

Canon

Disinfection Guide for Ultimax Multipurpose R&F System

CANON MEDICAL SYSTEMS CORPORATION

13.4 Cleaning

Clean the system, the optional units, and the room after each use.

If the cleaning is contracted to a cleaning company, provide them with the following precautions and instructions regarding the cleaning procedures.

(1) Cleaning the table

(a) Wiping off contrast agent stains

If a contrast agent, such as barium, has been spilled on the table, wipe it off using a cloth moistened with water. Do not use detergent or solvent as using them may cause the contrast agent to spread.

(b) Cleaning ordinary stains

Wipe off stains with a cloth moistened with mild detergent that is diluted as specified by the manufacturer. Be sure to thoroughly wring out the cloth to prevent the detergent solution from dripping onto the table. After cleaning the table with the detergent solution, wipe the table dry using a dry cloth.

(c) Washing the patient fixing band

The patient fixing band is waterproof. If barium spills on the band, wipe it off with a clean cloth moistened with water. If the waterproofing is degraded, perform waterproofing again. If barium spills on the Velcro tape of the band, remove it using a brush moistened with water. If barium spills on the Velcro tape on the back of the tabletop, remove it in the same manner.

(2) Cleaning the room

When using water to clean the floor in the room, use a mop or rag that has been wrung out properly to ensure that no water drips off.

(3) Monitors (live monitor, system monitor, and reference monitor)

If the display screen is dirty, wipe it with a soft, dry rag.

If the soiling is severe, wipe it clean using a tissue or soft rag sprayed with a cleaner designed for use with office automation equipment.

If dust is present in the vent holes, use a vacuum cleaner to clean out the dust.

(4) Cleaning the keyboard

Use a vacuum cleaner to remove the dust from between the keys.

(5) Cleaning the mouse

If the pointer movement on the screen does not correspond properly to movement of the mouse, remove the trackball from the mouse and clean it.

Mouse operation may sometimes be difficult due to the color or surface condition of the desk or mouse pad. In such cases, replace the mouse pad and check the operation.

(6) DVD drive

To ensure data reliability, we recommend that a service contract for periodic inspection and cleaning be signed with your Canon Medical Systems service representative.

NOTE: If the system is not inspected and cleaned appropriately, dust may adhere to the DVD drive lens and the media, increasing the number of retries required due to the laser having to adjust the luminescence. As a result, the time required for reading and writing to the media may increase. If the DVD drive is not cleaned periodically, reading/writing errors may occur.

(7) Cleaning the image processor PC ventilation hole (fan)

If the PC is not stored in the subdesk DSK-080A or DSK-088A, be sure not to place it on the floor. Install it on a desk or some other surface where dust and heat do not tend to accumulate. If dust adheres to the ventilation holes, use a vacuum cleaner to clean out the dust. Leave 5 cm of free space on each side of the PC. If the system is used with dust clogging the ventilation holes or without sufficient space around it, heat may build up inside the system, and the system may fail.

⚠WARNING:

1. If disinfection is required due to the presence of blood etc., perform disinfection thoroughly referring to subsection 13.5 "Disinfection".
2. Turn OFF the power supply of the unit before cleaning. If the power is ON, a malfunction or an accident may occur. If liquids such as water or detergent enter the unit, there is a danger of electric shock.
3. If there is a risk of infection, wear disposable gloves.

CAUTION:

1. Do not spill or spray liquids such as water or detergent on the equipment. If such liquids enter the equipment, a malfunction or an accident may occur.
2. Do not use solvents, such as paint thinner or benzine, or abrasive cleansers for cleaning the system. These substances may cause discoloration or scratches on the cleaned surface.
3. Do not pour liquids such as water or detergent on the floor. If liquid is spilled on the unit or liquid enters the cable pit, a malfunction or an accident may occur.
4. Do not apply force to the cables and switches at the rear of the monitor and processor. If the connectors are loose or the switch settings change, the system may malfunction or fail.

13.5 Disinfection

Disinfect the system and peripheral units according to the instructions of a disinfection specialist. This system, which is a noncritical instrument according to the Spaulding classification, is not intended to be placed in direct contact with the patient. Disinfection or sterilization of the system is therefore not required.

However, it is possible to disinfect some parts of the system, such as unit covers.

If it is necessary to disinfect a unit cover that has been exposed to body fluids such as blood, follow the instructions in this subsection.

- (1) Disinfectant : The following disinfectants can be used on the system. Before using a disinfectant, carefully read and understand the precautions for use and the disinfectant characteristics in the instructions provided with the disinfectant.

Disinfectant	Working concentration
Glutaraldehyde	2.0%
Benzalkonium chloride	0.2%

- (2) Disinfection method : Wipe the surface of the system with a rag that has been moistened with disinfectant and has then been wrung out lightly. After wiping off the disinfectant, thoroughly dry the system by wiping it with a soft, dry cloth. Be careful not to allow any disinfectant to enter the interior of the system. Do not disinfect the PC for the image processor. Clean the PC with a rag that has been moistened with water or diluted detergent and has then been wrung out properly.

- ⚠WARNING:**
1. Be sure to turn OFF the power supply of the unit before disinfection. If power is supplied, an accident may occur due to unexpected operation of the unit when the operating switches are touched. If flammable gas or liquid enters the unit, a fire, explosion, or electric shock may occur.
 2. After disinfection, ventilate the room thoroughly before turning ON the power supply. If any flammable gas remains in the room, there is a danger of fire or explosion when the power supply is turned ON.
 3. If there is a risk of infection, wear disposable gloves.

- ⚠CAUTION:** Do not pour or spray disinfectant on the unit. If disinfectant enters the unit, a malfunction or an accident may occur.

CAUTION: 1. Do not use the types of disinfectants listed below. They will damage the system. The performance and safety of the system cannot be guaranteed if it has been damaged by use of an unsuitable disinfectant.

- Disinfectants that are excessively corrosive to metal or rubber, such as chlorine-based disinfectants, or disinfectants which warn against use on metal, plastic, rubber, or coatings.
- Disinfectants that may enter the system, such as formalin gas or spray-type agents.

2. Disinfect the system only when necessary. Performing disinfection repeatedly may result in discoloration or cracking of the surface finish or in damage to rubber or plastic parts. If the system appears to be harmed by a disinfectant, immediately stop using the system. Contact your Canon Medical Systems service representative for repair.

13.6 Sterilization

It is not possible to sterilize the system. If sterilization is required, use sterile caps or sheets.

13.7 Inspection During Storage

Maintenance inspection is required during storage. If the system is to be used after a period of storage, clean and inspect the system following the instructions in subsection 7.1 "Checks Before Operation". If the system is stored for a prolonged period, ensure that the storage environmental conditions are met throughout the storage period.

13.8 Disposing of the System

⚠CAUTION: 1. Disposal of the system by the customer or by contractors who are not designated by Canon Medical Systems may cause environmental damage. The system includes lead, LCDs, and materials that require special handling, and must be disposed of in accordance with all applicable laws and regulations.

2. Cesium iodide is used as the scintillator material for Portable FPD, and a lithium ion battery is also used in Portable FPD. In addition, lead plates are used as X-ray protective plates. If they are disposed of by the customer or by disposal technicians other than those designated by Canon Medical Systems, there is a risk of harm to the environment. Be sure to comply with all applicable laws and regulations when disposing of the system.

If it is necessary to dispose of the system or any of the units used in combination, contact your Canon Medical Systems service representative.

13.9 System Failure

If the system malfunctions, post a sign reading "DO NOT USE" on the system and contact your Canon Medical Systems service representative for repair. Do not use the system until it is repaired.

10.5 Checking the Vertical Bucky Stand

- (1) Checks before turning OFF the power

Set the height of the radiographic unit to the appropriate position for subsequent use.

- (2) Checks after turning OFF the power

- (a) Remove the image receptor (used or unused) from the cassette tray.
- (b) Be sure to insert the cassette tray into the radiographic unit.
- (c) Confirm that there is no damage such as cracks in the Bucky stand support column section or radiographic unit.
- (d) Confirm that the cables are not damaged or excessively bent.

10.6 Cleaning

If cleaning is to be performed by cleaning staff, be sure that they are aware of the warnings and precautions below.

After operating the system, clean the system and the units used in combination. According to the Spaulding classification, this system is a Non-Critical medical device. It is not intended to be used in direct contact with a patient, and therefore does not require disinfection or sterilization.

Sections that can be cleaned

Tabletop, X-ray beam limiting device, radiographic unit of the vertical Bucky stand, and the areas surrounding them

<p>⚠️WARNING:</p> <ol style="list-style-type: none">1. If disinfection is required due to the presence of blood etc., be sure to perform thorough disinfection referring to subsection 10.7 "Disinfection".2. Turn OFF the power supply of the unit before cleaning. If the power is ON, malfunction or an accident may occur. If liquids such as water or detergent enter the unit, there is a danger of electric shock.3. Do not pour or spray liquids such as water or detergent on the unit. If liquid enters the unit, a malfunction or an accident may occur.4. Do not pour liquids such as water or detergent on the floor. If liquid enters the cable pit, a malfunction or an accident may occur.5. To prevent infection, always wear new protective gloves when performing cleaning and disinfection.6. Clean and disinfect the system using the specified medical agents according to the procedures specified in this manual. Otherwise, the system may be cleaned or disinfected inadequately or may malfunction.

⚠WARNING: 7. Canon Medical Systems cannot guarantee the effectiveness of the specified medical agents for cleaning and disinfection. For questions concerning these products, please contact the manufacturer.

NOTICE: 1. Do not clean the unit with organic solvents (such as paint thinner) or abrasive cleansers, because they may cause damage or discoloration.

2. Performing cleaning or disinfection repeatedly may gradually lead to deterioration in system performance. Do not clean or disinfect the system more than is required for preventing infection.

(1) Cleaning the system

Wipe off stains with a soft cloth moistened with mild detergent.

- Dilute the mild detergent to the concentration specified by the manufacturer.
- Moisten a soft cloth with the diluted detergent, and then wring the cloth out firmly so that the detergent does not drip from the cloth.
- Wipe off the stains, then wipe the system again using a dry soft cloth.

(2) Cleaning of the room

Remove dust from the room using a vacuum cleaner. When scrubbing the floor, use a tightly wrung-out mop or cloth so that water does not drip.

(3) Cleaning the tabletop mat cover

Turn the cover inside out and clean it. Observe the following precautions.

- When the cover is washed, the water temperature used for washing should be 95°C or less.
- The cover should not be chlorine-bleached, dry cleaned, or ironed.
- When the cover is dried in a dryer, the temperature should be set to low.
- The tabletop mat cannot be washed. Clean it according to the procedure in step (1) "Cleaning the system".

10.7 Disinfection

Ensure that appropriate procedures are followed to disinfect the system, accessories, and units used in combination according to instructions from personnel with expertise in disinfection.

According to the Spaulding classification, this system is a Non-Critical medical device. It is not intended to be used in direct contact with a patient, and therefore does not require disinfection or sterilization.

However, it is possible to disinfect parts of the system such as the covers. If there is blood or other organic substances on parts such as covers, disinfect the part appropriately according to the procedures described in this subsection.

Sections that can be disinfected

Tabletop, X-ray beam limiting device, radiographic unit of the vertical Bucky stand, and the areas surrounding them

<p>⚠WARNING:</p> <ol style="list-style-type: none">1. Observe the precaution below to prevent infection.<ul style="list-style-type: none">• If blood etc. has been spilled on the system, perform thorough disinfection.2. Do not pour or spray disinfectant on the unit. If disinfectant enters the unit, a malfunction or an accident may occur.3. Be sure to turn OFF the power supply of the unit before disinfection. If power is supplied, an accident may occur due to unexpected operation of the unit when the operating switches are touched. If flammable gases or liquids enter the unit, a fire, explosion, or electric shock may occur.4. After disinfection, ventilate the room thoroughly before turning ON the power supply. If any flammable gas remains in the room, there is a danger of fire or explosion when the power supply is turned ON.5. To prevent infection, always wear new protective gloves when performing cleaning and disinfection.6. Clean and disinfect the system using the specified medical agents according to the procedures specified in this manual. Otherwise, the system may be cleaned or disinfected inadequately or may malfunction.7. Canon Medical Systems cannot guarantee the effectiveness of the specified medical agents for cleaning and disinfection. For questions concerning these products, please contact the manufacturer.

NOTICE:

1. Do not use the disinfectants listed below. They will damage the system. The performance and safety of the unit cannot be guaranteed if it has been damaged by use of an unsuitable disinfectant.
 - Disinfectants that are excessively corrosive to metal or rubber, such as chlorine-based disinfectants.
 - Disinfectants that warn against use on metal, plastic, rubber, or coatings.
 - Disinfectants that may enter the unit, such as formalin gas or spray-type agents.
2. Disinfect the equipment only when necessary. Performing disinfection repeatedly for a long period may result in cracking of the surface finish or discoloration or damage to rubber or plastic parts. If the equipment appears to have been harmed by a disinfectant, immediately stop using the equipment and contact your Canon Medical Systems representative for repair.

(1) Disinfectants

The disinfectants listed below can be used on this system. Read the handling instructions for the chosen disinfectant, and fully understand the precautions required and its characteristics before using it.

Disinfectant	Concentration rate
Glutaraldehyde	2.0%
Ethanol for disinfection	76.9% to 81.4%
Benzalkonium chloride	0.2%

(Do not use these disinfectants on the control panel, covers, or other parts made of synthetic rubber or synthetic resin.)

(2) Disinfection procedures

Wipe off the surface of the system with a cloth moistened with the disinfectant and tightly wrung out. Be careful not to allow disinfectant to enter the system.

(3) Drying

After disinfection, wipe the system with a dry soft cloth or let the system dry naturally.

10.8 Sterilization

This system cannot be sterilized. If sterilization is required, use a sterile cap or sheet.