as needed.

IMPORTANT

- Even if the displayed transmittance of the overlap portion is modified during the adjustment, it will not be reflected in the output image.
-

5 Once all combination positions are adjusted, press [Apply].



- The image combination position is confirmed.

6 Press [Back].



- The display returns to the exposure screen, and the combined image is added to the order list.

HINT

- A merged image can also be displayed after the pre-merged images in the order list. For more details, contact Konica Minolta technical representatives.



.....

7 Press [Adjust].

- If you press [Adjust], the viewer screen (for stitching combination position adjustment) will be displayed. The combination position can then be readjusted.



- The combined image is output, and the display returns to the initial screen.

IMPORTANT

- The stitching image is output first, then non-stitching images are output.
- If images are output before stitching, the stitching image is output last.
- Press the [Adjust] button after rotating combined images on the exposure screen to reset the image rotation.

.....

HINT

- If outputting the combined image in sections, set the number of sections by [Split].
- The order of combined image output can be changed. For more details, contact Konica Minolta technical representatives.

.....

7.5.4 Image adjustment

The adjustment method for the combined image is as follows.

1 Display the combined image and press [Viewer].



- The viewer screen is displayed.
- Perform various image adjustments. For details on how to operate the viewer screen, refer to "3.6 Viewer screen".

IMPORTANT

- Note the following when adjusting images created by stitching exposure.
 - ROI adjustment is not possible.
 - Automatic recognition of the exposure field is not possible (manual adjustment is possible).
 - If the effective image area is changed, only the image size will change.
 - Automatic calculation of masking is not possible.

2 Press [Return] when image adjustment is completed.



- Returns to the exposure screen.

7.6 • Auto stitching exposure with AeroDR Detector

IMPORTANT



- The AeroDR 3 1417HD cannot be used for auto stitching exposure with AeroDR Detector.
- The following DR Detector are described here as "DR Detector."
 - AeroDR 1417HQ
 - AeroDR 1417S
 - AeroDR 1717HQ
 - AeroDR 1012HQ
 - AeroDR 2 1417HQ
 - AeroDR 2 1417S

7.6.1 Screen structure

● Exposure screen

This is the screen for auto stitching exposure with DR Detector.

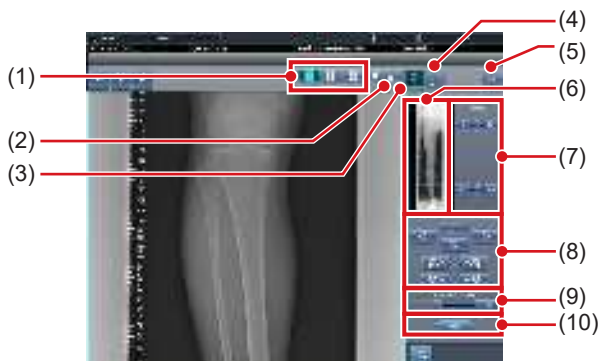


Number	Name	Functions
(1)	Order list	List of exposures. Exam. Tags are grouped for each examination.
(2)	Combined image display area	The images for combination are displayed. Focus is displayed on selected images. In the case of 2 exposures, "x" is displayed in the area at the top.
(3)	Standard gradation button	This button is for selecting the image which will be the image shade standard among the images displayed in the combined image display area. You can only select 1 image.  : Not selected  : Selected
(4)	Selection button (batch selection)	Gathers multiple exposure images associated with the images selected in the order list and displays them in the combined image display area.








Number	Name	Functions
(5)	Selection button (individual selection)	Displays the selected images in the order list in the combined image display area.
(6)	Delete button	Deletes the images selected in the combined image display area.
(7)	Combination sequence switch button	Moves the position of images selected in the combined image display area.
(8)	Stitching button	Combines the images displayed in the combined image display area. Press this button to display the stitching combination position adjustment confirmation screen.
(9)	Adjust button	Performs re-adjustment of the combination position. This button cannot be pressed when combined images are not displayed.

● Viewer screen (for stitching combination position adjustment)

This is the screen for adjusting combined position of images taken with stitching exposure with the DR Detector.



Number	Name	Functions
(1)	Display layout toggle button	Selects the screen display format from 1×1, 2×1, and 2×2 display options.

Number	Name	Functions
(2)	Overlap button	Changes the plate overlap sequence. Every time you press the button, the plate overlap sequence is sequentially changed and the display of the overlap button is changed. The changed overlap sequence is also reflected in the output image.  : Interchanges the plate overlap sequence (middle and bottom).  : Interchanges the plate overlap sequence (top and middle). When two plates are used, only  is displayed.
(3)	Adjust button	Displays and hides the stitching adjustment panel.
(4)	Proportion button	Changes the displayed transmittance of the overlapped portion. Pressing this button sequentially changes the transmittance. A modified transmittance is not reflected in the output image.
(5)	Reset button	Resets the position of the moved image and the changed density to return them to their initial states.
(6)	Full preview	All images to be combined are displayed.
(7)	Part correction button	Adjust the density of the images by pressing  or dragging the bar.
(8)	Move/rotate button	Moves the position of selected images and adjusts their angles.  : image position is moved toward each direction.  : image angles are adjusted.
(9)	Magnification Ratio button/Magnification Ratio bar	Display images are magnified/shrunk by pressing  or dragging the bar.
(10)	Apply button	Applies the adjusted image combination position.

 **HINT**

● **Moving/rotating an image during image combination**





- For image movement/rotation, the lower image becomes the work image. The movement/rotation action is as follows.

Moving

    : Moves the image to direction pressed

The image can also be moved by dragging the center of the image (horizontal stripe portion).

Rotating

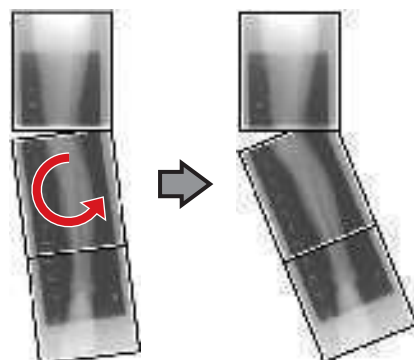
-  : Lowers the upper left edge of the image
-  : Raises the upper left edge of the image
-  : Lowers the upper right edge of the image
-  : Raises the upper right edge of the image



If you drag the left or right area of the image (horizontal stripe portion) vertically, you can move the upper edge up or down in the direction you are dragging it. If you drag it horizontally, you can move the image horizontally.

● **Linking 3 images**

- When combining 3 images, the lower image will also move/rotate if the central image is moved/rotated.



● **About image display**

- During the image combination, the combined parts (frame parts) displayed in the full preview are magnified and displayed in the image display area as frames.
- The display format and magnified displayed part are as follows:

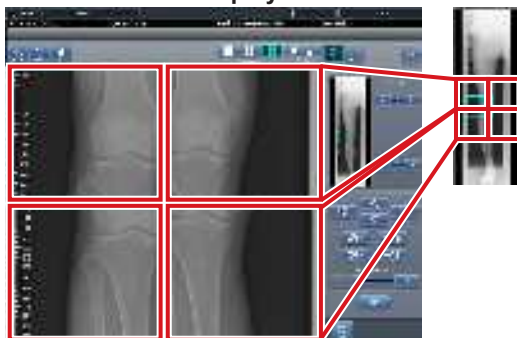
1×1 display



2×1 display



2×2 display



- 2×2 display can only be selected when combining 3 images.
 - Set the plate overlap sequence during installation.
-

● **Control panel (Output - for host)**

This is the control panel to perform setting of host output conditions for combined stitching images.



Number	Name	Functions
(1)	Trimming size button	This button is used to select the trimming size. Set to hide/unhide trimming size button during installation.
(2)	[Split] button	This button is used to split combined images and output these images to hosts. The device switches between ON and OFF every time the button is pressed. Press and hold the button to select the size of each section.

● **Procedure to change the output size of split images**

- 1 Press the [Split] button for 1 second or more.



- The Split Output Size dialog box is displayed.

2 Press [OFF] or the button of the output size to be changed on the Split Output Size dialog box.



- The output size is changed.

HINT

- When output of split images is enabled, a frame appears on the image to indicate the area of the split image that will be output.



Split output frame
Trimming frame

- The size of the trimming frame changes in accordance with changes to the size of the image frame so that images are automatically split into the selected section size. Images can be split into a maximum of 3 sections.
- If the split image is smaller than the trimming region, the entire combined image may not completely fit within the selected region.
- If the configuration of the split images results in one image, the split processing is not applied, and the split output frame does not appear.

.....

7.6.2 Exposure

The auto stitching exposure method using DR Detector is as follows.

1 Perform exposure preparations for AeroDR Stitching System.

- For details, refer to the "AeroDR Stitching System Manual".

2 After transitioning from the initial screen to the exposure body part selection screen, select the Exam. Tag for stitching exposure.

- Select 2 or 3 Exam. Tags for stitching exposure.



- The selected Exam. Tags are displayed on the Exam. Tags display area.

HINT

- It is also possible to register multiple exposure body parts in 1 Exam. Tag.

.....

3 Press [Perform].



- The exposure screen is displayed.

HINT

- Display of the device icon and message changes according to the device status. The meaning of the statuses to be displayed are listed below.



"Please do the height detection."
AeroDR Stitching Unit is in preparation.



"Please detect radiation field."
Condition of undetected exposure. Detect exposure field detection.



"Please check a panel"
DR Detector is not set (ready) for modality to be used for exposure. Set (prepare) the DR Detector.

4 Patients are led before the AeroDR Stitching Unit and the X-ray exposure range is set.

IMPORTANT

- If Exam. Tag and exposure field confirmation results do not match, the following action is performed.
 - If exposure field confirmation results are less than the Exam. Tag, the confirmation screen is displayed. The Exam. Tag is maintained as is and exposure is enabled.
 - If exposure field confirmation results exceed the Exam. Tag, an error is displayed. Either reset the exposure field or add an Exam. Tag on the body part selection screen.

5 The exposure ready LED (blue) of the AeroDR Stitching Unit lights to let you know exposure is enabled.

6 Exposes the first.

- Set up the X-ray device before exposure. Perform exposure after checking the exposure settings.



Press the exposure switch



- Exposed preview image is displayed.

IMPORTANT

- Make sure the focus matches stitching Exam. Tags.
- Always ensure the exposure ready LED (blue) of the AeroDR Stitching Unit is lit before performing an exposure. Additionally, do not press the first stage of the exposure switch until the exposure ready LED (blue) is lit.

7 Expose the second and third.

- Repeat from step 5 to perform exposure.
- Set up the X-ray device before exposure just like for the first exposure. Perform exposure after checking the exposure settings.



- Exposed preview image is displayed.

IMPORTANT

- Preview images is first displayed on the exposure screen. Because signal reception does not start until all exposure is complete, it may take a while before the image is displayed.
- If [Cancel] is pressed during a single examination, re-exposure or additional exposure cannot be performed for that examination.
- If you want to reject an image during exposure, press [Cancel] followed by [REJECT].
- You can perform reject even after all images have been exposed. The target of reject is the image before and after combination.
- Rejecting any image within a single examination makes other images also the target for rejecting.

.....

7.6.3 Image combination

Images exposed by auto stitching using the DR Detector are combined automatically. The following procedure describes an example of combining 3 images.

IMPORTANT

- Automatic combination may fail depending on the condition of the exposed image. Always check the combination position visually, and adjust manually when necessary.

.....

1 Select the images to be combined.

- Select images only if not already selected.
- Select the images to be combined from the order list and press [SELECT] or [SELECT].



- The selected images are displayed in the combined image display area.
- If you pressed [SELECT], continuously select the associated images (second and third).

HINT

- [SELECT] and [SELECT] can be pressed only when the Exam. Tag for stitching exposure is selected.

.....

2 Press [Stitching].



- The combination position confirmation screen is displayed.

3 Press [OK].

- To adjust combination position manually, press [Adjust] and display the viewer screen (for stitching combination position adjustment). For information concerning the method of manually adjusting the combination position, refer to "7.6.1 Screen structure".
- Press [Cancel] to return to the previous screen.



- The combined image is displayed.
- The combined image is added to the order list.

IMPORTANT

- Press the [Adjust] button after rotating combined images on the exposure screen to reset the image rotation.

.....

HINT

- A merged image can also be displayed after the pre-merged images in the order list. For more details, contact Konica Minolta technical representatives.



.....

4 Press [].



- The combined image is output, and the display returns to the initial screen.

IMPORTANT

- The stitching image is output first, then non-stitching images are output.
- If images are output before stitching, the stitching image is output last.

.....

HINT

- If outputting the combined image in sections, set the number of sections by [Split].
 - The order of combined image output can be changed. For more details, contact Konica Minolta technical representatives.
-

7.6.4 Image adjustment

The adjustment method for the combined image is as follows.

1 Display the combined image and press [Viewer].

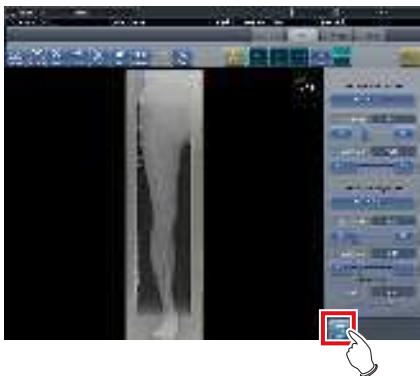


- The viewer screen is displayed.
- Perform various image adjustments. For details on how to operate the viewer screen, refer to "3.6 Viewer screen".

IMPORTANT

- Note the following when adjusting images created by stitching exposure.
 - ROI adjustment is not possible.
 - The exposure field automatic recognition function cannot be performed (manual adjustment is possible).
 - If the effective image area is changed, only the image size will change.

2 Press [Return] when image adjustment is completed.



- Returns to the exposure screen.

7.7 • One Shot stitching exposure

IMPORTANT

- This function can only be used in some countries.
 - This function cannot be used in the United States or Canada.
 - This function cannot be used in the EU, EFTA member countries, Switzerland or Turkey.
 - For details of countries where this function can be used, contact Konica Minolta technical representatives.
- The following DR Detector cannot be used for One Shot stitching exposure.
 - AeroDR 1417S
 - AeroDR 1012HQ
 - AeroDR 3 1417HD
- The following DR Detector are described here as "DR Detector".
 - AeroDR 1417HQ
 - AeroDR 1717HQ
 - AeroDR 2 1417HQ
 - AeroDR 2 1417S



7.7.1 Screen structure

● Exposure screen

This is the screen for One Shot stitching exposure.



Number	Name	Functions
(1)	Application bar	Date and time, operator name, exposure room name, icons of devices connected to this device, and the state of the DR detector loaded into the stitching holder are displayed.
(2)	Order List	List of exposures. Exam. Tags displays the conditions of the combined image.
(3)	Combined image display area	The images for combination are displayed. Focus is displayed on selected images.

Number	Name	Functions
(4)	Reference graduation button	This button is for selecting the image which will be the image shade standard among the images displayed in the combined image display area. You can only select 1 image.  : Not selected  : Selected
(5)	Adjust button	Performs re-adjustment of the combination image.

● Details of application bar

The date and time, operator name, exposure room name, icons of devices connected to this device, and so on are displayed in the application bar.

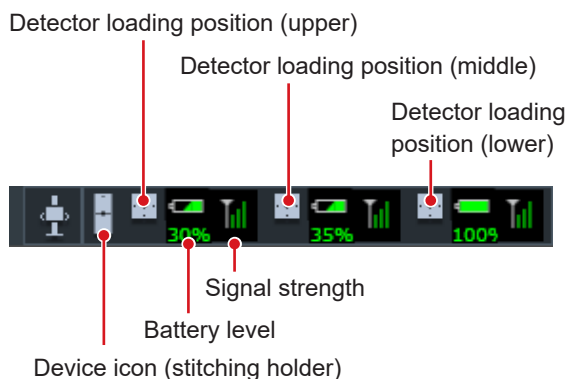
Date time / engineer name display area



One Shot stitching device information display area

One Shot stitching device information display area

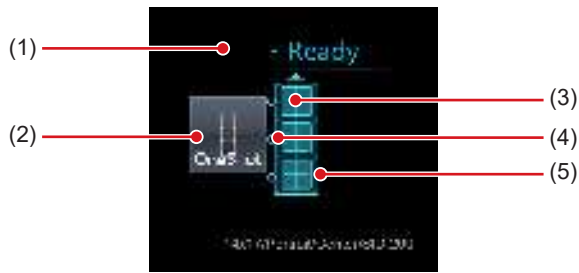
The device information display area of the application bar displays the loading position and the states (battery level and signal strength) of the DR Detectors registered in this device.



Number of loading detectors and One Shot stitching device information display area display content

Number of loading detectors	Display content
3 detectors	
2 detectors	
1 detector	




● Work area (not during exposure)





Number	Name	Functions
(1)	Status	The exposure status appears.
(2)	Device icon	The stitching holder icon or name is displayed.
(3)	Detector status display	The status of the DR detector loaded in the stitching holder is displayed. The AeroDR UF cable or AeroDR Registration key that are not connected to the DR detector are not displayed.
(4)	Combination display	The combination identification mark of the DR detector loaded into the stitching holder is displayed.
(5)	Stitching holder state display	Confirm the combination and status of the DR detector loaded into the stitching holder, and the status of the One Shot stitching exposure will be displayed.

HINT


- The display of the detector status display will change through the state of the DR detector. The display meaning is as follows.


-  The DR detector is ready for exposure.
-  An error has occurred in the DR detector.
-  An unsent image remains in the DR detector.

- The combination display will display in an icon whether or not the connection status and type of DR detector loaded into the upper section or lower section, based on the DR detector that is loaded into the middle section of a stitching holder. The display meaning is as follows.


-  The DR detector that is loaded in the middle section and the same DR detector have been loaded.
-  The DR detector that is loaded in the middle section and a different DR detector have been loaded.


– Combination display example

 The DR detector has been loaded in the correct combination.

 The kind of DR detector that is loaded into the upper part of the stitching holder is different.

- In the stitching holder status display, the color of the frame will change in whether or not is possible to do One Shot stitching exposure. The display meaning is as follows.

 Frame color: Blue
One Shot stitching exposure can be done.

 Frame color: Red
One Shot stitching exposure can not be done.

.....

● **Viewer screen**

This is the screen for adjusting images taken with One shot stitching exposure with the DR Detector.



Number	Name	Functions
(1)	Display layout toggle button	Selects the screen display format from 1×1, 2×1, and 2×2 display options.
(2)	Adjust button	Displays and hides the stitching adjustment detector.
(3)	Reset button	Resets the position of the moved image and the changed density to return them to their initial states.
(4)	Full preview	The entire image will be displayed.
(5)	Part correction button	Adjust the density of the images by pressing [] or dragging the bar.
(6)	Move/rotate button	Moves the position of selected images and adjusts their angles. : image position is moved toward each direction. : image angles are adjusted.
(7)	Magnification Ratio button/ Magnification Ratio bar	Display images are magnified/shrunk by pressing [] or dragging the bar.
(8)	Apply button	Applies the adjusted image combination position.
(9)	Adjust image guide	The adjusted target image is displayed.

HINT

● **Moving/rotating an image during image combination**

- For image movement/rotation, the lower image becomes the work image. The movement/rotation action is as follows.

Moving

[] [] [] [] : Moves the image to direction pressed

The image can also be moved by dragging the center of the image (horizontal stripe portion).

Rotating

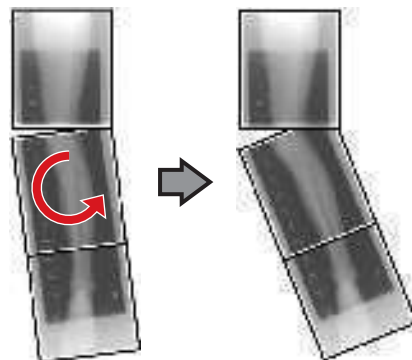
- [] : Lowers the upper left edge of the image
- [] : Raises the upper left edge of the image
- [] : Lowers the upper right edge of the image
- [] : Raises the upper right edge of the image



If you drag the left or right area of the image (horizontal stripe portion) vertically, you can move the upper edge up or down in the direction you are dragging it. If you drag it horizontally, you can move the image horizontally.

● **Linking 3 images**

- When combining 3 images, the lower image will also move/rotate if the central image is moved/rotated.



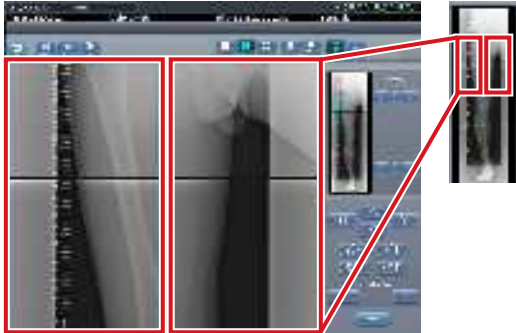
● **About image display**

- During the image combination, the combined parts (frame parts) displayed in the full preview are magnified and displayed in the image display area as frames.
- The display format and magnified displayed part are as follows:

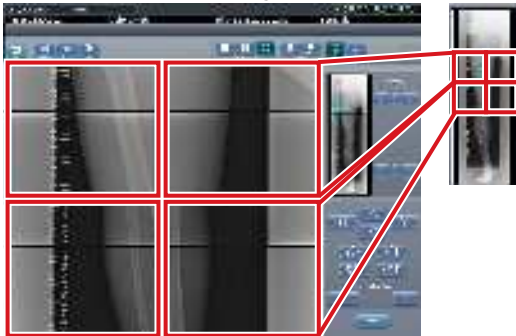
1x1 display



2x1 display



2x2 display



- 2x2 display can only be selected when combining 3 images.

.....

● **Control panel (Output - for host)**

This is the control panel to perform setting of host output conditions for combined stitching images.



Number	Name	Functions
(1)	Trimming size button	This button is used to select the trimming size. Set to hide/unhide trimming size button during installation.
(2)	[Split] button	This button is used to split combined images and output these images to hosts. The device switches between ON and OFF every time the button is pressed. Press and hold the button to select the size of each section.

● **Procedure to change the output size of split images**

- 1 Press the [Split] button for 1 second or more.



- The Split Output Size dialog box is displayed.

- 2 Press [OFF] or the button of the output size to be changed on the Split Output Size dialog box.



- The output size is changed.

HINT

- When output of split images is enabled, a frame appears on the image to indicate the area of the split image that will be output.



Split output frame
Trimming frame

- The size of the trimming frame changes in accordance with changes to the size of the image frame so that images are automatically split into the selected section size. Images can be split into a maximum of 3 sections.
 - If the split image is smaller than the trimming region, the entire combined image may not completely fit within the selected region.
 - If the configuration of the split images results in one image, the split processing is not applied, and the split output frame does not appear.
-

7.7.2 Exposure

The One shot stitching exposure method using DR Detector is as follows.

IMPORTANT

- If One Shot stitching exposure is carried out, please be careful of the following items.
 - Image copying is not possible.
 - Image replacing is not possible.
 - Exposure condition copying is not possible.
 - Automatic sorting of the order of exposures is not possible.
 - The reading conditions can not be specified.
 - The scattered radiation collection is not possible.
 - Lung lack/body motion blur detection is not possible.
 - Examination sharing is not possible.
 - Merging and separation of studies is not possible
-

- 1 After transitioning from the initial screen to the exposure body part selection screen, select the Exam. Tag for One shot stitching exposure.



- The selected Exam. Tags are displayed on the Exam. Tags display area. By selecting the Exam. tags again, further Exam tags can be added.

2 Press [Perform].



- The exposure screen is displayed.

3 Load 2 or more detectors of the DR detector into the stitching holder.



- "Preparing" will be displayed in the work area until exposure preparation and loading the DR detector in a stitching holder is complete.



- When the exposure preparation of the DR detector loaded into the stitching holder is complete, the work area detector status will be lit blue, and "Ready" will be displayed.

IMPORTANT

- When the DR detector with power off has been loaded on the front side, since the overlapping portion may not be able to be corrected, please make sure to turn on the power of the DR detector loaded into the stitching holder.
- When carrying out table position exposure in 2 DR detectors, the dummy detector is loaded in the upper slot. In addition, please make sure to always load this in the upper slot since reflection of the dummy detector will occur.
- One Shot stitching exposure outputs the merged images by correcting the overlapping portions of the captured image in the DR detector. Through the exposure conditions, since lowering of the horizontal streaks and contrast in the correction area may occur, please carry out exposure so the diagnostic site does not overlap the correction area.
- Please confirm whether the size of the DR detector loaded in the stitching holder fits or not.
- Before exposure, always confirm the position and number of DR detectors loaded in the stitching holder in the exposure screen.

4 Exposure.

- Set up the X-ray device before exposure. Perform exposure after checking the exposure settings.



Press the exposure switch





- When transfer of the exposed image is completed, the image is displayed in the image display area.

IMPORTANT

- Please confirm that the focus hits the Exam. tag for One Shot stitching exposure.

.....

5 Confirm the image combination position.



- If you want to adjust the combination position, press [Adjust].



- This displays the viewer screen.
- Refer to "7.7.1 Screen structure" for the method to manually adjust the merging position.
- Press [Enter] after adjusting the binding position, and return to the exposure screen.

IMPORTANT

- Adjust the combination position by using the markers as supplementary standards in addition to body parts of the subject.

It is also recommended that you arrange the measure in the combined image part during exposure to simplify the confirmation of the combined parts.

.....

6 Press [Output].



- The combined image is output, and the display returns to the initial screen.

IMPORTANT

- Please be sure to confirm that the overlapping portion of the image is combined in a normal position towards the image subjected to One Shot stitching exposure.

.....

HINT

- If you want to change the trimming size when the host is output, from the trimming setting for stitching, press the trimming size button that corresponds to the size and number of loaded DR detectors.



.....

7.7.3 Image adjustment

The adjustment method for One shot stitching exposure image is as follows.

1 Display the image after exposure, and press [Viewer].



- The viewer screen is displayed.
- Perform various image adjustments. For details on how to operate the viewer screen, refer to "3.6 Viewer screen".

IMPORTANT

- Note the following when adjusting images created by stitching exposure.
 - ROI adjustment is not possible.
 - The exposure field automatic recognition function cannot be performed (manual adjustment is possible).
 - If the effective image area is changed, only the image size will change.
-

2 Press [Return] when image adjustment is completed.



- Returns to the exposure screen.



7.8 • CR stitching cassette exposure

7.8.1 Screen structure

● Exposure screen

This is the screen for stitching exposure with CR stitching cassette.



Number	Name	Functions
(1)	Order list	List of exposures
(2)	Combined image display area	The images for combination are displayed. Focus is displayed on selected images.
(3)	Standard gradation button	This button is for selecting the image which will be the image shade standard among the images displayed in the combined image display area. You can only select 1 image.  : Not selected  : Selected
(4)	Selection button (batch selection)	Gathers multiple exposure images associated with the images selected in the order list and displays them in the combined image display area.
(5)	Selection button (individual selection)	Displays the selected images in the order list in the combined image display area.
(6)	Delete button	Deletes the images selected in the combined image display area.
(7)	Combination sequence switch button	Moves the position of the images selected in the combined image display area.

Number	Name	Functions
(8)	Stitching button	Combines the images displayed in the combined image display area. Press this button to display the stitching combination position adjustment screen.
(9)	Adjust button	Performs re-adjustment of the combination position. This button cannot be pressed when combined images are not displayed.

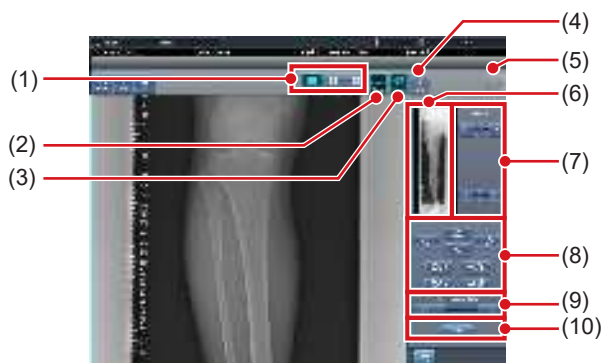


HINT


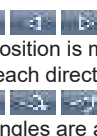


- Adjustments to the combination position of the stitching exposure images are performed on the viewer screen (for stitching combination position adjustment). For details, refer to "7.8.3 Image combination".

● Viewer screen (for stitching combination position adjustment)

This is the screen for adjusting combined position of images taken with stitching exposure with CR stitching cassette.



Number	Name	Functions
(1)	Display layout toggle button	Selects the screen display format from 1×1, 2×1, and 2×2 display options.
(2)	Overlap button (Standard/Inversion)	Switches and displays the plate overlap sequence when checking the combination position. Switches to standard or reversed every time it is pressed. The switching is for display only and does not affect the overlapping sequence during combination.
(3)	Adjust button	Displays and hides the stitching adjustment panel.

Number	Name	Functions
(4)	Proportion button	Changes the displayed transmittance of the overlapped portion. Pressing this button sequentially changes the transmittance. A modified transmittance is not reflected in the output image.
(5)	Reset button	Resets the position of the moved image and the changed density to return them to their initial states.
(6)	Full preview	All images to be combined are displayed.
(7)	Part correction button	Adjusts the density of the image by pressing [] or dragging the bar.
(8)	Move/rotate button	Moves the position of selected images and adjusts their angles.  : image position is moved toward each direction.  : image angles are adjusted.
(9)	Magnification Ratio button/Magnification Ratio bar	Display images are magnified/shrunk by pressing [] or dragging the bar.
(10)	Apply button	Applies the adjusted image combination position.

 **HINT**

● **Moving/rotating an image during image combination**

- For image movement/rotation, the lower image is the operational object. The movement/rotation action is as follows.





Moving

[ |  |  | ] : Moves the image to direction pressed.

The image can also be moved by dragging the center of the image (horizontal stripe portion).



Rotating

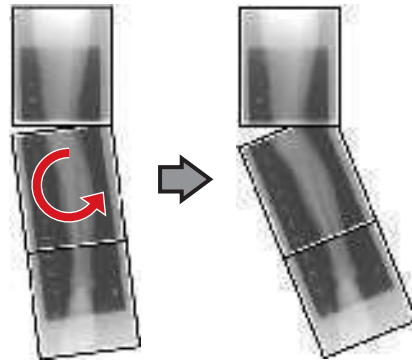
- [] : Lowers the upper left edge of the image
- [] : Raises the upper left edge of the image
- [] : Lowers the upper right edge of the image
- [] : Raises the upper right edge of the image



If you drag the left or right area of the image (horizontal stripe portion) vertically, you can move the upper edge up or down in the direction you are dragging it. If you drag it horizontally, you can move the image horizontally.

● **Linking 3 images**

- When combining 3 images, the lower image will also move/rotate if the central image is moved/rotated.



● **About image display**

- During the image combination, the combined parts (frame parts) displayed in the full preview are magnified and displayed in the image display area as frames.
- The display format and magnified displayed part are as follows:

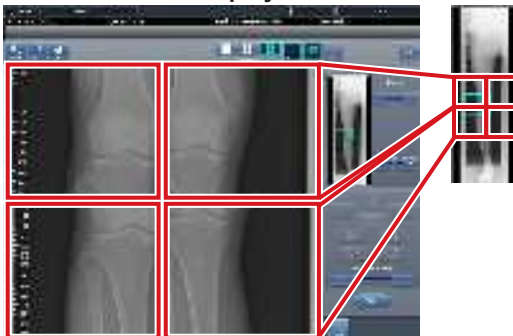
1×1 display



2×1 display



2×2 display



- 2×2 display can only be selected when combining 3 images.
 - Set the plate overlap sequence during installation.
-

● **Control panel (Output - for host)**

This is the control panel to perform setting of host output conditions for combined stitching images.



Number	Name	Functions
(1)	Trimming size button	This button is used to select the trimming size. Set to hide/unhide trimming size button during installation.
(2)	[Split] button	This button is used to split combined images and output these images to hosts. The device switches between ON and OFF every time the button is pressed. Press and hold the button to select the size of each section.

● **Procedure to change the output size of split images**

- 1 Press the [Split] button for 1 second or more.



- The Split Output Size dialog box is displayed.

2 Press [OFF] or the button of the output size to be changed on the Split Output Size dialog box.



- The output size is changed.

HINT

- When output of split images is enabled, a frame appears on the image to indicate the area of the split image that will be output.



Split output frame
Trimming frame

- The size of the trimming frame changes in accordance with changes to the size of the image frame so that images are automatically split into the selected section size. Images can be split into a maximum of 3 sections.
 - If the split image is smaller than the trimming region, the entire combined image may not completely fit within the selected region.
 - If the configuration of the split images results in one image, the split processing is not applied, and the split output frame does not appear.
-

7.8.2 Exposure

The exposure method for CR stitching cassette is as follows.

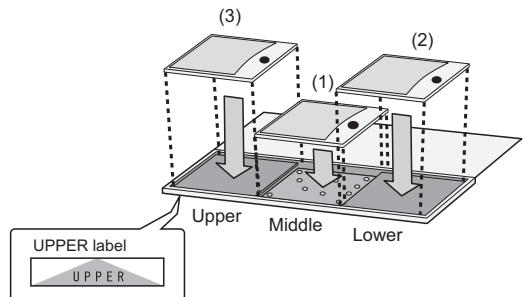
IMPORTANT

- For the stitching exposure images, make sure that the combined parts are combined in the correct positions.
 - If there is gap between the combined images, manually adjust the image position of the combined parts using the viewer screen (for stitching combination position adjustment). It is also recommended that you arrange a measure in the combined image part during exposure to confirm the combined parts easier.
-

HINT

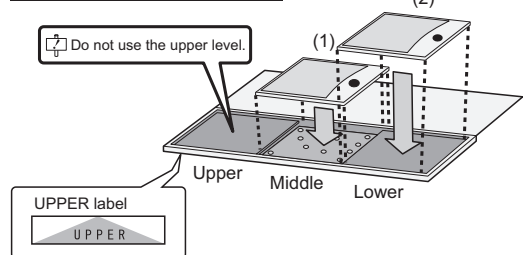
- The sequence by which the CR cassette is mounted on the CR stitching cassette is as follows (The UPPER label indicates the top).

If exposing with 3 REGIUS plates



- To expose by mounting 2 CR cassettes on stitching dedicated cassettes for 3 images, use the middle and lower mounting positions only to mount the CR cassette (the UPPER label indicated the top).

If exposing with 2 REGIUS plates



- 1 Focus on Exam. Tags to register the CR stitching cassette.



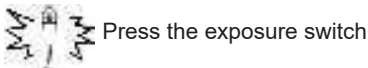
- 2 Read the barcode of the CR stitching cassette with a barcode reader.



- The barcode number read is displayed in the Exam. Tag display area. This completes the read preparation for REGIUS.

- 3 Perform exposure with the registered CR stitching cassette.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



- 4 Set the REGIUS plate on the read cassette and read by REGIUS.



- The image read from the barcode on the CR stitching cassette will be displayed.

7.8.3 Image combination

Images exposed by CR stitching cassette can be combined automatically or manually. The procedure below explains an example of combining 3 images.

IMPORTANT

- Adjust the combination position by using the markers as supplementary standards in addition to body parts of the subject. It is also recommended that you arrange the measure in the combined image part during exposure to simplify the confirmation of the combined parts.
- In stitching exposure, when plates overlap and are arranged so that there is no image loss in each plate's boundaries, there might be a slight gap in the marker position because of a minute difference in magnification. After taking this into account, confirm the combination position through the marker.

- 1 Select the images to be combined.

- Select the images to be combined from the order list and press [] or [].



- The selected images are displayed in the combined image display area.
- If you pressed [], continuously select the associated images (second and third).

HINT

- [] and [] can be pressed only when the Exam. Tag for stitching exposure has been selected.

2 Press [Stitching].



- The combination position confirmation screen is displayed.

3 Press [OK].

- To adjust the combination position manually, press [Adjust] and display the viewer screen (for stitching combination position adjustment). For information concerning the method of manually adjusting the combination position, refer to "7.8.1 Screen structure".
- Press [Cancel] to return to the previous screen.



- The combined image is displayed.
- The combined image is added to the order list.

IMPORTANT

- Press the [Adjust] button after rotating combined images on the exposure screen to reset the image rotation.

.....

HINT

- A merged image can also be displayed after the pre-merged images in the order list. For more details, contact Konica Minolta technical representatives.



.....

4 Press [].



- The combined image is output, and the display returns to the initial screen.

IMPORTANT

- The stitching image is output first, then non-stitching images are output.
 - If images are output before stitching, the stitching image is output last.
-

HINT

- If outputting the combined image in sections, set the number of sections by [Split].
 - The order of combined image output can be changed. For more details, contact Konica Minolta technical representatives.
-

7.8.4 Image adjustment

The adjustment method for the combined image is as follows.

1 Display the combined image and press [Viewer].



- The viewer screen is displayed.
- Perform various image adjustments. For details on how to operate the viewer screen, refer to "3.6 Viewer screen".

IMPORTANT

- Note the following when adjusting images created by stitching exposure.
 - ROI adjustment is not possible.
 - The exposure field automatic recognition function cannot be performed (manual adjustment is possible).
 - If the effective image area is changed, only the image size will change.
-

2 Press [Return] when image adjustment is completed.



- Returns to the exposure screen.



7.9 • SIGMA stitching exposure

7.9.1 Screen structure

● Exposure screen

This is the screen for SIGMA stitching exposure using Reina buckies.



Number	Name	Functions
(1)	Order list	List of exposures
(2)	Combined image display area	The images for combination are displayed. Focus is displayed on selected images.
(3)	Standard gradation button	This button is for selecting the image which will be the image shade standard among the images displayed in the combined image display area. You can only select 1 image.  : Not selected  : Selected
(4)	Selection button (batch selection)	Gathers multiple exposure images associated with the images selected in the order list and displays them in the combined image display area.
(5)	Selection button (individual selection)	Displays the selected images in the order list in the combined image display area.
(6)	Delete button	Deletes the images selected in the combined image display area.
(7)	Combination sequence switch button	Moves the position of the images selected in the combined image display area.
(8)	Stitching button	Combines the images displayed in the combined image display area. Press this button to display the stitching combination position adjustment screen.

Number	Name	Functions
(9)	Adjust button	Performs re-adjustment of the combination position. This button cannot be pressed when combined images are not displayed.
(10)	SID setting	Select the SID value.

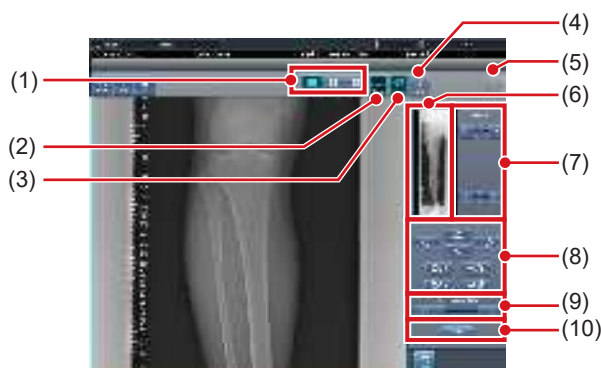


HINT



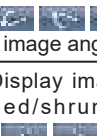

- Adjustments to the combination position of the stitching exposure images are performed on the viewer screen (for stitching combination position adjustment). For details, refer to "7.8.3 Image combination".

● Viewer screen (for stitching combination position adjustment)

This is the screen for adjusting combined position of images taken using Reina buckies with stitching exposure.



Number	Name	Functions
(1)	Display layout toggle button	Selects the screen display format from 1×1, 2×1, and 2×2 display options.
(2)	Overlap button	Switches and displays the plate overlap sequence when checking the combination position. Switches to standard or reversed every time it is pressed. The switching is for display only and does not affect the overlapping sequence during combination.
(3)	Adjust button	Displays and hides the stitching adjustment panel.
(4)	Proportion button	Changes the displayed transmittance of the overlapped portion. Pressing this button sequentially changes the transmittance. A modified transmittance is not reflected in the output image.

Number	Name	Functions
(5)	Reset button	Resets the position of the moved image and the changed density to return them to their initial states.
(6)	Full preview	All images to be combined are displayed.
(7)	Part correction button	Adjusts the density of the image by pressing [] or dragging the bar.
(8)	Move/rotate button	Moves the position of selected images and adjusts their angles.  : image position is moved toward each direction.  : image angles are adjusted.
(9)	Magnification Ratio button/Magnification Ratio bar	Display images are magnified/shrunk by pressing [] or dragging the bar.
(10)	Apply button	Applies the adjusted image combination position.

 **HINT**

● **Moving/rotating an image during image combination**

- For image movement/rotation, the lower image is the operational object. The movement/rotation action is as follows.





Moving

[] [] [] [] : Moves the image to direction pressed.

The image can also be moved by dragging the center of the image (horizontal stripe portion).



Rotating

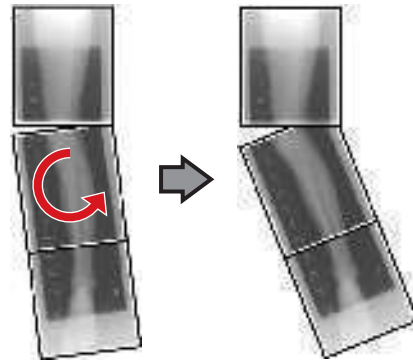
- [] : Lowers the upper left edge of the image
- [] : Raises the upper left edge of the image
- [] : Lowers the upper right edge of the image
- [] : Raises the upper right edge of the image



If you drag the left or right area of the image (horizontal stripe portion) vertically, you can move the upper edge up or down in the direction you are dragging it. If you drag it horizontally, you can move the image horizontally.

● **Linking 3 images**

- When combining 3 images, the lower image will also move/rotate if the central image is moved/rotated.



● **About image display**

- During the image combination, the combined parts (frame parts) displayed in the full preview are magnified and displayed in the image display area as frames.
- The display format and magnified displayed part are as follows:

1×1 display



2×1 display



2×2 display



- 2×2 display can only be selected when combining 3 images.
 - Set the plate overlap sequence during installation.
-

● **Control panel (Output - for host)**

This is the control panel to perform setting of host output conditions for combined stitching images.



Number	Name	Functions
(1)	Trimming size button	This button is used to select the trimming size. Set to hide/unhide trimming size button during installation.
(2)	[Split] button	This button is used to split combined images and output these images to hosts. The device switches between ON and OFF every time the button is pressed. Press and hold the button to select the size of each section.

● **Procedure to change the output size of split images**

- 1 Press the [Split] button for 1 second or more.



- The Split Output Size dialog box is displayed.

- Press [OFF] or the button of the output size to be changed on the Split Output Size dialog box.



- The output size is changed.

HINT

- When output of split images is enabled, a frame appears on the image to indicate the area of the split image that will be output.



Split output frame
Trimming frame

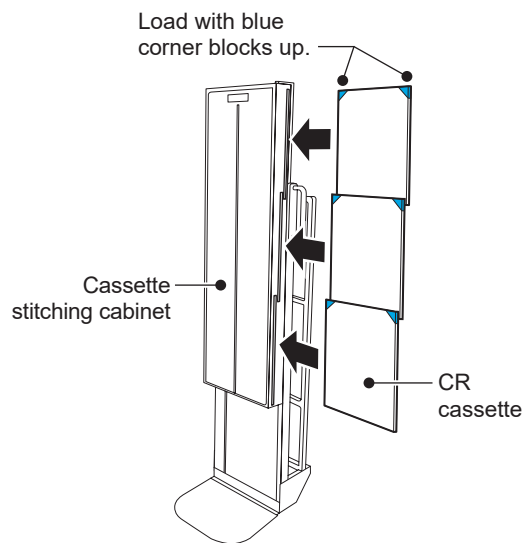
- The size of the trimming frame changes in accordance with changes to the size of the image frame so that images are automatically split into the selected section size. Images can be split into a maximum of 3 sections.
 - If the split image is smaller than the trimming region, the entire combined image may not completely fit within the selected region.
 - If the configuration of the split images results in one image, the split processing is not applied, and the split output frame does not appear.
-

7.9.2 Exposure

The Reina bucky-based exposure method is as follows. This is an example using three images.

IMPORTANT

- For the stitching exposure images, make sure that the combined parts are combined in the correct positions.
- If there is gap between combined images, manually adjust the image position of the combined parts using the viewer screen (for stitching combination position adjustment). It is also recommended that you arrange a measure in the combined image part during exposure to confirm the combined parts easier.
- When loading a CR cassette into a cassette stitching cabinet, be careful of the following points.
 - Load the CR cassette so that the black side of the plate (the front) is facing towards the patient.
 - Load the CR cassette so that the blue corner blocks are up.
 - Check that the whole CR cassette is completely loaded.



.....

1 Set the upper row of the Reina buckies for the first exposure, and then set the reading sequence by pressing the exposure conditions display areas sequentially.



• The first exposure is registered.



• The second exposure is registered.



• The third exposure is registered.

2 Perform exposure using Reina buckies.

- Configure the X-ray device and check the exposure conditions before making an exposure.



Press the exposure switch

3 Read CR cassette.



- After the first image is displayed, the indication "First" disappears. "First" is indicated for the thus far "Second" image, and "Second" for the thus far "Third" image (the numbering changes in order).
- Repeat Step 3 to read the remaining CR cassette.



- After every CR cassette is read, the numbers disappears.

IMPORTANT

- If the image rotation settings have not been specified with the SIGMA stitching Exam. Tags, rotate the images before combining them.
-

HINT

- You can also specify the reading sequence in the order list. Set the upper stage of the Reina buckies for the first exposure, and then press the exposures sequentially.



- If you press the exposure conditions display area where the reading sequence of the examinations is specified, the specified reading sequence is cancelled.
-

7.9.3 Image combination

You can automatically or manually combine the stitching images exposed using the Reina buckies. The following procedure describes an example of combining 3 images.

IMPORTANT

- If SID is 1.7m or less, it may be necessary to adjust the combination positions manually.
- Adjust the combination position by using the markers as supplementary standards in addition to body parts of the subject.

It is also recommended that you arrange the measure in the combined image part during exposure to simplify the confirmation of the combined parts.

- In stitching exposure, when plates overlap and are arranged so that there is no image loss in each plate's boundaries, there might be a slight gap in the marker position because of a minute difference in magnification. After taking this into account, confirm the combination position through the marker.
-

1 Select the images to be combined.

- Select the images to be combined from the order list and press [] or [].



- The selected images are displayed in the combined image display area.
- If you pressed [], continuously select the associated images (second and third).

HINT

- [] and [] can be pressed only when the set key for stitching exposure has been selected.
-

2 Check the SID value.



- HINT**
- The last specified SID value is displayed.
 - You can display the SID value by setting it using the service tool. When the SID value is not displayed, contact Konica Minolta technical representatives.
-

3 Press [Stitching].



- The combination position confirmation screen is displayed.

4 Press [OK].

- To adjust the combination position manually, press [Adjust] and display the viewer screen (for stitching combination position adjustment). For information concerning the method of manually adjusting the combination position, refer to "7.9.1 Screen structure".
- Press [Cancel] to return to the previous screen.



- The combined image is displayed.
- The combined image is added to the order list.

- IMPORTANT**
- Press the [Adjust] button after rotating combined images on the exposure screen to reset the image rotation.
-

- HINT**
- A merged image can also be displayed after the pre-merged images in the order list. For more details, contact Konica Minolta technical representatives.



.....

5 Press [].



- The combined image is output, and the display returns to the initial screen.

IMPORTANT

- The stitching image is output first, then non-stitching images are output.
- If images are output before stitching, the stitching image is output last.

.....

HINT

- If outputting the combined image in sections, set the number of sections by [Split].
- The order of combined image output can be changed. For more details, contact Konica Minolta technical representatives.

.....

7.9.4 Image adjustment

The adjustment method for the combined image is as follows.

1 Display the combined image and press [Viewer].



- The viewer screen is displayed.
- Perform various image adjustments. For details on how to operate the viewer screen, refer to "3.6 Viewer screen".

IMPORTANT

- Note the following when adjusting images created by stitching exposure.
 - ROI adjustment is not possible.
 - The exposure field automatic recognition function cannot be performed (manual adjustment is possible).
 - If the effective image area is changed, only the image size will change.

.....

2 Press [Return] when image adjustment is completed.



- The exposure screen is displayed.

7.10 Mammogram exposure

This section describes the screen structure and procedure for mammogram exposure.

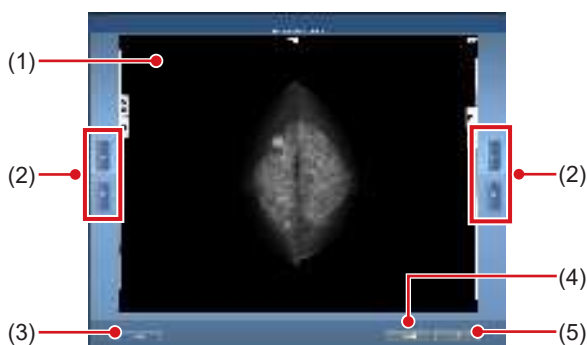
IMPORTANT

- For United States of America, this device is not intended to use for Mammography.
- If the mammogram print button on the patient registration and list screens are set to [Mammo Print OFF], change the setting go [Mammo Print ON].



7.10.1 Screen structure

The screen structure for the adjustment of the position of the right and left breast images in mammogram exposure is as follows.



Number	Name	Functions
(1)	Image preview area	Mammogram images are previewed in this area.
(2)	Vertical positioning button	Adjust the position of the images in the vertical direction. Operate the right and left vertical positioning buttons to adjust the position of the right and left images, respectively.

Number	Name	Functions
(3)	Segment flip button	Replaces the right and left images with each other. The images are replaced every time you press the button.
(4)	Cancel button	Cancels outputting image in AB format.
(5)	OK button	Outputs mammogram images in AB format.

7.10.2 Exposure

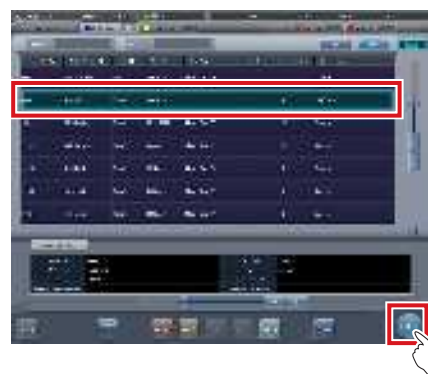
The procedure for mammogram exposure is as follows. The procedure is explained using barcode registration as an example.

IMPORTANT

- Using EF processing for mammogram images (standard processing) may produce artifacts in the high contrast area due to strong edge effect, which is characteristic of this processing. You should use hybrid processing for mammogram images in order to avoid such phenomena from appearing on the chest wall.

1 Select or register the examination for which mammogram exposure is to be conducted.

- In the case of list screen, select the examination.
- In the case of patient registration screen, register the examination.
- Press [Perform].



- The body part selection screen is displayed.
- If linked with host system such as RIS, the exposure screen is displayed.
→ Go to step 4

2 Select the Exam. Tag for mammogram exposure on the body part selection screen.



- The exposure body part is registered.

3 Press [Perform].



- The exposure screen is displayed.

4 Focus on the image display area to register the Mammography cassette.



5 Read the barcode of the Mammography cassette with a barcode reader.



- The barcode number read is displayed in the Exam. Tag display area. This completes the read preparation for REGIUS.

6 Select image resolution (High) on the [Acquisition] tab.



IMPORTANT

- In the case of mammogram exposure, [Standard] is 87.5 μ m and [High] is 43.75 μ m.

.....

7 Expose using the registered Mammography cassette.

- Make sure the image display areas to be exposed are focused.
- Set up the X-ray device before exposure. Perform exposure after checking the exposure settings.



Press the exposure switch

8 Read the Mammography cassette with REGIUS.



- The image read from the barcode on the Mammography cassette will be displayed.

IMPORTANT

- In the case of X-ray link, make sure exposure settings are displayed for the image after exposure.
- Confirm that additional information such as markers and stamps is not superimposed on the breast area.

HINT

- Overlay settings (LR, CC, MLO, etc.) are made on the [Overlay] tab (host or printer). For information on the overlay setting method, refer to "6.4.22 Overlay".
- If the image needs revision (chest wall blackening process, etc.) when checking the image by pressing [Preview] of overlay, adjust the image on the viewer screen.

9 Perform the second exposure or more.

- Repeat from step 4 to perform the second exposure or more.

10 Press [] for the first image.



11 Press [] for the second image.

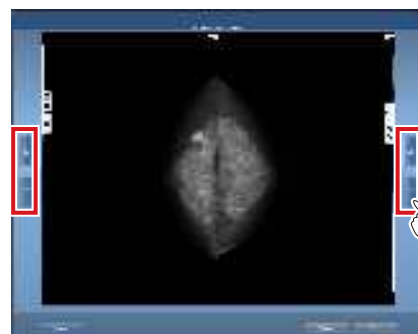


- The breast position adjustment screen is displayed. Two images are displayed on the right and left, and the vertical position of them is automatically adjusted.

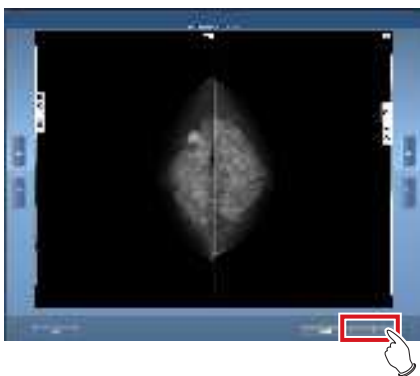
HINT

- When the two images are transposed with each other, press [Swap] to replace them with each other.

12 Fine-tune the position of the right and left images if necessary.



13 Press [OK] when fine-tuning is completed.



- The exposure screen is displayed.

14 Press [Viewer].



- The image is output, and the display returns to the initial screen.

7.10.3 Chest wall blackening process adjustment

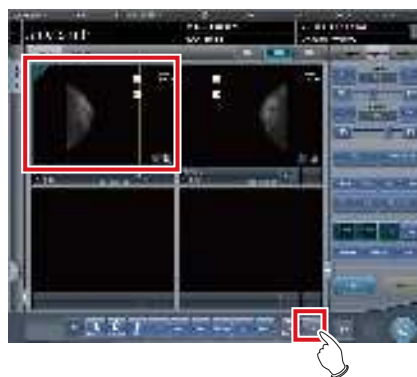
Chest wall blackening process for the mammogram image is conducted on the viewer screen.

HINT

- Chest wall blackening process is [ON] under ordinary circumstances.

.....

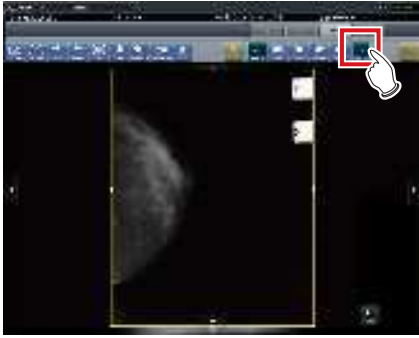
1 Focus on the image to be adjusted and press [Viewer].



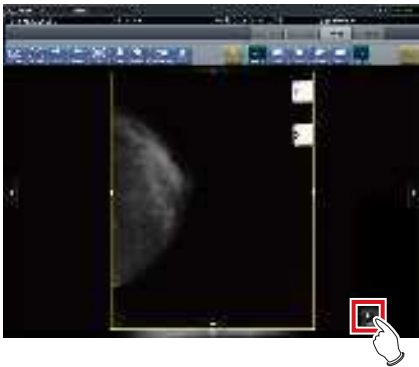
- The viewer screen is displayed.

2 Select the [Masking] tab.



3 Press [Chest wall].

- Pressing [Chest wall] toggles blackening process between [ON] and [OFF].

4 Click [Return].

- Return to the exposure screen.
- When outputting, make sure chest wall blackening process is applied.

7.11 • Media output

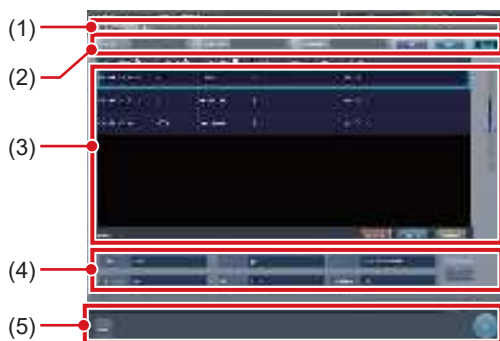
When outputting examination results to media, use the media output function.

IMPORTANT

- When outputting to CD-R and DVD-R media, this device must be equipped with a writable media drive.
- Since writing to CD-R and DVD-R media uses the disc-at-once method, additional data cannot be added on the media once data is written.
- The patient ID is used in the image file name when outputting to JPEG. When the patient ID file name has restricted characters (. \ : * ? " < > |), they are replaced with "_". Be careful not to misidentify patients.

7.11.1 Screen structure

Structure of the media output screen is as follows.



Number	Name	Functions
(1)	Sorting tab	Transition with the list screen. When you switch from the system monitor screen to the media output screen, tabs other than the [Media] tab are not displayed.
(2)	Filter items	Keyword input column for refined display for the patient displayed in the [Media] tab.
(3)	List display area	Examinations registered on the [Media] tab are displayed.
(4)	Conditions setting area	The setting when outputting to media is displayed. If you press [Set], the setting screen for media output is displayed.

Number	Name	Functions
(5)	Tool bar area	[Run] and [Close] are displayed. [Close] is only displayed when the display transitioned from the system monitor screen to the media output screen. Press [Run] to start writing. Press [Close] to return to the system monitor screen.

7.11.2 Output to media

Perform outputting to media using the following procedure. First, show the media output screen from the list screen or the system monitor screen.

1 Display the media output screen.

- Press the [Media] tab to display it from the list screen.



- Press [Media] to display it from the system monitor screen.



- The media output screen is displayed.

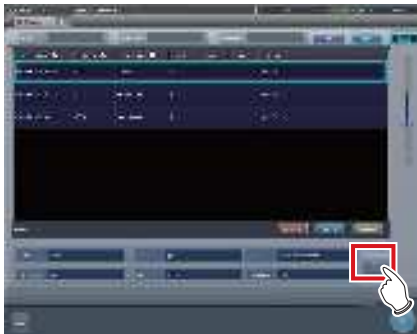
2 Press the examination that will be output to media to select.

- When outputting multiple examinations, press the other examinations in succession to select them.
- Pressing the examination with a selected status cancels the selection.
- When selecting all examinations, press [Select All].
- When canceling all selected statuses, press [Remove All].
- When selecting a range, select the start and end points after pressing [Area Select].



- The examination you pressed will have a selected status.

3 Press [Set].



- The setting screen is displayed.

4 Select the output destination. Press [HDD] or [DVD/CD].



- The drive information of the output destination is displayed in [Media:]. The capacity of the output destination is displayed in [Capacity:].

5 Select the image format. Press [JPEG] or [PDI].

- When [JPEG] is pressed, select image size and image quality. Select one image size from [25%], [50%], [75%], or [100%]. Select one image quality from [Low], [Standard], or [High].



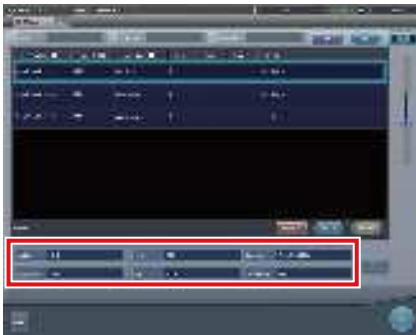
HINT

- When image size becomes larger and image quality becomes higher, data volume during output becomes larger.
- The JPEG image size is the aspect ratio for the original image. For example, when the image is at 1,500 × 1,000 pixels, it has the following image sizes:
 - 100%, 1,500 × 1,000 pixels
 - 75%, 1,125 × 750 pixels
 - 50%, 750 × 500 pixels
 - 25%, 375 × 250 pixels
- The JPEG image quality is the image quality (compression ratio) when the JPEG image is created. The relationship between the image quality and the compression ratio is as follows:
 - High: image quality 100 (uncompressed)
 - Standard: image quality 75
 - Low: image quality 50

.....

6 Press [OK].

- Pressing [Cancel] returns to the previous screen. This time, the set contents are not reflected.



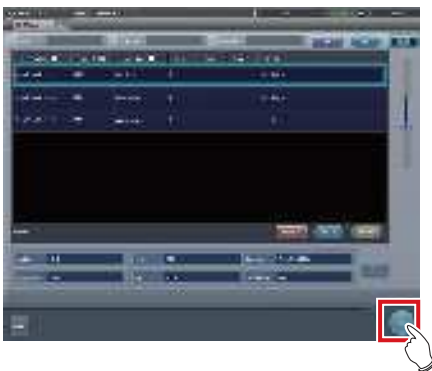
- Output settings are reflected, and when returning to the original screen, the contents are displayed in the conditions setting area.

HINT

- The set contents are preserved even after this device is restarted.

.....

7 Press [Run].



- When outputting to JPEG, specify the output destination folder for the image. Specify the folder name, then press [OK].
- You can enter up to 15 characters.
- Press [Cancel] to stop media output.



- The screen that shows the progress status is displayed and creation of the write data starts.
- Press [Cancel] to stop media output.



- The screen that shows the progress status is displayed and writing to media starts.
- When writing to media is finished, the display returns to the original screen.

**HINT**

- Exposed images of completed examinations that include 1 or more sheets of exposed images become targets for media output.
- Rejected images cannot be output.
- The following examinations cannot be output to media even if exposed images are included.
 - Paused examination.
 - Examination with a history of deleted images.
 - Examination of rejected images only.
- When an image is output to media in PDI format, output it together with a PDI viewer. Depending on the settings at installation, it may also be possible to enable automatic launching of the PDI viewer.
- Do not specify the drive in which the software for this device is installed as the output destination drive.
- In the examination that was output to media (examination that has one or more images that was normally output), an icon is displayed in the [Output finished] field of the list display area.
- When you press [Area Select] to select the range, the button display changes to [Area Selecting]. If range is selected or cancelled, the button display will return to [Area Select].
- Pressing [Area Select] to select the start point of the selected range displays that examination in a color that indicates a temporary selection. Selecting the end point of the selected range displays all examinations of the selected range in the normal color.
- When start point is selected in the selected range, performing the following operations cancels the selected status of the range.
 - [Select All] is pressed.
 - [Remove All] is pressed.
 - [Area Selecting] is pressed.
 - Refined search is on.
 - [Clear] is pressed.
 - The display is transitioned to another screen from the media output screen.
- The file name of the image to be output to media is automatically added in the following format (folder structure):
 - Folder name (specified)
 - ↳Folder (PatientID)
 - ↳Folder (ExposureDate)
 - ↳File (PatientID_Name_Exam.Tag_
 - ExposureTime(seconds)_ImageNumber.jpg)

7.11.3 Operation of the PDI viewer

This section describes how to start and operate the PDI viewer.

**HINT**

- The device to start the PDI viewer must meet the following specifications.
 - OS: Windows 2000, Windows XP, Windows Vista, or Windows 7
 - CPU: Pentium III processor or higher
 - Memory: 256 MB RAM or more
 - Graphic: 32 bit graphic board or higher
 - Resolution: 1024 × 768 pixels or finer
 - CD-ROM drive: (24 ×) or faster

● Start-up of the PDI viewer

1 Set the disc on the disc drive of this device.

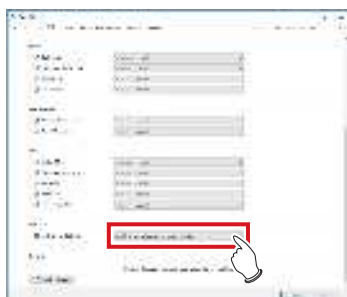
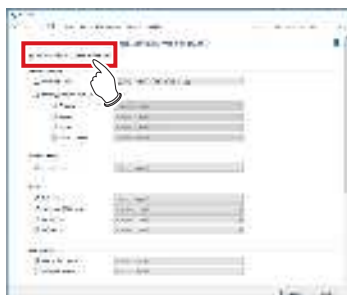
- The [INDEX.HTM] screen is displayed.

**HINT**

- If it does not start automatically, double-click the [INDEX.HTM] file icon in the disc drive window.
- If you start up the PDI viewer from the CD on Windows 7 and Windows 10, the dialog screen of [AutoPlay] will be displayed. Press [Run PDIView.exe] to start up the PDI viewer.



- Following settings is required for the automatic start of the PDI viewer.
 - Check [Use AutoPlay for all media and devices] on the [Hardware and Sound/AutoPlay] screen, then select [Install or run program from your media] on the [Software and games] screen on the control panel of Windows.



2 Press [PDI Viewer].



- A security warning message is displayed.

HINT

- For Windows 10, cannot start the PDI viewer from the [INDEX.HTM] screen of the Microsoft Edge. Display the [INDEX.HTM] screen on the Internet Explorer.

3 Press [Run].



- The PDI viewer is displayed.

HINT

- The following message may be displayed when you press [Run]. Then press [Run].

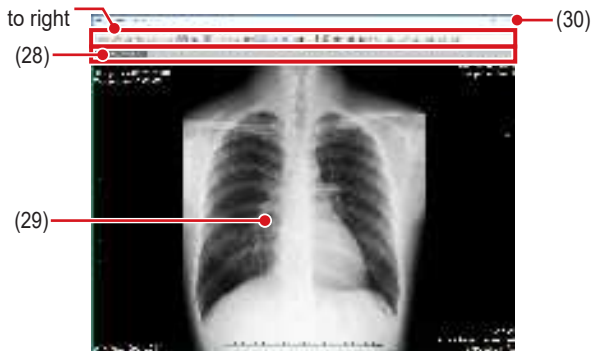


● **Operation of the PDI viewer**

The following buttons are displayed on the PDI viewer.

(1) to (27) in order from left

to right



Number	Name	Functions
(1)	Patient list	Displays the patient list dialog.
(2)	Import file	Reads the data stored in the drive.
(3)	Go to next patient	Switches the screen to that of the next patient.
(4)	Go to prev patient	Switches the screen to that of the previous patient.
(5)	Go to prev series	Goes to the previous DICOM series screen.
(6)	Go to next series	Goes to the next DICOM series screen.
(7)	Switch mode (Tile)	Changes the mode to the tile display mode.
(8)	Switch mode (Stack)	Changes the mode to the stack display mode.
(9)	Change number of frames	Changes the number of frames of the image.
(10)	Tag information	Displays the DICOM tag information.
(11)	Gradation process	Apply gradation processing to the image.
(12)	Zoom	Zooms in/out on the image.
(13)	Pan	Move the image.
(14)	Magnifier	Enlarges the area pointed with the mouse pointer.
(15)	Contrast invert	Reverses black and white on the image.
(16)	Overlay	Displays or hides the overlay. <div style="border: 1px solid black; padding: 2px; display: inline-block;"> HINT • Not used in this device. </div>
(17)	Horizontal flip	Reverses the image in the horizontal direction.
(18)	Vertical flip	Reverses the image in the vertical direction.
(19)	Right turn	Turns the image to the right.
(20)	Left turn	Turns the image to the left.
(21)	Straight line	Draws a straight line.
(22)	Text	Press this to input text.
(23)	Distance	Measures the distance.

Number	Name	Functions
(24)	Angle	Measures the angle.
(25)	Rectangle area	Measures the area of a rectangle.
(26)	Ellipse area	Measures the area of an ellipse.
(27)	Polygon area	Measures the area of a polygon.
(28)	Image change tab	Changes the image.
(29)	Image display area	Displays the image.
(30)	[×]	Closes the PDI viewer.

IMPORTANT

- All measurement functions display a rough indication, and may differ from actual measurements (accuracy and performance are not guaranteed).

7.12 • Multi-study

This section describes the screen structure of the exposure screen and procedure of examination when performing examination with the multi-study.

In multi-study, individual order items displayed in the Study List are referred to as examinations.

In addition, a single exposure taken for each examination unit displayed in the Exam. List is referred to as an exposure.

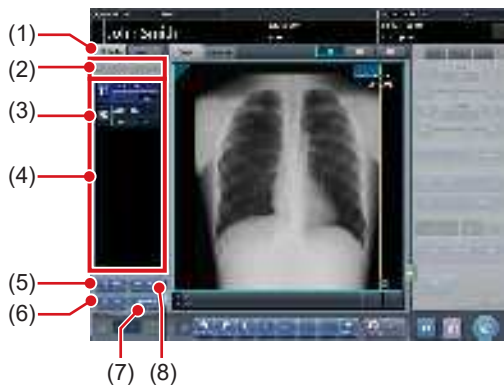
IMPORTANT

- Multi-study and real-time back up cannot be used simultaneously.
- If the total number of exposures surpasses 512, further examinations cannot be acquired. If the Get Study button is pressed and the total number of exposures surpasses 512, an error message is displayed.

7.12.1 Screen structure

Structure of the screen when performing examination with the multi-study is as follows.

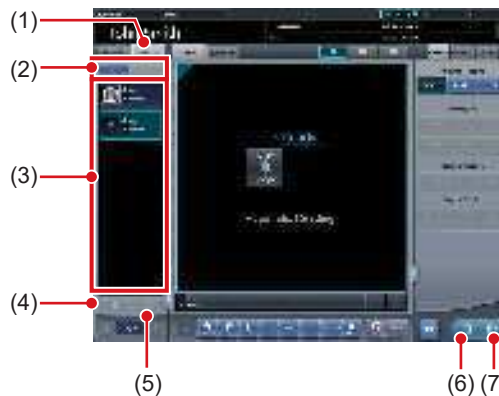
Exposure screen ([Study List] tab screen)



Number	Name	Functions
(1)	Study List tab	Displays the Study List tab screen.
(2)	Study switching button	Pressing [] displays the first page of the examination item list, and [] displays the last page. In this way, you can switch the target examination to be exposed.

Number	Name	Functions
(3)	Status Icon	<ul style="list-style-type: none"> : Unexposed : Exposed (Saved) : Outputting : Output finished : Paused : In progress : Finished (Exposed) : Delete
(4)	Examination item list	Examination item list is displayed.
(5)	Add Study button	Adds an examination item to the examination item list.
(6)	Get Study button	Carries out MWM using the patient information on the exposure screen as the search key. If an examination that is not included in the displayed examination item list is found, that examination is additionally displayed.
(7)	Output Image button	Outputs images that have not been output in the examination items selected using the button. This outputs on an examination item basis.
(8)	Delete Study button	Deletes the examination selected with the button from the examination item list.

Exposure screen ([Exam.Tag] tab screen)



Number	Name	Functions
(1)	Exam. Tag tab	Displays the Exam. Tag tab screen.
(2)	Exposure switching button	Pressing [] displays the first page of the exposure item list, and [] displays the last page. In this way, you can switch the target examination to be exposed.

Number	Name	Functions
(3)	Exposure item list	Exposure item list is displayed.
(4)	Image copy button	Copies the exposed image (examination).
(5)	Image replace button	Replaces the exposed image (examination) with another.
(6)	Exposed image button	Saves the exposed image and operating state.
(7)	Output button	Outputs the exposed images.

Body part selection screen



Number	Name	Functions
(1)	Accession No.	Accession number of the displayed examination is displayed.
(2)	Issue button	Issues the accession number.
(3)	Delete button	Deletes exposures individually after selecting the exposure to be deleted.

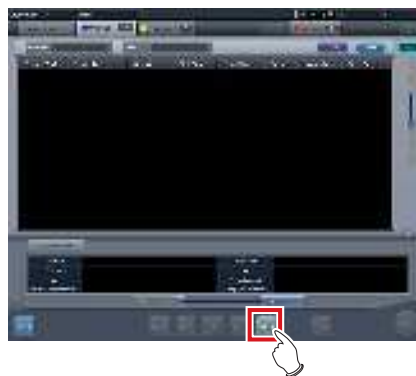
IMPORTANT

- Aside from the screen structures explained here, each screen is the same as usual. However, [] cannot be pressed on the exposure screen when performing an examination with multi-study.

7.12.2 Multi-study examination from the list screen

The following describes the procedure for implementing the multi-study based examination from the list screen.

1 Press [Refresh] on the list screen.



- It acquires the information from the higher system to update the list.

2 Select the examination item.



- The selected examination is highlighted.

3 Press [Perform].

- Exposure screen ([Exam.Tag] tab screen) is displayed.
- A list of exposures relevant to the selected examination is displayed.

4 Select the first exposure in the shot list.**5 Perform exposure.**

- You can use the exposure functions and others in the same way as you do in the ordinary examinations. For more information, refer to "5.2 Exposure procedure with DR Detector (Basic connection)" and after.

**6 Select the second exposure to be exposed.**

- When there are two or more exposure items, repeat the same procedure to proceed with the second and later exposures.

**7 After performing the exposure, press [] or [].**

- Press [] to save the exposed image. Press [] to output the exposed image.



- After the image is saved or output, the exposure screen ([Study List] tab screen) is displayed.

8 Press the second examination.

- When there are two or more exposure items, press the intended examination and proceed with the exposure using the same procedure.



- Exposure screen ([Exam.Tag] tab screen) is displayed.
- Continue with your exposure using the procedures described in Steps 4 to 7.

9 When exposure of every examination is completed, press [].



- The display returns to the initial screen.

HINT

- Exposures can be added or deleted even after moved to the body part selection screen.
- In case of the automatic 1×1 display screen, next exposure can be displayed by pressing [NEXT] displayed in the Exam. Tags display area after completing the exposure of 1 examination.



.....

7.12.3 Multi-study examination from patient registration screen

When conducting examination by multi-study from the patient registration screen, use the following procedure.

1 Enter the search conditions from the Patient registration screen.



2 Press [Search].



- A list of examinations corresponding to the entered conditions is displayed.

3 Select a single target examination to be exposed.



4 Press [OK].

- Press [Cancel] to return to the previous screen.



- The Patient registration screen is displayed.

5 Press [Perform].



- Exposure screen ([Exam.Tag] tab screen) is displayed.
- A list of every exposure of the selected patient is displayed in the exposure list.

6 Select the first exposure in the shot list.



7 Perform exposure.

- Exposure and other functions can be operated same as normal examination. For detail, refer to "5.2 Exposure procedure with DR Detector (Basic connection)" and later.



8 Select the second exposure to expose the examination.

- When there are two or more exposure items, repeat the same procedure to proceed with the second and later exposures.



9 After carrying out the exposure, press [] or [].

- Press [] to save the exposed image. Press [] to output the exposed image.



- After the image is saved or output, the exposure screen ([Study List] tab screen) is displayed.

10 Press the second examination.

- When there are two or more exposure items, press the intended examination and proceed with the exposure using the same procedure.



- Exposure screen ([Exam.Tag] tab screen) is displayed.
- Continue with your exposure using the procedures described in Steps 5 to 8.

11 Once all the examinations are finished, press [].



- The display returns to the initial screen.

HINT

- Exposures can be added or deleted even after switching to the body part selection screen.
- In case of the automatic 1x1 display screen, next exposure can be displayed by pressing [NEXT] displayed in the Exam. Tags display area after completing the exposure of 1 examination.



.....

7.12.4 Additional exposure in the multi-study

The following describes how to add exposures to the examination item.

IMPORTANT

- The maximum number of exposures that can be acquired, including examinations which have already been started with exposed images, is 512. If the total number of exposures surpasses 512, an error message is displayed.

.....

1 Press [Add Study] on the exposure screen ([Study List] tab screen).



- The Body part selection screen is displayed.

2 Select the body part targeted for exposure.

- For the body part selection procedure, refer to "5.2.4 Manual body part selection".



HINT

- You can issue the accession number by pressing [Issue].

.....

3 Press [OK].



- Added exposures are displayed in the exposure item list on the exposure screen ([Study List] tab screen).

7.12.5 Deletion of exposures in the multi-study

The following describes how to delete exposures in the exam. item.

1 Select the exposure items to be deleted from the exposure screen ([Study List] tab screen).

- For the selection, press the icon on the left side of the exposure item.



- After the selection, the button portion on the left end is focused on.

2 Press [Del Study].



- The icon turns to [**i**] indicating the exposure item is in the deleted state.

HINT

- When canceling the deleted state of the exposure item, select the currently deleted exposure item again.
- For the selection, press [**ti**] icon to the left side of the exposure item.



- [Del Study] button changes to [Undelete] button.



- Press [Undelete].



- The exposure item is restored from the deleted state.

.....

7.12.6 Image output per examination in the multi-study

The following describes how to output every image that has been exposed but not yet output on an examination item basis.

HINT

- If you want to output exposed images on a piece-by-piece basis, press [**ti+**] on [Exam.Tag] tab screen.

1 Select the exposure item to be output from the exposure screen ([Study List] tab screen).

- For the selection, press the icon on the left side of the exposure item.



- After the selection, the button portion on the left end is focused on.

2 Press [Output Image].



- Every image in the selected examination item is output.

7.13 • Examination sharing

Multiple these devices can share examination information, and perform exposure, check/adjustment of images. Examination information can be sent or received from one unit of this device to another unit of this device.

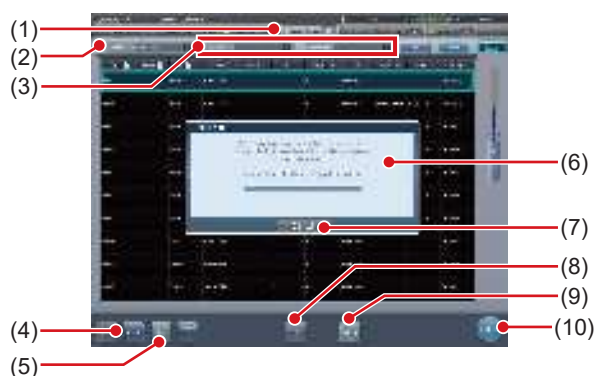
IMPORTANT

- Examination can be shared among up to nine units of this device for one system.

7.13.1 Screen structure

● List screen (reception)

Displays examination information of another unit of this device.



Number	Name	Functions
(1)	Study Sharing tab	Displays examinations of another unit of this device. Information is updated automatically at certain intervals. In addition, this tab does not show examination details.
(2)	Specified terminal	Select another unit of this device whose shared examinations are to be displayed.
(3)	Filter conditions	Specify conditions to display filtered examination list. Filtering can be performed with [Pending Reason], [Study Status], etc.
(4)	Receive button	Receives the selected examination. This button is displayed only when operating in examination sharing.
(5)	Cancel button	Cancels the reception process of the selected examination. This button is displayed only when operating in examination sharing.

Number	Name	Functions
(6)	Examination start preparation confirmation screen	Displayed when receiving examination information from another unit of this device. This screen disappears when reception is complete.
(7)	Cancel button	Press this button to prevent automatic start of examination after examination information is received. It does not cancel the reception process itself.
(8)	Refer button	References an examination. This button is available only when a completed examination is selected.
(9)	Refresh button	Updates the examination list.
(10)	Perform button	Starts an examination received from another unit of this device. This button is not available when a completed examination is selected.

HINT

- Functions of tabs and buttons not described here are the same as those of the normal list screen.
- In the [Study Sharing] tab, [Delete], [Modify], [Append], and [Guard] cannot be pressed.
- On the [Study Sharing] tab, the contents of the list are not updated by clearing the entries of [Specified terminal] and [Filter condition] by pressing the [Clear] button. The contents of the list are updated by executing search by pressing the [Search] button.

● List screen (transmission)

Displays the examination information of this device.



Number	Name	Functions
(1)	OrderList tab	This tab displays the examination information registered in this device.

Number	Name	Functions
(2)	Filter conditions	Specify conditions to display filtered examination list. Filtering can be performed with "Pending Reason", "Study Date", etc.
(3)	Send button	Transmits a selected examination to another unit of this device. This button is displayed only when operating in examination sharing.
(4)	Cancel button	Cancels the transmission process of the selected examination. This button is displayed only when operating in examination sharing.
(5)	Transmission destination confirmation screen	This is displayed when [Send] is pressed. Select another unit of this device as the transmission destination. Pressing [OK] on this confirmation screen transmits examination information to the selected another unit of this device. Pressing [Cancel] cancels the transmission process and closes the confirmation screen.
(6)	Refresh button	Updates the examination list.

HINT

- Functions of tabs and buttons not described here are the same as those of the normal list screen.
- An error message is displayed if the buttons below are pressed while an examination reserved for transmission or transmitted examination is selected.
 - [Delete]
 - [Modify]
 - [Refer]
 - [Append]
 - [Guard]
 - [Perform]
- The name of the [OrderList] tab is set at installation.
- A tab to automatically filter by specifying a pending reason can be added. Whether to display this tab, name of the tab, and pending reason to be displayed are set at installation.

● **Exposure screen (transmission)**

When an examination is paused during exposure, the screen below is displayed.



Number	Name	Functions
(1)	Details confirmation screen	This is displayed when [] is pressed depending on the setting. This button is displayed only when operating in examination sharing. Pressing [OK] pauses the examination and transitions to the initial screen. Pressing [Cancel] cancels the examination pause.
(2)	Reason	Select the pending reason for the examination.
(3)	Destination	Select another unit of this device as the transmission destination. Selecting [None] does not perform automatic transmission.
(4)	Examination pause/finish button area	Depending on the settings, two of the following buttons will appear. []: Pauses examination for which focus has been achieved. []: Finishes examination and returns to the list screen. []: Finishes exposure and returns to the list screen.

HINT

- The functions of [] and [] are as follows.

Icon	Examination status	RIS/HOST	Examination sharing
[]	Exposure finished	Transmit	No
[]	Pause at sharing destination	Does not transmit	Yes

- The [] function is set to one of the following depending on the settings at installation.

Icon	Examination status	RIS/HOST	Examination sharing
[]	Pause at sharing destination	Does not transmit	Yes
[]	Pause	Does not transmit	No

7.13.2 Reception of examination information

Receive shared examination information following the procedure below.

1 Press the [Study Sharing] tab on the list screen.



2 Select this device whose shared examination information is to be acquired and press [Search].

- If this device is already selected, update the list by pressing [Refresh].



- Reception of shared examination information is started and displayed in the list.

HINT

- To update examination information to be displayed, press [Refresh].

.....

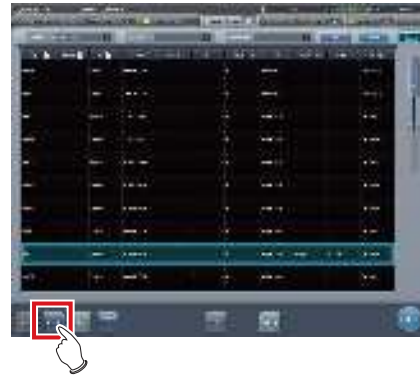
3 Select an examination to receive.



IMPORTANT

- Only one examination can be received per reception operation. Multiple examinations cannot be received at the same time.
-

4 Press [Receive].



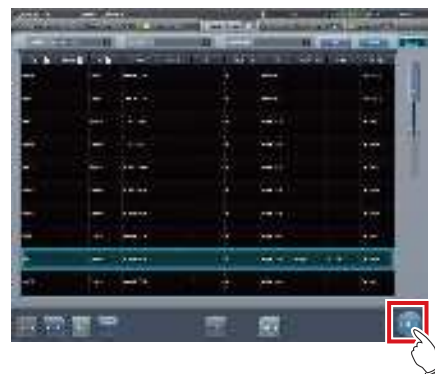
- The examination is received.

IMPORTANT

- When examination information is received, the examination information is deleted from this device (the transfer source).
-

HINT

- If the examination to be received is reserved for reception or transmission with another unit of this device, then an error message is displayed and reception is not reserved.
- If the examination to be received is waiting for image retransfer, or image reading has not been completed after job registration, an error message is displayed and reception is not reserved.
- Pressing [Perform] displays the exposure screen as soon as the examination is received.



.....

7.13.3 Transmission of examination information

The procedure for transmitting examination information is as follows.

1 Select an examination to send.

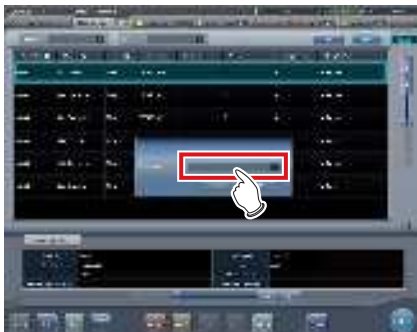


2 Press [Send].



- The transmission destination confirmation screen is displayed.

3 Select this device (the transmission destination).



4 Press [OK].

- Pressing [Cancel] returns the screen to the previous screen.



- The examination is sent.

IMPORTANT

- The list screen is not updated after examination information is transmitted. Press [Refresh] to display the latest information.
- When examination information is transmitted, the examination information is deleted from this device.

HINT

- If the examination to be transmitted is reserved for reception from another unit of this device, or reserved for transmission to another unit of this device, then an error message is displayed and transmission is not reserved.
- If the examination to be transmitted is waiting for image retransfer, or image reading has not been completed after job registration, an error message is displayed and transmission is not reserved.

7.13.4 Transmission of examination information during exposure

The procedure for transmitting examination information by pausing an examination during exposure is as follows.

IMPORTANT

- The examination information cannot be transmitted if the examination to be paused includes image re-transmission standby or examination whose barcode has already been read.
-

1 Press [Pause].



- A confirmation screen is displayed.

2 Press [OK].

- Press [Cancel] to return to the previous screen.



- The details confirmation screen is displayed.

HINT

- The details confirmation screen may not be displayed depending on the setting. In this case, pressing [OK] transmits the data with the preset pending reason to the preset destination.
-

3 Select [Reason] and [Destination].



IMPORTANT

- Select [None] for transmission destination if you do not want to transmit the examination.
-

4 Press [OK].

- Press [Cancel] to return to the previous screen.



- Examination is reserved for the specified destination, and the initial screen is displayed.

7.14 • Merging and separation of studies

This section describes the combination and separation of studies.

IMPORTANT

- The combination and separation of studies may cause patient, study, series, and image information to be updated.
- The combination and separation of studies cannot be performed during HOST output, RIS-OUT output, study sharing, real-time backup, or CR image reading.

7.14.1 Screen structure

The screen structure for combining and separating studies is as follows.

● List screen



Number	Name	Functions
(1)	Merge button	Combines the selected study with another study or separates it from a study.

HINT

- Functions of the buttons not described here are the same as those that are available on the normal list screen.

● Study Search screen






Number	Name	Functions
(1)	Search conditions input columns	These columns are used to display and enter the search conditions.
(2)	Clear button	Clears the entered search conditions.
(3)	Search button	Searches for the study based on the entered search conditions.
(4)	Return button	Press this button before entering any search condition to stop the combination operation. The display will then return to the list screen.

● Image Move Screen



Number	Name	Functions
(1)	Patient information area	The patient information is displayed.
(2)	Examination list area	Examination information is displayed.
(3)	Image list area	Images are displayed.
(4)	Image selection button	Selects images. [Remove All]: Cancels the selection. [Select Exposed]: Selects all the exposed images. [Select All]: Selects all images.

Number	Name	Functions
(5)	Image Move button	Moves the selected images.  : Moves the images from the image list on the right to the image list on the left.  : Moves the images from the image list on the left to the one on the right.  : Swap images between the left and right image lists.
(6)	Close button	Cancels operation of moving images, and returns to the list screen.
(7)	Save button	Saves the result of moving images.

7.14.2 Merging of studies

The following describes the procedure for merging (re-assigning) studies from the list screen.

- 1 Select a study with a "Suspended" or "Exposed" status that you want to merge on the list screen.



- 2 Press [Merge].



- The Study Search screen is displayed.

- 3 Enter the patient name, ID, and other items of the destination study.



HINT

- When an accession number is used for the search, you can change the status of every study related to the patient ID to the unexposed study. When using this function, contact Konica Minolta technical representatives.
-

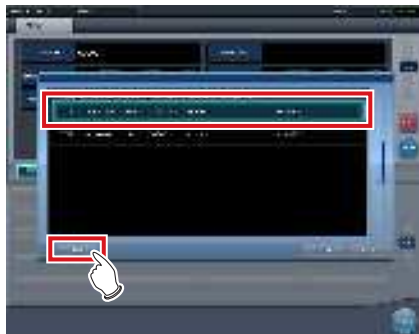
4 Press [Search].



- A confirmation screen is displayed.

HINT

- When there are multiple sets of study results, the selection screen that is displayed when multiple relevant studies have been found is displayed. If you select a destination to combine studies in and press [Execute], the confirmation screen shown in Step 5 is displayed.



- The suspended or completed studies may be displayed depending on settings. To merge (reassign) studies, select unexposed studies.
 - If you press [To List] on the selection screen that is displayed when multiple relevant studies have been found, you return to the list screen. If the study to be merged cannot be found after searching with the correct search terms, return to the list screen and redo the search.
 - Press [Cancel] to return to the search screen. When there is a mistake in the search terms, return to the search screen, enter the correct search terms, and redo the search.
-

5 Press [OK].

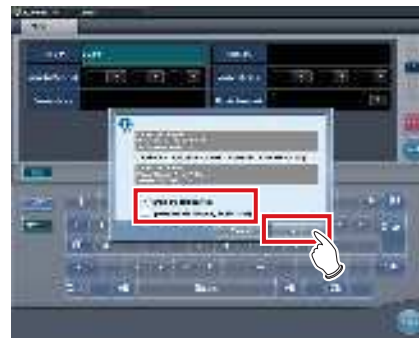
- Press [Cancel] to return to the search screen.



- The studies are combined and the display returns to the list screen.

IMPORTANT

- The study to be merged is suspended and the merging examination is deleted.
- Depending on the setting, you can leave the merging study in an unexposed state. When leaving the merging study, check the [Retain the source study] check box in the merge confirmation dialog window and then press [OK].
- When using the [Retain the source study] option, if the data has already been sent to an external system or you want to recreate the study as a new examination, check the [Update the source study as new study] checkbox and press [OK].



- If you press [OK] without checking the check box, the merging study is deleted.
 - For the setting procedure, contact Konica Minolta technical representatives.
-

HINT

- Press [Cancel] on the confirmation screen to return to the search screen. If the search conditions are not correct when checked, press [Cancel] to return to the search screen and re-enter the correct search terms.
-

7.14.3 Moving images

The procedure for moving images between studies is as follows.

HINT

- To combine studies, select the suspended and exposed studies and combine (reassign) them with unexposed images. However, you can move images regardless of the status of the source or destination study.

Example: Unexposed study and unexposed study, suspended study and exposed study

- The Image Move button may not be displayed depending on settings, resulting in an image movement failure.

.....

1 On the list screen, select the study from which to move images.



2 Press [Merge].



- The Study Search screen is displayed.

3 Enter the patient name, ID, and other items of the study to move images to.



HINT

- When an accession number is used for the search, you can search for all studies related to the patient IDs of the target study. When using this function, contact Konica Minolta technical representatives.

.....

4 Press [Search].



- A confirmation screen is displayed.

HINT

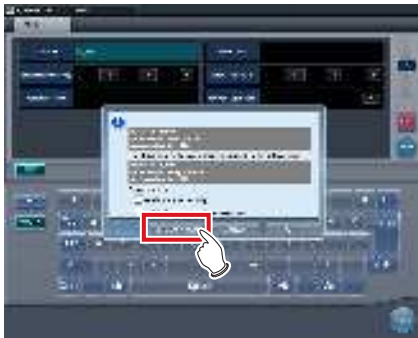
- When there are multiple sets of study results, the selection screen that is displayed when multiple relevant studies have been found is displayed. If you select a destination to move a study to and press [Execute], the confirmation screen shown in Step 5 is displayed.



- If you press [To List] on the selection screen that is displayed when multiple relevant studies have been found, you return to the list screen. If the destination study is not found after searching is carried out using the correct search terms, return to the list screen and redo the search.
- Press [Cancel] to return to the search screen. When there is a mistake in the search terms, return to the search screen, enter the correct search terms, and redo the search.

5 Press [Image Move].

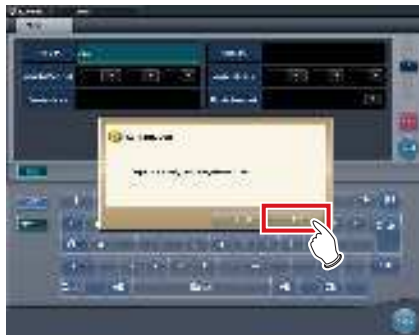
- Press [Cancel] to return to the search screen.



- The Image Move screen is displayed.

HINT

- Note that studies are combined if you press [OK] on the confirmation screen.
- Press [Cancel] on the confirmation screen to return to the search screen. If the search conditions are not correct when checked, press [Cancel] to return to the search screen and reenter the correct search terms.
- Studies other than completed, suspended, or unexposed studies cannot be combined. If an attempt is made to combine such studies, the following dialog box appears. Press [OK] to display the Image Move screen.



6 Select images to move.

- Press an image to select it. Press it again to cancel the selection.
- Multiple images can be selected.

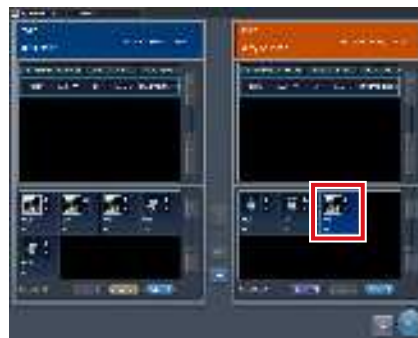


- The image is selected.

HINT

- By selecting an area while holding down the Shift key, you can select multiple images in the area.

7 Press [→].



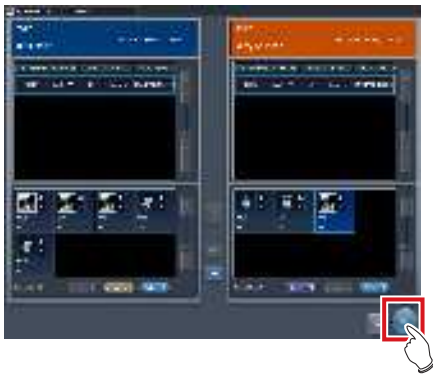
- The selected image is displayed at the end of the image list area to which the images have been moved.
- The background color of the moved image is displayed in blue or orange (color of the patient information display area of the source study).

HINT

- You can also drag and drop an image to move it.
- To move images to the image list area on the left, select images in the image list area on the right and press [←].
- To swap images between the left and right image list areas, select images in each image list area and press [⇄].
- The moved image is placed at the end of the image list area of the destination.
- If the moved image is moved to the original study again, it will be placed in the same location it was in before it is moved.
- If an output image is moved, the study status is suspended, and the output completed checkmark is cleared. To output data again, press [↻] button or complete the study that is being performed.

8 Press [Save].

- Press [Close] to return to the list screen.



- The Image Move screen is closed.

7.14.4 Checking an image

The procedure for checking an image is as follows.

1 Double-click the image to check its details.



- The image display dialog box appears, and you can check the details of the target image.

HINT

- The image display dialog box shows the same image as the one displayed on the exposure screen.
- If you drag four corners or four sides of the image display dialog box, you can zoom in on or out of the image display dialog box.

2 Press [×].



- The image display dialog box closes.

7.15 • Statistics/summary tool

With the statistics/summary tool, various information items such as exposure status of this device or this device within the network or operation status of the DR Detector can be referenced or output into a file.

7.15.1 Screen structure

The basic screen structure of the statistics/summary tool is as follows. The type of information to be displayed will vary according to the tool.



Number	Name	Functions
(1)	Information type selection button	Select the type of information to be referenced.
(2)	Period specification, operator name, modality, reader selection	Select the period when information is collected or the operator name, etc. The options (filter conditions) will change according to the type of information to be referenced.
(3)	Information display area	Displays information in a list format. Pressing the item name of displayed information sorts the item name in ascending/descending order.
(4)	List Update button	Refreshes the displayed list.
(5)	Export CSV button	Outputs the displayed list in CSV format. When the list has been sorted, outputs in the sorted state.
(6)	OK button	Exit the statistics/summary tool.

IMPORTANT

- Units of this device that are started and within the network are the target of statistics and summary. Units of this device connected to the network but not started are not the target of statistics and summary.

HINT

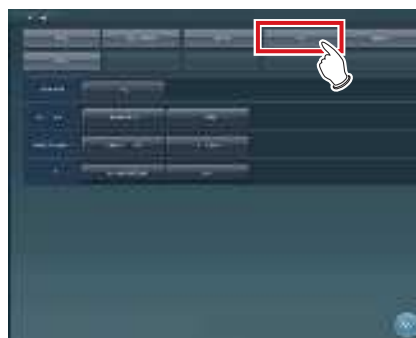
- The items to be displayed in the information display area and order of the items are set at installation.

7.15.2 Acquisition of various information

Acquire various information following the procedure below.

1 Display the user tool screen, and start the statistics/summary tool.

- For how to display the user tool screen and how to start the statistics/summary tool, refer to "User Tool Operation Manual".



- The statistics/summary tool starts.

2 Press the type selection button for information to be acquired to specify the search range, etc.



3 Press [List Update].



- Selected information is acquired.

HINT

- Pressing [Export CSV] enables you to output information in CSV format.
 - On the Edit Columns Tool screen, you can add an apostrophe (') to the beginning of each item so that the CSV file is output.
 - On the Edit Columns Tool screen, you can specify to output the re-exposure information and NG reason information separately in two CSV files.
-

4 Press [OK].



- Return to the user tool screen.

7.15.3 Options of information (filter conditions)

The options (filter conditions) displayed on each information screen are as follows.

Information	Options (filter conditions)	Remarks
Re-Exposure Info	Period, operator, modality	Displays the operator who performed retake or modality.
Exposure Info	Period, operator, modality	Displays exposure information.
Console Info	Period, modality	Displays information of another unit within the network. Only started devices are display targets.
Plate Info	Modality	Displays the usage of the DR Detector or CR cassette.
Reader Info	Period, reader, modality	Displays the reader information.

HINT

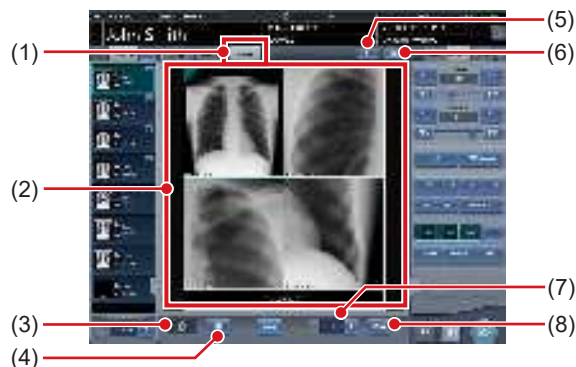
- Pressing the operator name while displaying "Re-Exposure Info" displays the breakdown of rejected images of the operator.
 - On the Edit Columns Tool screen, you can set the search conditions for the acquired information so that these conditions apply to the search conditions for other acquired information.
-

7.16 • Print composer

Using the print composer, multiple exposed images can be laid out as you like on a film and output.

7.16.1 Screen structure

● Exposure screen



Number	Name	Functions
(1)	Filming tab	Selecting this tab can display the film editing area.
(2)	Film editing area	Displays the output layout. The display area of each exposed image is called the image box, and the border between the image boxes is the split line. You can change the output layout by dragging the image box and split line.
(3)	Trash box	To delete an exposed image assigned to the film editing area, drag it to this trash box.
(4)	Film clear button	Deletes all exposed images that have been assigned to the film editing area.
(5)	Automatic acquisition button	Assigns exposed images in the order list to each image box beginning from the top image.
(6)	Fixed format selection button	Displays the fixed format selection area.
(7)	Number of copies	Set the number of copies.
(8)	Output button	Outputs the exposed images after they have been laid out.

IMPORTANT

- If you select [Filming] tab, the operation on the control panel only applies to the image in the selected box.
- If you select the [Filming] tab, the [Zoom-] button on the control panel (image adjustment) is replaced with the [TRUE SIZE] button. In addition, functions of the [Zoom+] button and the [Fit] button are changed.



Number	Name	Functions
(1)	ZOOM button	Zooms in or out the image in the selected image box by dragging the mouse.
(2)	TRUE SIZE button	Displays the image in the selected image box in life size proportions.
(3)	FIT button	Displays the entire image in the selected image box.

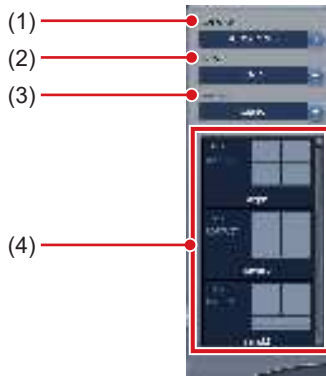
- If you select [Filming] tab, the following buttons on the control panel (overlay) will be disabled.
 - Stamp Selection button
 - Stamp Position button
 - Preview button
- If you select [Filming] tab, the following tabs on the control panel will be disabled.
 - Acquisition
 - AeroSync
 - QUICK
 - Exp.info
 - Output
 - Stitching

HINT

- If you drag an exposed image into the film editing area, the assignment completed checkmark is displayed on the image in the examination display area.
 - If you output an exposed image, the output completed checkmark is displayed on the image in the study display area.
 - In the viewer screen, the image in the selected box is displayed.
 - You can also zoom in or out by rotating the mouse wheel up or down on the image.
-

● Control panel (Filming)

This control panel is used for setting the output conditions.



Number	Name	Functions
(1)	Destination	Selects the output destination.
(2)	Film Size	Selects the film size.
(3)	Direction	Selects the film direction.
(4)	Preset selection list	Selects the output format from the registered preset.

7.16.2 Film output

The following describes the procedure for laying out and outputting the exposed image.

1 Select the [Filming] tab.



- If you select the [Filming] tab, the [Filming] tab of the control panel is automatically displayed. If the tab is not automatically displayed, select the [Filming] tab manually.

2 Set the output conditions on the control panel (filming).



HINT

- You can also select the fixed format by pressing the Fixed format selection button.
-

3 Drag and drop the Exam.Tags to the image box.



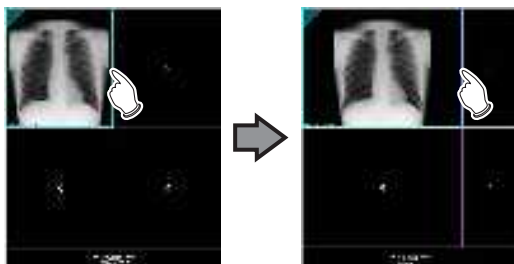
- The exposed image is displayed in the image box.

IMPORTANT

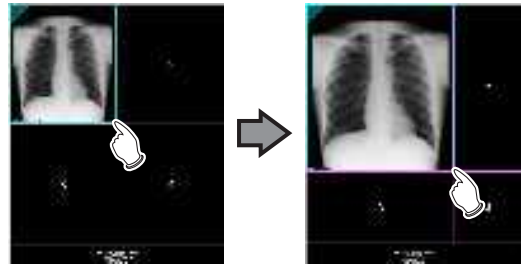
- Exam. Tags for unexposed images cannot be assigned to the image box.
- A rejected image cannot be assigned to the image box.
- A single image cannot be assigned to multiple image boxes.

HINT

- If you drop a new image into the image box to which another image has already been assigned, the image that is currently in the image box will be replaced with the new one.
- Dragging the split line changes the shape of the image box.



- Dragging the intersection of split lines can move two split lines at the same time.



- If a new box number is reassigned to the image boxes by moving the split line, the position of the image assigned in the image box is changed.

4 Set the number of copies.



5 Press the output button.



- The exposed image is output.

7.16.3 Automatic acquisition of exposed image

The following describes the procedure to automatically acquire exposed images.

1 Select [Filming] tab.



- The [Filming] tab of the control panel is automatically selected. If the tab is not automatically displayed, select the [Filming] tab manually.

2 Set the output conditions in the Filming tab of the control panel.



3 Press Automatic acquisition button.



- The image acquired to the image box is displayed.

IMPORTANT

- Each exposed image is assigned to an image box in numerical order of the boxes.
- An exposed image with the output completed checkmark and the rejected exposed image are not acquired.
- If the Exam. Tag before reading is acquired, the image box will be left blank.
- Exposed images beyond the number of image boxes are not acquired.

.....

7.16.4 Rearrangement of images

The following describes the procedure for rearranging the images in the film editing area.

- 1 Drag the triangular mark in the upper left corner of the image to be moved, and drop it into the destination image box.



- The image is displayed in the destination image box.



HINT

- If you move a new image to the image box to which another image has already been assigned, the image that is currently in the image box will be replaced with the new one.
-

7.16.5 Deletion of images

The following describes the procedure for deleting images from the film editing area.

- 1 Drag the triangular mark in the upper left corner of the image to be deleted, and drop it into the trash box.



- The image has been deleted.

7.17 • Lung lack/body motion blur detection

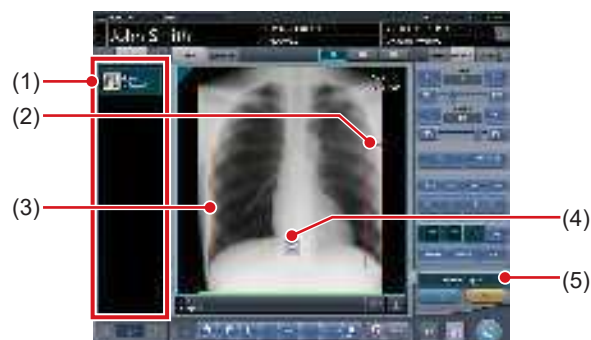
Use the lung lack/motion blur detection function to search images with a high likelihood of having deficiencies in lung images or motion blur.

IMPORTANT

- Lung images with deficiencies are images in which the entire lung is not in the image or not within the irradiation field.
- Images with motion blur are images in which the lung are blurry due to breathing, movement of the body, etc.
- This function targets front images of adult lungs.
- Before rejecting image in which lung lack or motion blur have been detected, be sure to check the images.
- In images with lesions, foreign substances, etc. in the lungs, lung lack or motion blur may be detected even when not present.
- As a false positive may occur or detection may not be possible if exposure is performed with the exposure field at a slant, be sure to perform exposures with the DR Detector parallel to the exposure position.
- This function is available only when the DR Detector is used.
- It is recommended that this function be used during examinations carried out on rounds.

7.17.1 Screen structure

● Exposure screen



Number	Name	Functions
(1)	Order List	If a deficiency in the lung image or body motion blur is detected, an icon (⚠) indicating such is displayed for the Exam. Tag.

Number	Name	Functions
(2)	Lung lack detection spot	The spot where a deficiency in the lung image is detected is enclosed in a red frame. The alert frame is displayed around any of the following five areas depending on where the deficiency is detected: bottom right, bottom left, right, left, and top.
(3)	Body motion blur detection spot	The spot where the body motion blur is detected is enclosed in an orange frame.
(4)	Magnifier button	Viewer screen (for body motion blur) is displayed.
(5)	Detection display button	Turns on or off the display of the detection.

IMPORTANT

- The detection display button appears only if a deficiency in the lung image or body motion blur is detected.

● Viewer screen (for body motion blur)



Number	Name	Functions
(1)	Entire display area	The spot displayed in the image display area is enclosed in a green frame.

7.17.2 Confirming the detected spot

Confirm the spot where a deficiency in the lung image or body motion blur is detected in the following procedure.

● Lung lack

- 1 Check the spot in the image display area where a deficiency in the lung image is detected.



HINT

- Use [Detection display] to turn the display of the detected spot on or off.

.....

● Body motion blur

- 1 Check the spot in the image display area where body motion blur is detected.



HINT

- Use [Detection display] to turn the display of the detected spot on or off.



.....

- 2 Press [].



- Viewer screen (for body motion blur) is displayed.

HINT

- On the viewer screen, a [] icon is displayed over images in which body motion blur is detected.
- You can also display the viewer screen (for body motion blur) by pressing [] on the viewer screen.



- Press the tool bar tab on the viewer screen (for body motion blur) to display the viewer screen.
-

- 3 Check the spot where the body motion blur is detected.



HINT

- Press any position in the entire display area to display the pressed position in the image display area.
-

7.18 • Checkup mode

The checkup mode allows the patient ID and accession number to be issued automatically, reducing the time required for examination.



- Exposure in Aero Sync mode is not possible in checkup mode.

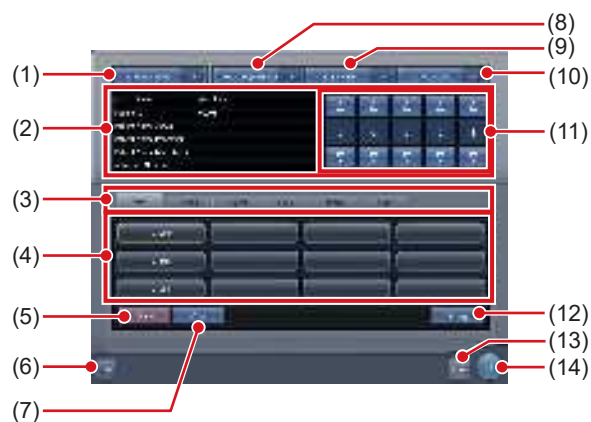
7.18.1 Screen structure

The following shows the setting screens of the checkup mode.

● Checkup setting screen

This screen is used for turning on or off the mode. You can also start setting the checkup preset on this screen.

Display this screen by pressing [Checkup] in the tool bar of the system monitor screen, or by pressing [Patient Info] on the exposure screen during checkup mode.



Number	Name	Functions
(1)	Checkup Mode button	Toggles the skip examination generator [ON] and [OFF].
(2)	Selected preset information display field	Displays the information in the currently selected preset.
(3)	Switching tab	Switches the preset tab.
(4)	Preset button	Used to select the preset. A preset name is indicated on the button for which the preset has already been carried out. A button remains unnamed until preset is carried out.

Number	Name	Functions
(5)	Delete button	Deletes the selected preset.
(6)	CSV button	Outputs the information from the examination exposed in the checkup mode in CSV format.
(7)	Copy button	Copies the selected preset.
(8)	Create skipped studies button	Turns the daily reset function [ON] and [OFF]. Setting to [ON] automatically generates the examination that is skipped when the serial number is changed.
(9)	Daily Reset button	Turns the auto examination start function [ON] and [OFF]. If set to [ON], the serial number set on the automatic number issuing function is reset when the date is changed, and the value is returned to the starting number. Turning it [ON] also deletes all the unexposed studies from the previous day automatically.
(10)	Auto Checkup button	Turns the checkup mode [ON] and [OFF]. If set to [ON], pressing the Complete button does not switch the exposure screen. Thus, the automatic issue of the numbers is maintained, allowing you to proceed with exposure of the next patient.
(11)	Serial number field	Displays the current serial number. The serial number can be changed using the [▲] and [▼] buttons. HINT • The serial number is held for each preset.
(12)	Setting button	Changes the contents of the selected preset.
(13)	Cancel button	Closes the screen without saving the modifications made on this screen.
(14)	OK button	Closes the screen after saving the modifications conducted on this screen.



- The examination automatically generated by the Create skipped studies function can be started from the list screen.

● Checkup preset setting screen

This screen is used for setting the preset. You can set the rules for the automatic issuing of patient IDs and accession numbers.

You can display this screen by pressing [Setting] on the checkup setting screen.



Number	Name	Functions
(1)	Preset Name	Enter a preset name. Up to 16 characters can be used.
(2)	Target item tab	Select the target item of the automatically issued number by choosing the corresponding tab.
(3)	Component selection menu	Select the components of the issued number from the menu.
(4)	Issue image	Displays an example of the number when issued according to the specified automatic issue format. [Next Value] is indicated as the value of the serial number.
(5)	Occurrence Number	Set the starting and ending values of a serial number. If you press [Reset] button, [Next value] is returned to the starting value.
(6)	Exam. Tag setting area	Displays the set Exam. Tags. Press [Exam. Tag] to display the Exam. Tag setting screen to set the Exam. Tags.
(7)	Cancel button	Closes the screen without saving the modifications made on this screen.
(8)	OK button	Closes the screen after saving the modifications conducted on this screen.

● Exam. Tag setting screen

Set the conditions of the automatic exposure.

You can display this screen by pressing [Exam. Tag] on the checkup preset setting screen.



Number	Name	Functions
(1)	Body Part Filter	Narrows down the Exam. Tags to be displayed in [Body parts list].
(2)	Body Parts List	Displays the list of the Exam. Tags that are available for the setting.
(3)	Delete button	Deletes the selected Exam. Tags from the Exam. Tags area.
(4)	Cancel button	Closes the screen without saving the modifications made on this screen.
(5)	Exam. Tags settings area	Displays the Exam. Tags to be set. You can register the tags by dragging and dropping the Exam. Tags from [Body Parts List]. Up to 128 shots of Exam. Tags can be registered. You can modify the alignment sequence of the registered Exam. Tags with drag and drop operations.
(6)	OK button	Closes the screen after saving the modifications conducted on this screen.

● **List screen**

You can display [Delete All] in the tool bar area depending on the setting.

For more details, contact Konica Minolta technical representatives.



Number	Name	Functions
(1)	Delete all button	Deletes all the unexposed studies. Press this button to display the dialog. Press [OK] to perform the deletion.

7.18.2 Preset setting procedure

The following describes how to set the preset.

● **When setting up new presets**

As there are no presets in the initial state, it is necessary to set new presets.

1 Press [System] on the initial screen.



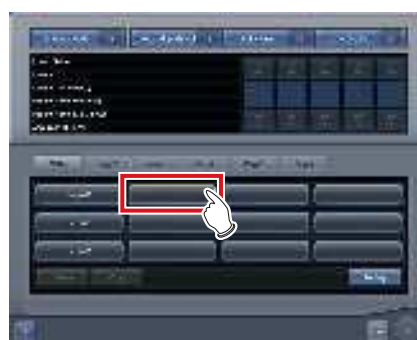
- The system monitor screen is displayed.

2 Press [Checkup].



- The checkup setting screen is displayed.

3 Select the preset button to be set from the tabs on [Page1] through [Page6].



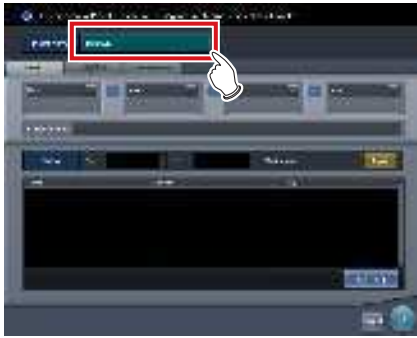
4 Press [Setting].



- The checkup preset setting screen is displayed.

5 Enter the desired preset name in [Preset Name].

- Up to 16 characters can be usable.



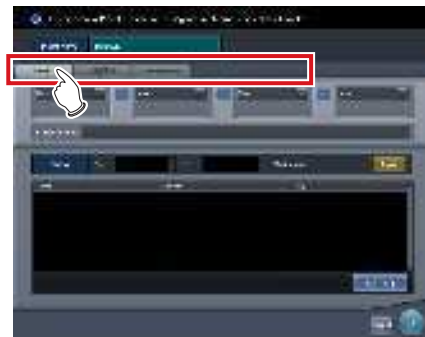
IMPORTANT

- When you use the checkup preset on two or more of the devices, ensure that no overlapping occurs among the set items.

.....

6 Select the target item of the automatic number issuing by choosing the corresponding tab.

- The following items can be selected.
 - [Patient ID]
 - [PatientName (ASCII)]
 - [Accession Number]

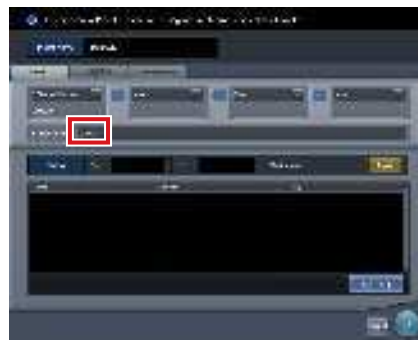
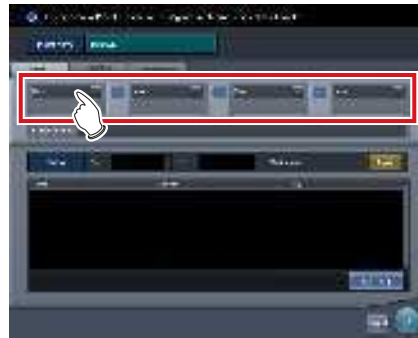


HINT

- [Patient ID] is a mandatory setting item.

.....

7 Select the components of the number from the menu.



- An example of the automatically issued number is displayed in [Issue image]. Using the corresponding tabs, set the components for each of the items you require.

IMPORTANT

- Serial numbers can be set at between 3 and 5 digits long, but when setting multiple serial numbers, such as for [Patient ID] and [Accession Number], select serial numbers with the same amount of digits.
- Be careful. When neither serial numbers nor the time is set for [Patient ID], the same ID will be issued each time.

.....

HINT

- The components that can be selected from the menu are as shown below.
 - Western Calendar (yyyymmdd)
 - Western Calendar (mmddyyyy)
 - Western Calendar (ddmmyyyy)
 - Western Calendar (yymmdd)
 - Western Calendar (mmddy)
 - Western Calendar (ddmmy)
 - Time (hhmmss)
 - Arbitrary Character String
 - 5 Digit Serial Number
 - 4 Digit Serial Number
 - 3 Digit Serial Number
- * "y" represents year. Likewise, "m" represents month, "d" represents day, "h" represents hour, "m" represents minute, and "s" represents second.
- If you select [Arbitrary character string], the input field is displayed.

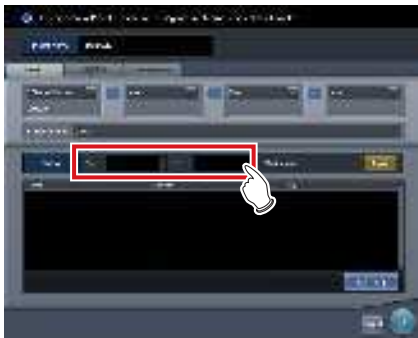


- To delimit components using "-", press [-] placed between the menus. "-" is included when it is kept pressed.

.....

8 Set the starting and ending values using [Occurrence Number].

- Enter the beginning value for the serial number in [Start], and enter the ending value for the serial number in [Stop].



HINT

- After the ending value is issued, the next number is returned to the starting value.
- The number to be issued next time is displayed in [Next Value]. If you want to return to the starting value, press [Reset].

.....

9 Then set the Exam. Tag. Press [Exam Tag].



- The Exam. Tag setting screen is displayed.

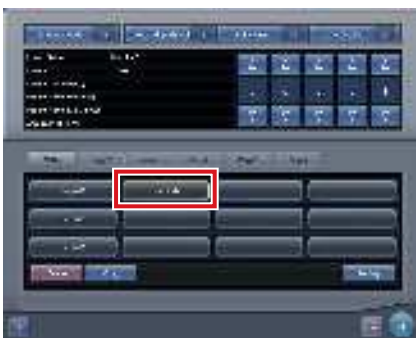
10 Drag and drop the Exam.Tags from [Body Parts List] into the Exam.Tags area.



- The aligned sequence of the keys in the Exam. Tags area is the exposure sequence. You can modify their aligned sequence with drag and drop operations.
- Press [Delete] to delete the Exam. Tags in the Exam. Tag area.

11 Press [OK].

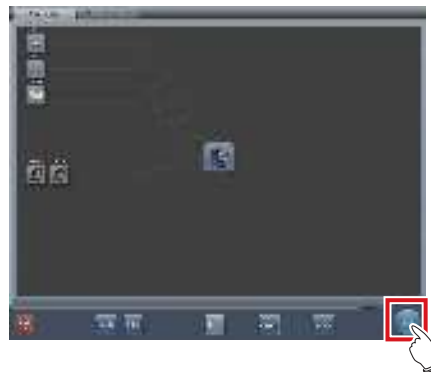
- The display returns to the checkup preset setting screen.
- The Exam. Tags set in the Exam. Tag area are displayed.

12 Press [OK].

- The display returns to the checkup settings screen.
- Make sure that the specified preset name is displayed.

13 Press [OK].

- The display returns to the system monitor screen.

14 Press [Close].

- The display returns to the initial screen.

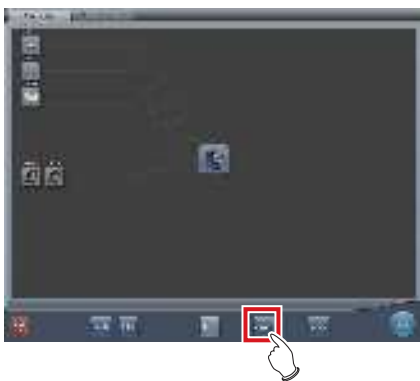
● **When copying and setting an existing preset**

It is possible to copy an existing preset, make changes to it, and then save it as a new preset.

1 Press [System] on the initial screen.

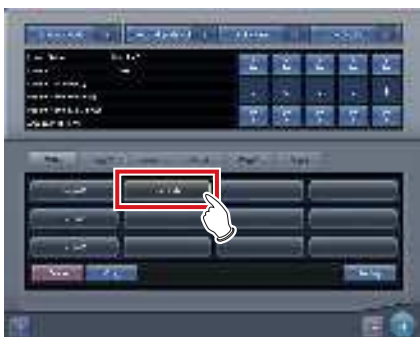
- The system monitor screen is displayed.

2 Press [Checkup].



- The checkup setting screen is displayed.

3 Select the preset to be copied.

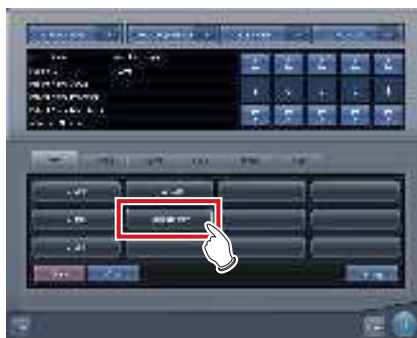


4 Press [Copy].



- The preset is copied.

5 Select the copied preset.



6 Press [Setting].



- Checkup preset settings screen is displayed.

7 Change the settings as necessary.



8 Press [OK].

- The display returns to the checkup settings screen.

9 Press [OK].

- The display returns to the system monitor screen.

10 Press [Close].

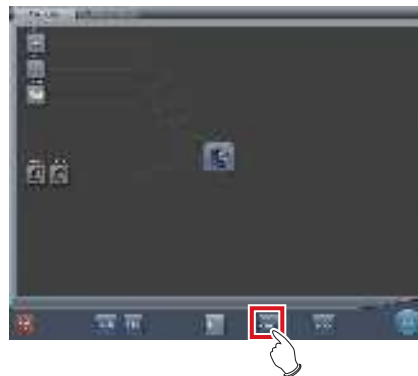
- The display returns to the initial screen.

7.18.3 Starting checkup mode

Start checkup mode and perform preparations for taking exposure.

1 Press [System] on the initial screen.

- The system monitor screen is displayed.

2 Press [Checkup].

- The checkup setting screen is displayed.

3 Press [Checkup Mode] to turn it [ON].

- Press [Checkup Mode] to switch between [ON] and [OFF].



4 Turn [Daily Reset] and [Auto Checkup] [ON] and [OFF], as necessary.



5 Select the preset used.

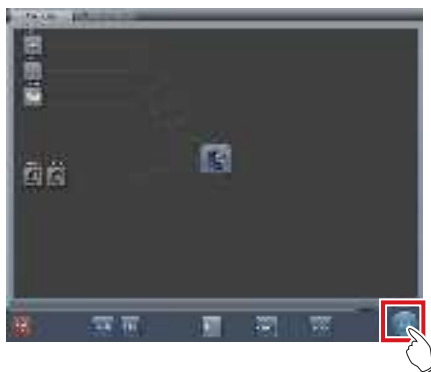


6 Press [OK].



- The display returns to the system monitor screen.

7 Press [Close].



- The display returns to the initial screen.
- When serial numbers are automatically issued, the list screen or the patient registration screen is displayed. Press [Perform] to start the exposure in checkup mode.

7.18.4 Exposure in checkup mode

The following describes the procedure for performing exposures in the checkup mode.

Before starting the exposure, refer to "7.18.3 Starting checkup mode" to make necessary preparations for the checkup mode.

The following procedures vary depending on whether the auto examination start function is to be used, and also whether the Exam. Tags are already set for the preset used.

● When the Auto Checkup is turned ON and the Exam. Tags are set

The following describes the procedure when [Auto Checkup] is turned [ON] and the Exam. Tags are set for the preset used.

1 Display the Patient registration screen or List screen.

- Check that the automatic issuing worked correctly.



2 Press [Perform].



- The exposure screen is displayed.
- The screen displays the preset body part targeted for exposure.

3 Perform exposure.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch

4 Press [Done].



- The automatic number issuing function displays the next number.
- Continue the exposure process repeating Steps 3 and 4.

• When the Auto Checkup is turned OFF and the Exam. Tags are not set

The following describes the procedure when [Auto Checkup] is turned OFF and the Exam. Tags are not set for the preset used.

1 Display the Patient registration screen or List screen.

- Check that the automatic issuing worked correctly.



2 Press [Perform].



- The Body part selection screen is displayed.

3 Select the exposure body part.



HINT

- Press [Return] to return the display to the initial screen. In this case, the issued number remains the same.
 - If you press [Schedule], the number is saved and the display returns to the initial screen. In this case, a next number is automatically issued.
-

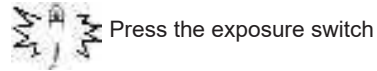
4 Press [Perform].



- The exposure screen is displayed.
- The selected body part targeted for exposure is displayed.

5 Perform exposure.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



6 Press [Next].



- The display returns to the initial screen with the next numbers displayed on it.
- Repeat Steps 1 to 6 to continue your exposure.

HINT

- When [Auto Checkup] is turned [ON], the display returns to the Body part selection screen rather than the initial screen.
-

7.18.5 Change of serial numbers and presets

To change the serial number and preset during exposure, perform the following procedure.

IMPORTANT

- The following functions cannot be used when the checkup setting screen is displayed from the exposure screen.
 - Turns the checkup mode [ON] and [OFF].
 - Turns the daily reset function [ON] and [OFF].
 - Turns the auto examination start function [ON] and [OFF].
 - Switching to the checkup preset setting screen
 - [Delete], [Copy], and [Setting] operations
-

● **Change of serial numbers**

1 Press [Patient Info] on the exposure screen.



- The checkup setting screen is displayed.

2 Change the serial number using the [▲] and [▼] buttons in the serial number display field.



3 Press [OK].



- The patient information is updated.

HINT

- When the examination of the changed serial number is completed, the process continues and starts the examination with the next serial number. For example, if the serial number is changed from "001" to "010" before the examination is finished, the serial number shifts to the next number, "011". If "011" has already been exposed, the serial number shifts to "012", the next number.
-

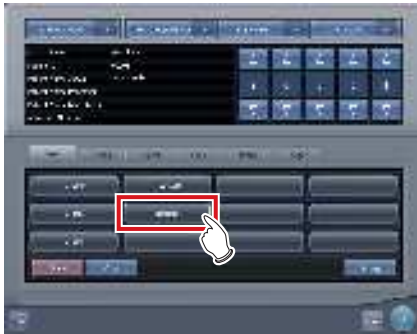
● Change of presets

1 Press [Patient Info] on the exposure screen.



- The checkup setting screen is displayed.

2 Select the preset to be changed.



- HINT**
- The serial number is held for each preset, so it is also changed each time a preset is changed.
-

3 Press [OK].



- Patient information is updated according to the preset.

- HINT**
- The examination continues subsequently for the same preset.
 - If you want to restart an examination from the preset before a change, select the preset. The examination restarts from the accession number before the change.
-

7.18.6 Auto Checkup using bar code scan

If bar code scanning is carried out on the patient registration screen by the settings, an examination can be started automatically using the scanned patient ID or accession number.

This section describes how to set [Auto Checkup] to [OFF] and automatically start an examination by the bar code scanning function.

- HINT**
- For details on how to automatically start an examination by the bar code scanning function, contact Konica Minolta technical representatives.
-

- 1 Carry out bar code scanning on the patient registration screen to scan the patient ID or accession number.



- An examination starts automatically.

- 2 Perform exposure.

- Set up the X-ray device and check the exposure settings before performing exposure.



Press the exposure switch

- 3 Press [].



- The patient registration screen is displayed.

HINT


- The serial number displayed before bar code scanning was carried out is input to the patient registration screen.
-

7.18.7 Ending the checkup mode

End the checkup mode.

Here, the procedure when automatic checkup is on is described. When automatic checkup is off, refer to step 3.

- 1 Press [] on the exposure screen.

- Press [] while nothing is being exposed.



- A confirmation message to end the checkup is displayed.

2 Press [OK].



- The display returns to the initial screen with the number at the ending time issued.
- Press [Perform] to restart the checkup.

HINT

- Press [] instead of [] to save the number at the time it was paused and return to the initial screen with the next number issued.

.....

3 Press [System] on the initial screen.



- The system monitor screen is displayed.

4 Press [Checkup].



- The checkup setting screen is displayed.

5 Press [Checkup Mode] and switch to [OFF].



6 Press [OK].

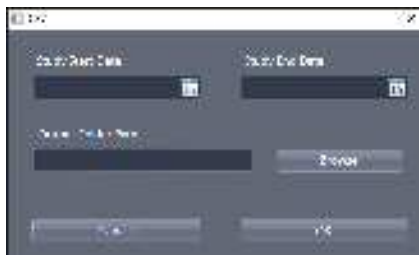


- The display returns to the system monitor screen.

7.18.8 Output of a CSV file

You can output information of the examination exposed in the checkup mode in CSV format.
You can output the information according to exposure date.

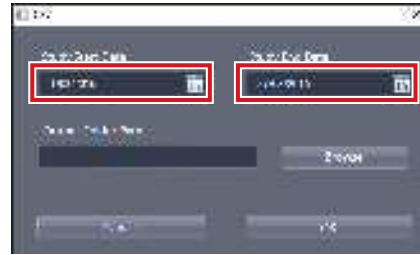
1 Press [CSV] on the checkup setting screen.



- [CSV] is displayed.

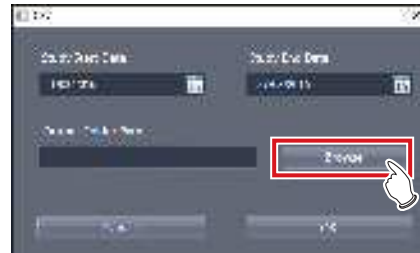
2 Select the date of the exposure of the information you want to output.

- Select the exposure date from [Study Start Date] or [Study End Date].



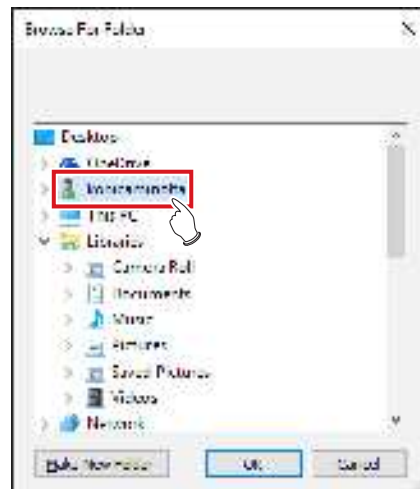
- The exposure date is set.

3 Press [Browse.].



- [Browse For Folder] is displayed.

4 Select the folder you want to output the file to.



5 Press [OK].

- The CSV file is output.

HINT

• The file name is "ImageList-<Study Date>.csv". The specified examination date is entered in "<Study Date>". If, for example, from January 10, 2013 to January 18, 2013 are specified, the file name is "ImageList-20130110-20130118.csv".
.....

7.19 • Automatic emergency number issuing

The automatic emergency number issuing function automatically issues a patient ID and accession number for the emergency patient who has been received in order for the examination to proceed immediately.

IMPORTANT

- When the checkup mode is turned ON, the automatic emergency number issuing function cannot be used. Turn the checkup mode OFF.

1 Press [trauma] on the initial screen.



- The body part selection screen is displayed.
- Check that the automatic issuing worked correctly.

HINT

- If [trauma] button is not displayed on the initial screen, set it using the user tool.
- When automatic transition is turned OFF, the emergency number is automatically issued from the initial screen. Press [Perform] to start examination.
- If you have set to register the Exam. Tags automatically, the body part selection screen is not displayed. The display transitions to the exposure screen.

2 Select the body part and press [Perform].



- The exposure screen is displayed.

HINT

- Press [Back] on the Body part selection screen to return the display to the initial screen. In this case, the issued number remains the same.
- If you press [Schedule] on the Body part selection screen, the number is saved and the display returns to the initial screen. In this case, a new number is not issued.

3 Perform exposure.

- Configure the X-ray device settings and check the exposure setting before making an exposure.



Press the exposure switch

4 Press [Trauma].



- The display returns to the initial screen.


HINT

- When examining emergency patients in sequence, press [trauma] and repeat the procedure from Step 1. In this case, make sure the next number is issued.


.....

7.20 • Real-time backup


Using the real-time backup function, you can output the exposed images to media at the same time as the study ends.

-  **HINT**
- For details on editing the tag of image data to be output, refer to "Editing Media Output Tag" in "CS-7 Installation/Service Manual".
-

7.20.1 Points to be confirmed before use


-  **IMPORTANT**
- Before connecting the media used to this device, run a virus scan to check it for virus infections.
 - Do not connect any media for any other reasons other than to carry out real-time backups. If you connect other media, the backup drive will be changed and normal output will be disabled.
 - Do not remove the media while the access lamp to the media is on. Otherwise, data may be lost.
-

7.20.2 Media-related matters

-  **IMPORTANT**
- A USB memory, SD card and DVD-RAM can be used as the backup media. However, two or more media cannot be used simultaneously.
 - Check beforehand that the PDI files being output to media can be retrieved using another company's systems.
 - Access to some types of media via the encryption function is denied if you do not enter the correct password the predetermined number of times. For optimal results, read the operation manuals carefully before using the media.
 - The following lists recommended media. For purchase information, contact Konica Minolta technical representatives.

Types of media	Product name
USB memory	JetFlash® 780 from Transcend Information, Inc.
SD card	PSDHC/10 series from Princeton Technology, Ltd.
DVD-RAM drive	BRP-U6N series from I-O Data Device, Inc.
DVD-RAM media	DRM47PWC.S1P5S A from Hitachi Maxell, Ltd.

- When using the DVD-RAM, format it beforehand according to the below.
 - File system: UDF 2.01 (default)
 - Allocation unit size: 2048 bytes
 - When the "Burn a Disc" dialog box is displayed when you use the DVD-RAM, select "Use as the USB flash drive".
 - For details of the DVD-RAM and other media, refer to their respective operation manuals. If you do not follow the relevant operating procedure(s) described in the manual, your data may not be backed up correctly.
 - If you do not correctly write data to the DVD-RAM, it may result in a read error. In this case, redo the output to media process from the start.
 - Depending on the media used, access to the task tray may be required in order to start the tool. If you want to display the task tray on this device, contact Konica Minolta technical representatives.
-

-  **HINT**
- The following shows the capacity per image when outputting images in PDI format.

DR Detector	Capacity
AeroDR3 1417HD	<ul style="list-style-type: none"> • For "Standard" (200µm) Approximately 40MB (Approximately 8MB more for every additional image) • For "High" (87.5µm) Approximately 65MB (Approximately 30MB more for every additional image)
AeroDR 1417HQ AeroDR 2 1417HQ AeroDR 2 1417S	Approximately 42MB (Approximately 10MB more for every additional image)
AeroDR 1717HQ	Approximately 44MB (Approximately 12MB more for every additional image)

*The capacity varies depending on the image trimmed.

.....

7.20.3 Output of images

When the real-time backup function is used, output to media is started at the same time as the study ends.

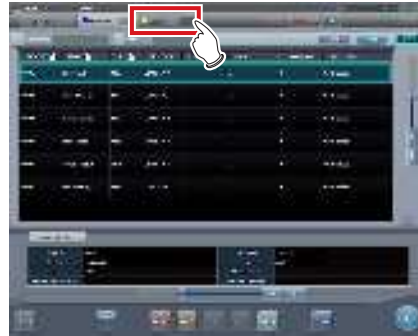
HINT

- You can proceed to the next study even before output to media has finished.
- If there is no free space remaining on the media, an error message is displayed. Replace it with a new media and press [Retry] after this device has recognized it.
- If you stop operation of this device while output to medium is continuing, the following dialog box is displayed. If you press [OK], operation of this device ends and the studies that are not output are saved as an output reservation (queue). Any studies that have been saved as the output reservation (queue) are output to media when this device is restarted.



7.20.4 Output status confirmation procedure

- 1 Select the [Completed] tab on the list screen.



- The icon is displayed for the studies that have already been output to media.

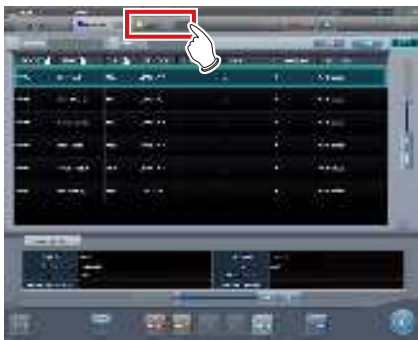
7.20.5 Re-output of images

The following describes the procedure to re-output images that have already been output once.

IMPORTANT

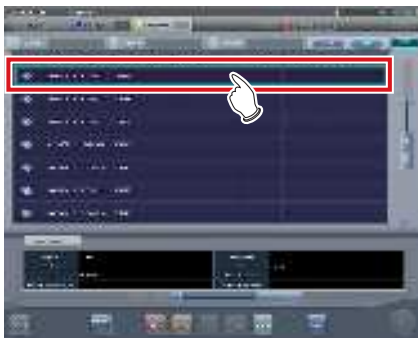
- If you changed patient information after outputting it to media, re-output it in order to update the information stored on media.
-

1 Select the [Completed] tab on the list screen.

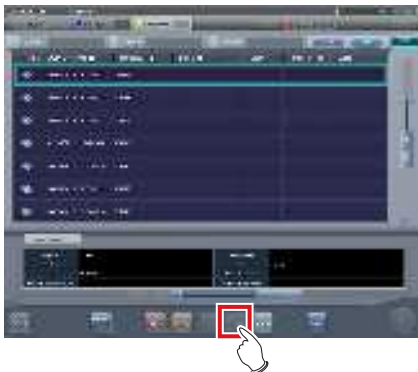


- The [Completed] tab is displayed.

2 Select the study to be re-output.

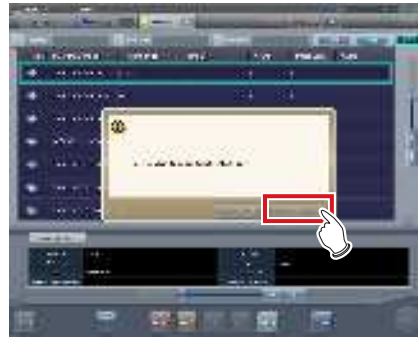


3 Press [Append].



- The confirmation dialog box is displayed.

4 Press [OK].



- The Body Part Selection screen is displayed.

5 Add or change the Exam. Tags if necessary, and then press [OK].



- The exposure screen is displayed.

6 Add exposure or change the patient information if necessary, and then press [].



- The image is output to media again.

HINT

- For the procedure to issue Study/Series UID and SOP instance UID, contact Konica Minolta technical representatives.
-

7.21 • Web/Remote Desktop Linkup

If the Web/Remote Desktop Linkup is enabled, you can start Acies client using the [Web Linkup] on the patient registration screen or list screen, start the Remote Desktop function using the [Remote Desktop Linkup], and operate the RIS client, etc. on the same terminal.

IMPORTANT

- The Web/Remote Desktop Linkup allows to connect up to two personal computers simultaneously.

HINT

- The name you have registered during installation is displayed as the name of the [Web Linkup] or [Remote Desktop Linkup] button.
- If multiple connection destinations are registered, long pressing [Web Linkup] or [Remote Desktop Linkup] displays sub menus for you to select a connection destination displayed on the Remote Desktop.



- The name of the connection destination selected from the sub menu is displayed as the name of the [Web Linkup] or [Remote Desktop Linkup] button.
- The screen for the linked devices below are examples only.

7.21.1 Web Linkup

- 1 Press the [Web Linkup] button on the patient registration screen or the list screen.



- The login dialog of the registered Acies client or the specified web page on Internet Explorer is displayed.

- 2 Once operation of the connected device is finished, minimize or close the Acies client or Internet Explorer, and return to this device's screen.



7.21.2 Remote Desktop Linkup

- 1 Press the [Remote Desktop Linkup] button on the patient registration screen or the list screen.



- The registered linked device is displayed via Internet Explorer or the Remote Desktop.

- 2 Once operation of the connected device is finished, minimize or close the Remote Desktop, and return to this device's screen.



HINT

- If Auto Checkup is enabled by RIS-IN setting and automatic remote connection is set when the study is complete, the screen can be switched automatically between the screen of this device and the relational RIS client, etc.



Study registration   Complete



7.22 • Other functions

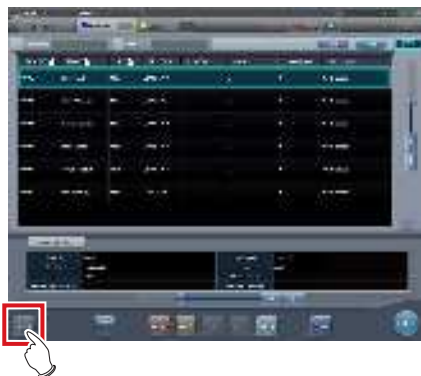
7.22.1 Switching of the wireless communication function of the DR Detector

The wireless communication functions of the DR Detector (permitted/prohibited) can be switched.

IMPORTANT



- Switch the wireless communications function from off to on while the DR Detector is in the wired connection condition.
- If there are more DR Detectors than I/F Cables, establish a wired connection once for DR Detectors that did not have one when the wireless communications function was switched from off to on before use.

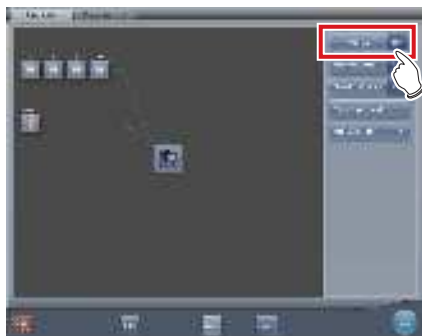
1 Press [System] on the initial screen.



- The system monitor screen is displayed.
- If the network status is not displayed, select the [System Monitor] tab on the function switching tabs.

2 Press [Wireless] to switch the wireless communication function.

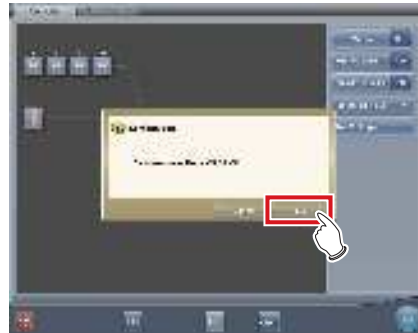
- [] shows that wireless communication function is on.
- [] shows that wireless communication function is off.



- A confirmation screen is displayed.

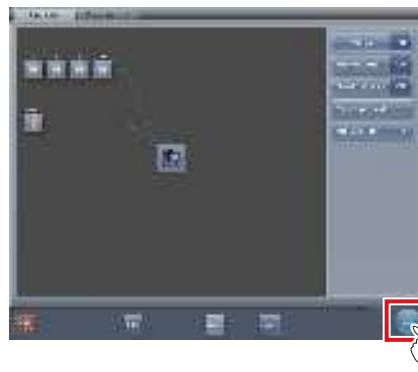
3 Press [OK].

- Press [Cancel] to return to the previous screen.



- The wireless communication function switches.

4 Press [Close].



- The display returns to the initial screen.

7.22.2 Release of the X-ray linkage when using AeroDR S-SRM KIT

When using AeroDR S-SRM KIT with sync mode to the X-ray device set to manual connection, you can release the link to the X-ray.

● **Screen configuration**



Number	Name	Functions
(1)	Free button	The link to the X-ray device is canceled to enable exposure.

HINT

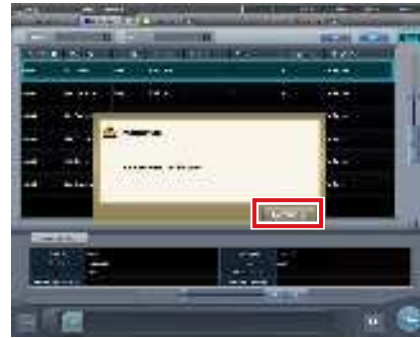
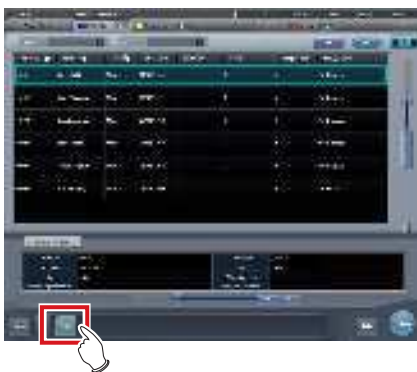
- If [Free] does not appear, press [] on the toolbar.
- When a fault occurs due to a bad connection etc., [Free] turns yellow. Check the connection status and power status of the AeroDR S-SRM KIT and then execute the link setting again.

.....

● **Canceling link to X-ray device**

The link to the X-ray device can be canceled as follows.

1 Press [Free].



- A confirmation screen is displayed.

IMPORTANT

- The link to the X-ray device is released to enable exposure only while the confirmation screen is displayed.
- Press [Use XG-Sync] to restore the link to the X-ray device.

.....

● **About messages during CR exposure**

Depending on the settings at installation, messages may appear during CR exposure.



IMPORTANT

- The link to the X-ray device is released only while the confirmation screen is displayed.
- Press [OK] to restore the link to the X-ray device.

.....

7.22.3 Display of long-sentence pop-up screen

Use the long-sentence pop-up screen to check the portion of the entry that exceeds the dimensions of the display pane of the item or an entry that spreads across multiple lines.

- 1 Press the long-sentence comment pop-up button, [].



- The entry is displayed on the long-sentence pop-up screen.

HINT

- You can use the user tool to set the items to be displayed along with the entry.


.....

- 2 Press [Close].

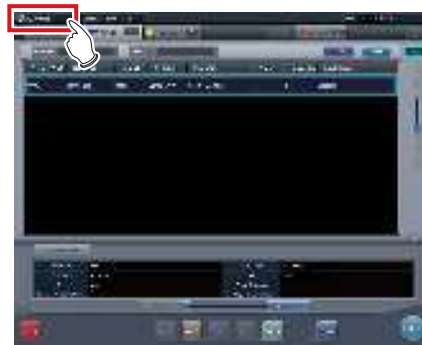


- The long-sentence pop-up screen closes.

7.22.4 Screen hide function

When the [] icon is displayed in the leftmost position of the application bar, you can hide the screen using a one-touch operation.

- 1 Press the date and time display on the application bar.



- The screen display is hidden.

- 2 To return to the screen display, perform an operation with the touch panel, mouse, or keyboard.

IMPORTANT

- Before using a bar code reader or a magnetic card reader, recover the screen display first.
- Do not hide the screen display during exposure.
- If the Auto Checkup function is enabled, do not use this function.
- When returning to the screen display, if the screen saver is in operation, cancel the screen saver.

.....

7.22.5 Screen saver

When operation is not performed for a certain time, the screen saver starts.

● Login as another operator after screen saver is canceled

If displaying the login screen after canceling screen saver, it is possible to log in with another user ID.

The following procedure describes the case where the screen saver starts up while logged in as Edward.N, and logging in as Alan.E after canceling screen saver.

1 After canceling screen saver, input the user ID and password of Alan.E, then press [Login].



- A confirmation screen is displayed.

2 Press [OK].

- Press [Cancel] to return to the previous screen.



- The initial screen for user ID of Alan.E is displayed.

7.22.6 Bar code reader and magnetic card reader

When optional bar code reader and magnetic card reader are used, various types of information can be read and input.

The following are precautionary items when bar code reader and magnetic card reader are used.

● Bar code reader

- When placed on its special stand, the laser is always in the lit state.
- When used in the constant lit state freeing the hands, exercise full caution that the laser is not discharged in a direction where it will enter the eyes of people.
- The bar code can be read in either up or down orientation of the CR cassette.
- After pressing the trigger button, if the bar code is not read in a certain time, the laser goes out. When reading again, release the trigger button, press it again, and discharge the laser.

● Bluetooth bar code reader

- The battery lasts for about 2 days when connected to a PC via Bluetooth communication.
 - * Varies depending on the usage.
- When not used, connect the USB cable to charge.
- For approximate charging time and battery replacement, refer to the Bluetooth bar code reader operation manual.
- The display shifts to sleep state when there are no operations, and screen display disappears, however Bluetooth communication is not disconnected.
- Communication distance is within 10 m.
 - * Varies depending on the usage.
- For recovery from the Bluetooth communication failure, refer to Bluetooth bar code reader operation manual.
- Data read with the bar code reader while Bluetooth communication is disconnected will not be sent to this device.
 - * Accumulated data is not transferred when connection is recovered.
- If bar codes are not transmitted, ID search and screen transitions are not performed. If not yet transitioned to the exposure screen, recover the communication. For the recovery procedure, refer to the Bluetooth bar code reader operation manual.

- When reading bar codes of the patient list, read while keeping the distance from the bar codes to approx. 5 to 10 cm. Sometimes it is not possible to read outside this range.
 - * Reading distance will vary depending on the size of bar code and code system.
- Connect one PC to one Bluetooth bar code reader in tandem. Do not connect multiple units.
- During normal operation, if the PC is shut down, connection of Bluetooth communication is disconnected, and the power of the bar code reader is turned off 5 minutes later.
- The valid digit number cannot be set, depending on the barcode reader used.

● **Magnetic card reader**

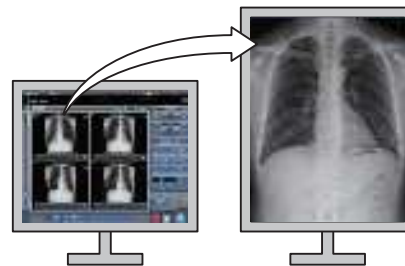
- When a card is read while the screen saver is operating, some data may be lost. Perform reading after the screen saver is released.
- After reading magnetic data, always check that the patient information displayed on the screen matches the patient information written on the magnetic card.
- Insert the magnetic card from the edge of the magnetic card reader unit, and slide horizontally to the opposite edge.
- While the magnetic data is being read, do not perform input. Sometimes magnetic data gets mixed with data input by input operation.

7.22.7 Addition of high precision monitor

An optional high precision monitor can be connected to this device.

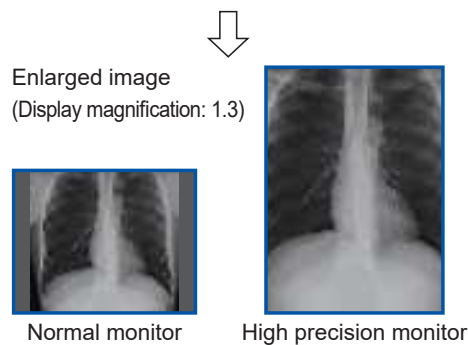
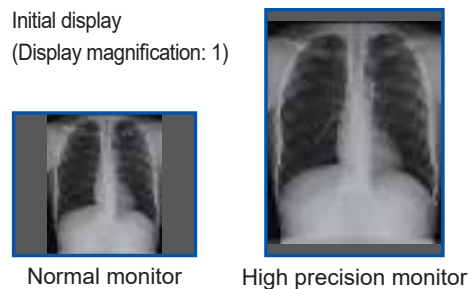
The following are precautionary items when a high precision monitor is used.

- The image that has focus on the exposure screen or the image displayed on the viewer screen is displayed. Unexposed images on the list screen, the body part selection screen, and the exposure screen are not displayed.



IMPORTANT

- Images cannot be manipulated on the high precision monitor. Perform manipulation of images with this device.
- Since high precision monitors has a different aspect ratio from that of the exposure screen and viewer screen, when you enlarge, reduce, or move an image on the exposure screen or viewer screen, an image of a different area may be displayed on such a monitor.



- The high-definition monitor does not display a high-definition mammography

7.22.8 Addition of sub monitor

An optional sub monitor can be connected to this device.

The following are precautionary items when a sub monitor is used.

- Used as auxiliary exposure equipment in the exposure room.
- A network display adapter is needed for connection.

IMPORTANT

- When a problem, such as network disconnection, occurs, there may not be anything displayed on the monitor. If this occurs, restart this device.
- If the power for the AeroDR Interface Unit, etc. is turned on/off while a sub monitor is connected, the network can be disconnected and the screen display goes black or freezes, being no-op. When turning on/off the power for the AeroDR Interface Unit, etc., do so after unplugging the power cable for the network display adapter or restart this device after turning the power on/off.

7.22.9 Addition of monitor for checking image

An optional monitor for checking image can be connected to this device.

The following are precautionary items when a monitor for checking image is used.

- Used as a monitor for checking images when operating this device with the portable X-ray device.

IMPORTANT

- This device's monitor will not be displayed when connected.
- When connecting a monitor for checking images, do not perform exposure.
- Do not perform a diagnosis using the image displayed in the monitor for checking images.

7.22.10 Display of manuals

The "CS-7 Operation Manual" and other manuals can be displayed.

● **Displaying a manual from the system monitor screen**

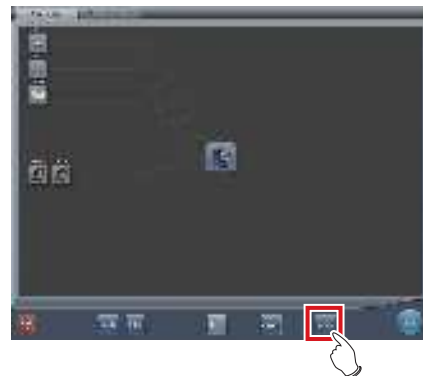
The procedure to display a manual from the system monitor screen is as follows.

1 Press [System] on the initial screen.



- The system monitor screen is displayed.

2 Press [Manual].



- The "CS-7 Operation Manual" is displayed.

IMPORTANT

- If the manual file is not stored, the [Manual] button is not displayed.

HINT

- When the following manual display button is pressed, the "CS-7 Operation Manual" can be displayed on the front layer.



- The TeamViewer startup button may be displayed at the same time.



- You can also arrange and display the manual display button and TeamViewer startup button vertically. For more details, contact Konica Minolta technical representatives.

3 To close the manual, press [X] on the operation manual screen or [X] in the manual display dialog box.



- The operation manual is closed.

● Displaying a manual from the user tool

For information regarding the procedure to display the manual from the user tool, refer to the "User Tool Operation Manual".

HINT

- Up to eight manuals can be called from the user tool if it is used.

7.22.11 TeamViewer startup

TeamViewer is a remote tool for performing operation support service.

The procedure for starting up TeamViewer is as follows.

IMPORTANT

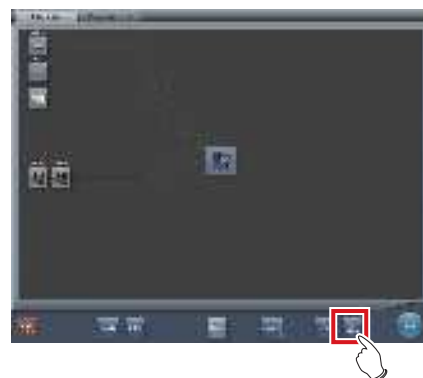
- This function is used when operating the remote maintenance service.

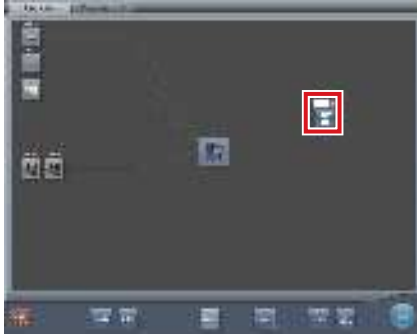
1 Press [System] on the initial screen.



- The system monitor screen is displayed.

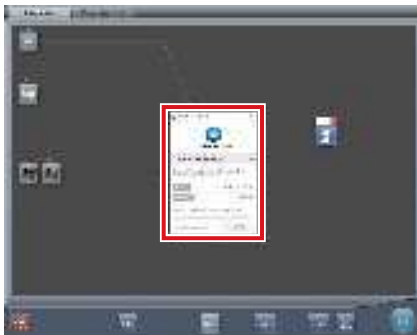
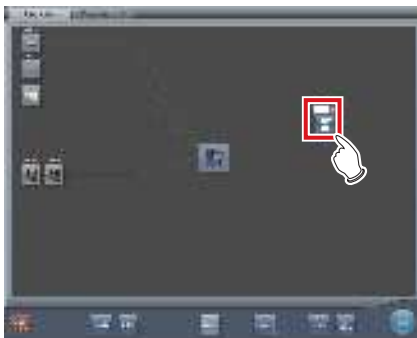
2 Press [TeamViewer].





- The TeamViewer startup button is displayed.

3 Press the TeamViewer startup button.



- TeamViewer starts up, and the remote operation permission screen is displayed.

HINT

- You can press the following TeamViewer startup button to display the remote operation permission screen on the front layer.



- Give the ID (9 digits) and password (4 digits) information displayed on the remote operation permission screen to a customer service representative. This information is used to start remote access.

4 To close the remote operation permission screen, press [X] on the remote operation permission screen or [*] on the TeamViewer startup button.



- The remote operation permission screen is closed.

Chapter 8

Displayed Messages

This chapter describes the displayed messages
and the countermeasures.

8.1 • Displayed message types

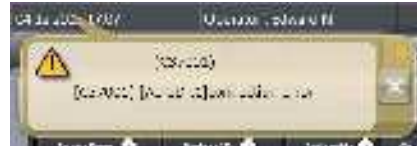
Messages for warnings and cautions will be displayed on the screen in dialog boxes or balloons. The following describes the difference between a dialog box and a balloon.

Dialog box



- Together with a message, [OK] and [Cancel] are displayed. Read the message, and perform the appropriate operation.
- Pressing [Cancel] will basically return you to the previous screen.

Balloon



- [X] is displayed together with the message. The screen can be closed by pressing [X]. The screen will also close after a certain amount of time elapses.

8.2 • Dialog boxes/balloons and countermeasures



HINT

- The messages displayed on this device are described in the following order:
 - 1) symbols
 - 2) numbers in ascending order
 - 3) alphabet characters in ascending order



8.2.1 Messages displayed in dialog boxes and countermeasures






If the following messages appear, take the respective countermeasures.

Displayed message	Problems/countermeasures
"[DR Detector name]" requires refresh operation to be used for next study. Please refresh the AeroDR by pressing [Refresh] or rebooting the AeroDR. [Refresh]: Refresh the AeroDR. [Cancel]: Return without refreshing.	Displayed when moving to the list screen while there are unreceived images in the DR Detector. Press [Refresh] to refresh the Detector.
"[ImageAcquisitionConditionName]":Wired/Wireless connection is changed during image reception. Return the panel to previous connection. Needs to retrieve the image.	Displayed when switching a wired or wireless connection while receiving an image. Check the connection status of the network device and communication cables, and tap the Exam. Tags (in the yellow frame) to re-acquire the image.
[DR Detector name]: "[ImageAcquisitionConditionName]" Press OK button to retrieve the image. This panel cannot take an image until the image is fully sent.	Re-acquire the unreceived image. Press the [OK] button. * Exposure with the corresponding panel is unavailable until image re-acquisition is complete.
[DR Detector name]: A communication error occurred during image reception. Check the connection status of the communication cable.	Displayed when a communication error occurs while the device is receiving an image from the DR Detector. Check the cable status. Also, tap the Exam. Tags (in the yellow frame) to re-acquire the image.
[DR Detector name]: The AeroDR needs to be refreshed. Do you wish to continue?	An image remains in the panel displayed by a yellow frame on the Application Bar. Press [OK] to erase images. To recapture those images without deleting them, open the study that exposed those images.
[ExposureArea]cm over-sized radiation field detected. Please set the radiation area again, or add the Exam.Tag.	Displayed when the number of images detected by the AeroDR Stitching System is greater than the number of Exam. Tags. Either add Exam. Tags or perform the exposure field detection again.
[ImageAcquisitionConditionName]: Wired/Wireless connection is changed during image reception. Return the panel to previous connection. Needs to retrieve the image.	Displayed when image reception fails. Wait until the Detector has returned to the previous connection and communications are restored.
A barcode is registered to this capture condition key. Is it OK to change the registration?	Displayed when changing the exposure conditions of a CR Cassette with a registered barcode to DR Detector exposure conditions. Press [OK] to erase the registration.

Continued on the next page

8.2 Dialog boxes/balloons and countermeasures

Displayed message	Problems/countermeasures
A CR reader connected to CS-7 does not support mammogram reading.	Contact Konica Minolta technical representatives.
Aborting image reading could lead to image loss. If image reading is aborted, suspend the study and restart CS.	Displayed when [Delete Reading] is pressed on the JM condition confirmation screen. Press [OK] to stop the reading. When [OK] is pressed, all registered jobs will be erased.
Accession Number Format text cannot be more than 16	The number of characters of the Accession Number exceeds the possible number of characters to enter. Change the settings, and reduce the number of characters.
AEC for CR Exposure condition cannot turn ON. Is it OK to turn OFF the AEC?	This may be displayed if the image display area of an exposure condition whose AEC settings cannot be activated is pressed when linked with the X-ray device. Press [OK] to deactivate the AEC setting.
AeroDR XG BOX/ AeroDR Interface Unit2 / AeroDR Portable RF Unit Verify that the version of the device is correct.	Check the device version for the AeroDR Interface Unit2, AeroDR Generator Interface Unit, AeroDR Generator Interface Unit2, AeroDR Portable RF Unit, AeroDR Portable RF Unit2.
An accession number overlapped with existing study	Duplicated Accession Numbers have been deleted since there are multiple identical Accession Numbers with existing studies. Register an unduplicated Accession Number.
An empty accession number exists. Please register the accession number.	A study without a registered Accession Number exists. Register the Accession Number.
An error occurred during image reading. Check the network. Restart the reader.	Displayed when a communications error occurs while reading an image with a CR Cassette exposure. Check the network and restart REGIUS.
An unexpected error has occurred.Please restart CS-7.	Displayed when an error with an unknown cause occurs. Restart the device. If the error persists, contact Konica Minolta technical representatives.
Are you sure want to delete unreceived image? If press [OK], It is not able to do image re-reception. [OK]: Delete the image. [Cancel]: Return without deleting.	Displayed to reconfirm the deletion of the image remaining in the DR Detector. Press [OK] to delete.
Are you sure you want to cancel discard?	This is displayed when [] (cancel reject button) on the rejected image is pressed. Press [OK] to cancel reject.
Are you sure you want to change status to not exposed? If the status is changed to not exposed, the study should be re-started once again in order to re-receive the unreceived image.	Displayed when [] is pressed while there are unreceived images in a study. Press [Cancel], and tap the Exam. Tags (in the yellow frame) to re-acquire the image.
Are you sure you want to change the image processing parameters?	Displayed when changing the Image processing value of the Exam. Tag. Press [OK] to change the image processing parameters.
Are you sure you want to change the layout?	This is displayed when changing the layout in the print composer. Press [OK] to change it.
Are you sure you want to clear the film?	This is displayed when clearing the film in the print composer. Press [OK] to clear them.
Are you sure you want to complete these examinations? Completing the study will erase the unreceived image. (Unread barcode will be deleted)	Displayed when ending multiple studies at once. Press [OK] to run the termination process. Studies with no exposed images will be deleted. (Unread barcodes will be deleted.)

Displayed message	Problems/countermeasures
Are you sure you want to complete these examinations? examinations that has no images will be deleted. (Unread barcode will be deleted)	Displayed when ending multiple studies at once. Press [OK] to run the termination process. Studies with no exposed images will be deleted. (Unread barcodes will be deleted.)
Are you sure you want to complete these examinations? There is examination that is not started. (Unread barcode will be deleted)	Displayed when ending multiple studies at once. Press [OK] to run the termination process. Unexposed images exist. (Unread barcodes will be deleted.)
Are you sure you want to complete this study? Completing the study will erase the unreceived image.	Displayed when pressing [] while there are unreceived images in a study. Press [Cancel], and tap the Exam. Tags (in the yellow frame) to re-acquire the image.
Are you sure you want to delete this study?	Displayed when [] is pressed while there are no exposed images for the study in progress. Press [OK] to end the study.
Are you sure you want to delete this study? (Unread cassette barcode will be deleted)	Displayed when pressing [] while there are unexposed images in a study. Press [OK] to end the study. Press [OK] to delete barcodes on which image reading has not been performed.
Are you sure you want to delete this study? Deleting the study will erase the unreceived image.	Displayed when pressing [] while there are unreceived images in a study. Press [Cancel], and tap the Exam. Tags (in the yellow frame) to re-acquire the image.
Are you sure you want to discard image? [OK]: Discard [Cancel]: Return without discarding	Displayed when confirming re-exposure. Press [OK] to reject.
Are you sure you want to re-Assign image to film?	This is displayed when clearing the images that have been assigned to the print composer. Press [OK] to clear them.
Are you sure you want to suspend these examinations?	Displayed when pausing multiple studies at once. Press [OK] to run the suspension process.
Are you sure you want to suspend these examinations? If this examination is suspended, it is necessary to start this examination again in order to re-receive an image.	Displayed when pausing multiple studies at once. Press [OK] to run the suspension process. When suspended, beginning the study again is required in order to re-acquire images. Also, studies with no exposed images return to unexposed status.
Are you sure you want to suspend these examinations? Studies no captured images is changed to not started.	Displayed when pausing multiple studies at once. Studies with no exposed images return to unexposed status.
Are you sure you want to suspend this study?	This is displayed when suspending a study containing an exposed Exam. Tag.
Are you sure you want to suspend this study? If this study is suspended, it is necessary to start this study again in order to re-receive an image.	Displayed when [] is pressed while there are unreceived images in a study. Press [Cancel], and tap the Exam. Tags (in the yellow frame) to re-acquire the image.
As the image is queued for output, it cannot be discarded. Before discarding the image, please wait for the output finished or delete the output queue.	Displayed when trying to delete an image while output is in progress. Delete the image after stopping output.
As the stitched image is created, this image cannot be deleted.	Displayed when attempting to delete an image on which combination stitching was performed. First delete the combined image and then perform the deletion.
Automatic generated submaster cannot be copied	Contact Konica Minolta technical representatives.

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

8.2 Dialog boxes/balloons and countermeasures

Displayed message	Problems/countermeasures
Before study completion, please output or reject each Mammo Image.	This is displayed when finishing an examination while there are mammogram images that have not yet been output. Output all mammogram images or reject them.
Below consoles are having more studies, but only partial studies are displayed.	Displayed when unable to acquire parts of a study after performing multiple terminal study acquisition through study sharing. Check the connection and reacquire the study.
Birth date is mandatory, Please enter birth date.	Displayed when mandatory fields have not been filled in. Press [OK] to close the screen.
Calibration of [DR Detector name] have expired. Please perform calibration urgently. Do it now? - If choose later: Press the arrow buttons at the bottom of the screen. And Press the calibration button in the toolbar that appears.	This is displayed when calibration of the DR Detector has expired. Perform calibration as soon as possible.
Calibration of [DR Detector name] will expire in [LimitDate] more day(s).	The calibration expiration date of the DR Detector is displayed.
Calibration of [DR Detector name] will expire in [LimitDate] more day(s). Please perform calibration. Do it now? - If choose later: Press the arrow buttons at the bottom of the screen. And Press the calibration button in the toolbar that appears.	This is displayed when calibration of the DR Detector will be expiring soon. Perform calibration.
Can not manipulate the data in the deleted status.	The study cannot be opened as it has been deleted.
Cannot add exposures beyond [0].	Displayed when the number of scheduled exposures for the same patient exceeds the maximum value. Further reservations cannot be added.
Cannot add exposures beyond [MaxSize].	This is displayed when the maximum number of Exam. Tags that can be registered has been exceeded.
Cannot capture images due to low battery power. Charge the battery.	Displayed when the battery level for the DR Detector in use is low. Charge the DR Detector.
Cannot edit the stitching position, because image stitching is performed at other console. Please stitch the images again.	Displayed when trying to recombine an image that was combined on another shared terminal. Combine the images again on the original shared terminal.
Cannot get exposures beyond [0].	The Image Count for this patient has exceeded the upper limit. No more studies can be acquired.
Cannot perform the calibration in the Technologist. Please perform again in higher than super user privileges.	This is displayed when you log in as Technologist and try to perform calibration. Log in again using Super user or higher privileges.
Cannot perform the operation as selected study data save is in progress. Please perform the same operation after some time.	The selected study was displayed during image processing. Wait until processing is finished and perform the operation again.
Cannot perform the studies as different Patients studies got selected.	Displayed when a different study is performed with a multi-study. Reselect a study of the same patient.
Cannot perform the study as the study is in moving.	Displayed when the [Perform] button is pressed while a study is being transmitted or the destination device is receiving a study. Cancel sending the transmission or start the study with the destination device.
Cannot perform this operation as image reading is in progress	Displayed when attempting to shut down the system or delete a job while reading an image. Shut down the system after the image reading is finished.

Displayed message	Problems/countermeasures
Cannot read the magnetic card. Restart the system.	This is displayed if an error occurred when a magnetic card is read.
Changed parameters have not been saved. Are you sure you want to discard them?	Displayed when [Back] is pressed with without pressing [Apply] after making edits on the stitching viewer screen. Press [OK] to close without saving the edits.
Changing patient information may cause errors in PACS study matching. Confirm all changed data immediately on PACS.	This is displayed when the patient information is modified after starting the study.
Channel change is not required for wireless access point.	This is displayed when there is no necessity to change the channel settings of the wireless access point.
Connected successfully.	This is displayed when the connection is confirmed as a result of the ping diagnosis.
Copying ...	Image copying in progress. Wait until the process end.
Could not find the matching Order to apply the exposure results. Please check.	This is displayed when there is no Exam. Tag to apply the exposure result from the X-ray device.
CR mode (Free) will be active!	Displayed when set to non-interlock with the X-ray device. To return to the sync setting, press [OK] or [Use XG-Sync]. (When S-SRM X-ray Exposure sync mode is set to Manual)
CS-7 AEROSYNC license is not registered. Please register for the license.	Displayed when using the Aero-Sync mode exposure function on a console with the device's unregistered AEROSYNC license. Register the device's AEROSYNC license.
CSV OutPut Successfully saved.	Displayed when CSV output is complete.
Data Already Present. Please Change Media	This is displayed when appending to written media is not possible.
DB data got udapted, Updated Study will be displayed.	Displayed when updating a study while it is in operation. Check the content details.
DB Error - Create order failed.	This is displayed when a new study cannot be created.
Deleting of the job is not success.	This is displayed when stopping of JM read has failed.
Destination setting is invalid. This study is not shared, and suspended.	The moving process was not performed because the destination settings were not correct. Check the destination settings.
Device cancellation failed.	Displayed when canceling the DR Detector registration from the exposure room has failed.
Different digit serial numbers can not be configured.	Displayed when setting the Start value and Stop value with differing numbers of digits. Set link numbers with the same number of digits.
Digit Serial Number or Time is not configured to Patient ID. Every time same Patient ID will get generated. Is it OK?	The patient may be recognized as an identical patient on each occasion. Set the link number settings and time settings.
Do you want change the body size, Please confirm?	This is displayed when a child patient size is changed to other patient size in the [Exp. Info] tab.
Do you want to abort the calibration process?	This is displayed when aborting calibration. Press [OK] to abort.
Do you Want to append shot to the Study?	This is displayed when adding exposure to studies. Press [OK] to add exposure.
Do you want to change the Detection Algorithm setting to OFF ?	This is displayed when changing the detection selection processing setting from ON to OFF. Press [OK] to turn OFF the detection selection processing.

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8.2 Dialog boxes/balloons and countermeasures



Displayed message	Problems/countermeasures
Do you want to change the Detection Algorithm setting to ON ? Appropriate area of radiation field is required in case of ON. Refer user manual for details.	This is displayed when changing the detection selection processing setting from OFF to ON. Press [OK] to turn ON the detection selection processing.
Do you want to change the wireless access point channel? Channel setting change may take few minutes	Displayed when changing the channel settings of the wireless access point. Press [OK] to change channel settings.
Do you want to change the wireless access point to the suitable channel? Channel setting change may take few minutes.	Displayed when changing the channel settings (Auto CH) of the wireless access point. Press [OK] to change channel settings.
Do you want to clear all?	Displayed when [Clear] is pressed after entering patient info. Press [OK] to erase the contents of the entry form.
Do you want to clear the Log?	Displayed when deleting the log using the Log management tool or Reject log tool. Press [Yes] to delete the log.
Do you want to close?	Displayed when it is necessary to confirm closing a screen.
Do you want to continue this operation?	Displayed when terminating exposure.
Do you want to copy the image ?	Displayed when [] is pressed. Press [OK] to copy images.
Do you want to delete the selected record?	Displayed when [Delete] is pressed on the list screen. Press [OK] to delete the study.
Do you want to end the system?	Displayed when the [Shut down] button is pressed. Press [OK] to end.
Do you want to exchange the image ?	Displayed when [] is pressed. Press [OK] to exchange images.
Do you want to exit without saving?	Displayed when closing the screen without saving changes. Press [OK] to close the screen without saving.
Do you want to overwrite collimator size?	May be displayed when updating the reading conditions while linked with an X-ray device. Press [OK] to update the collimator size.
Do you want to overwrite the data?	This is displayed when patient information is read from the magnetic card while operating in the patient registration screen.
Do you want to register the study?	This is displayed when trying to transition to the list screen after entering the patient information.
Do you want to Save?	Displayed when a confirmation for saving is necessary.
Do you want to Save/Backup the Log?	Displayed when backing up (saving) the log using the Log management tool or Reject log tool. Press [Yes] to save.
Do you want to Switch the JM?	Displayed when switching the JM. Press [OK] to switch the JM. When [OK] is pressed, all registered jobs will be erased.
Empty fields are not allowed. Please enter the text.	Displayed when either the preset name, arbitrary character string, or link number is not entered. Enter a preset name, arbitrary character string, or link number.
Enter End date.	Displayed when an end date is not set. Set the end date.
Enter Start date or End date.	Displayed when the start date or end date is not set. Set the start date or end date.
Entered value is invalid	Displayed when numerals besides acceptable values are entered. Enter values that are within range.
Error happened in JM switching, Please confirm the backup JM status.	Displayed when JM switching fails. Check that the device personal computer assigned to be the new JM is turned on.

Displayed message	Problems/countermeasures
Error has occurred. Please restart CS-7.	Displayed when an internal processing error occurs while "Backing up" the log or "Deleting" the log. Restart this device.
Error in queue deletion.	Displayed when deleting a queue fails. Restart the device and try deleting the queue again.
Error occurred in Study Sharing. The study was not moved.	Displayed when attempting to transmit a study stored on the device from the Study Sharing tab and the target study does not exist or a study is being performed. Confirm from the device that the study is not being performed, has not been deleted, and has not been move to another device.
Error occurred during receive cancel operation in [Other device name]. Check the study status in [Other device name]	Cancellation of the scheduled move for the target study failed. Check the target study status. If the target study has already been moved, it cannot be cancelled.
Error occurred during receive completion operation. Check the study status in [Other device name]	An error of unknown cause occurred during the moving process. Move the target study again. If the problem persists, restart the device and try to move the target study again. If this does not solve the problem, contact Konica Minolta technical representatives.
Error occurred during send cancel operation to [Other device name]. Check the [Other device name] study status.	Cancellation of the scheduled move for the target study failed. Check the target study status. If the target study has already been moved, it cannot be cancelled.
Error occurred during send completion operation to [Other device name]. Check the [Other device name] study status.	An error of unknown cause occurred during the moving process. Move the target study again. If the problem persists, restart the device and try to move the target study again. If this does not solve the problem, contact Konica Minolta technical representatives.
Error occurred while receiving the files in [Other device name]. Check the network status.	Communication between consoles failed. Confirm that there is not a problem with the LAN connection between the device and the console and establish the communications again. If the problem persists, restart the device and try to establish communications again. If this does not solve the problem, contact Konica Minolta technical representatives.
Error occurred while receiving the files in [Other device name]. Please check the study status in [Other device name]	Failed to prepare the target study for moving. Check the target study status. Studies in the following statuses cannot be moved. <ul style="list-style-type: none"> • The target study has been deleted and does not exist • The target study is in progress • The target study has been reserved for moving or is currently being moved. • The same study exists in the destination terminal and the exposure is complete • The same study exists in the destination terminal and is scheduled for moving
Error occurred while receiving the files in [Other device name]. There is no matching study. Please check the study status.	The target study has been deleted or has already been moved. Check the target study status.
Error occurred while sending to [Other device name]. Check the network status.	Communication between consoles failed. Confirm that there is not a problem with the LAN connection between the device and the console and establish the communications again. If the problem persists, restart the device and try to establish communications again. If this does not solve the problem, contact Konica Minolta technical representatives.

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8.2 Dialog boxes/balloons and countermeasures

Displayed message	Problems/countermeasures
Error occurred while sending to [Other device name]. Check the study status of [Other device name].	Failed to prepare the target study for moving. Check the target study status. Studies in the following statuses cannot be moved. <ul style="list-style-type: none"> • The target study has been deleted and does not exist • The target study is in progress • The target study has been reserved for moving or is currently being moved.
Error occurred while sending to [Other device name]. There is no matching study. Check the study information.	The target study has been deleted or has already been moved. Check the target study status.
Error occurred while the image was being copied.	Contact Konica Minolta technical representatives.
Error updating patient DB.	This is displayed when updating of the patient information has failed after modifying the patient information.
Exam.Tag copy process error occurred.	Contact Konica Minolta technical representatives.
Exam tag other than stitching are contained in the source images.	Displayed when images with body part Exam. Tags not to be stitched are included with the body part Exam. Tags to be combined. Select the body part Exam. Tags to be stitched.
Exam tag selection limit is exceeded.	Set the number of Exam. Tags within range.
Exchanging ...	Image replacement in progress. Wait the processes end.
Expose again? [OK]: Discard and add exposure [Cancel]: Discard only	Displayed when [] is pressed. Press [OK] to perform exposure again.
Exposure area and Exam.Tag. don't match. Please confirm the number of exposure.	Displayed when the number of images detected by the AeroDR Stitching System is less than the number of Exam. Tag. Confirm the image count and performed the exposure.
Exposure results applied for more than one order.	This is displayed when an exposure result is applied to multiple images that were exposed.
Exposure sync setting error. Check the network connection.	Displayed when unable to set exposure synchronization mode. Check the connection to the x-ray device, and set it again.
Failed save CSV Output.	The CSV file may be corrupted. Run the CSV output again.
Failed to complete study.	This is displayed when completion of the study has failed.
Failed to connect.	This is displayed when the connection cannot be confirmed as a result of the ping diagnosis. Press [Close] to close the screen and then check the network connection.
Failed to create stitching image.	Displayed when updating combination stitched images fails. Restart the device, and perform the image combination again.
Failed to delete AeroDR panel.	Unable to delete DR Detector correction data that is registered to an exposure room. On the system monitor screen for the exposure room registered with the corresponding DR Detector, clear the DR Detector registration and perform the deletion procedure again.
Failed to get AeroDR panel information.	Check the communications status with the corresponding DR Detector.
Failed to get Stitching Unit.	Confirm the status of the communications with the AeroDR Stitching Unit.
Failed to get XG BOX.	Check the status of the connection with the corresponding Generator Interface Unit.
Failed to obtain the Exam.Tag.	This is displayed when the obtaining of the exposure condition has failed.

Displayed message	Problems/countermeasures
Failed to obtain the image data.	This is displayed when obtaining image data has failed.
Failed to process grid moire suppression. Please do not use this image for purpose of diagnosis.	This is displayed when grid moire suppression processing has failed. The corresponding image cannot be used.
Failed to suspend study.	This is displayed when suspending of the study has failed.
Failed to update the inside of AeroDR.	Displayed when deleting the image remaining in the DR Detector fails.
Few data are in the output Queue. Wait till the output happens or delete the Queue data for switching.	Displayed when switching connected devices while there is still data that is has not been outputted. Wait for the data to be outputted, or delete the output data before switching connected devices.
File already exists. Do you want to overwrite?	Displayed when saving a file and another file exists with the same name. Press [OK] to overwrite it.
File read error ([0])	Displayed when reading a file fails.
Folder does not exist, Please select other folder.	Specify an existing folder.
Future Date Entered for Patient BirthDate.Please Confirm.	Displayed when the date of birth is set after present time. Enter a past date.
Gain calibration successfully completed. Correct Data was updated.	This is displayed when calibration has completed and the correction data has been updated.
Image Exchange process error occurred.	Contact Konica Minolta technical representatives.
Image inversion will be canceled.	Displayed when trying to merge flipped images. Confirm the contents of the images and press [OK] to clear the flip.
Image is being resent. (Do not turn off the power to the AeroDR.)	Displayed during image re-acquisition. Wait until image re-acquisition is complete.
Image not assigned. because it exceeded the maximum film size ([MaxAssignSize]MB).	This is displayed when the size that can be assigned to the print composer has been exceeded. Assign again.
Image Read operation is not complete. Study move is not possible. Are you sure you want to suspend studies?	Study transmission is not available due to studies that have not completed image reading. Press [OK] to continue the suspension process.
Images have not been captured. Are you sure you want to complete study?	Displayed when [] is pressed while there are unexposed images for the study in progress. Press [OK] to end the study.
Images have not been captured. Are you sure you want to complete study? (Unread cassette barcode will be deleted)	Displayed when pressing [] while there are unexposed images in a study. Press [OK] to end the study. When [OK] is pressed, barcodes on which image reading has not been performed are deleted.
Images will be rearranged. Is it OK?	Displayed when [Reset] is pressed. Press [OK] to sort again.
Input is Mandatory.	Displayed when the study is started without mandatory fields filled in. Fill in the mandatory fields.
Input value is not proper. Please correct it.	Displayed when the entered value is not correct. Enter the correct value.
Invalid value. Can not use "\" here.	Displayed when "\"" is entered. Do not use "\".
Invalid value. Can not use "\" or "=" here.	Displayed when "\"" or "=" is entered. Do not use "\" or "=".

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8.2 Dialog boxes/balloons and countermeasures


Displayed message	Problems/countermeasures
Invalid value. Cannot use "\", "^" or "=" here.	Displayed when "\", "^", or "=" is entered. Do not use "\", "^", or "=".
Is it OK to cancel the registration?	Displayed when attempting to cancel the DR Detector registration to the exposure room. Press [OK] to erase the registration.
Is it OK to delete?	Displayed when characters which have been placed in annotation are selected and [Delete] is pressed. Press [OK] to delete.
Is it OK to delete all?	Displayed when characters which have been placed in annotation are selected and [Delete All] is pressed. Press [OK] to delete.
Is it OK to delete the active capture conditions?	Displayed when attempting to delete unexposed Exam. Tags. Press [OK] to delete the Exam. Tags.
Is it OK to delete the registered cassette barcode?	Displayed when deleting the Exam. Tags with the bar code registered.
Is it OK to delete the selected queue?	Displayed when the [Delete] button is pressed. Press [OK] to delete the queue.
Is it OK to log off?	Displayed when [Log off] in the tool bar area is pressed. Press [OK] to log off.
It cannot edit because of the waiting for an output. Please perform edit after waiting till the completion of an output or deleting output queue.	Displayed when trying to edit combined Exam. Tags while output is in progress. Wait until output is complete, or delete the output queue before editing.
It is not uniformly exposed. Confirm that there are no foreign objects before the AeroDR Detector or check the irradiation field aperture.	This is displayed when irradiation was not uniform. Check for foreign objects and problems with the irradiation field aperture, then perform exposure again.
Less than Minimum Space Required. Please Check Media.	This is displayed when the amount of available space on the media for storing backup data is low. Prepare new media.
Log Backup Failed due to an error.	Displayed when an internal processing error occurs while backing up (saving) the log using the Log management tool or Reject log tool fails. Confirm that the designated save location is write-enabled and try to back up (save) the Log again.
Log delete operation is completed.	Displayed when deleting the log using the Log management tool or Reject log tool is complete. Press [Yes] to delete the log.
Log has been Saved. Do you want to clear the Log?	Displayed when confirming whether to delete the log after backing up (saving) the log using the Log management tool or Reject log tool is complete. Press [Yes] to delete the log.
Mammo Exam. Tag is fixed with high resolution.	This is displayed when changing the reading resolution to Standard in the mammogram exposure conditions. Set the reading resolution to High.
Mandatory Field is not Entered. Perform Not Possible.	Displayed when an improper character has been entered. Press [OK] to close the screen.
Max value of shots has exceeded. Cannot perform the study.	Displayed when the total number of exposures in a study selected through multi-study exceeds the max value. Reduce the number of selected exposures and perform the study again.
Maximum number of preset is configured.	Displayed when the number of preset settings exceeds the upper limit. Delete the preset to add more settings.

Displayed message	Problems/countermeasures
Media Not Inserted. Please Insert Media	This is displayed when media is not inserted.
Media Not Inserted. Please insert new media and click Retry button.	This is displayed when the media for storing backup data is not recognized. Check the media and select the Retry button.
Media Write Error	This is displayed when a media write error has occurred.
Merge Error	This is displayed when the process to merge studies failed. Try to merge them again later.
Merge not possible as the searched study is in progress in another console.	This is displayed when merging studies that are currently shared. Try to merge them again after stopping sharing.
More than 16 characters are not allowed.	Displayed when the number of entered characters exceeds the character limit. Enter characters within the limit.
More than 250 characters for Preset name is not allowed	Set by reducing the number of characters.
Multiple patient can not be selected.	Displayed when selecting a different patient's study after multiple search results are displayed in multi-study. Reselect a study of the same patient.
Multiple Study Exist With Given Information.	This is displayed when there are multiple studies with same patient ID or Accession Number as a result of study search.
New stitching information has not been saved. Are you sure you don't want to create stitching image?	Displayed when [Back] is pressed without pressing [Apply] after making edits on the stitching viewer screen. Press [OK] to close without saving the edits.
Non-activated AeroDR detector is found. Please activate using service tool.	Contact Konica Minolta technical representatives.
Not able to retrieve studies from below consoles. Please check the connectivity of these consoles.	Displayed when unable to acquire parts of a study after performing multiple terminal study acquisition through study sharing. Check the connection and reacquire the study.
Not Enough Space For Output. Please insert new media and click Retry button.	This is displayed when there is not enough available space on the media to store backup data. Replace the media and select the Retry button a short while later.
Now image reading. Please try to log off again after a while.	This is displayed when a log in with separate user account is attempted while another user is logged in during the time when the image is captured from the reader and being displayed.
Only stitched image exam tag exists, discard is not possible.	Displayed when attempting to reject an image on which combination stitching was performed. Combination stitched images cannot be rejected.
Operation not possible	Displayed when numerals besides acceptable values are entered. Enter values that are within range.
Order is registered. Do you want to overwrite?	This is displayed when [Clear] is pressed for the registered study.
Output image is updated. Please output again in order to reflect the correct mammo CAD result.	The output image is updated. Output again in order to reflect the correct mammo CAD result.
Output Not Possible to CD/DVD. Please Check Media.	This is displayed when the media for storing backup data is not the correct type. Use the correct media.
Output queue present. Error may happen if Area selection is changed. Do you want to continue?	This is displayed when the area selection button is pressed while there is untransmitted data.
Overwrite the RM device info?	This is displayed when overwriting the RM device information. Press [OK] to overwrite it.

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8.2 Dialog boxes/balloons and countermeasures

Displayed message	Problems/countermeasures
Patient ID format selection is mandatory.	Displayed when the patient ID is not set. Set the patient ID.
Patient ID: [PATIENTID] Patient name: [PATIENTNAME] Reader name: [READERNAME] Image reception is not completed. Check the network.	Displayed when a communication error occurs while reading an image when performing a CR Cassette exposure with a cassette capable of resending images. When reconnected to the network, the device is able to resend the images.
Patient info already present in DB. Do you want to use that patient info?	This is displayed when a patient information is already registered in this device when the patient information entered.
Patient size could not be changed for some order. Please check.	This is displayed when the patient size could not be changed in the study.
Patient Update Error.	Displayed when updating patient information fails. Update patient info again.
PatientID is mandatory, Please enter PatientID.	Displayed when mandatory fields have not been filled in. Press [OK] to close the screen.
PatientName is mandatory, Please enter PatientName.	Displayed when mandatory fields have not been filled in. Press [OK] to close the screen.
PDA backprocess error.	Restart the device. If this does not solve the problem, contact Konica Minolta technical representatives.
PDA backprocess error. Failed to display on the PDA.	Restart the device. If this does not solve the problem, contact Konica Minolta technical representatives.
PDA Backprocess sending error. Failed to display on the PDA.	Restart the device. If this does not solve the problem, contact Konica Minolta technical representatives.
PDA backprocess startup error. Check settings.	Restart the device. If this does not solve the problem, contact Konica Minolta technical representatives.
Perform Not Possible.	This is displayed when starting of selected study has failed.
Please check all reader and console is running and press [OK].	Displayed after pressing [Backup] on the system monitor JM screen when a problem occurs with JM.
Please connect to a network and proceed with Area selection.	Displayed when disconnected from network when switching from first area. Press [OK] to close the screen, then check that the device is connected to a network and select an area again.
Please Enter Correct Password.	Displayed when the wrong password is entered on the system monitor screen. Press [Close] to close the screen.
Please Enter Password.	Displayed when [OK] is pressed without a password being entered on the system monitor password entry screen. Enter the correct password and press [OK].
Please enter the mandatory fields	This is displayed when an study is attempted to start without values entered into the mandatory input form.
Please Enter Value for both Content Date and Content Time Fields	This is displayed when neither image date nor time are entered in the image supplementary information and [OK] is pressed.
Please input the alphanumeric character.	Displayed when non-English characters are entered. Enter English alpha-numeric characters.
Please input the content for searching.	This is displayed when [Search] is pressed without the values required for search are not entered in the input form.
Please input the integer.	Displayed when a non-numeric character is entered. Enter numeric characters.
Please restart Regius.	Displayed when JM switching is finished.

Displayed message	Problems/countermeasures
Please select queue(s) that is to be deleted.	Displayed when [Delete] is pressed without selecting a target queue for deletion. Select the target queue to be deleted.
Please set the right number of digits for start and stop values.	Displayed when entering a numeral that exceeds the upper limit of the set number of digits. Enter numerals within the limit.
Please wait for a while until connection is restored. Do not turn off the power of the AeroDR. Turning off the power will delete the image before it is fully sent.	Wait for a while until the device and DR Detector connection is restored.
Please wait...	This is displayed when internal processing is being carried out in this device. Wait until the processing end.
Preset Format text cannot be more than 64	Displayed when the number of entered characters exceeds the character limit. Enter characters within the limit.
Preset Name already exists.	Displayed when entering a preset name that already exists. Enter a different name.
Preset Name is invalid.	Displayed when an invalid name is entered. Enter another name.
Press [Re-reception] to retrieve the image from "[DR Detector name]". Patient ID: [PATIENTID] Exam.Tag: [BODYPARTS] [Re-reception]: Open the study, and executes re-reception the image automatically. [Cancel]: Return without the Image re-reception. [Delete]: Delete the image in "[DR Detector name]".	Displayed when moving to the list screen while there are unreceived images in the DR Detector. Press [Re-reception] to re-acquire the images.
progressing...	Displayed while various processes are running. Wait for a while until the processes end.
Queue cannot be deleted because this study is moving to other console.	Studies in the process of moving cannot be cancelled.
Radiation field detection Failed.	Displayed when exposure field detection of the AeroDR Stitching Unit fails. Check the exposure range, and perform exposure field detection again.
Re exposure is required. Do you really want to cancel the operation?	Displayed when trying to cancel stitching exposure. Press [OK] to cancel exposure.
Reader name: [READERNAME] Are you sure you want to cancel image reception? Please restart the reader in case of reception canceled.	Displayed when an image display area is pressed during the resending of images while exposing with a CR cassette. Press [OK] and restart REGIUS to cancel resending.
Reading cassette is already started. This operation is interrupted.	Displayed when [Body Part Selection] or [] are pressed while a cassette is already being read. Wait until the cassette reading is complete, and perform the operation again.
Real Time Backup in progress. Do you want to end the system?	This is displayed when terminating system operation while the Real Time Backup process is in progress. Press [OK] to terminate system operation. The queued data that has not been output to external media will remain where it is.
Receive Cancel Error occurred. Please refresh the study list and try again.	Displayed when attempting to cancel reception of a study which does not exist. Confirm that the target study has not been moved to another device.
Receive Error occurred. Please refresh the study list and try again.	Displayed when attempting to receive a target study which does not exist. Confirm that the target study has not been moved to another device.

Continued on the next page

8.2 Dialog boxes/balloons and countermeasures

Displayed message	Problems/countermeasures
Registration Failed	This is displayed when registering of patient information has failed.
Re-reception Error. Check network condition and Retry operation.	Displayed when image reacquisition fails. After a few seconds, press [Resend] for re-acquisition.
Re-reception Error. Check network condition and touch application bar after few seconds.	Displayed when image reacquisition fails. Check the connection status of the network device and communication cables, and tap the Application Bar after a few seconds or tap the Exam. Tags (in the yellow frame) to re-acquire the image.
Re-reception Error. Check network condition and touch application bar after few seconds.	Image re-reception from the AeroDR Stitching System failed. After a few seconds, touch the yellow frame on the Application Bar, and receive the image again.
Restoring Previous Setting. Please Wait...	Displayed when area switching fails and the area settings are returned to their original status.
Same Patient ID: [0],Patient Name: [1],Sex: [2],DOB:[3] available in Database, do you want to overwrite?	This is displayed when registering patient information that is already registered in this device.
Scheduled Date(From) cannot be greater than Scheduled Date(End).	This is displayed when the value for the examination schedule date entered in (From) is larger than that for (To). Enter appropriate values.
Search Error occurred	This is displayed when a search to the higher system has failed.
Select Folder Path.	Displayed when a folder path is not selected. Select a folder path.
Send Cancel Error occurred. Please refresh the study list and try again.	Displayed when attempting to cancel transmission of a study which does not exist. Confirm that the target study has not been moved to another device.
Send Error occurred. Please refresh the study list and try again.	Displayed when attempting to transmit a study which does not exist or which has already been reserved for transmission to another device. Confirm that the target study has not been moved to another device.
Separately, if you want to use the panel Aero-Sync environment was conducted calibration must be calibrated Aero-Sync environment.	This is displayed when using the DR Detector calibrated in Sync Mode in the Aero-Sync environment. Perform calibration in the Aero-Sync environment.
Separately, if you want to use the panel Sync environment was conducted calibration must be calibrated Sync environment.	This is displayed when using the DR Detector calibrated in Aero-Sync Mode in the Sync environment. Perform calibration in the Sync environment.
Setting File loading failed due to file lock	The file may be corrupted. Load the file again.
Sex is mandatory, Please enter Sex.	Displayed when mandatory fields have not been filled in. Press [OK] to close the screen.
Some of the components are going to expire or have expired. Please Check.	Displayed when there is a unit which will require or does require an exchange. Contact Konica Minolta technical representatives.
Space Not Enough. Please Check Media	This is displayed when there is not enough space to write to the media.
Start Date should be less than End Date.	Displayed when the end date is set earlier than the start date. Set the start date earlier than the end date.
Start value should be less than Stop value.	Displayed when setting the Start value to a number higher than the Stop value. Enter a Start value that is lower than the Stop value.
Stitched image will be selected. Is it OK to clear selected image(s).	Displayed when trying to decompress a combined image into the stitch adjustment panel. Press [OK] to decompress it.

Displayed message	Problems/countermeasures
Study already present in DB. Do you want to use that study?	This is displayed when matching study information is already registered in this device when study information is entered.
Study Append Error occurred. Please refresh the study list and try again.	Displayed when attempting to append a target study which does not exist. Confirm that the target study has not been moved to another device.
Study Delete Error occurred. Please refresh the study list and try again.	Displayed when attempting to erase a target study which does not exist. Confirm that the target study has not been moved to another device.
Study got deleted from database, Perform operation is not possible.	This is displayed when a selected study has been deleted by a higher system.
Study Guard Error occurred. Please refresh the study list and try again.	Displayed when attempting to guard a target study which does not exist. Confirm that the target study has not been moved to another device.
Study ID is mandatory, Please enter PatientID.	Displayed when mandatory fields have not been filled in. Press [OK] to close the screen.
Study is Already Performed in Another Console.	The same study has already been started in another exposure room.
Study is in progress state, Do you want to perform?	This is displayed when attempting to start a study that is "in progress".
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Check the network status.	Communication between consoles failed. Confirm that there is not a problem with the LAN connection between the device and the console and establish the communications again. If the problem persists, restart the device and try to establish communications again. If this does not solve the problem, contact Konica Minolta technical representatives.
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. [Other device name] file access failed.	File access failed due to unforeseen circumstances. Move the target study again. If the problem persists, restart the device and try to move the study again. If this does not solve the problem, contact Konica Minolta technical representatives.
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. [Other device name] DB access failed for	DB access failed due to unforeseen circumstances. Move the target study again. If the problem persists, restart the device and try to move the study again. If this does not solve the problem, contact Konica Minolta technical representatives.
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Check the study status for completeness all required files	Due to a failure in moving the target study or cause, not all of the necessary data is available and the target study cannot be moved.
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Failed to access image information of [Other device name]	Failed to move the image file due to unforeseen circumstances. Move the target study again. If the problem persists, restart the device and try to move the study again, and if this does not solve the problem, contact Konica Minolta technical representatives.
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Failed to access study information of [Other device name]	Failed to move study info due to unforeseen circumstances. Move the target study again. If the problem persists, restart the device and try to move the study again, and if this does not solve the problem, contact Konica Minolta technical representatives.

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8.2 Dialog boxes/balloons and countermeasures

Displayed message	Problems/countermeasures
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Not existing the respective study. Please check the study status.	The target study has been deleted or has already been moved. Check the target study status.
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Patient information is not matching, Please correct the patient information.	The patient information in the destination does not match the patient information in the source. Check the source and destination patient info. When the patient name, date of birth, and sex are different, the patient is determined to be someone else and it is not possible to move the study.
Study reserve to the console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME].check the study status or Study sharing status.	The target study does not satisfy sharing conditions. Check the target study status. Target studies in the following statuses cannot be moved. <ul style="list-style-type: none"> • The same study exists in the destination and is in progress • The same study exists in the destination and is complete • The same study exists in the destination and is scheduled for moving • The study in the source is in progress • The study in the source is scheduled for moving to another terminal
Study retrieval from console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Check the network status.	Communication between consoles failed. Confirm that there is not a problem with the LAN connection between the device and the console and establish the communications again. If the problem persists, restart the device and try to establish communications again. If this does not solve the problem, contact Konica Minolta technical representatives.
Study retrieval from console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Failed to access Image information of [Other device name]	Failed to move the image file due to unforeseen circumstances. Move the target study again. If the problem persists, restart the device and try to the target study again. If this does not solve the problem, contact Konica Minolta technical representatives.
Study retrieval from console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Failed to access study information of [Other device name]	Failed to move study info due to unforeseen circumstances. Move the target study again. If the problem persists, restart the device and try to move the study again. If this does not solve the problem, contact Konica Minolta technical representatives.
Study retrieval from console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. [Other device name] DB access failed.	DB access failed due to unforeseen circumstances. Move the target study again. If the problem persists, restart the device and try to move the study again. If this does not solve the problem, contact Konica Minolta technical representatives.
Study retrieval from console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. [Other device name] file access failed.	File access failed due to unforeseen circumstances. Move the target study again. If the problem persists, restart the device and try to move the study again. If this does not solve the problem, contact Konica Minolta technical representatives.
Study retrieval from console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Patient information is not matching, Please correct the patient information.	The patient information in the destination does not match the patient information in the source. Check the source and destination patient info. When the patient name, date of birth, and sex are different, the patient is determined to be someone else and it is not possible to move the study.

Displayed message	Problems/countermeasures
Study retrieval from console [Other device name] got failed for the study [PATIENT_ID,PATIENT_NAME]. Please check the study status or Study sharing status.	The target study does not satisfy sharing conditions. Check the target study status. Target studies in the following statuses cannot be moved. <ul style="list-style-type: none"> • The same study exists in the destination and is in progress • The same study exists in the destination and is complete • The same study exists in the destination and is scheduled for moving • The study in the source is in progress • The study in the source is scheduled for moving to another terminal
Study without captured images cannot be completed.	Cannot be terminated because studies with no exposed images are included. Press [OK] to close the screen.
Study without exam tags exists. Cannot perform the study.	Displayed when studies with unspecified Exam. Tags are included in the studies selected with the multi-study. Select only studies with specified exposure body parts, and then begin the study.
System cannot be switched by current user. [ERRORS]	Restart this device.
System hasn't completed [STATUS] within a time frame yet. Are you want to proceed?	Cancel and restart the device.
System hasn't completed [STATUS] within a time frame yet. System complete the process.	Press [OK] to force stop the process.
The contents changed when the tab was changed without saving are lost. Are you sure?	Displayed when switching tabs without saving setting information.
The corresponding patient is not present in the DB	This is displayed when patient information could not be found in the patient information search.
The wireless use will be set OFF. Is it OK?	Displayed when changing wireless from enabled to disabled. Press [OK] to continue.
The wireless use will be set ON. Is it OK?	Displayed when changing wireless from disabled to enabled. Press [OK] to continue.
There are images unreceived to the AeroDR. Do not turn off the power of AeroDR. Return AeroDR detector to previous connection state(Wired/Wireless). In the case of wireless connection, the electric wave state has deteriorated. Please check an electric wave state by the AeroDR icon at the upper right of a screen, and wait until connection returns.	Displayed when unreceived images remain in the DR Detector. Check the network equipment and communication cable connection status. Press [OK], and wait until image re-acquisition is complete.
There are no captured images. Are you sure you want to change status to not started?	This is displayed when suspending a study without capturing any image.
There is an exposed image in the study, do you want to edit the study?	This is displayed when modifying the patient information of the completed study.
There is no corresponding study, patient info.	Displayed when the queried patient or study cannot be found. Press [OK] to close the screen.
There is no corresponding study, patient.	This is displayed when corresponding study or patient information was not found as a result of searching the higher system for study or patient information.
There is no corresponding study.	This is displayed when a searched study was not found. Enter new search conditions and search again.
There is no Exam. Tag license.	Contact Konica Minolta technical representatives.
There is no images for auto assignment.	This is displayed when there are no Exam. Tags set for auto assignment in the print composer.

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8.2 Dialog boxes/balloons and countermeasures

Displayed message	Problems/countermeasures
This cassette has already been started reading. Unable to delete barcode registration.	Displayed when trying to delete a cassette barcode that is already being read.
This cassette has already been started reading. Unable to delete jobs registered with manual registration mode.	Displayed when trying to change the order of Exam. Tags that are already being read.
This cassette is already registered. Register a different cassette.	This is displayed when trying to register a cassette that is already registered to a barcode.
This cassette is for contact mammography. Check the Exam. Tag.	This is displayed when a bar code for a mammogram cassette is read in to a registered exposure condition.
This cassette is for general exposure. Check the Exam. Tag.	Displayed when a barcode of a normal exposure cassette is read into a registered mammogram exposure condition.
This cassette is for PCM. Check the Exam. Tag.	This is displayed when a bar code for a mammogram cassette is read in to a registered exposure condition.
This character is not allowed	Displayed when an invalid character is entered. Do not enter these characters.
This data is being output.	Study output in progress. Wait until the processes end.
This data is being processed.	Study processing in progress. Wait until the processes end.
This data is guarded.	Displayed when trying to delete a study which is protected.
This image can't be deleted because it is being output.	Displayed when trying to delete a queue while output is in progress. Delete the queue after stopping output.
Timeout occurred in image reception.	Displayed when a timeout occurs while the device is receiving an image from the DR Detector. Tap the Exam. Tags (in the yellow frame) to re-acquire the image.
Unable to clear log	Displayed when deleting the log using the Log management tool or Reject log tool fails. Restart this device and try to delete the log again.
Unable to prepare to read CR cassette as CR Mammography license is not installed, Please register the license.	Displayed when mammogram exposure conditions are read with the barcode and the CR Mammography license is not registered. Register the CR Mammography license.
Unable to receive the image. Suspend the study, and then re-start this study. It probably retrieve the image.	Displayed if an image may be recovered when exposure is interrupted due to an internal error in this device. If the image is not displayed and the DR Detector does not contain untransferred images (the same status as that observed when no exposures have been carried out), the image may be recoverable by suspending the study and displaying the exposure screen from the list screen again.
Unable to register mammo exam tag. because CR Mammography license is not installed. Please install the license.	This is displayed when registering mammogram exposure conditions using a DR Detector that has not had the CR Mammography license registered.
Update Success.	Displayed when image transfer is successful. Press [OK].
User: [USERNAME] has already logged in. Log off this user?	Displayed when attempting to log in into another account while a user is already logged in. Press [OK] to log in with a different user account.
Wireless Access Point channel setting change failed.	Displayed when changing the wireless access point channel settings fails. Press [Close] to close the screen and then check the AeroDR Portable RF Unit or AeroDR Portable UF Unit condition.
Wireless Access Point channel setting successfully changed.	This is displayed when the channel settings of the wireless access point has been changed.
You cannot register more than [MaxSize] images.	This is displayed when trying to add an Exam. Tag exceeding the maximum number of Exam. Tags that can be registered.

8.2.2 Messages displayed in balloons and countermeasures

If the following messages appear, take the respective countermeasures.

Displayed message	Problems/countermeasures
Enter number.	This is displayed when a character other than number is entered in the input form for numbers. Confirm the character entered.
Entered day is invalid.	This is displayed when a day other than 1 to 31 is entered. Enter the correct day.
Entered hour is invalid.	This is displayed when an hour other than 0 to 24 is entered. Enter the correct hour.
Entered minutes are invalid.	This is displayed when a minute other than 00 to 59 is entered. Enter the correct minute.
Entered month is invalid.	This is displayed when a month other than 1 to 12 is entered. Enter the correct month.
Entered seconds are invalid.	This is displayed when a second other than 00 to 59 is entered. Enter the correct second.
Entered value is invalid.	This is displayed when a value out of range is entered. Enter a numeral value within the range in accordance with the displayed message.
Entered year is invalid.	This is displayed when a year out of range is entered. Enter a year within the range.
Entered year is invalid. Enter a value of 1800 or higher.	This is displayed when a year before 1800 is entered. Enter a year 1800 A.D. or later.
Future date not possible.	This is displayed when a future date from current date is entered. Enter the correct date.
Future month not possible.	This is displayed when a future month from current date is entered. Enter the correct month.
Future year not possible.	This is displayed when a future year from current date is entered. Enter a year within the range.
Invalid value. Can not use "\" here.	This is displayed when one of "\", "^" or "=" is entered in the specific input form.
Invalid value. Can not use "\" or "=" here.	This is displayed when one of "\", "^" or "=" is entered in the specific input form.
Invalid value. Can not use "\", "^" or "=" here.	This is displayed when one of "\", "^" or "=" is entered in the specific input form.
Please input the alphanumeric character.	This is displayed when a character other than alphanumeric is entered in the input form for alphanumeric. Confirm the character entered.
Please input the integer.	This is displayed when a character other than integer is entered in the input form for integers. Confirm the character entered.
The entered year is not a leap year. Check the date.	This is displayed when February 29 is entered in a year other than leap year. Enter the correct day.
The following AeroDR is registered. AeroDR name: {DeviceName}	This is displayed when an DR Detector is registered to an exposure room.

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8.2 Dialog boxes/balloons and countermeasures

Displayed message	Problems/countermeasures
The maximum number of characters is not reached.	This is displayed when allowable number of characters are exceeded. Confirm the number of characters.
The minimum number of characters is not reached.	This is displayed when the number of characters has not reached the minimum number required. Confirm the number of characters.
The remaining battery power is low. Charge the battery.	This is displayed when the battery level of the DR Detector is getting low. Charge the DR Detector.
The remaining PC battery power is low.	This is displayed when the battery level of this device being used is getting low. Charge this device.
The remaining PC battery power is low. Charge the battery.	This is displayed when the battery level of this device being used is insufficient. Charge this device. If this device cannot be charged right away, shut down this device.
Wrong user name or password.	This is displayed when incorrect user name or password is entered for login.

Chapter 9

Troubleshooting

This chapter describes the countermeasures when the problems occur.

9.1 • Various problems and countermeasures

When the followings occur while using this device, take the respective countermeasures.

9.1.1 JM issues

When the backup JM is used in combination, it is possible to switch to the backup JM when a fault occurs on the standard JM. Switch over must be performed because when the JM has a fault, exposures are not possible with the REGIUS.

Switching of the JM can be performed from this single unit. At this time, it is unnecessary to restart this device, but the REGIUS must be restarted.

1 Press [System].



- The system monitor screen is displayed.
- If the network status is not displayed, press the [System Monitor] tab on the function switching tabs.

2 Press [JM].



- The JM status confirmation screen is displayed.

3 Select [Backup].



- The confirmation screen is displayed.

4 Press [OK].

- Press [Cancel], and the switchover of JM is cancelled, returning to the JM status confirmation screen, however, exposure cannot be performed because a fault has occurred in the JM.



- The confirmation screen is displayed.

5 After checking that all REGIUS and this unit have activated, press [OK].

- Display returns to the JM status confirmation screen.
- A confirmation screen indicating completion of JM switchover and prompting restart of REGIUS is displayed.



- Press [OK] to restart all REGIUS and the switchover of JM is completed.
- Exposure can be performed again.

6 The confirmation screen is displayed on this unit connected to the same system.

IMPORTANT

- After the switchover of JM, contact Konica Minolta technical representatives as soon as possible.
-

HINT

- Switching to backup JM may take about 1 minute.
-

9.1.2 Reacquisition of images from the DR Detector

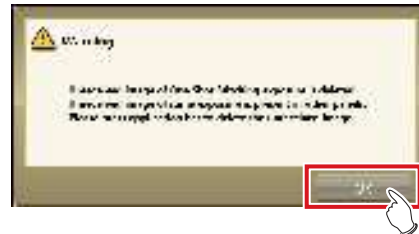
Reacquire the images when images cannot be received from the DR Detector after the exposure due to reasons such as communication errors, etc.

IMPORTANT

- Reacquire images that have not been transferred using this device, in which a communication error has occurred.
- If you end your examination while an image that has not been transferred is left in the DR Detector, you will not be able to acquire the image again.
- When images that have not been transferred remain in the DR Detector, exposure cannot be performed with that DR Detector.
- If an image cannot be received using the Auto stitching exposure with DR Detector, cancel the image reacquisition and do not perform any changes to the exposure device.
- In the event of a communication error and depending on the timing at which the error has occurred, images may not be displayed and the DR Detector may not contain any images that have not been transferred (the same status as that observed when no exposures have been carried out). In such a case, a message may be displayed. Suspend the study and display the exposure screen from the list screen. This operation may successfully recover the images.
- Non-transferred images need to be reacquired because the One Shot stitching exposure conducts the combining and displaying images after acquiring all the images.

- Delete the non-transferred images from all the DR panels used in the exposure, to delete the non-transferred images by the reacquiring of the One Shot stitching exposure.

- (a) Press [OK] when a message "Unreceived image of One Shot Stitching exposure is deleted. Unreceived image of same exposure is present in other panels." appeared.



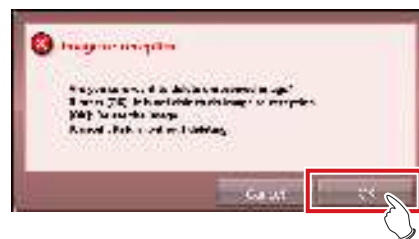
- (b) Press the framed device icon.



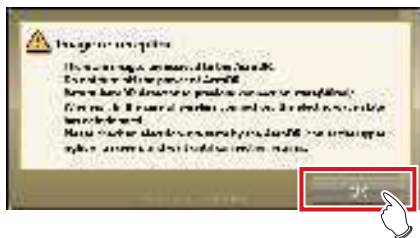
- (c) Press [OK] when a confirmation screen appeared.



- (d) Press [OK] when the confirmation screen appeared again.



1 When the message "There are images unreceived to the AeroDR. Do not turn off the power of AeroDR." is displayed, press [OK].



- When the wireless connection is used, check the state of wireless communication. When the wired connection is used, check that the wired cables are securely connected.
- When reconnection is made, the device icon in the application bar is enclosed in a yellow frame.



- The dialog window regarding the reconnection between this device and the DR Detector is displayed.



- When the connection is restored, images are automatically transferred.



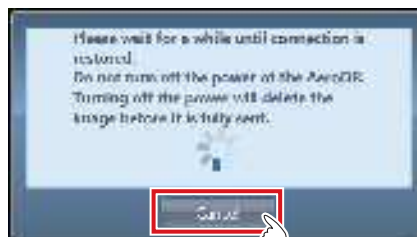
- Images are reacquired and displayed.

9.1.3 Stopping and resuming reacquisition of images from the DR Detector

If recovery of the connection with the DR Detector is taking a long time, you can stop reacquisition of images.

● Stopping reacquisition of images

1 Press [Cancel] if the dialog box indicating that recovery of the connection is underway.



- The Exam. Tag for the unacquired image is highlighted.

IMPORTANT

- If you suspend the examination and display the list screen without acquiring images that have not been transferred, or if you restart this device after deactivating it once, a confirmation dialog for reacquiring the images appears.



- When [Delete] is pressed, the image deletion confirmation screen is displayed. When [OK] is pressed on the image deletion confirmation screen, the images not transferred yet are deleted.
- When [Cancel] is pressed, the display returns to the list screen.
- When [Re-reception] is pressed, the study is started, and the image is acquired from the DR Detector.

● Resuming reacquisition of images

1 Press the image display area to resume reacquisition of images from the DR Detector.



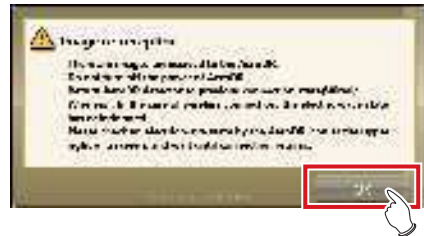
- The confirmation dialog is displayed.

IMPORTANT

- The confirmation dialog displayed varies depending on the connection with the DR Detector.
 - When the connection with the DR Detector is restored: Press [OK] and reacquisition of images from the DR Detector is resumed.



- When the connection with the DR Detector is not restored: After pressing [OK], check the connection with the DR Detector.



- If there is an image on the DR Detector that has not been transferred when [] or [] is pressed on the exposure screen, a confirmation screen for reacquiring the images is displayed.



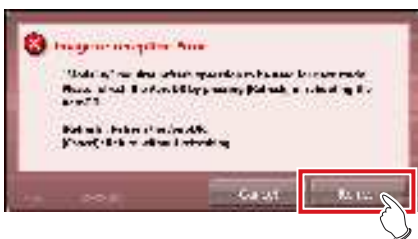
- When the [Re-reception] is pressed, the image acquisition from the DR Detector is started.
- When [Cancel] is pressed, the display returns to the exposure screen.
- When [OK] is pressed, the examination is ended or suspended.

9.1.4 Deletion of untransferred images in the DR Detector

If you have ended the study without acquiring untransferred images, or performed an exposure using a different DR Detector without acquiring untransferred images, use the following procedure to delete the untransferred images.

1 When the message ""Modality" requires refresh operation to be used for next study." is displayed, press [Refresh].

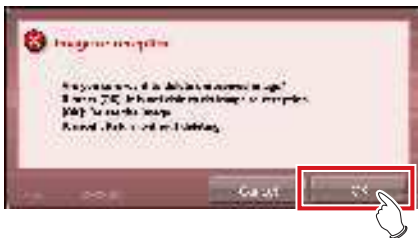
- Press [Cancel] to return to the previous screen.



- The confirmation screen is displayed again.

2 Press [OK].

- Press [Cancel] to return to the previous screen.



- The confirmation dialog box disappears and untransferred images in the DR Detector are deleted, then exposure can be performed.

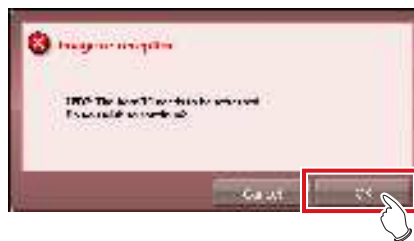
HINT

- You can also delete untransferred images by pressing the device icon that is enclosed in a frame on the list screen.

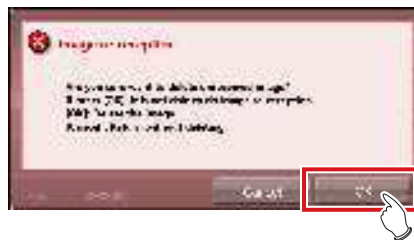
(a) Press the device icon that is enclosed in a frame.



(b) When the confirmation dialog is displayed, press [OK].



(c) When the confirmation dialog is displayed again, press [OK].



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9.1.5 Reacquisition of images from the REGIUS

Reacquire the images when images cannot be received from the REGIUS after the exposure due to reasons such as communication errors, etc.

- 1 When the message "Image reception is not completed. Check the network." appears, press [OK].
- 2 Please check the connection status with REGIUS.
 - A confirmation screen will be displayed. Press [OK].



- The "Receiving the retransmitted images" screen is displayed.
- It continues until the images are received successfully.



- Images are reacquired and displayed.

HINT



- If you cancel via the "Receiving the retransmitted images" screen, a confirmation screen which says, "Are you sure you want to cancel image reception? Restart the reader in case of reception canceled." will be displayed.
 - Press [OK] to cancel retransmission. The REGIUS needs to be restarted.
 - Press [Cancel] to return to the "Receiving the retransmitted images" screen, and to continue receiving.

9.1.6 Communications error during image reception

When a fault occurs in network communications while receiving images, operation sometimes becomes impossible.

When operation cannot be continued after about 5 minutes have elapsed, shut down this device and restart.

9.1.7 How to release the lock on the exposure screen

After operating the exposure switch of the X-ray device, the screen sometimes remains locked without displaying the exposure image ([] and [] cannot be pressed).

When this condition occurs, perform the following operation.

1 Again press only the first stage of the exposure switch, and release it.

- The screen lock is released, and the screen operation and operation of the exposure switch are enabled.
- Make sure "Ready" is displayed in the work area of the exposure target, and expose again.

IMPORTANT

- In the above operation when the screen lock is released, X-rays are not actually exposed, rather it is a state awaiting exposure.

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Chapter 10

Error Codes

This chapter describes the error codes and countermeasures.

10.1 • Types of error codes and recognition methods

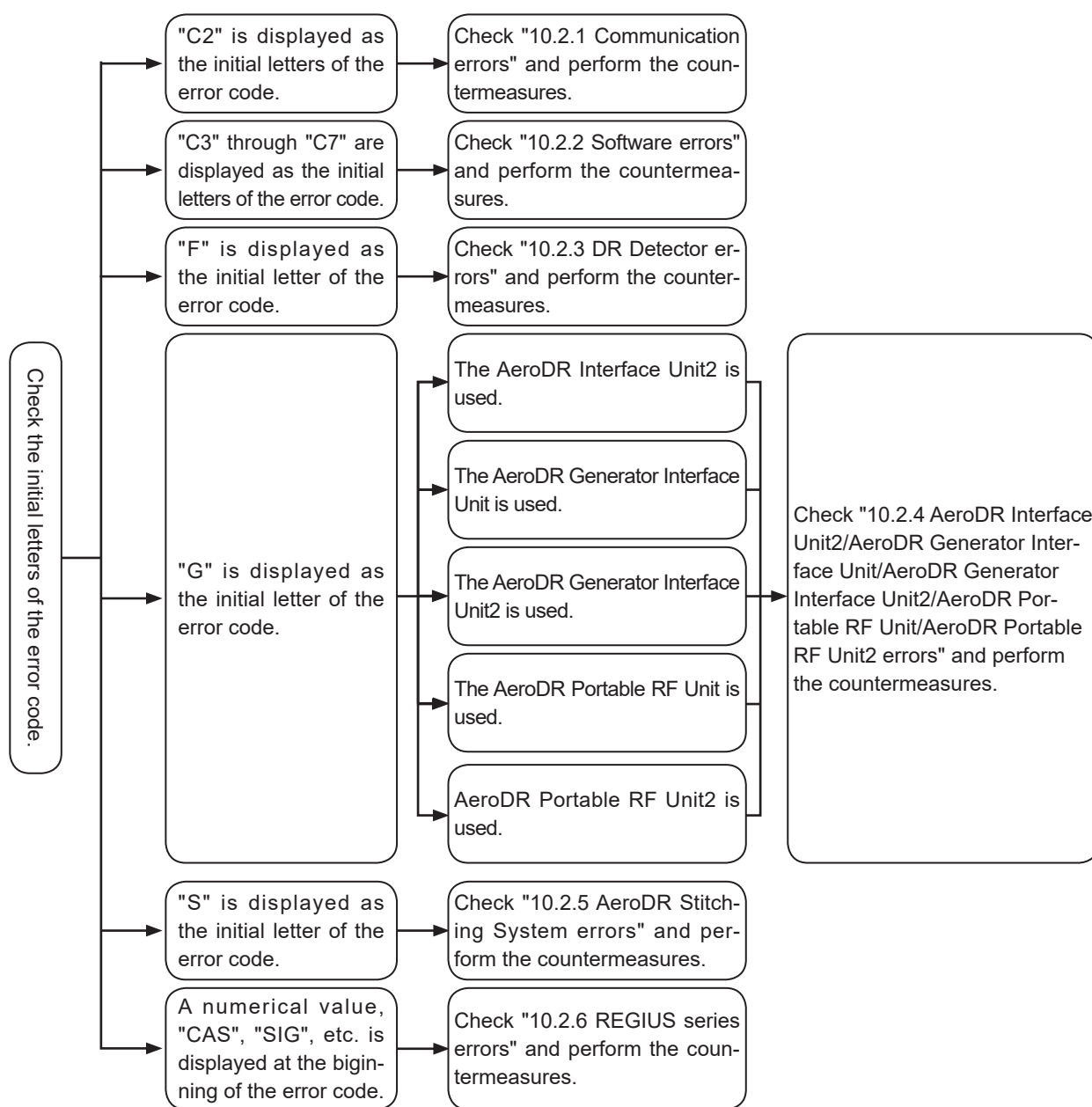
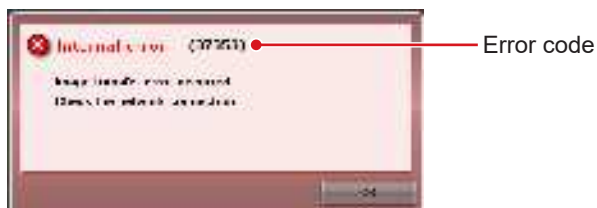
10.1.1 Types of error codes

Error messages are all displayed in a dialog box. The types and description of error messages are as follows.

Types	Description
Communication errors	An error has been caused in communications.
Software errors	An error has been caused in this device.
DR Detector errors	An error has been caused in the DR Detector.
AeroDR Interface Unit2 errors	An error has been caused in the AeroDR Interface Unit2.
AeroDR Generator Interface Unit errors	An error has been caused in the AeroDR Generator Interface Unit.
AeroDR Generator Interface Unit2 errors	An error has been caused in the AeroDR Generator Interface Unit2.
AeroDR Portable RF Unit errors	An error has been caused in the AeroDR Portable RF Unit.
AeroDR Portable RF Unit2 errors	An error has been caused in the AeroDR Portable RF Unit2.
AeroDR Stitching System errors	An error has been caused in the AeroDR Stitching System.
REGIUS errors	An error has been caused in the REGIUS series.

10.1.2 Recognition method for error codes

The initial letters have been decided for each type of error code. When an error message has been displayed, identify the type of error in accordance with the flow and check the error description and the countermeasures in each item.



10.2 • Error codes and countermeasures

If the following error codes appear, take the respective countermeasures.

IMPORTANT

- After performing countermeasures, if the problem does not go away, contact Konica Minolta technical representatives.
- If the displayed error code is not supported on this device, contact Konica Minolta technical representatives.

HINT

- The "*" at the tail of the error code is indicating a character from 0 to 9 or from A to Z.
- For operation of the AeroDR SYSTEM and the REGIUS series, refer to the respective operation manuals.

10.2.1 Communication errors

Error codes starting with "C2" are indicating communication errors.

Error code	Displayed message	Problems/countermeasures
C21522	X-ray system error detected.	(1) Pause the examination and start it again. (2) Restart the X-ray device and this device if it is displayed again.
C21523	X-Ray device initializing, Please wait.	Check the X-ray device status.
C21524	X-ray system connection error. Check the network.	Check the network status.
C21525	Connection destination X-ray device or DAP error message displayed.	Contact Konica Minolta technical representatives.
C21526	Parameter setting to the X-ray system error.	Check the exposure settings set on this device.
C21527	The X-ray system interlock failed.	Check the X-ray device status.
C21528	The X-ray system inter unlock failed.	
C21529	Failed to send the X-ray system buzzer sound (success).	
C21530	Failed to send the X-ray system buzzer sound (failure).	
C21531	Failed to retrieve DAP value.	Contact Konica Minolta technical representatives.
C21541	X-ray system error detected.	Restart the X-ray device and this device.
C21559	Internal error occurred in X-ray communication process.	
C27300 - C27307	[AeroDR Stitching Unit name] Failed to connect AeroDR Stitching Unit. Please check the network connection.	Contact Konica Minolta technical representatives.
C27308	[AeroDR Stitching Unit name] Timeout error occurred in AeroDR Stitching Unit. Please check the network connection.	
C27309 - C27313	[AeroDR Stitching Unit name] Failed to connect AeroDR Stitching Unit. Please check the network connection.	
C27314	[AeroDR Stitching Unit name] Communication with AeroDR Stitching Unit has failed. Please check the network connection.	
C27315	[AeroDR Stitching Unit name] Communication with AeroDR Stitching Unit has failed.	
C27316	[AeroDR Stitching Unit name] Failed to connect AeroDR Stitching Unit. Please check the network connection.	

Error code	Displayed message	Problems/countermeasures
C27600 - C27604	Initialization Error	Check the destination connected to.
C27605	Health check error	
C27606 - C27608	Scheduled check error	
C2761*	Error in study completed notification to RIS	
C27620 - C27626	Patient search error	
C27628 C27629 C2763* C2764*	Folder check error	
C2770* C2773*	Communication error occurred in RIS-OUT communication. Check the communication destination.	Check the network status.
C2774*	Communication error occurred in RIS-IN communication. Check the communication destination.	

10.2.2 Software errors

Error codes starting with "C3" through "C7" are indicating software errors.

Error code	Displayed message	Problems/countermeasures
C35500	Failed to initialize.	Restart this device.
C35501	There was an error with reading the setting file.	Check the setting file and update it.
C35502	A time-out occurred.	MWM search request response waiting time-out occurred. Check the connection destination.
C35503	A socket error occurred.	An error occurred in communication with DICOM. (1) Check the destination connected to, the network status, and connection settings. (2) Restart the device.
C35504	Channel mismatch occurred	Contact Konica Minolta technical representatives.
C35520	Failed to initialize.	Restart this device.
C35521	There was an error with reading the setting file.	Check the setting file and update it.
C35522	A time-out occurred.	PPS result notification time-out occurred. Check the connection destination.
C35540	Failed to initialize.	Restart this device.
C35541	There was an error with reading the setting file.	Check the setting file and update it.
C35542	A time-out occurred.	Detach result notification response timeout occurred. Check the connection destination.
C35543	Channel mismatch occurred	Contact Konica Minolta technical representatives.
C35560	Failed to initialize.	
C35561	There was an error with reading the setting file.	
C35562	A time-out occurred.	
C35563	Socket error has occurred.	Check the network equipment and communication cable connection status.
C35564	Exceeded the maximum number of strings obtained.	Contact Konica Minolta technical representatives.
C36020	At PrintComposer process, execution error occurred.	(1) Try performing the operation again. (2) Contact Konica Minolta technical representatives.
C36021	At PrintComposer process, Fatal error occurred. Contact a service representative.	Contact Konica Minolta technical representatives.

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
C36022	At PrintComposer process, processing is timeout.	(1) Try performing the operation again. (2) Contact Konica Minolta technical representatives.
C37001	[DR Detector name] Connecting detector	Check the network equipment and communication cable connection status.
C37002	[DR Detector name] disconnection error	
C37003 C37004	Error. Please touch the work area.	Check the network equipment and communication cable connection status. Touching either the working area or exposure condition items may fix the problem.
C37005	[DR Detector name] Disconnected energy saving not set. Please touch the work area.	(1) Touch either the working area or exposure condition items. (2) Check the network equipment and communication cable connection status. (3) Stop the examination.
C37006	[DR Detector name] wireless forbidden error	Check the network equipment and communication cable connection status.
C37007	[DR Detector name] version up error Version upgrade failed. Check the connection and restart the AeroDR cassette.	
C37008	[DR Detector name] calibration error Calibration failed. Check the connection and retry.	(1) Check the network equipment and communication cable connection status. (2) Restart the calibration tool.
C37009	There are images unreceived to the AeroDR. Do not turn off the power of AeroDR. Return AeroDR detector to previous connection state(Wired/Wireless). In the case of wireless connection, the electric wave state has deteriorated. Please check an electric wave state by the AeroDR icon at the upper right of a screen, and wait until connection returns.	(1) Check the network equipment and communication cable connection status. (2) Press [OK], and wait until image re-acquisition is complete.
C37010	[DR Detector name] Correction processing error Correction processing error. Restart the CS-7 and retake.	Restart this device and perform the exposure again.
C37012	[DR Detector name] Additional registration error	Check the network equipment and communication cable connection status.
C37013	[DR Detector name] Registration cancelation error	
C37014	[DR Detector name] Set panel data error	
C37015	[DR Detector name] Get panel data error	
C37017	[DR Detector name] Attribute information error.	
C37018	[DR Detector name] Error in image file creation. Please contact the service representation.	Contact Konica Minolta technical representatives.
C37019	[DR Detector name] Exposure Permission Setting Error Please touch the work area.	(1) Touch either the working area or exposure condition items. (2) Check the network equipment and communication cable connection status.
C37025	[DR Detector name] Exposure Mode Setting Error Please touch the work area.	Touching either the working area or exposure condition items may fix the problem. If not, contact Konica Minolta technical representatives.
C37054	Exposure field setting error. Check the network connection and touch this exposure condition.	(1) Check the network equipment and communication cable connection status. (2) When [Ready] is displayed, press the Exam. Tag.
C37055	Communication error. Check the network connection and touch this exposure condition.	
C37056	Version up failed. Check the connection and restart the AeroDR XG BOX/ AeroDR Interface Unit2.	(1) Check the network equipment and communication cable connection status. (2) Restart the device and the AeroDR Interface Unit.
C37058	Failed to set the Setting data. Please check network connection and retry.	Contact Konica Minolta technical representatives.
C37059	Failed to get the Setting data. Please check network connection and retry.	Contact Konica Minolta technical representatives.

Error code	Displayed message	Problems/countermeasures
C37060	Exposure sync setting error. Check the network connection and touch this exposure condition.	Check the network equipment and communication cable connection status.
C37064	Network connection between AeroDR and AeroDR XG BOX/AeroDR Interface Unit2 may not be good. Check the network connection and take exposure once again.	The DR Detector and AeroDR Interface Unit2, AeroDR Generator Interface Unit or AeroDR Generator Interface Unit2 communications status is poor. Check the network status and then try performing the exposure again.
C37102	5th AeroDR Detector can not be registered.	Up to four DR Detectors can be registered to one exposure room. A fifth DR Detector cannot be registered because four panels are already registered.
C37103	Unknown AeroDR Detector.	The DR Detector is unregistered. Registered DR Detectors are available.
C37104	Unknown exposure device.	Exposure device is not registered. Registered panels (DR Detectors or CR cassettes) are available.
C37111	An error occurred when canceling registration of the AeroDR panel.	Check the network equipment and communication cable connection status.
C37116	The license of the panel you tried to register does not exist or the number of licenses is insufficient. Obtain a license or register the panel for the number of licenses obtained.	(1) Acquire a DR Detector license. (2) Register DR Detectors without exceeding the number of licenses.
C37119	Non-activated AeroDR detector is found.	Contact Konica Minolta technical representatives.
C37121	There's no selectable channel. It will take maximum 30 minutes to recover the wireless LAN.	This appears when there are no accessible channels available when attempting to switch access point channels while detecting radar waves. Please wait until wireless communication is restored.
C37122	Radar wave has been detected. Changing the communication channel. It takes about 1 minute for channel change.	This appears when radar waves are detected. Please wait until the device has finished switching the access point channel.
C37123	Channel has been changed.	This appears when the device has finished switching the access point channel.
C37124	Failed to start the AP Process. Please restart the PC.	Restart the device. If this does not solve the problem, contact Konica Minolta technical representatives.
C37150	[LongLenIF] Initialization failed. Contact a service representative.	(1) Restart the device. (2) Contact Konica Minolta technical representatives.
C37151	[LongLenIF] Termination failed. Contact a service representative.	
C37153	[DR Detector name] Radiation field detection Failed. Radiation field light got off.	Check the light intensity and exposure range, and perform exposure field detection again.
C37154	[DR Detector name] Radiation field detection Failed. Radiation field is out of range.	
C37155 - C37157	[DR Detector name] Radiation field detection Failed.	
C37300	Termination status	(1) Please check the connection status. (2) Restart the device.
C3730* C3731* C3732*	Initialization error	
C3733* C3734*	Conversion error	

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
C37350 C37351	Internal error occurred in DICOM communication. Contact a service representative.	Contact Konica Minolta technical representatives.
C37352	Failed to get DICOM communication setting. Please confirm communication setting.	
C37353	Failed in communication. Please confirm communication setting and server is working.	
C37354	Failed in A-ASSOCIATE. Please confirm communication setting and server is working.	
C37355	Rejected from server in A-ASSOCIATE due to invalid setting. Please confirm communication setting.	
C37356	Internal error occurred in DICOM communication. Contact a service representative.	
C37357	It failed in the communication of release.	
C37358	A-ABORT was received.	Check the network and destination connected to.
C3736* C3737*	Internal error occurred in RIS-OUT communication. Contact a service representative.	Data transfer failed or error occurred at the communication data creation. (1) Please check the connection destination. (2) Restart the device. (3) Please check the setting again.
C37400 - C37402	Conversion error	(1) Please check the connection status. (2) Restart the device.
C37403 - C37409 C3741* C37420 C37421	Health check error	
C37422 - C37430	Scheduled check error	
C37431 - C37438 C3744*	Termination error	
C37454 - C37456	Study performing error	
C37457 - C37459 C3746* C37470 - C37472	Error in study completed notification to RIS	
C37473 - C37479 C3748* C37495	Patient search error	
C3760*	Internal error occurred in RIS-OUT communication. Contact a service representative.	
C3761*	Internal error occurred in RIS-IN communication. Contact a service representative.	
C37614	MWM C-FIND request aborted because it exceeded the maximum number of search responses.	Contact Konica Minolta technical representatives.
C37662	Internal error occurred in RIS-OUT communication. Contact a service representative.	Error occurred at the data transfer, the communication data creation or the image creation. (1) Output again. (2) Please check the connection destination. (3) Restart the device. (4) Please check the setting again.

Error code	Displayed message	Problems/countermeasures
C37680	[Detached] RIS-OUT A-ASSOCIATE request is rejected. Please check communication setting.	Check the communication settings of the device and the server.
C37680	[MPPS] RIS-OUT A-ASSOCIATE request is rejected. Please check communication setting.	
C37680	[MWM] RIS-IN A-ASSOCIATE request is rejected. Please check communication setting.	
C37681	[Detached] RIS-OUT communication received transient reject for A-ASSOCIATE request.	Check the connection status from the server.
C37681	[MPPS] RIS-OUT communication received transient reject for A-ASSOCIATE request.	Check the server status.
C37681	[MWM] RIS-IN communication received transient reject for A-ASSOCIATE request.	
C37698	The end notification was received.	(1) Please check the connection destination. (2) Restart the device.
C37699	[Patient ID] Real Time backup Failed	Contact Konica Minolta technical representatives.
C3772*	At PrintComposer process, internal error occurred.	(1) Try performing the operation again. (2) Contact Konica Minolta technical representatives.
C40001	Failed to create queue file.	Check the system monitor and if there is no output data, redo the output operation. If the error persists, restart the device, and perform the output operation again.
C40002	Failed to queue.	(1) Restart the device. (2) Redo settings and output.
C40004	Failed to read Exam. Tag. Please confirm the Exam. Tag.	Contact Konica Minolta technical representatives.
C40005	Corrupted Exam. Tag is Found.	
C40006	Corrupted Exam. Tag has been recovered.	Check the exposure conditions on the device screen, and change the Exam. Tag on the Body part selection screen.
C40007	Reselect Exam. Tag. in Body part selection screen	Registration of Exam. Tag failed. Register the Exam. Tag from the body part selection screen again.
C40008	Study is busy. Reopen study after few seconds.	The study is currently being processed so the study cannot be performed. Wait for a while before performing a study.
C50001	The Channel is inactive. (Service No:[0], Channel No:[1])	(1) If the settings are off after checking the system monitor, turn the settings on. (2) When the icon does not exist, contact Konica Minolta technical representatives.
C50002	The service and channel to get settings are invalid. (Service No:[0], Channel No:[1])	
C60001	Loaded default parameter for image processing. Confirm parameters.	Image processing conditions are set to default values because they are incorrect. Check the image processing conditions after exposure.
C70001	RIS Code mapping file not found. Please call service representative.	Contact Konica Minolta technical representatives.
C80001	Unable to register this Exam. Tag due to no available modalities. Please confirm modalities of the Exam. Tag.	Using the Exam. Tag edit tool, confirm the modalities that have been set.
C90001	Order number of shot is abnormal. There is a possibility that the operations of order has not been reflected. Before you start exposing, make sure you have registered the exposing conditions.	Check the registered Exam. Tags before starting exposure.
C90002	Order number of shot is abnormal. It is greater than [0]. There is a possibility that the operations of order has not been reflected. Before you start exposing, make sure you have registered the exposing conditions.	Cannot perform exposure that exceeds the maximum. Check the registered Exam. Tags, and perform exposure within the number of registered cases.
C90003	Cannot perform the study as the image count exceeds the limit [0].	The Image Count for this patient has exceeded the upper limit. No more studies can be started.

10.2.3 DR Detector errors

Error codes starting with "F" are indicating DR Detector errors.

Error code	Displayed message	Problems/countermeasures
F0100*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0101*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0200*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0201*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0202* F0203*	[DR Detector name] version update error If the panel after rebooting does not recover, contact a service representative.	
F0210* F0211*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0300*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0400*	[DR Detector name] version update error If the panel after rebooting does not recover, contact a service representative.	
F090** F091** F092** F093** F094**	[DR Detector name] radio error The radio condition has transiently worsened.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives. Wireless connection cannot be used, but continued operation is possible with the wired connection.
F0H00* F0H01*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0H02*	[DR Detector name] internal error. If the panel after rebooting does not recover, contact a service representative.	
F0H03*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0H04* F0H05*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0H06* F0H07* F0H08*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0H09* F0H10* F0H11* F0H12*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0H16* F0H17*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0I00* F0I01* F0I02* F0I03*	[DR Detector name] power source error If the panel after rebooting does not recover, contact a service representative.	
F0I04* F0I05*	[DR Detector name] power source error If the panel after rebooting does not recover, contact a service representative.	

Error code	Displayed message	Problems/countermeasures
F0106* F0107*	[DR Detector name] capacitor error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0108* F0109* F0110*	[DR Detector name] capacitor error Can continue to use the panel. But, if the panel after rebooting does not recover, contact a service representative.	Lithium ion capacitor is degraded, or the power consumption of the whole AeroDR SYSTEM has increased. (1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives. However, continued use is possible.
F0111* F0112* F0113*	[DR Detector name] capacitor error If the panel after rebooting does not recover, contact a service representative.	
F0114*	[DR Detector name] power source error If the panel after rebooting does not recover, contact a service representative.	
F0115*	[DR Detector name] capacitor error If the panel after rebooting does not recover, contact a service representative.	
F0116*	[DR Detector name] power source error If the panel after rebooting does not recover, contact a service representative.	
F0117*	AeroDR Battery Charger error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0118*	[DR Detector name] Power source error If the panel after rebooting does not recover, contact a service representative.	
F0119*	[DR Detector name] power source error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0120*	[DR Detector name] power source error Remove cable or cradle from the panel. If the panel does not recover after a while, contact a service representative.	(1) Remove the DR Detector from the AeroDR Battery Charger/AeroDR Battery Charger2 or the wired connection cable. (2) Contact Konica Minolta technical representatives.
F0121*	[DR Detector name] capacitor error Contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0122*	[DR Detector name] power source error If the panel after rebooting does not recover, contact a service representative.	
F0123*	[DR Detector name] power source error The AeroDR panel cannot be charging because of high temperature inside the panel. You can charge it again after cooling down.	(1) Move the DR Detector away from an electrical carpet, a location exposed to direct sunlight, or a place where heat can build up, then wait until the temperature falls. If an error occurs, charging will not be possible. However, it will be possible to carry out exposures. (2) If the problem persists, contact Konica Minolta technical representatives.
F0124* F0125*	[DR Detector name] capacitor error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0126*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0127*	[DR Detector name] capacitor error If the panel after rebooting does not recover, contact a service representative.	
F0128*	AeroDR Battery Charger error If the cradle after rebooting does not recover, contact a service representative.	(1) Restart the AeroDR Battery Charger/AeroDR Battery Charger2. (2) Contact Konica Minolta technical representatives.

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
F0134* F0135* F0136* F0137*	[DR Detector name] cable/cradle connection error Poor connection of a cable or a cradle. Please reconnect after checking for a foreign particle in the connector.	(1) Confirm that the wired connection connector part of the DR Detector, AeroDR Battery Charger, AeroDR Battery Charger2 and I/F Cable doesn't have any foreign objects attached. (2) Confirm that the I/F Cable is not connected at an angle. (3) Reconnect.
F0138*	[DR Detector name] cable/cradle connection error Poor connection of a cable or a cradle. Please reconnect after checking for a foreign particle in the connector.	(1) Confirm that the wired connection connector part of the DR Detector, AeroDR Battery Charger, AeroDR Battery Charger2 and I/F Cable doesn't have any foreign objects attached. (2) Check the AeroDR Battery Charger or AeroDR Battery Charger2 power. (3) Confirm that the I/F Cable is not connected at an angle. (4) Reconnect.
F0139*	[DR Detector name] power source error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0146*	[DR Detector name] power source error The AeroDR panel cannot be charging because of high temperature inside the panel. You can charge it again after cooling down. If this error occurs frequently, contact a service representative.	(1) Move the DR Detector away from an electrical carpet, a location exposed to direct sunlight, or a place where heat can build up, then wait until the temperature falls. If an error occurs, charging will not be possible. However, it will be possible to carry out exposures. (2) If the problem persists, contact Konica Minolta technical representatives.
F0147*	Please reconnect the cable or the cradle.	(1) Please reconnect the I/F Cable or the AeroDR Battery Charger. (2) If the problem persists, contact Konica Minolta technical representatives.
F0J11*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F0P01*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F0Q00* F0Q01*	[DR Detector name] shock detection Detected a shock. Be careful in handling the panel.	The DR Detector is precision equipment, therefore subjecting it to strong impacts or excessive loads such as falls and hits may cause it to malfunction. Be careful in handling the DR Detector.
F0Q02* F0Q03*	[DR Detector name] shock detection Detected a shock. Please run the panel check tool because of the possibility of malfunction.	The DR Detector may be malfunctioning. (1) Use the drop/impact panel check tool to check if the DR Detector is malfunctioning or not. (2) If an error occurs, contact Konica Minolta technical representatives.
F0Q10* F0Q11* F0Q12*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F2E01*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F2E17*	[DR Detector name] version update error If the panel after rebooting does not recover, contact a service representative.	
F3205* F3500*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F3600* F3601* F3604* F3605*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F3606* F3700*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	

Error code	Displayed message	Problems/countermeasures
F3800* F3801*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F3802* F3803* F3804*	[DR Detector name] wired LAN error If the panel after rebooting does not recover, contact a service representative.	
F39***	[DR Detector name] radio error Temporarily wireless status became worse.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives. Wireless connection cannot be used, but continued operation is possible with the wired connection.
F3C00*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F3C11* F3C12*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F3J00*	[DR Detector name] radio error Temporarily wireless status became worse.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives. Wireless connection cannot be used, but continued operation is possible with the wired connection.
F3K24*	[DR Detector name] network error IP address is already in use for another device. Contact a service representative.	Contact Konica Minolta technical representatives.
F3L27*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	(1) Restart the DR Detector. (2) Contact Konica Minolta technical representatives.
F3P00*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F3Y00* F3Z02*	[DR Detector name] internal error If the panel after rebooting does not recover, contact a service representative.	
F4I32*	[DR Detector name] holding the power switch down error The panel's power switch is held down. please release the power switch.	The power switch of the DR Detector is pressed and held for 30 seconds or longer. Release the power switch.
F4I33*	[DR Detector name] holding the power switch down error The panel's power switch is held down. please release the power switch.	The selection switch of the DR Detector is pressed and held for 30 seconds or longer. Release the selection switch.

10.2.4 AeroDR Interface Unit2/AeroDR Generator Interface Unit/ AeroDR Generator Interface Unit2/AeroDR Portable RF Unit/ AeroDR Portable RF Unit2 errors

Error codes starting with "G" are indicating AeroDR Interface Unit2, AeroDR Generator Interface Unit, AeroDR Generator Interface Unit2, AeroDR Portable RF Unit, AeroDR Portable RF Unit2 errors.



- HINT**
- Error codes are common to the AeroDR Interface Unit2, AeroDR Generator Interface Unit, AeroDR Generator Interface Unit2, AeroDR Portable RF Unit, and AeroDR Portable RF Unit2.
 - [Device name] under the Displayed message column and the "corresponding device" under the Problems/countermeasures column indicate a device in which an error is occurring.
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Error code	Displayed message	Problems/countermeasures
G0600X	Version up failed. Contact a service representative.	Contact Konica Minolta technical representatives.
G0601X	Restart the AeroDR Interface Unit / AeroDR Interface Unit2, and CS-7. If the error cannot be released, contact a service representative.	(1) Restart the corresponding device and this device. (2) Contact Konica Minolta technical representatives.
G0602X	Restart the AeroDR Interface Unit / AeroDR Interface Unit2, and CS-7. If the error cannot be released, contact a service representative.	
G06030	Restart the AeroDR Interface Unit / AeroDR Interface Unit2, and CS-7. If the error cannot be released, contact a service representative.	
G2010S G2011S	[Device name] There is a startup error. Release the exposure switch.	Initial status error of the corresponding device occurred. Release the exposure switch.
G2012S	[Device name] There is a startup error. Contact a service representative.	Contact Konica Minolta technical representatives.
G2020S G2021S	[Device name] There is a startup error. Release the exposure switch.	Initial status error of the corresponding device occurred. Release the exposure switch.
G2022S	[Device name] There is a startup error. Contact a service representative.	Contact Konica Minolta technical representatives.
G2030S G2031S	[Device name] There is a startup error. Release the exposure switch.	Initial status error of the corresponding device occurred. Release the exposure switch.
G2032S	[Device name] There is a startup error. Contact a service representative.	Contact Konica Minolta technical representatives.
G22000	[Device name] There is a X-ray device exposure link error. Restart the X-ray device and AeroDR Interface Unit/AeroDR Interface Unit2.	Link error between the X-Ray device and the corresponding device occurred. Restart the X-ray device and the corresponding device.
G2201U	[Device name] There is a X-ray device exposure link error. Contact a service representative.	Contact Konica Minolta technical representatives.
G2300U - G2302U	[Device name] There is an internal device error or a communication error. Restart the AeroDR Detector, AeroDR Interface Unit/AeroDR Interface Unit2 and CS-7.	System error of the corresponding device occurred. Restart the corresponding device, and the device.
G2303U	[Device name] Exposure link failed, X-rays are not exposed. Please take exposure once again.	X-rays were not irradiated. Try performing the exposure again. The release of the exposure switch may occur quickly, so exposure while making sure to release the exposure switch properly.

Error code	Displayed message	Problems/countermeasures
G2500U	[Device name] There is an internal device error. Restart the AeroDR Interface Unit/AeroDR Interface Unit2.	System error of the corresponding device occurred. Restart the corresponding device.
G2501U	[Device name] There is an internal device error or a communication error. Contact a service representative.	Contact Konica Minolta technical representatives.
G410**	[Device name] Exposure switch is not released. Release the exposure switch.	Release the exposure switch.
G4103U	[Device name] Exposure link failed, X-rays are not exposed. Please take exposure once again.	X-rays were not irradiated. Try performing the exposure again. The release of the exposure switch may occur quickly, so exposure while making sure to release the exposure switch properly.

10.2.5 AeroDR Stitching System errors

Error codes starting with "S" are indicating AeroDR Stitching System errors.

Error code	Displayed message	Problems/countermeasures
S000** S00100	[AeroDR Stitching Unit name] MCB Error Contact a service representative.	Contact Konica Minolta technical representatives.
S00110 S00120	[AeroDR Stitching Unit name] Motor Error Please power OFF of AeroDR Stitching unit. Please confirm the auto barrier unit movement area before switch the power to ON.	(1) Turn off the AeroDR Stitching System. (2) Check that there are no obstacles in the operating range of the Stitching Mask of the AeroDR Stitching X-Ray Auto-barrier Unit, and turn on the AeroDR Stitching System.
S00130	[AeroDR Stitching Unit name] MCB Error Contact a service representative.	Contact Konica Minolta technical representatives.
S00140	[AeroDR Stitching Unit name] Motor Error Please power OFF of AeroDR Stitching unit. Please confirm the auto barrier unit movement area before switch the power to ON.	(1) Turn off the AeroDR Stitching System. (2) Check that there are no obstacles in the operating range of the Stitching Mask of the AeroDR Stitching X-Ray Auto-barrier Unit, and turn on the AeroDR Stitching System.
S00200	[AeroDR Stitching Unit name] Motor Error Please power OFF/ON of AeroDR Stitching unit.	Restart the AeroDR Stitching System.
S00210 S00220	[AeroDR Stitching Unit name] Motor Error Please power OFF of AeroDR Stitching unit. Please confirm the auto barrier unit movement area before switch the power to ON.	(1) Turn off the AeroDR Stitching System. (2) Check that there are no obstacles in the operating range of the Stitching Mask of the AeroDR Stitching X-Ray Auto-barrier Unit, and turn on the AeroDR Stitching System.
S00230	[AeroDR Stitching Unit name] Sensor Error Please power OFF/ON of AeroDR Stitching unit.	Restart the AeroDR Stitching System.
S00240	[AeroDR Stitching Unit name] Motor Error Please power OFF of AeroDR Stitching unit. Please confirm the auto barrier unit movement area before switch the power to ON.	(1) Turn off the AeroDR Stitching System. (2) Check that there are no obstacles in the operating range of the Stitching Mask of the AeroDR Stitching X-Ray Auto-barrier Unit, and turn on the AeroDR Stitching System.
S00250	[AeroDR Stitching Unit name] Motor Error Please power OFF/ON of AeroDR Stitching unit.	Restart the AeroDR Stitching System.
S00260	[AeroDR Stitching Unit name] Sensor Error Please power OFF/ON of AeroDR Stitching unit.	
S00400	[AeroDR Stitching Unit name] MCB Error Contact a service representative.	Contact Konica Minolta technical representatives.
S00420	[AeroDR Stitching Unit name] Motor Error Please power OFF/ON of AeroDR Stitching unit.	Restart the AeroDR Stitching System.
S00510 S00530	[AeroDR Stitching Unit name] Sensor Error Contact a service representative.	Contact Konica Minolta technical representatives.

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
S008** S00900 S00910 S00920 S00930	[AeroDR Stitching Unit name] MCB Error Contact a service representative.	Contact Konica Minolta technical representatives.
S00940 S00A00 S00A10 S00A20	[AeroDR Stitching Unit name] Motor Error Please power OFF/ON of AeroDR Stitching unit.	Restart the AeroDR Stitching System.
S00A30	[AeroDR Stitching Unit name] Sensor Error Please power OFF/ON of AeroDR Stitching unit.	
S00A40 S00A50	[AeroDR Stitching Unit name] Motor Error Please power OFF/ON of AeroDR Stitching unit.	
S00A60 S00C90	[AeroDR Stitching Unit name] Sensor Error Please power OFF/ON of AeroDR Stitching unit.	
S00CA0	[AeroDR Stitching Unit name] Side Cover Open Please close the AeroDR stitching unit cover and press RESET switch.	Close the side cover of the AeroDR Stitching Unit, and press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error.
S00CB0	[AeroDR Stitching Unit name] Panel Error Properly set the grid inside AeroDR stitching unit, close the over and press the RESET switch.	Check that the DR Detector is correctly inserted in the AeroDR Stitching Unit, and close the side cover. Press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error.
S00CC0	[AeroDR Stitching Unit name] Grid Error Properly set the grid inside AeroDR stitching unit, close the over and press the RESET switch.	Check that the grid is correctly installed on the AeroDR Stitching Unit, and then close the side cover. Press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error.
S00CD0	[AeroDR Stitching Unit name] Panel Error Properly close the inner cover of AeroDR stitching unit and switch the power OFF/ON.	(1) Open the side cover on the AeroDR Stitching Unit and close the internal lid. (2) Close the side cover and restart the AeroDR Stitching System.
S200**	[AeroDR Stitching Unit name] Internal connection error Please power OFF of AeroDR Stitching unit. Please confirm the connectivity of Power box and auto barrier unit before switching the power to ON.	(1) Turn off the AeroDR Stitching System. (2) Check the power unit and the AeroDR Stitching X-Ray Auto-barrier Unit are connected by the power cable, and turn on the AeroDR Stitching System.
S208**	[AeroDR Stitching Unit name] Internal Error Please power OFF/ON of AeroDR Stitching unit. Please confirm the connectivity of Power box and Stitching unit before switching the power to ON.	(1) Turn off the AeroDR Stitching System. (2) Check the power unit and the AeroDR Stitching Unit are connected by the power cable, and turn on the AeroDR Stitching System.
S20C50	[AeroDR Stitching Unit name] Network Error Please confirm the network of AeroDR stitching unit and CS-7, switch on the power OFF/ON of AeroDR stitching unit.	Check that the AeroDR Stitching Unit and this device are connected by the network cable and restart the AeroDR Stitching System.
S20C60	[AeroDR Stitching Unit name] Network Error Please confirm the network of AeroDR stitching unit and CS-7, press the AeroDR Stitching unit RESET switch.	Check that the AeroDR Stitching Unit and this device are connected by the network cable, and press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error.
S30460	[AeroDR Stitching Unit name] Height detection (out of range) Please press the AeroDR Stitching unit RESET switch. Repeat the height detection.	(1) Press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error. (2) Check the collimator installation position in the X-ray device is correct. (3) Execute height detection. (4) If the problem is not solved by the above method, there is a possibility that the intensity of the exposure field lamp has changed. Change the brightness setting.

Error code	Displayed message	Problems/countermeasures
S30470	[AeroDR Stitching Unit name] Internal Error Please power OFF/ON of AeroDR Stitching unit.	Restart the AeroDR Stitching System.
S30540	[AeroDR Stitching Unit name] MCB Error Contact a service representative.	Contact Konica Minolta technical representatives.
S307**	[AeroDR Stitching Unit name] Internal Error Please power OFF/ON of AeroDR Stitching unit.	Restart the AeroDR Stitching System.
S30FD0	[AeroDR Stitching Unit name] Internal Error Contact a service representative.	Contact Konica Minolta technical representatives.
S30FE0 S30FF0	[AeroDR Stitching Unit name] Internal Error Please power OFF/ON of AeroDR Stitching unit.	Restart the AeroDR Stitching System.
S40430	[AeroDR Stitching Unit name] Height detection failed (lamp is off) Please press the AeroDR Stitching unit RESET switch. Repeat the height detection.	<ol style="list-style-type: none"> (1) Press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error. (2) Check that the exposure field lamp is set to on, press the Set switch on the AeroDR Stitching X-Ray Auto-barrier Unit, and re-execute height detection. (3) If the problem is not solved by the above method, there is a possibility that the intensity of the exposure field lamp has changed. Change the brightness setting.
S40440	[AeroDR Stitching Unit name] Height detection failed(cross mark mismatch) Please press the AeroDR Stitching unit RESET switch. Repeat the height detection.	<ol style="list-style-type: none"> (1) Press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error. (2) Check the installation position of the Collimator of the X-ray device and the AeroDR Stitching X-Ray Auto-barrier Unit is correct. (3) If the problem is not solved by the above method, there is a possibility that the intensity of the exposure field lamp has changed. Change the intensity settings and then implement height detection.
S40450	[AeroDR Stitching Unit name] Height detection failed(other reason) Please press the AeroDR Stitching unit RESET switch. Repeat the height detection.	<ol style="list-style-type: none"> (1) Press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error. (2) Check the collimator installation position in the X-ray device is correct. (3) Execute height detection. (4) If the problem is not solved by the above method, there is a possibility that the intensity of the exposure field lamp has dropped. Reset the light sensor sensitivity setting and then execute height detection. (5) If the problem is not solved with the light sensor sensitivity setting, there is a possibility that the intensity of the exposure field lamp has changed. Change the brightness setting.
S40480	[AeroDR Stitching Unit name] Obstacle in the movement Obstacle detected in the AeroDR Stitching unit movement. Please press the RESET switch.	Check that there are no obstacles in the operating range of the Stitching Mask of the AeroDR Stitching X-Ray Auto-barrier Unit, and press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error.
S40490	[AeroDR Stitching Unit name] Switch Error AeroDR stitching unit switch is in pressed state. Confirm the switch not pressed state and switch the power OFF/ON of AeroDR stitching unit.	Check that the Set switch of the AeroDR Stitching X-Ray Auto-barrier Unit is not being continuously pressed, and restart the AeroDR Stitching System.
S404A0	[AeroDR Stitching Unit name] Switch Error AeroDR stitching unit switch is in pressed state. Confirm the switch not pressed state and switch the power OFF/ON of AeroDR stitching unit.	Check that the Image Area switch of the AeroDR Stitching X-Ray Auto-barrier Unit is not being continuously pressed, and restart the AeroDR Stitching System.
S404B0	[AeroDR Stitching Unit name] Switch Error AeroDR stitching unit switch is in pressed state. Confirm the switch not pressed state and switch the power OFF/ON of AeroDR stitching unit.	Check that the Reset switch of the AeroDR Stitching X-Ray Auto-barrier Unit is not being continuously pressed, and restart the AeroDR Stitching System.

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
S404D0	[AeroDR Stitching Unit name] Emergency Stop AeroDR stitching unit emergency stop switch is ON. Release the emergency stop and press the RESET switch.	Release the Emergency Stop switch on the AeroDR Stitching X-Ray Auto-barrier Unit, and then press the Reset switch to cancel the error.
S404F0	[AeroDR Stitching Unit name] Obstacle in the movement Obstacle detected in the AeroDR Stitching unit movement. Please press the RESET switch.	Check that there are no obstacles in the operating range of the Stitching Mask of the AeroDR Stitching X-Ray Auto-barrier Unit, and press the Reset switch on the AeroDR Stitching X-Ray Auto-barrier Unit to cancel the error.

10.2.6 REGIUS series errors

Error codes starting with a numerical value, "CAS", "SIG", etc. are indicating REGIUS errors.

Error code	Displayed message	Problems/countermeasures
CASIN2	Barcode scanning Error	(1) Remove the CR cassettes from the slot, and check the barcode labels for any dirt or peeling. (2) Contact Konica Minolta technical representatives.
CASIN3	Incorrect barcode	Re-select Exam. Tags with the device.
CASIN4	Cassette Jam (feeds 2 cases simultaneously)	Remove the CR cassettes from the slot, and re-insert the CR cassettes one at a time.
CASIN5	Unregistered Job	Remove the CR cassettes from the slot, and register them with the device before re-inserting them.
CASIN6	Cassette Jam(feeds 2 case contiguously)	Remove the last inserted CR cassettes, and wait for the slot's blue indicator to light up before re-inserting them.
CASIN7	Cassette Jam(feeds 2 case contiguously)	Contact Konica Minolta technical representatives.
CASINB	Unsupported Cassette is inserted	A cassette that is not supported by the device is inserted. The device does not support cleaning cassettes (optical cleaners, insertion rollers).
CASINE	Failed to take the plate out of the cassette. Open upper door and remove cassette.	Removing the plate from the cassette failed. Open the top door and remove the cassette.
CASINF	Cannot start cassette process because of overheating. Open upper door and remove cassette Try it again after a while.	The cassette cannot be processed as the internal humidity is too high. After opening the top door and removing the cassette, wait a while before inserting a cassette.
CASINI	Cassette insertion is not proper enough. Push it more-over.	The insertion of the cassette is not correct. Insert the cassette correctly.
CASINJ	Cleaning of a roller is required.	Clean the rollers.
CASOUT8	Discharge stack is full	Remove the CR cassettes that have accumulated in the ejection container, and check that the ejection container shutter is closed.
CASOUT9	Discharge door opens	Close the ejection container shutter, and restart the transport operation.
DOOR1	Opened front door is detected	Close the front door. When a CR Cassette is left inside the device, after pulling the Transport Unit to the front and removing the CR Cassette, check that there are no CR Cassettes in the device (in the front plate, back plate, or plate), return the Transport Unit to the back, and then close the front door.
LAMPA	Erase-lamp A turns off	Contact Konica Minolta technical representatives.
LAMPC	Fluorescent-tube turns off	

Error code	Displayed message	Problems/countermeasures
LAMPD	Erase lamp life expired.	The Erasure Lamp need to be replaced. Contact Konica Minolta technical representatives.
LAMPG	Erase lamp life had exceeded. Please call service to get lamp changed.	
LASER1	Laser Error	Contact Konica Minolta technical representatives.
POLI1	Polygon PLL Error	
SIG1	Uses Default Shading Coefficient	
SIG2	Uses Default QRV Table	
SIG3	Uses Default Shading Coefficient / QRV Table	
0001	Error occurred while copying setting files	The setting file may have not been updated. Check the saved settings, and perform the update again.
04001 - 05000	-	(1) Restart the REGIUS series. (2) If the error persists after restarting, restart the device and the REGIUS series.
05001	JM Error. Please call service. Or change to Backup JM if it exists.	(1) When there is a backup JM, switch the JM. (2) If there is no backup JM, contact Konica Minolta technical representatives.
05002	JM Switching Error	Check that the JM in the backup destination is running, and switch the JM again.
05003	ExchangeParts DB Initialization Error	Check that the JM is running, and restart the device.
05004	JM switched.	JM switching was completed successfully.
05005	Please restart Regius	JM switching was completed successfully. Restart all CR cassette readers.
05006	JM Error. Please call service. Or change to Primary JM	(1) Switch from the backup JM to the primary JM. (2) Contact Konica Minolta technical representatives.
06000 - 06785	-	(1) Restart the REGIUS series. (2) If the error persists after restarting, restart the device and the REGIUS series.
07000	Initialization failed. Cassette is set in the reader. Please open the door and remove the Cassette and Plate.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07001 07002	Initialization failed. Plate still might be inside the reader. Please open the door and check inside.	
07003 - 07005	Initialization failed. Cassette is set in the reader. Please open the door and remove the Cassette and Plate.	
07006	Initialization failed. Plate still might be inside the reader. Please open the door and check inside.	
07007 - 07016	Initialization failed. Sensor Error was detected during initialization.	Open and close the top door. Perform initialization of the device again. Check if the error reoccurs.
07017	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07018 07019	Initialization failed. Sensor Error was detected during initialization.	Open and close the top door. Perform initialization of the device again. Check if the error reoccurs.
07020	Initialization failed. Cassette was detected. Please open the top door and remove the Cassette.	Open the top door and remove the cassette.
07021	Initialization failed. Sensor Error was detected during initialization.	Open and close the top door. Perform initialization of the device again. Check if the error reoccurs.
07022	Single unit operation error.	Contact Konica Minolta technical representatives.
07023 07024	Initialization failed. Sensor Error was detected during initialization.	

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
07100 - 07106	Error was detected during Cassette insertion.	Remove the cassette and perform the image reading operation again. (The plate image on the cassette can be read again.)
07107	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	Remove the cassette and perform the image reading operation again. (The plate image on the cassette can be read again.)
07108 07109	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07110	Cassette might not contain the plate. Please open the door and remove the cassette. Confirm the plate is in the cassette.	Remove the cassette and plate from the device. (1) When there is not a plate inside the device or inside the cassette, check that the correct cassette has been inserted. (2) Delete the image on the plate using the Erase mode when the plate is inside the device.
07111 - 07117	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07118	Critical error has occurred while processing the cassette. Please contact service. Please open the top door and remove the Cassette. And open the back door and remove the Plate.	Remove the plate and cassette. (1) After this error occurs, even if the power is turned OFF and ON, the device error will not be cleared. (2) Contact Konica Minolta technical representatives.
07119 - 07124	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07125	Critical error has occurred while processing the cassette. Please contact service. Please open the top door and remove the Cassette. And open the back door and remove the Plate.	(1) After opening the top door, remove the plate and cassette. (2) After this error occurs, even if the power is turned OFF and ON, the device error will not be cleared. Contact Konica Minolta technical representatives.
07126 - 07129	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07130	Cassette Size error was detected during cassette insertion. Please confirm whether the cassette size is supported.	Remove the cassette. Check the cassette size and confirm that the cassette is compatible with the device.
07131 - 07135	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07136	Cassette size and the Plate size might not match. Please open the door and remove the Cassette. Confirm the size of the cassette and plate. Erase the cassette in ERASE MODE before using the cassette again.	(1) Remove the cassette and plate from the device. (2) Confirm that the cassette and plate size match. (3) Load the removed plate with a cassette of the matching size, and erase the image with the Erase mode.
07137	Single unit operation error.	Contact Konica Minolta technical representatives.
07138 07139	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07140 - 07142	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	While processing the cassette, an error was detected. Open the door, remove the cassette/plate, and erase the cassette using Erase mode.

Error code	Displayed message	Problems/countermeasures
07143 - 07152	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	(1) Remove the cassette and plate from the device. (2) Delete the image on the removed plate using the Erase mode.
07153	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE.	While processing the cassette, an error was detected. Open the door, remove the cassette/plate, and erase the cassette using Erase mode.
07154	Error was detected while processing the cassette. Please open the door and remove the Cassette and Plate. After removal, erase the cassette in ERASE MODE. Moreover, please clean a roller.	While processing the cassette, an error was detected. Open the door, remove the cassette/plate, and erase the cassette using Erase mode. Also, clean the rollers.
07200 - 07224 07300 - 07354	Single unit operation error.	Contact Konica Minolta technical representatives.
07400 - 07409	Initialization failed. Reader error was detected during initialization.	Open and close the top door. Perform initialization of the device again. Check if the error reoccurs.
07410 07411	Erasure error was detected.	An error was detected in the device when erasing the image. (1) As the image reading is complete, wait for the image transfer to finish. (2) After confirming that the transfer is complete, remove the cassette. (3) Contact Konica Minolta technical representatives.
07412 - 07414	Reader error was detected.	(1) Remove the cassette and plate from the device. (2) Contact Konica Minolta technical representatives.
07415	Initialization failed. Reader error was detected during initialization.	Open and close the top door. Perform initialization of the device again. Check if the error reoccurs.
07416 - 07419	Reader error was detected.	(1) Remove the cassette and plate from the device. (2) Contact Konica Minolta technical representatives.
07420	Initialization failed. Reader error was detected during initialization.	Open and close the top door. Perform initialization of the device again. Check if the error reoccurs.
07421 07422	Reader error was detected.	(1) Remove the cassette and plate from the device. (2) Contact Konica Minolta technical representatives.
07600 - 07622	Single unit operation error.	Contact Konica Minolta technical representatives.
07650 07651	Reader error was detected.	Contact Konica Minolta technical representatives.
07700 07701	Initialization failed. Reader error was detected during initialization.	Open and close the top door. Perform initialization of the device again. Check if the error reoccurs.
07710 - 07746	Detected Memory error.	After this error occurs, even if the power is turned OFF and ON, the device error will not be cleared. Contact Konica Minolta technical representatives.
07747 - 07749	Detected Data error.	Contact Konica Minolta technical representatives.
07750 - 07759	Detected Data error.	An error was detected in the transferred data. (1) Check the transmitted data and the communication cable. (2) Afterward, power the device OFF and ON.
07800 07801	Parameters which cannot be processed in the Reader Settings are specified	An error was detected in the cassette size parameter. (1) Remove the cassette and plate from the device. (2) Contact Konica Minolta technical representatives.
07802	Reader error was detected.	(1) Remove the cassette and plate from the device. (2) Contact Konica Minolta technical representatives.
07803	Parameters which cannot be processed in the Reader Settings are specified	Exposure conditions which cannot be processed by the device have been indicated. Recheck the exposure conditions.

Continued on the next page

10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
07810	Top door open	Close the top door.
07811	Back door open	Close the back door.
07812	Left side door open	Close the left side door.
07820	Cassette insertion is not proper enough. Push it more-over.	The insertion of the cassette is not correct. Insert the cassette correctly.
07821	Failed to take the plate out of the cassette. Open upper door and remove cassette.	Removing the plate from the cassette failed. Open the top door and remove the cassette.
07822	Cannot start cassette process because of overheating. Open upper door and remove cassette. Try it again after a while.	The cassette cannot be processed as the internal temperature is too high. After opening the top door and removing the cassette, wait a while before inserting a cassette.
07823	Erase lamp life had exceeded. Please call service to get lamp changed.	The Erasure Lamp need to be replaced. Contact Konica Minolta technical representatives.
07999	Service call. Program data of reader corrupted. Need to recover the program.	Contact Konica Minolta technical representatives.
10000 - 12011	-	Restart this device and the REGIUS series.
12012 - 26999	-	(1) Restart the REGIUS series. (2) If the error persists after restarting, restart the device and the REGIUS series.
27000	Reader is not in the status of sending image. Image transmission failed.	The reader's power was cut while reading, and the image data was lost. Perform the exposure again and reread the image.
27001	USB was disconnected while calibration. Re-try maintenance command.	Contact Konica Minolta technical representatives.
27002	Maintenance operation failed as USB was disconnected during its operation. Re-try maintenance command.	
27010	Service call. Version of program doesn't correspond. Need to update program.	
27100	This reader is in process. Connect to the former PC. To terminate process, turn off the reader. The image will be deleted.	This message is displayed when one reader connects to a reader which is transferring image data. (1) When the reader connection has changed Reconnect to the device processing the reading of the original image. With the return to the correct connection condition, transfer will be performed again. (However, this only occurs when the device and the reader's processes are continued. If they are powered OFF or the process is stopped, the data transfer will not be performed.) (2) When the device was restarted while processing an image reading The image data will not be transferred. Remove the plate and cassette and power the reader OFF and ON. Delete the image on the removed plate using the Erase mode.
27101	The reader was switched. To complete image reading, connect to the former reader.	Reconnect to the original reader performing the processing. With the return to the correct connection condition, transfer will be performed again. (However, this only occurs when the device and the reader's processes are continued. If they are powered OFF or the process is stopped, the data transfer will not be performed.) If a connection with the original reader cannot be established, restart the device. The image data cannot be transferred again. Also, remove the plate and cassette and power the reader OFF and ON. Delete the image on the removed plate using the Erase mode.

Error code	Displayed message	Problems/countermeasures
27105	Another reader is working in the system. This reader is unusable now. Stop another reader if you want to use this reader.	The message will be displayed if multiple readers are connected to one system. Readers which have not been detected by the device cannot be used. To use a connected reader, after unplugging all reader USB cables, connect only the reader to be used. (When unplugging readers, confirm that the readers are not performing any processes.)
27110	USB was disconnected during image transmission. Connect USB. Image transmission will start after connection.	Confirm that the USB cable is connected. After connecting, continue the transfer of image data.
27750	Communication error has occurred with PRINTER communication. Check the communication destination.	Failed to acquire printer information. Restart the printer and reacquire printer information.
27751 - 27759	Communication error has occurred with PRINTER communication. Check the communication destination.	Communication with the printer failed. (1) Output again. (2) Contact Konica Minolta technical representatives.
27770 27771	Internal error occurred in HOST communication. Check the communication destination.	HOST sending failed. (1) Check the HOST status, and output again. (2) Contact Konica Minolta technical representatives.
35940	Space Not Enough	There is not enough free space in the media. Check the media's free space, and adjust the study to be outputted.
35941	Media Write Error	Contact Konica Minolta technical representatives.
35942 35943	Media Write Error	Writing to the media failed. (1) Check the media status, and output again. (2) Contact Konica Minolta technical representatives.
35944	Media Write Error	JPEG creation failed. (1) Output again. (2) Contact Konica Minolta technical representatives.
35945	Time Out Error	Contact Konica Minolta technical representatives.
36200	BAD RECEIVE MGZ	An error occurred in the printer's ejection magazine. Check the printer status.
36201	BAD SUPPLY MGZ	An error occurred in the printer's supply magazine. Check the printer status.
36202	CALIBRATING	The printer is in the process of calibration. Wait for the calibration to finish, and output again.
36203	CALIBRATION ERR	An error occurred in the printer's calibration. Check the printer status.
36204	CHECK CHEMISTRY	A problem occurred with the developer machine's chemicals. Check the developer machine.
36205	CHECK SORTER	A problem occurred with the sorter. Check the sorter.
36206	CHEMICALS EMPTY	The developer fluid level is empty. Replenish the developer machine's chemicals.
36207	CHEMICALS LOW	The developer fluid level is low. Replenish the developer machine's chemicals.
36208	COVER OPEN	The printer's cover, drawer, or door is open. Check the printer status.
36209	ELEC CONFIG ERR	The printer is not operational due to a setting error. Check the printer settings.
36210	ELEC DOWN	The imager is not operational due to a problem with electronic hardware. Check the imager.
36211	ELEC SW ERROR	The printer is not operational due to a software error. Check the printer status.
36212	EMPTY 8X10	There is no more 8×10 film. Set the film.
36213	EMPTY 8X10 BLUE	There is no more 8×10 blue film. Set the film.

Continued on the next page

10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
36214	EMPTY 8X10 CLR	There is no more 8×10 clear film. Set the film.
36215	EMPTY 8X10 PAPR	There is no more 8×10 paper. Set the paper.
36216	EMPTY 10X12	There is no more 10×12 film. Set the film.
36217	EMPTY 10X12 BLUE	There is no more 10×12 blue film. Set the film.
36218	EMPTY 10X12 CLR	There is no more 10×12 clear film. Set the film.
36219	EMPTY 10X12 PAPR	There is no more 10×12 paper. Set the paper.
36220	EMPTY 10X14	There is no more 10×14 film. Set the film.
36221	EMPTY 10X14 BLUE	There is no more 10×14 blue film. Set the film.
36222	EMPTY 10X14 CLR	There is no more 10×14 clear film. Set the film.
36223	EMPTY 10X14 PAPR	There is no more 10×14 paper. Set the paper.
36224	EMPTY 11X14	There is no more 11×14 film. Set the film.
36225	EMPTY 11X14 BLUE	There is no more 11×14 blue film. Set the film.
36226	EMPTY 11X14 CLR	There is no more 11×14 clear film. Set the film.
36227	EMPTY 11X14 PAPR	There is no more 11×14 paper. Set the paper.
36228	EMPTY 14X14	There is no more 14×14 film. Set the film.
36229	EMPTY 14X14 BLUE	There is no more 14×14 blue film. Set the film.
36230	EMPTY 14X14 CLR	There is no more 14×14 clear film. Set the film.
36231	EMPTY 14X14 PAPR	There is no more 14×14 paper. Set the paper.
36232	EMPTY 14X17	There is no more 14×17 film. Set the film.
36233	EMPTY 14X17 BLUE	There is no more 14×17 blue film. Set the film.
36234	EMPTY 14X17 CLR	There is no more 14×17 clear film. Set the film.
36235	EMPTY 14X17 PAPR	There is no more 14×17 paper. Set the paper.
36236	EMPTY 24X24	There is no more 24×24 film. Set the film.
36237	EMPTY 24X24 BLUE	There is no more 24×24 blue film. Set the film.
36238	EMPTY 24X24 CLR	There is no more 24×24 clear film. Set the film.
36239	EMPTY 24X24 PAPR	There is no more 24×24 paper. Set the paper.
36240	EMPTY 24X30	There is no more 24×30 film. Set the film.
36241	EMPTY 24X30 BLUE	There is no more 24×30 blue film. Set the film.

Error code	Displayed message	Problems/countermeasures
36242	EMPTY 24X30 CLR	There is no more 24×30 clear film. Set the film.
36243	EMPTY 24X30 PAPR	There is no more 24×30 paper. Set the paper.
36244	EMPTY A4 PAPR	There is no more A4 paper. Set the paper.
36245	EMPTY A4 TRANS	There are no more A4 transparencies. Set the transparencies.
36246	EXPOSURE FAILURE	A problem of unknown cause occurred with the exposure unit. Check the printer.
36247	FILM JAM	A film jam occurred in the printer. Check the printer.
36248	FILM TRANSP ERR	A film feed-related error occurred. Check the printer.
36249	FINISHER EMPTY	The finisher is empty. Check the finisher.
36250	FINISHER ERROR	An error occurred in the finisher. Check the finisher.
36251	FINISHER LOW	The finisher's supply is low. Check the finisher.
36252	LOW 8X10	Low supply on 8×10 film. Set the film.
36253	LOW 8X10 BLUE	Low supply on 8×10 blue film. Set the film.
36254	LOW 8X10 CLR	Low supply on 8×10 clear film. Set the film.
36255	LOW 8X10 PAPR	Low supply on 8×10 paper. Set the paper.
36256	LOW 10X12	Low supply on 10×12 film. Set the film.
36257	LOW 10X12 BLUE	Low supply on 10×12 blue film. Set the film.
36258	LOW 10X12 CLR	Low supply on 10×12 clear film. Set the film.
36259	LOW 10X12 PAPR	Low supply on 10×12 paper. Set the paper.
36260	LOW 10X14	Low supply on 10×14 film. Set the film.
36261	LOW 10X14 BLUE	Low supply on 10×14 blue film. Set the film.
36262	LOW 10X14 CLR	Low supply on 10×14 clear film. Set the film.
36263	LOW 10X14 PAPR	Low supply on 10×14 paper. Set the paper.
36264	LOW 11X14	Low supply on 11×14 film. Set the film.
36265	LOW 11X14 BLUE	Low supply on 11×14 blue film. Set the film.
36266	LOW 11X14 CLR	Low supply on 11×14 clear film. Set the film.
36267	LOW 11X14 PAPR	Low supply on 11×14 paper. Set the paper.
36268	LOW 14X14	Low supply on 14×14 film. Set the film.

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
36269	LOW 14X14 BLUE	Low supply on 14×14 blue film. Set the film.
36270	LOW 14X14 CLR	Low supply on 14×14 clear film. Set the film.
36271	LOW 14X14 PAPR	Low supply on 14×14 paper. Set the paper.
36272	LOW 14X17	Low supply on 14×17 film. Set the film.
36273	LOW 14X17 BLUE	Low supply on 14×17 blue film. Set the film.
36274	LOW 14X17 CLR	Low supply on 14×17 clear film. Set the film.
36275	LOW 14X17 PAPR	Low supply on 14×17 paper. Set the paper.
36276	LOW 24X24	Low supply on 24×24 film. Set the film.
36277	LOW 24X24 BLUE	Low supply on 24×24 blue film. Set the film.
36278	LOW 24X24 CLR	Low supply on 24×24 clear film. Set the film.
36279	LOW 24X24 PAPR	Low supply on 24×24 paper. Set the paper.
36280	LOW 24X30	Low supply on 24×30 film. Set the film.
36281	LOW 24X30 BLUE	Low supply on 24×30 blue film. Set the film.
36282	LOW 24X30 CLR	Low supply on 24×30 clear film. Set the film.
36283	LOW 24X30 PAPR	Low supply on 24×30 paper. Set the paper.
36284	LOW A4 PAPR	Low supply on A4 paper. Set the paper.
36285	LOW A4 TRANS	Low supply on A4 transparencies. Set the transparencies.
36286	NO RECEIVE MGZ	The printer's discharge magazine cannot be used. Check the printer.
36287	NO RIBBON	The printer does not have a ribbon cartridge. Check the printer.
36288	NO SUPPLY MGZ	There is no supply magazine. Check the printer.
36289	CHECK PRINTER	The printer could not be prepared. Check the printer.
36290	CHECK PROC	The developer machine cannot be used. Check the developer machine.
36291	PRINTER DOWN	The printer cannot be used due to an unspecified reason. Check the printer.
36292	PRINTER BUSY	The printer cannot be used because it is currently processing. Output once the printer can be used.
36293	PRINT BUFF FULL	The printer cannot be used because the printer buffer is full. Output again once the printer can be used.
36294	PRINTER INIT	The printer is not ready because it is still warming up, etc. Output once the printer is prepared.
36295	PRINTER OFFLINE	The printer is offline. Output after the printer is online.

Error code	Displayed message	Problems/countermeasures
36296	PROC DOWN	The developer machine cannot be used. Check the developer machine.
36297	PROC INIT	The developer machine cannot be used as it is currently being initialized. Output once the printer can be used.
36298	PROC OVERFLOW FL	The developer machine's liquid waste tank is nearly full. Empty the liquid waste tank chemicals.
36299	PROC OVERFLOW HI	The developer machine's liquid waste tank is full. Empty the liquid waste tank chemicals.
36300	QUEUED	The printer job is pending in the job queue.
36301	RECEIVER FULL	The discharge magazine is full. Check the printer.
36302	REQ MED NOT INST	The requested film magazine has been inserted, but it is unusable. Check the printer.
36303	REQ MED NOT AVAI	The requested film cannot be used with this printer. Check the selected film.
36304	RIBBON ERROR	An error occurred with the printer's ribbon cartridge. Check the printer.
36305	SUPPLY EMPTY	The supply magazine is empty. Check the printer.
36306	SUPPLY LOW	Low supply in the supply magazine. Check the printer.
36307	UNKNOWN	An undefined error occurred. (1) Output again. (2) Contact Konica Minolta technical representatives.
36308	EMPTY 8X10 DR	There is no more 8×10 DR film. Set the film.
36309	EMPTY 8X10 DR B	There is no more 8×10 DR blue film. Set the film.
36310	EMPTY 8X10 DR C	There is no more 8×10 DR clear film. Set the film.
36311	EMPTY 10X12 DR	There is no more 10×12 DR film. Set the film.
36312	EMPTY 10X12 DR B	There is no more 10×12 DR blue film. Set the film.
36313	EMPTY 10X12 DR C	There is no more 10×12 DR clear film. Set the film.
36314	EMPTY 11X14 DR	There is no more 11×14 DR film. Set the film.
36315	EMPTY 11X14 DR B	There is no more 11×14 DR blue film. Set the film.
36316	EMPTY 11X14 DR C	There is no more 11×14 DR clear film. Set the film.
36317	EMPTY 14X14 DR	There is no more 14×14 DR film. Set the film.
36318	EMPTY 14X14 DR B	There is no more 14×14 DR blue film. Set the film.
36319	EMPTY 14X14 DR C	There is no more 14×14 DR clear film. Set the film.
36320	EMPTY 14X17 DR	There is no more 14×17 DR film. Set the film.
36321	EMPTY 14X17 DR B	There is no more 14×17 DR blue film. Set the film.
36322	EMPTY 14X17 DR C	There is no more 14×17 DR clear film. Set the film.

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
36323	EMPTY 24X24 DR	There is no more 24×24 DR film. Set the film.
36324	EMPTY 24X24 DR B	There is no more 24×24 DR blue film. Set the film.
36325	EMPTY 24X24 DR C	There is no more 24×24 DR clear film. Set the film.
36326	EMPTY 24X30 DR	There is no more 24×30 DR film. Set the film.
36327	EMPTY 24X30 DR B	There is no more 24×30 DR blue film. Set the film.
36328	EMPTY 24X30 DR C	There is no more 24×30 DR clear film. Set the film.
36329	LOW 8X10 DR	Low supply on 8×10 DR film. Set the film.
36330	LOW 8X10 DR B	Low supply on 8×10 DR blue film. Set the film.
36331	LOW 8X10 DR C	Low supply on 8×10 DR clear film. Set the film.
36332	LOW 10X12 DR	Low supply on 10×12 DR film. Set the film.
36333	LOW 10X12 DR B	Low supply on 10×12 DR blue film. Set the film.
36334	LOW 10X12 DR C	Low supply on 10×12 DR clear film. Set the film.
36335	LOW 11X14 DR	Low supply on 11×14 DR film. Set the film.
36336	LOW 11X14 DR B	Low supply on 11×14 DR blue film. Set the film.
36337	LOW 11X14 DR C	Low supply on 11×14 DR clear film. Set the film.
36338	LOW 14X14 DR	Low supply on 14×14 DR film. Set the film.
36339	LOW 14X14 DR B	Low supply on 14×14 DR blue film. Set the film.
36340	LOW 14X14 DR C	Low supply on 14×14 DR clear film. Set the film.
36341	LOW 14X17 DR	Low supply on 14×17 DR film. Set the film.
36342	LOW 14X17 DR B	Low supply on 14×17 DR blue film. Set the film.
36343	LOW 14X17 DR C	Low supply on 14×17 DR clear film. Set the film.
36344	LOW 24X24 DR	Low supply on 24×24 DR film. Set the film.
36345	LOW 24X24 DR B	Low supply on 24×24 DR blue film. Set the film.
36346	LOW 24X24 DR C	Low supply on 24×24 DR clear film. Set the film.
36347	LOW 24X30 DR	Low supply on 24×30 DR film. Set the film.
36348	LOW 24X30 DR B	Low supply on 24×30 DR blue film. Set the film.

Error code	Displayed message	Problems/countermeasures
36349	LOW 24X30 DR C	Low supply on 24×30 DR clear film. Set the film.
37350 37351	Internal error occurred in DICOM communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37352	Failed to get DICOM communication setting. Please confirm communication setting.	Failed to get DICOM communication settings. (1) Check the communication settings. (2) Contact Konica Minolta technical representatives.
37353	Failed in communication. Please confirm communication setting and server is working.	Connection failed. (1) Check the communication settings or the server. (2) Contact Konica Minolta technical representatives.
37354	Internal error occurred in DICOM communication. Contact a service representative.	Communications failed. (1) Check the host or network. (2) Contact Konica Minolta technical representatives.
37355 37356	Internal error occurred in DICOM communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37357	Internal error occurred in DICOM communication. Contact a service representative.	Communications shutdown processing failed. (1) Check if sending is complete. (2) Contact Konica Minolta technical representatives.
37358	Internal error occurred in DICOM communication. Contact a service representative.	Communications were paused by the host. (1) Check the host. (2) Contact Konica Minolta technical representatives.
37390 - 37392	Media Write Error	
37620 37621	Internal error occurred in PRINTER communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37622	Internal error occurred in PRINTER communication. Contact a service representative.	Failed to acquire imager information. (1) Restart the imager and check it again. (2) Contact Konica Minolta technical representatives.
37623 37624	Internal error occurred in PRINTER communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37625	Internal error occurred in PRINTER communication. Contact a service representative.	Communication with the imager failed. (1) Try performing output again. (2) Contact Konica Minolta technical representatives.
37626 37627	Internal error occurred in PRINTER communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37628	Internal error occurred in PRINTER communication. Contact a service representative.	Communication with the imager failed. (1) Try performing output again. (2) Contact Konica Minolta technical representatives.
37629 37630	Internal error occurred in PRINTER communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37631	Internal error occurred in PRINTER communication. Contact a service representative.	Communication with the imager failed. (1) Try performing output again. (2) Contact Konica Minolta technical representatives.
37632 - 37635 37640 37641	Internal error occurred in PRINTER communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37642	Internal error occurred in PRINTER communication. Contact a service representative.	Communication with the imager failed. (1) Try performing output again. (2) Contact Konica Minolta technical representatives.
37643 37644	Internal error occurred in PRINTER communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37645	Internal error occurred in PRINTER communication. Contact a service representative.	Communication with the imager failed. (1) Try performing output again. (2) Contact Konica Minolta technical representatives.

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10.2 Error codes and countermeasures

Error code	Displayed message	Problems/countermeasures
37646 37647	Internal error occurred in PRINTER communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37648	Internal error occurred in PRINTER communication. Contact a service representative.	Communication with the imager failed. (1) Try performing output again. (2) Contact Konica Minolta technical representatives.
37649 37650	Internal error occurred in PRINTER communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37651	Internal error occurred in PRINTER communication. Contact a service representative.	Communication with the imager failed. (1) Try performing output again. (2) Contact Konica Minolta technical representatives.
37670 - 37672	Internal error occurred in HOST communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37673	Internal error occurred in HOST communication. Contact a service representative.	Host communications failed. (1) Check server or network. (2) Contact Konica Minolta technical representatives.
37674 37675	Internal error occurred in HOST communication. Contact a service representative.	Contact Konica Minolta technical representatives.
37676	Internal error occurred in HOST communication. Contact a service representative.	Host communications failed. (1) Check server or network. (2) Contact Konica Minolta technical representatives.
37680	HOST A-ASSOCIATE is rejected. Please check communication setting.	Connection request for communication with the host was denied. Check the communication settings.
37680	PRINT A-ASSOCIATE is rejected. Please check communication setting.	Connection request for communication with the imager was denied. Check the communication settings.
37681	HOST A-ASSOCIATE is rejected transient.	Connection request for communication with the host was temporarily denied. Check the host.
37681	PRINT A-ASSOCIATE is rejected transient.	Connection request for communication with the imager was temporarily denied. Check the imager.
50000A	Reading order is not selected. In order to perform image retrieval, click on [OK] button to close this dialog, and then select reading order	After pressing [OK] and closing the dialog, set the reading sequence.
50000B	Reading order is not selected. To eject the cassette, click on [Eject] button. In order to perform image retrieval, click on [OK] button to close this dialog, and then select reading order.	(1) Press [Eject] to remove the cassette. (2) After pressing [OK] and closing the dialog, set the reading sequence.
50001A 50001AB	Required to re-erase since imaging plate was exposed very much.	As a large amount of X-rays were used during exposure, deletion needs to be performed again.
90001	An error occurred during image reading. Check the network. Restart the reader.	Check the console network connection and the CR cassette reader network connection. After restarting the CR cassette reader, read the CR cassette with which exposure performed again.
90002	Image reception is not completed. Check the network.	Check the console network connection and the CR cassette reader network connection.
99999	CR Process Initialization failed. Please Restart the console or call service.	(1) Restart the device. (2) Contact Konica Minolta technical representatives.

Chapter 11

Maintenance

This chapter describes the items that require periodic maintenance.

11.1 • Maintenance and inspection items

This chapter describes inspections and cleaning required in order to maintain the use of this device in an optimum condition.

● Quality Tool



HINT

- "Simple Check QC for CS-7" is available for checking of imaging quality. Please contact our customer service for the detail.
- For more details, contact Konica Minolta technical representatives.

11.1.1 Maintenance schedule

Maintenance and inspection items periodically performed by the user, and maintenance and inspection items supported by service engineers are as follows.

● Maintenance items performed by the user

Maintenance task	Maintenance interval
Check operation of cooling fan	Weekly
Check built-in clock time	Weekly
Clean operation unit display	Weekly
Clean keyboard	Monthly
Clean mouse	Monthly

● Maintenance items handled by a service engineer

Maintenance task	Maintenance interval
Change the hard disk	Every 5 years, or 20,000 hours of operation
Backup the system	Semi-annually
Defragment the hard disk	Every year



IMPORTANT

- To ensure optimum use of this device, be sure to perform periodic maintenance.
- The above task intervals are estimates, and vary according to usage.
- Contact Konica Minolta technical representatives to discuss "Maintenance items handled by a service engineer".

11.1.2 Confirmation and cleaning

Check and clean the following items daily.

● Check operation of the cooling fan

Check that the cooling fan has not stopped, and is not making abnormal sounds (rattling). Periodically clean the cooling fan exhaust outlet with a vacuum cleaner.

● Check built-in clock time

Check and correct the built-in clock time with the user tool. Check periodically and discuss with the user tool administrator.

● Clean the operation unit display

The operation unit display requires periodic cleaning. At that time, be careful about the following points.

- Wipe with a soft cloth.
- Do not use a chemical cloth or wet cloth.
- Do not spray water or other liquids directly onto the display.

● Clean the keyboard

Check that the power for the whole system including this device and all peripheral devices is turned off (power lamp is out), then wipe the surface of the keyboard with a dry cloth.

● Clean the mouse

In order for the optical mouse to function properly, the internal optical sensor must be able to properly measure the direction and amount of movement. To prevent the sensor from getting dirty, use in a low-dust environment, and clean periodically with a dry cloth.

11.1.3 Periodically replaced parts

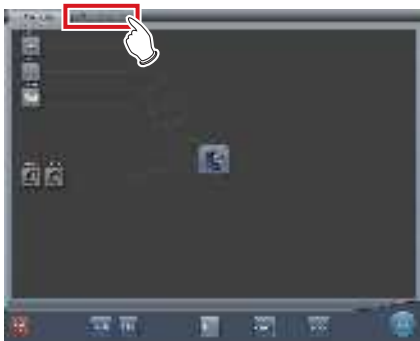
The number (period) of uses is counted for the DR Detectors and REGIUS. When it is time to replace the regular replacement parts, the [System] icon turns yellow. If the [System] icon turns yellow, check the regular replacement parts with the following procedure.

1 Press [System].



- The system monitor screen ([System Monitor] tab) is displayed.

2 Select [Warranty Component] tab.



- Replacement unit screen is displayed.
- Check the status of the regular replacement parts with the replacement unit list and unit usage status.
- For details on regular replacement parts, contact Konica Minolta technical representative.

HINT

- The yellow [System] icon will return to the original color when the regular replacement parts have been replaced.

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11.1.4 Consumables

IMPORTANT

- For information on consumables or periodic replacement parts for hardware of this device, UPS, etc., refer to each device's manual.
- In particular, continued use of the battery may result in degradation and wear, and it may no longer exhibit proper functioning capabilities. For extended, safe use, it is necessary to replace parts which have become worn or degraded.

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Chapter 12

Specifications

This chapter describes the specifications of this device.

12.1 • Specifications



12.1.1 Software specifications

Item	Description
Product name	DIRECT DIGITIZER CS-7
Product classification	MDD: Class II a, Rule10 FDA: 510 (k) Class II
Remarks (for MDD)	CE marking, indicating conformity with the Medical Devices Directive 93/42/EEC
DICOM support	DICOM Storage SCU DICOM Basic Grayscale Print Management SCU DICOM Modality Worklist Management SCU DICOM Modality Performed Procedure Step SCU
Image processing	Auto-gradation process Frequency processing (F process) Equalization processing (E process) Hybrid processing (HF process - HE process) Hybrid smoothing process (HS process) Grid removal process/Scattered Radiation Correction (Intelligent-Grid) Automatic exposure field recognition process
Readable devices	1) DR Detector 2) REGIUS MODEL 170, REGIUS MODEL 190, REGIUS MODEL 210, REGIUS MODEL 110, REGIUS MODEL 110S, REGIUS MODEL 110HQ 3) REGIUS SIGMA, REGIUS SIGMA2
Sampling pitch	200µm (Only for AeroDR 3 1417HD) 175µm 100µm (Only for AeroDR 3 1417HD) 87.5µm (Only for REGIUS series)
Image output	Host: max 4ch Printer: max 2ch
Software components	1) Application : CS-7 application software 2) OS : Windows 7 Professional 32bit/Windows 10 Enterprise 2015 LTSB (64bit)----- SOUP 3) Middleware : .NET framework 4.6.1 ----- SOUP Microsoft SQL Server Compact Edition ----- SOUP Postgre SQL----- SOUP 4) Driver : CD-R/DVD-R writing library ----- SOUP * OS is installed in PC. It is not included in CS-7 product.
Software main functions	1) Order registration/Order cooperation The order registration method of this device can be selected according to the connection environment of the facility. 2) Exam. Tag Select the Exam. Tag for exposure to select the optimal reading condition, image-processing condition, and output condition for each body part. 3) Image reading 4) Linkage with X-ray equipment Linkage of exposure between X-ray equipment, Digital Radiography, and this device. 5) Image processing 6) Image sending to printer/PACS/image storage media

IMPORTANT

- This device does not have a function for controlling the X-ray device. Exposure is operated via the X-ray device.

12.1.2 Hardware specifications













Item	Description			
CPU	Intel Core i3 processor 2.93 GHz or higher			
Memory	Standard 2 GB			
OS	Microsoft Windows 7 Professional (32 bit), Windows 10 Enterprise 2015 LTSC (64bit)			
Hard disk	250 GB or more			
Optical drive	CD/DVD super multi drive or higher (CD/DVD read, write enabled)			
PCI slot	2 empty slots or more (PCIx1, PCI-Express)			
Input/output port	Ethernet: 10base-T/100base-TX/1000base-T USB: 6 ports or more * ¹			
Keyboard	Full size keyboard			
Mouse	Optical wheel mouse (USB)			
Sound	Audio function available			
Power requirements	AC 90 V-264 V (Single phase 50/60 Hz)			
Power consumption	46 W			
Standard (for MDD)	Conforms to the standards that the CE marking requires.			
Major accessories	Control unit power cable Operation unit (monitor) power cable Connector cable between control unit and operation unit (monitor) Keyboard Mouse			
Recommended storage and usage environment conditions	During operation	Temperature	Humidity	
		10 to 35°C (0 m to 3,048 m in maximum altitude)		10 to 90% RH (ensure no water con- densation)
	In storage	Temperature	Humidity	
		-30 to 60°C (0 m to 9,144 m in maximum altitude)		10 to 90% RH (ensure no water con- densation)

*¹ Required for 1 mouse, keyboard, and touch panel.

IMPORTANT

- These product specifications may change for improvement without prior notice.
- If One Shot stitching exposure is being used, the device requires 4GB or more memory.
- If AeroDR 3 1417HD is being used, the device requires 4GB or more memory.

12.1.3 Hardware specifications (when using the portable X-ray device)

Item	Description					
CPU	Intel Core i5-2520M vPro processor 2.50 GHz or higher					
Memory	Standard 4 GB					
OS	Microsoft Windows 7 Professional (32 bit), Windows 10 Enterprise 2015 LTSC (64bit)					
Hard disk	250 GB or more					
Input/output port	Ethernet: 10base-T/100base-TX/1000base-T USB: 3 ports or more					
Keyboard	PC built-in keyboard					
Monitor	1280×800 or above					
Sound	Audio function available					
Power requirements	AC 100 V-240 V (Single phase 50/60 Hz)					
Power consumption	Max. about 60 W					
Standard (for MDD)	Conforms to the standards that the CE marking requires.					
Major accessories	Power cable					
Recommended storage and usage environment conditions	During operation	<table border="1"> <thead> <tr> <th>Temperature</th> <th>Humidity</th> </tr> </thead> <tbody> <tr> <td>5 to 35°C </td> <td>30 to 80% RH (ensure no water condensation) </td> </tr> </tbody> </table>	Temperature	Humidity	5 to 35°C 	30 to 80% RH (ensure no water condensation) 
	Temperature	Humidity				
5 to 35°C 	30 to 80% RH (ensure no water condensation) 					
In storage	<table border="1"> <thead> <tr> <th>Temperature</th> <th>Humidity</th> </tr> </thead> <tbody> <tr> <td>-20 to 50°C </td> <td>30 to 80% RH (ensure no water condensation) </td> </tr> </tbody> </table>	Temperature	Humidity	-20 to 50°C 	30 to 80% RH (ensure no water condensation) 	
Temperature	Humidity					
-20 to 50°C 	30 to 80% RH (ensure no water condensation) 					

IMPORTANT

- These product specifications may change for improvement without prior notice.

12.1.4 Optional products

Category	Product name
LCD monitor	17 inch high field of vision LCD multi-touch monitor
High precision monitor	21 inch color LCD monitor DP-DVI conversion cable
Bar code Reader	CS multi-bar code reader CS bar code reader Bluetooth bar code reader (when using the portable X-ray device)
Magnetic card reader	CD magnetic card reader
Add-in LAN	Add-in Ethernet board Wireless LAN adapter (when using the portable X-ray device)
Expansion memory	Memory module for expansion



HINT

- For the specifications of the monitor and options, refer to the operation manual of each product.



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