

DR-ID 670

Operation Manual

1st Edition : May 2013

For Safe Operation

**System
Configuration
(Product Overview)**

Basic Operation

**Daily Inspection and
Maintenance**

Appendix

**Maintenance and
Inspection**

Introduction

DR-ID 670 is an X-ray equipment which acquires a general radiograph from the indirect-conversion flat panel sensor. The detector of flat panel sensors features 150 micron pixel pitch, a wide 16-bit dynamic range and exposure times up to 3.8 seconds.

Intended Use

The Fujifilm DR-ID 670 provides digital image capture for radiographic examinations.

It is intended for use in general projection radiographic applications wherever conventional screen-film systems or CR systems may be used. DR-ID 670 is a device that provides images, which diagnostic image process is not implemented, to image collecting console. It is not designed for mammography, fluoroscope, tomography or angiography.

About This Manual

This Operation Manual includes descriptions of matters necessary when using the DR-ID 670 such as the equipment overview, operation procedures and precautions to observe, as well as daily inspections and maintenance.

Refer System Operation manual (which describe about image correction console, and prepared by System Integrator), about image collecting console and diagnostic images process.

Accompanying documents were originally drafted in the English language.

Important information

DR-ID 670 consists of DR-ID 600MP, DR-ID 670MC and DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE/DR-ID 613SE.

DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE and DR-ID 613SE :Wireless communication mode or wired communication mode is available. When used in wireless communication mode, an access point*1, battery pack (optional) and battery charger (optional) are required.

*1 In the countries other than the U.S., an access point is not included as a component of the system.

For details including installation, consult our official dealer.

Each flat panel sensor complies with IEC 62220-1 (MEDICAL ELECTRICAL EQUIPMENT - CHARACTERISTICS OF DIGITAL X-RAY IMAGING DEVICES -) as a general X-ray radiography equipment.

Installation may only be conducted by authorized service personal.



CAUTIONS

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This system is classified as a medical device under EC Directive 93/42/EEC.

Process waste correctly, as stipulated by local law or any regulations that apply.

Caution : Rx Only in the United States (Federal law restricts this device to sale by or on the order of a physician.)

Open-Source Software Used in This Product

This product uses third party's software that is made available as open source software or free software. For information on open source software used in this product, please see the attached CD. Source codes for certain type of open source software used in this product are available at delivery cost. If you would like to receive such source codes, please contact FUJIFILM dealer or the service representatives at the agency from which you purchased this product. (Please be noted that any inquiries concerning the contents of source codes should be directed to original licensors of open source software.)

Note : FUJIFILM has successfully performed verification and validation testing on all third party software and has confirmed its suitability to be used in this system.

Patent Marking

DR-ID 601SE/DR-ID 602SE are covered by one or more of the following US patents: US 5,654,084/US 5,681,666/US 6,413,645 or international equivalents.

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Maintenance and Inspection

Chapter 1 For Safe Operation

1.1 Safety

Before using the DR-ID 670, read this section thoroughly to ensure that you use the product properly.

Electric Shock Warnings and Cautions



WARNING

The power supply to the DR-ID 670 is AC100 to 240V.

To avoid electric shocks, users should always take the following precautions:

- Never open any covers of the equipment.
- Install the equipment in a location where it will not be exposed to water.
- Check that the equipment is securely earthed.
- Check that all of the cords and cables are completely and securely connected.



WARNING

Do not touch the patient's body while touching the control cabinet. Otherwise, the patient may receive an electric shock.



WARNING

Do not use a multiple tap connector or extension cable for powering the devices constituting the system. Otherwise, fire or electric shock may occur due to the electrical load exceeding the allowable limit.



WARNING

Observe the following precautions when using the cables.

- Turn off each unit before connecting/disconnecting the cable.
Do not touch the plug and connector with wet hands. Otherwise, electric shock may result, causing death or severe injury.
- Hold the plug or connector when removing the cable.
Pulling the cable or carrying by holding it may damage the cable, causing fire or electric shock.
- Do not damage or remodel the cable.
Do not place a heavy object on the cable or lay it under the flat panel sensor. Do not step on, pull, forcibly bend, or bundle the cable. Otherwise, fire or electric shock may result.
- Do not use the flat panel sensor for the radiographic examination stand if its cable becomes overloaded. Otherwise, the cable may be damaged, causing fire or electric shock.



WARNING

Do not turn on the system with dew condensation on the flat panel sensor. Otherwise, fire or electric shock may result.



WARNING

Do not use the equipment in a location where metal particles could come into the equipment. This may cause an electric shock.



WARNING

Do not disassemble or remodel the equipment. Otherwise, fire or electric shock may result. Keep away from the parts inside the product, which may cause electric shock. If you touch them accidentally, death or severe injury may result.



WARNING

Do not hit or drop the equipment or subject it to severe shock. Otherwise, the equipment may be damaged. If the damaged equipment is used, fire or electric shock may result.



WARNING

Before using the flat panel sensor (DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE and DR-ID 613SE), make sure that the battery cover or battery pack is attached. If not attached, an electric shock may result.



WARNING

Make sure to use the optional parts and accessories recommended by us. Failure to use the optional parts and accessories recommended by us may result in damage to the equipment and/or electric shock and injury.



CAUTIONS

As the cables of the equipment are long, be careful not to entangle the cables during use. Also, be careful not to trip over the cables. Falls could result in injury.



CAUTIONS

Follow the specified procedure when turning off the equipment. Otherwise, the flat panel sensor could be damaged by thermal shock.



CAUTIONS

Do not store magnetic media near the DR system and control cabinet. Otherwise, magnetism generated by the equipment may cause the data to be lost.



CAUTIONS

Keep the equipment away from patient's body fluids, chemicals, water, etc. Otherwise, it may become damaged, causing fire or electric shock. If necessary, protect the flat panel sensor by covering it with a disposable bag.

Explosion Warnings



WARNING

Because this equipment is not explosion-proof, do not use combustible and explosive gases near the equipment.

**WARNING**

Flammable gasses may stay in the room after disinfection. Ventilate the room well before powering on the equipment following disinfection.

Warnings for Abnormalities**WARNING**

If any of the following occurs, immediately turn off the power of each unit, unplug the power cable from the outlet, and then contact a FUJIFILM dealer.

- When smoke, strange odor, or abnormal sound is present.
- When a foreign object (such as a metal object) or liquid enters the product.
- When the equipment is dropped or hit and is damaged.

Installation Precautions**CAUTIONS**

Do not install the equipment in a location with the following conditions.

- Where the temperature changes sharply.
- Close to heat sources such as a heater.
- Where the equipment may be exposed to water due to water leakage or ingress.
- Where corrosive gas may be generated.
- Where there is excessive dust.
- Where the equipment is subject to frequent or excessive vibration/shock.
- Where the equipment is exposed to direct sunlight.
- Where there is no ventilator.

**CAUTIONS**

For veterinary or mobile applications, contact a FUJIFILM dealer.

**CAUTIONS**

Use the system indoor in wireless communication mode. For details, contact a FUJIFILM dealer.

**CAUTIONS**

Do not place any object in a place where removal of the power cable is prevented.

Connection Instructions**WARNING**

Make sure that the devices to be connected to the equipment are authorized for connection.

**WARNING**

When the DR-ID 670 is connected to X-ray equipment, make sure that the equipment complies with IEC 60601-1.

Precautions on External Network Connection



CAUTIONS

When a setting of the network to which the equipment is connected has been changed, check that the change does not affect the system operation and take measures if necessary.

The setting change may include the following:

- Change of connection destination
- Addition of devices
- Removal of devices
- Update of devices
- Upgrade of devices

Warnings and Cautions on Network



WARNING

Make sure to use the optional parts, accessories and networks recommended by us. Failure to use the optional parts, accessories and networks recommended by us may result in damage to the equipment and/or electric shock and injury.



CAUTIONS

Connect to the Ethernet Network of 1000BASE-T, 100BASE-TX, or 10BASE-T prescribed in the IEEE standard 802.3.

Do not connect telephone lines to LAN connector. Only UTP-type straight LAN cables of 4-pair Category 5 cable (CAT 5E) or higher are appropriate for connection to this connector.



CAUTIONS

After connecting this system to the network with other systems, confirm that the other systems are not affected. If they are affected, take countermeasures such as network separation.

System Isolation Instructions



WARNING

To ensure complete system isolation, never install any unauthorized accessories or other such items.

When it is necessary to install authorized accessories or optional items, contact a FUJIFILM dealer.



WARNING

Keep equipment other than those used for patients out of their reach to ensure appropriate system isolation.



WARNING

In normal use, have a patient take a proper positioning for exposure. The operator should operate the system in a place where safety from radiation is ensured. The operator should also make sure before exposure that no one but the patient is in the exposure area and the operating area of the system.

Software Precautions



CAUTIONS

Do not install additional software to the system. Do not uninstall any of the software preinstalled in the system.

The system is preinstalled with the appropriate software. If other software is installed or if the existing software is uninstalled, various operational errors may result.

Disinfection Instructions



WARNING

Confirm that the respiratory density of disinfectant including solvent is under legal regulation. Certain disinfectants may damage health. When using a disinfectant, follow instructions supplied by the manufacturers.



WARNING

Do not use the following disinfectants or sterilizers at the time of disinfection. Quality, performance and safety of the equipment cannot be assured.

- Chloric disinfectant which is strongly corrosive to metals and rubber parts.
- Disinfectant whose uses on metals, plastics, and coating are forbidden according to the instructions supplied with the disinfectant.
- Formalin gas and disinfectant sprays that may get inside the equipment.
- Ultraviolet sterilizers

Disinfectant ethanol is recommended for disinfection. Carefully read the instructions and cautions supplied with the disinfectant before use.

For details on the disinfectant, contact a FUJIFILM dealer or the service representatives at the agency from which you purchased the disinfectant.



CAUTIONS

Clean the sensor unit of the flat panel sensor with ethanol for disinfection, etc. for each patient to prevent infection.

Precautions for Charging the Battery



CAUTIONS

- Use the battery charger recommended by FUJIFILM Corporation.
For details on operations, refer to the instruction manual for the battery charger.
- Do not charge the battery pack near fire or under strong sunshine. If the built-in protection mechanisms are activated by a high temperature, the battery pack cannot be charged. Also, if the built-in protection mechanisms are damaged, the battery pack may be charged with extremely high current and voltage, and abnormal chemical reactions may occur inside the battery pack, causing it to overheat, emit smoke, explode or ignite.
- To charge the battery pack, be sure to use the designated battery charger and to observe the charging conditions specified by FUJIFILM Corporation. If the battery pack is charged in other conditions (temperature or voltage/current higher than specified, remodeled battery charger, etc.), the battery pack may be overcharged or charged with extremely high current, and abnormal chemical reactions may occur inside the battery pack, causing it to overheat, emit smoke, explode or ignite.
- Immediately stop charging the battery pack, if charging is not completed within the specified time. Otherwise, the battery pack may overheat, emit smoke, explode or ignite.
- Do not use the flat panel sensor near the AC adapter.
- Do not use the broken battery charger.

Battery Pack (Optional) Instructions



WARNING

If this equipment is not in use for while, store it with the battery pack removed. Not removing the battery pack may cause malfunction.



CAUTIONS

Observe the following precautions when using the battery pack (optional).

- The battery pack (125N100050) is exclusively for the flat panel sensor (DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE and DR-ID 613SE). Do not use them in other combinations.
- Charge the battery pack only with the designated battery charger. If the battery pack is charged under the charging conditions (voltage, current and charging method) different from those specified by FUJIFILM Corporation, the battery pack may emit smoke, ignite, explode or leak fluid.
- When storing the battery pack (125N100050) for a long period, charge the battery fully, remove it from the flat panel sensor and then store it in a cool and dark place. Recharge the stored battery every six months or every year. Otherwise a decrease in battery capacity or other problems may result.
- Do not leave the removed battery pack in the car or other places exposed to high temperature. If the battery pack is used or stored in a place where it is exposed to high temperature, the battery pack may emit smoke, ignite, explode or leak fluid.
- Use or store the battery pack only in the environmental conditions specified by FUJIFILM Corporation. If the battery pack is used or stored in a place where it is exposed to high temperature, the battery pack may emit smoke, ignite, explode or leak fluid.
- When disposing of the battery pack, consult our official dealer.
- Do not disassemble or remodel the battery pack. The battery pack is equipped with built-in safety and protection mechanisms. If they are damaged, the battery pack may overheat, emit smoke, explode or ignite.
- Do not connect the positive (+) and negative (-) terminals with a wire or any metal object. Do not carry or store the battery pack together with metal objects such as necklaces or hairpins. Otherwise, the battery pack may short-circuit and overcurrent may flow, causing the battery pack to overheat, emit smoke, explode or ignite. Metal objects such as necklaces or hairpins may also become hot.
- Do not throw the battery pack into fire or expose it to excessive heat. Otherwise, its insulator may melt, its gas release vent or safety mechanisms may be damaged, and/or its electrolyte may catch fire, causing the battery pack to overheat, emit smoke, explode or ignite.
- Do not use or leave the battery pack in a place where it is exposed to high temperature (80°C or higher), such as fire or a heater. If the resin separator is damaged due to heat, the battery pack may short-circuit, causing it to overheat, emit smoke, explode or ignite.
- Do not immerse the battery pack in water or seawater, and do not allow it to become wet. If the built-in protection mechanisms are damaged, the battery pack may overheat, emit smoke, explode or ignite.
- Do not pierce the battery pack with a nail, hit it with a hammer, or step on it. Otherwise, the battery pack may be damaged or deformed and short-circuit, causing it to overheat, emit smoke, explode or ignite.
- Do not subject the battery pack to strong impact or throw it. If the built-in protection mechanisms are damaged, the battery pack may be charged with extremely high current and voltage, and abnormal chemical reactions may occur inside the battery pack, causing it to overheat, emit smoke, explode or ignite.
- Do not use an apparently damaged or deformed battery pack. Otherwise, the battery pack may overheat, emit smoke, explode or ignite.
- Do not solder the battery pack directly. Otherwise, its insulator may melt, or its gas release vent or safety mechanisms may be damaged, causing the battery pack to overheat, emit smoke, explode or ignite.
- Do not reverse the positive (+) and negative (-) terminals. Otherwise, the battery pack may be reverse-charged during charging. As a result, abnormal chemical reactions may occur inside the battery pack, or extremely high current may flow during discharging, causing it to overheat, emit smoke, explode or ignite.

- The battery pack has a predetermined polarity. If you cannot connect the battery pack to the battery charger or other equipment, do not connect the battery pack forcefully. Make sure that the terminals are correctly oriented. If the battery pack is connected in reverse, it will be reverse-charged, and abnormal chemical reactions may occur inside the battery pack, causing it to overheat, emit smoke, explode or ignite.
- Do not connect the battery pack to an electrical outlet or cigarette lighter socket in a car. Overcurrent may flow to the battery pack due to high voltage applied, causing the battery pack to overheat, emit smoke, explode or ignite.
- Do not use the battery pack for equipment other than those specified. Otherwise, the guaranteed performance will be reduced and/or the service life will be shortened. Depending on the equipment to which the battery pack is connected, extremely high current may flow, causing the battery pack to be damaged, overheat, emit smoke, explode or ignite.
- If the electrolyte leaked from the battery pack enters the eyes, do not rub them. Wash the eyes immediately with clean water such as tap water, and consult a doctor. Otherwise, eye injury may result.
- Do not use the battery pack in combination with a primary battery such as a dry battery or other battery of a different capacity, type and/or brand. Otherwise, the battery pack may be overcharged during charging, and abnormal chemical reactions may occur inside the battery pack, causing it to overheat, emit smoke, explode or ignite.
- Keep the equipment or battery pack out of the reach of small children to prevent them from accidentally swallowing the battery pack. If swallowed, consult a doctor immediately.
- Do not put the battery pack in a microwave oven or high-pressure container. Otherwise, the battery pack may be rapidly heated or damaged, causing it to overheat, emit smoke, explode or ignite.
- If the battery pack leaks or emits an unusual odor, remove it from fire immediately. Otherwise, the leaked electrolyte may catch fire, causing the battery pack to overheat, emit smoke, explode or ignite.
- If you notice an unusual odor, heat, discoloration, deformation or any other abnormality during use, charging or storage, remove the battery pack from the equipment or battery charger, and stop using it. Otherwise, the battery pack may overheat, emit smoke, explode or ignite.
- Do not use the battery pack exposed to a strong magnetic field of an MRI system, etc.
- Do not use the battery pack immersed in liquid.

Other Warnings and Cautions



WARNING

No modification of this equipment is allowed.



CAUTIONS

Install the system in accordance with what is provided by IEC 60601-1-1:2000 and IEC 60601-1:2005 Chapter 16. Contact a FUJIFILM dealer for installation and relocation (except the flat panel sensor) of the system.



CAUTIONS

Do not hit or drop the equipment. Otherwise, injury or damage to images, etc. may result.



CAUTIONS

Be sure to inspect the system periodically.

To assure optimum performance of the equipment, it is necessary to systematically perform maintenance and inspection. For information on maintenance and inspection, contact a FUJIFILM dealer.



CAUTIONS

The institution where the equipment is installed is responsible for its use and maintenance. In addition, this equipment should not be used by persons other than doctors or suitably trained staff.

Contraindications and Prohibitions

No contraindications present.

Classification

- According to the type of protection against electrical shock
Wired communication mode: Class 1 equipment (stationary)
Wireless communication mode: Internal power supply
- According to the degree of protection against electrical shock
Type B applied part
- According to the degree of protection against harmful ingress of water
IPX0
- According to the degree of safety of application in the presence of a flammable anesthetics mixture with air or with oxygen or nitrous oxide.
Equipment not suitable for use in the presence of a flammable anesthetics mixture with air or with oxygen or nitrous oxide.
- According to the mode of operation
CONTINUOUS OPERATION

1.2 Electromagnetic Compatibility (EMC)

1.2.1 DR-ID 670

DR-ID 670 consists of DR-ID 600MP, DR-ID 670MC and DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE/DR-ID 613SE.

This equipment has been tested and found to comply with the limits for medical devices to the IEC 60601-1-2 (EN60601-1-2), Medical Device Directive 93/42/EEC.

These limits are designed to provide reasonable protection against harmful interference in a typical medical installation.

This equipment 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 this equipment does cause harmful interference to other devices, which can be determined by tuning the equipment off and on, the user 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.

If the problem cannot be solved with the above measures, stop using this equipment and consult the manufacturer or our official dealer for help.



WARNING

- **Do not place devices generating electromagnetic wave near this equipment.**
- **If a device(s) other than those specified is connected, predetermined EMC performance cannot be guaranteed.**

Further information for IEC 60601-1-2 (EN60601-1-2)

1. Medical electrical equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the accompanying documents.
2. Portable and mobile RF communications equipment can affect medical electrical equipment.
3. Information regarding the cable affecting EMC is as follows.

Name	Maximum Length	General Specification
Network Cable	30m(98.4 ft.)	Cat5e or more, UTP type and straight cable
Power Cable	3m(9.8 ft.)	Use a hospital grade power cable. (for North America)
		A non-hospital grade power cable can be used. (for other countries)

4. The use of accessories, transducers and cables other than those specified, with the exception of transducers and cables sold by FUJIFILM Corporation as replacement parts for internal components, may result in increased emissions or decreased immunity of the DR-ID 670.
5. The DR-ID 670 should not be used adjacent to or stacked with other equipment.
If adjacent or stacked use is necessary, the DR-ID 670 should be observed to verify normal operation in the configuration in which it will be used.
6. Basic performance of the equipment and the system
After image data are acquired from the panel unit, data correction is performed by the DR-ID 670MC, and the corrected image data are transferred to the image collection console.
7. Test items (Tables 1 to 4)

Table 1

TABLE 1

Guidance and manufacturer's declaration - electromagnetic emissions			
The DR-ID 670 is intended for use in the electromagnetic environment specified below. The customer or the user of the DR-ID 670 should assure that they are used in such an environment.			
Emissions test	Compliance		Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1		The DR-ID 670 uses RF energy only for their internal function. Therefore, their RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A		The DR-ID 670 is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC61000-3-2	Complies	Class A	
Voltage fluctuations/ flicker emissions IEC61000-3-3	Complies		

Table 2

Guidance and manufacturer's declaration - electromagnetic immunity			
The DR-ID 670 is intended for use in the electromagnetic environment specified below. The customer or the user of the DR-ID 670 should assure that they are used in such an environment.			
Immunity test	IEC 60601-1-2 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC61000-4-2	±6kV contact ±8kV air	±6kV contact ±8kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC61000-4-4	±2kV for power supply lines ±1kV for input/output lines	±2kV for power supply lines ±1kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC61000-4-5	±1kV differential mode ±2kV common mode	±1kV differential mode ±2kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC61000-4-11	<5% U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 s	<5% U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the DR-ID 670 requires continued operation during power mains interruptions, it is recommended that the DR-ID 670 be powered from an uninterruptible power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: U_T is the a.c. mains voltage prior to application of the test level.			

Table 3


Guidance and manufacturer's declaration - electromagnetic immunity			
The DR-ID 670 is intended for use in the electromagnetic environment specified below. The customer or the user of the DR-ID 670 should assure that they are used in such an environment.			
Immunity test	IEC 60601-1-2 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the DR-ID 670, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF IEC61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	<p>Recommended separation distance</p> $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P} \qquad 80 \text{ MHz to } 800 \text{ MHz}$ $d = 2.3\sqrt{P} \qquad 800 \text{ MHz to } 2.5 \text{ GHz}$ <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^a should be less than the compliance level in each frequency range.^b Interference may occur in the vicinity of equipment marked with the following symbol:</p> <div></div>
NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
<p>a Field strength from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the DR-ID 670 is used exceeds the applicable RF compliance, the DR-ID 670 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the DR-ID 670.</p> <p>b Over the frequency range 150 kHz to 80 MHz, field strength should be less than 3 V/m.</p>			

Table 4

Recommended separation distances between Portable and mobile RF communications equipment and the DR-ID 670			
<p>The DR-ID 670 is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled.</p> <p>The customer or the user of the DR-ID 670 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the DR-ID 670 as recommended below, according to the maximum output power of the communications equipment.</p>			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	80 MHz to 800 MHz $d = 1.2\sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
<p>For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.</p>			
<p>NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.</p> <p>NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			

1.3 Precautions in Using the DR-ID 670

This section describes the precautions in using the DR-ID 670.

1.3.1 Handling

Handle the flat panel sensor carefully since it is manufactured with precision.

If the flat panel sensor or the SE cable connector is hit or dropped or is subject to severe shock, it may be damaged.

If the front and rear of the flat panel sensor are subject to impact by a projection, it may be damaged.



CAUTIONS

If the shock sensor lights red, contact a FUJIFILM dealer.

Do not pull the cable of the flat panel sensor (wired communication mode).

Also, do not pull the flat panel sensor with something caught by the cable.

Make sure that the cable is not trapped under the wheels of a stretcher or wheelchair.

Otherwise, the cable will be damaged, causing electric shock or fire.

When carrying the flat panel sensor (wired communication mode), do not drag the sensor cable relay connector on the floor or ground. Make also sure that no one or object comes into contact with the flat panel sensor. It is recommended to hold the connector when carrying the flat panel sensor.

Unless these cautions are observed, the flat panel sensor may be caught by an object, personal injury may result, or properties or the connector may be damaged.

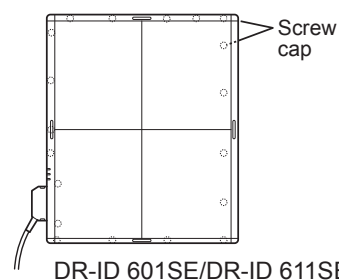
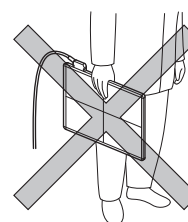
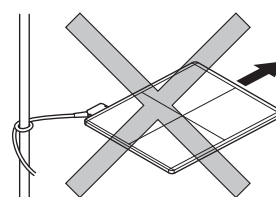
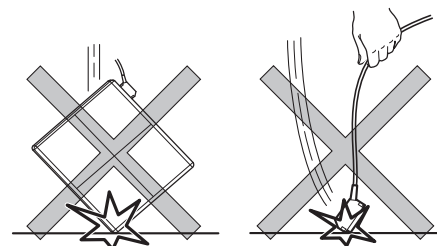
Do not hold the flat panel sensor in one hand when carrying it. Hold it in both the hands or under the arm.

If any of the screw caps on the flat panel sensor comes off, attach a spare cap. Otherwise, artifacts may appear in the image due to static electricity.

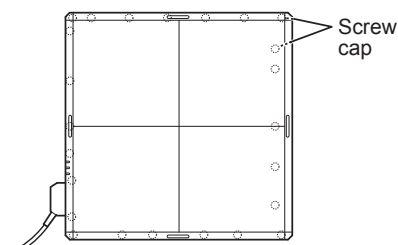
To ensure optimal image quality, it is recommended that you do not use the flat panel sensor near devices (motor, transformer, switching supply, etc.) that generate electromagnetic noise.

To ensure optimal image quality, it is recommended that you do not place the cables (power cable, communication cable, etc.) of the equipment near devices (motor, transformer, switching supply, etc.) that generate electromagnetic noise and their cables.

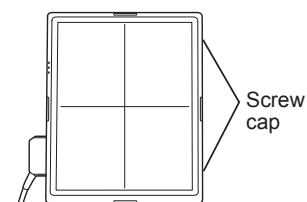
Make sure that no liquid enters the flat panel sensor from around the battery section. Otherwise, the flat panel sensor may be damaged.



DR-ID 601SE/DR-ID 611SE



DR-ID 602SE/DR-ID 612SE



DR-ID 613SE

Do not use a multiple tap connector or extension cable for powering the devices constituting the system.

Up to three flat panel sensors can be connected. If you intend to use four or more flat panel sensors, only the first three that were connected to the DR-ID 670MC can be used. For this reason, when four or more flat panel sensors are registered, be careful not to use a wrong one, as you may confuse which flat panel sensor is connected.

Be sure to disconnect the wired connection of the panel in the first room prior to connecting and imaging the patient with the same panel in the second room to avoid mis-identification of the patient.

Do not place the cable terminal on the floor, as doing so may cause infection.

Also, clean the cable and the terminal periodically.

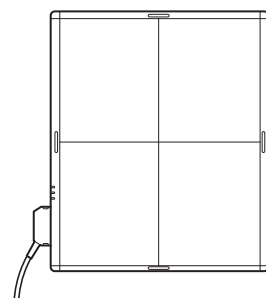
Do not insert the flat panel sensor into a CR reader unit.

1.3.2 Before Exposure

The use of an air-conditioner may dramatically changes the temperature of the room where the system is installed. This may cause dew condensation on the system, resulting in quality problems. When an air-conditioner is used, change the temperature gradually to avoid temperature variation in order not to cause dew condensation.

If an exposure is made with the front and rear of the flat panel sensor facing the other way round, re-exposure and electric parts may be damaged.

Do not use the flat panel sensor, which is communicating with the power supply unit in wired communication mode, for the radiographic examination stand equipped with an automatic loading function.



Exposure plane of the flat panel sensor

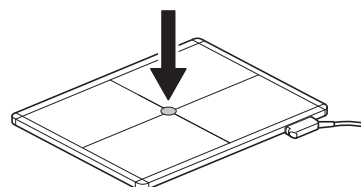
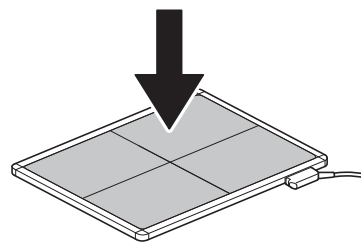
1.3.3 During Exposure

Before making an exposure, make sure that exposure conditions most appropriate for this system are set.

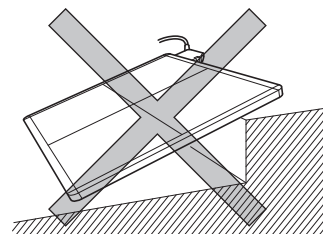
Do not apply an excessive force to the exposure plane.
The sensor inside the flat panel sensor may be damaged,
and it may not be possible to make an exposure properly.
<Load restriction>

Entire surface load : DR-ID 601SE, DR-ID 602SE, DR-ID 611SE
and DR-ID 612SE : 150kg (330.8 lb)
DR-ID 613SE : 310kg (683.6 lb)

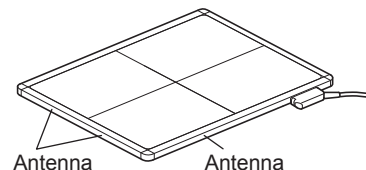
Local load : DR-ID 601SE, DR-ID 602SE, DR-ID 611SE and
DR-ID 612SE : 100kg (220.5 lb) / \varnothing 40mm (1.6in.)
DR-ID 613SE : 160kg (352.8 lb) / \varnothing 40mm (1.6in.)



Use the flat panel sensor on a flat floor or platform.
When an excessive force is applied to the unit when it is tilted, the sensor inside the flat panel sensor may be damaged.



Do not place a metal plate, etc., which blocks radio waves, before the antenna. Otherwise, data may not be sent correctly from the flat panel sensor.



1.3.4 During Cleaning

To clean the outer surfaces, use commercially available ethanol papers for disinfection or a cleaning cloth tightly wrung out of ethanol (or diluted neutral detergent).



CAUTIONS

- Do not use an excessive amount of ethanol (or neutral detergent), as doing so may allow the liquid to enter from the gap on the outer surfaces, resulting in the damage to the flat panel sensor, or cause the labels to come off.
- Do not use a solvent such as thinner or benzene, as it corrodes the outer surfaces.

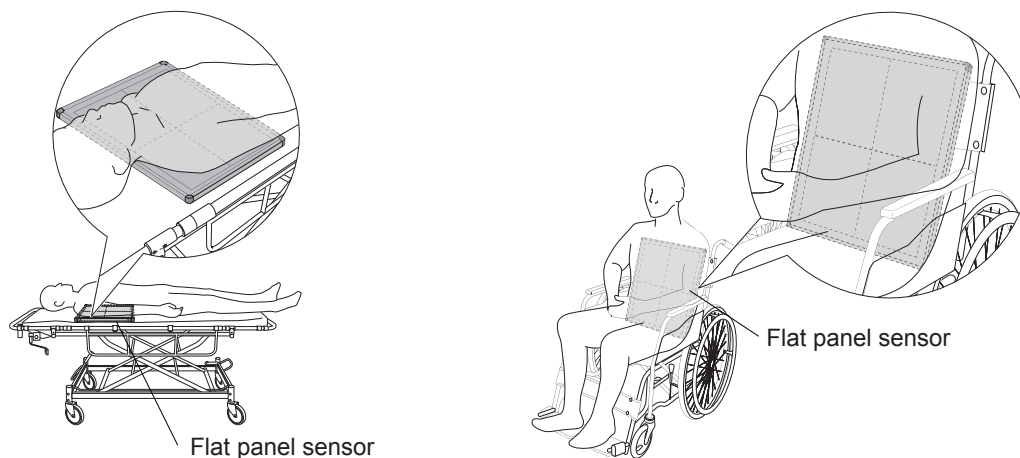
1.3.5 Storage

When the flat panel sensor is not in use, store the device in a place where it does not fall or drop.

1.3.6 Precautions Related to the Load Applied to the Flat Panel Sensor

If excessive load is applied to the flat panel sensor, use it on a flat floor or platform.

When making an exposure for the patient in a wheelchair or adjustable bed or on a stretcher, the flat panel sensor may be deformed (deflection by some millimeters).



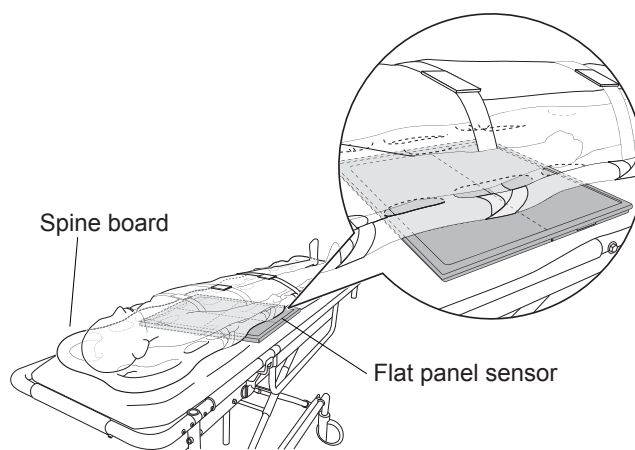
Avoid using the flat panel sensor in an exposure, if the load applied to it is expected to exceed the limits on the previous page.

In case that the flat panel sensor is deformed, make sure that X-ray images are not adversely affected before continuing the use of the flat panel sensor.

The precautions below must also be observed when making an exposure.

- Do not have the patient stand on the flat panel sensor.
- Do not place the hard devices such as spine board on the flat panel sensor.

Excessive load is applied locally and the flat panel sensor may be damaged.



Even when the flat panel sensor is used on a flat floor or platform, it may be damaged if the applied load exceeds the limit.

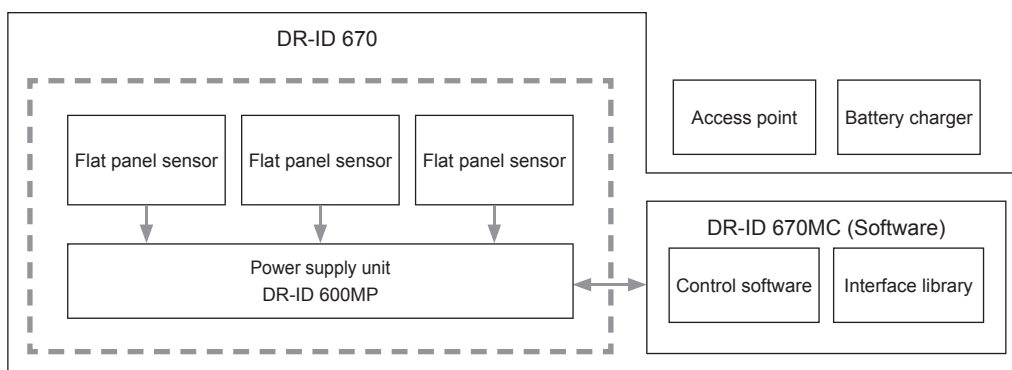



For Safe Operation

Chapter 2 System Configuration (Product Overview)

2.1 DR-ID 670

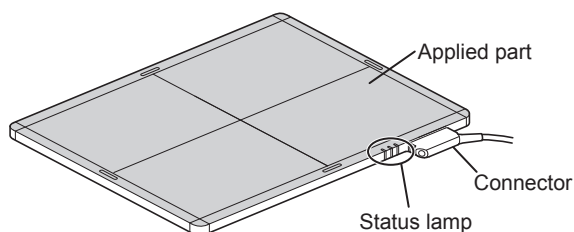
2.1.1 System Configuration



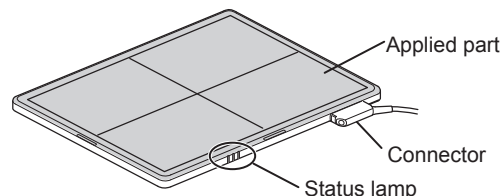
- The products in  can be installed in patient environment.
- DR-ID 670 consists of DR-ID 600MP, DR-ID 670MC and DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE/DR-ID 613SE.
- An access point is used only in wireless communication mode.
- * The configuration of the system varies depending on the country.
- One to three flat panel sensors can be connected to one power supply unit. If you connect all three flat panel sensors in wired communication mode or use them with three different techniques, two power supply units are required.

2.2 Unit Names and the Functions

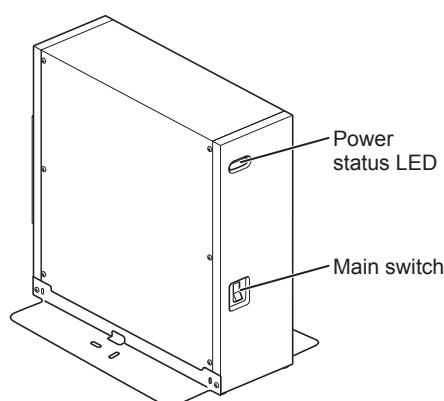
Unit names and the functions of the DR-ID 670 are described below.



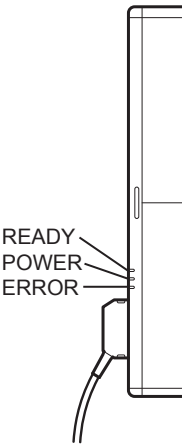



Flat panel sensor
(DR-ID 601SE, DR-ID 602SE, DR-ID 611SE and DR-ID 612SE)
* Exposure plane is shown in this figure.



Flat panel sensor (DR-ID 613SE)
* Exposure plane is shown in this figure.



Power supply unit (DR-ID 600MP)

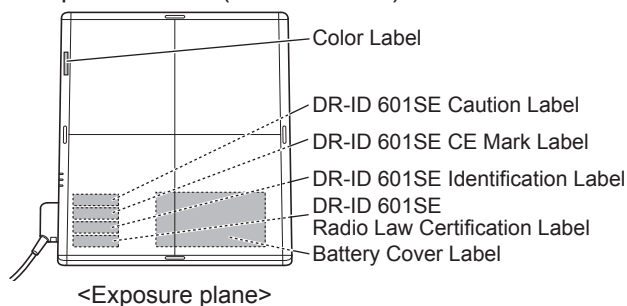
Name	Description				
Flat panel sensor	DR-ID 601SE and DR-ID 602SE incorporate a GOS indirect panel. The DR-ID 611SE, DR-ID 612SE and DR-ID 613SE incorporate a CsI indirect panel. There are five types of flat panel sensors: DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE and DR-ID 613SE (wireless/wired communication mode).				
Status lamp	Indicates the equipment status by LEDs.				
	READY  (Green)	On	Exposure possible		
		Blinks for 1.0 second.	During exposure sequence		
		Off	Ready		
	POWER  (Green) (In wireless communication mode, the status of the battery pack is indicated. In wired communication mode, the power status is indicated.).		Wireless	Wired	
		On	OK (Power ON)	Power ON	
		Blinks for 1.0 second.	Less than 10 min.	-	
		Off	Empty (Power OFF)	Power OFF	
	ERROR  (Orange)	On	Communication not possible.		
		Blinks for 1.0 second.	Error occurred		
		Off	Normal		
* All LEDs are off when the equipment is off.					
Power supply unit (DR-ID 600MP)	Supplies the power to the flat panel sensor and connects the flat panel sensor and the control cabinet.				
Main switch	Supplies the power to the flat panel sensor and the inside of the power supply unit.				
Power status LED	Displays ON/OFF of the power supply unit.				
Control software I/F library (DR-ID 670MC)	Controls the flat panel sensor.				

2.3 Locations of Labels and Signs

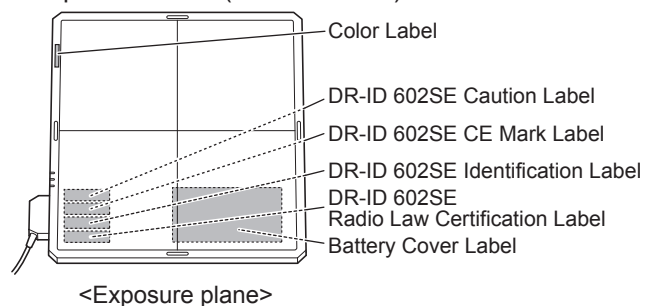
Locations of labels and signs affixed to the DR-ID 670, and the relevant safety signs are shown below.

2.3.1 Locations of Labels

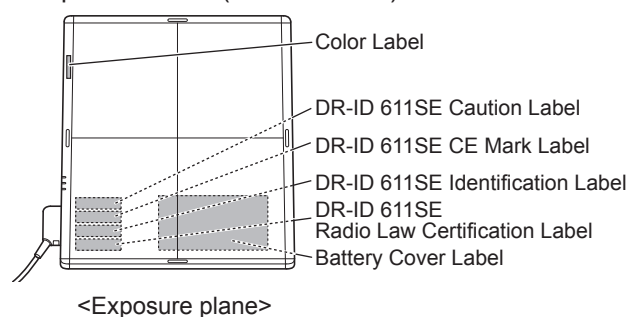
Flat panel sensor (DR-ID 601SE)



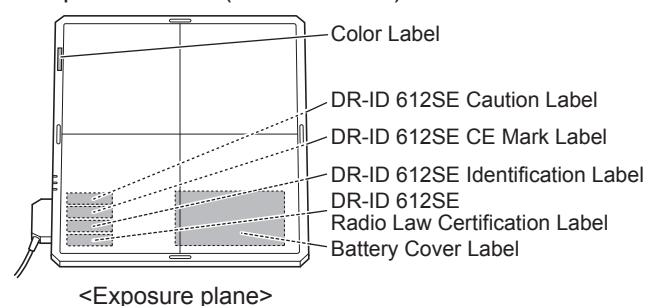
Flat panel sensor (DR-ID 602SE)



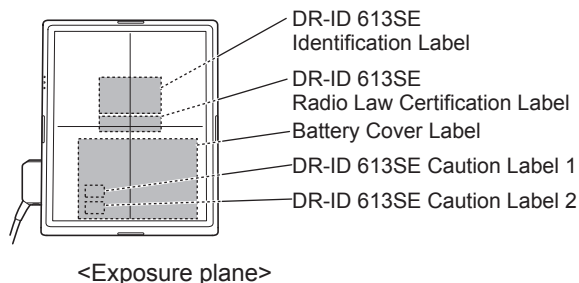
Flat panel sensor (DR-ID 611SE)



Flat panel sensor (DR-ID 612SE)



Flat panel sensor (DR-ID 613SE)



DR-ID 601SE Identification Label

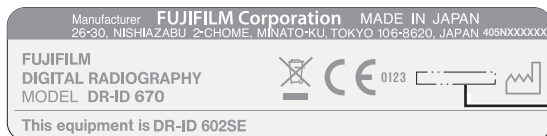


DR-ID 601SE CE Mark Label

Sample year of manufacture



DR-ID 602SE Identification Label

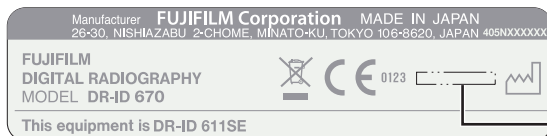


Sample year of manufacture

DR-ID 602SE CE Mark Label



DR-ID 611SE Identification Label



Sample year of manufacture

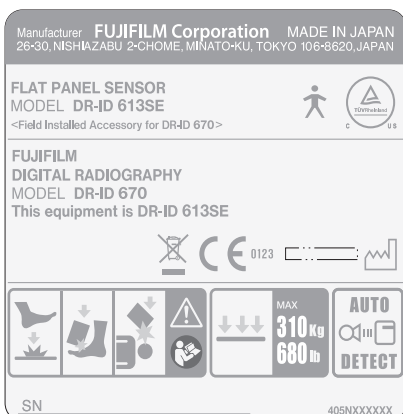
DR-ID 611SE CE Mark Label



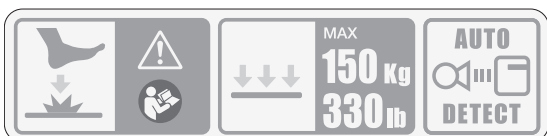
DR-ID 612SE Identification Label



DR-ID 612SE CE Mark Label



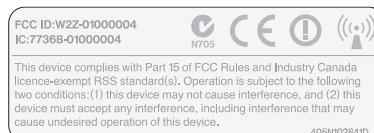
DR-ID 613SE Identification Label



DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE Caution Label



DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE Radio Law Certification Label



DR-ID 613SE Radio Law Certification Label



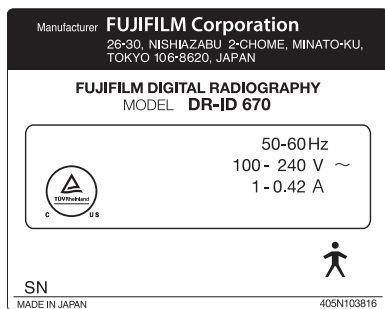
The left diagram shows the left-hand side of the unit. It is a tall, rectangular cabinet with a small, dark, rectangular label near the top left corner. A line points from the text 'DR-ID 600MP Caution Label 1' to this label. At the bottom left, there is a larger, light-colored rectangular label. A line points from the text 'DR-ID 670 Rating Label' to this label. Below the diagram is the text '<Left-hand side>'. The right diagram shows the rear side of the unit. It is a tall, rectangular cabinet with a large, light-colored rectangular panel in the center. Above this panel is a smaller, dark, rectangular panel with horizontal lines. A line points from the text 'DR-ID 600MP Caution Label 2' to this top panel. Below the top panel, there is a smaller, light-colored rectangular panel. A line points from the text 'DR-ID 600MP Caution Label 3' to this panel. Below the diagram is the text '<Rear side>'. To the right of the rear side diagram, there is a small icon of a hand holding a screwdriver. Below this icon is the text 'For the types of connectable cables, consult a FUJIFILM dealer.'

Battery charger Rating Label

AC adapter (Battery charger) Rating Label

Battery pack (optional)

Battery pack Rating Label



DR-ID 670 Rating Label



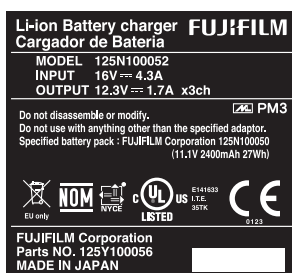
DR-ID 600MP Caution Label 1



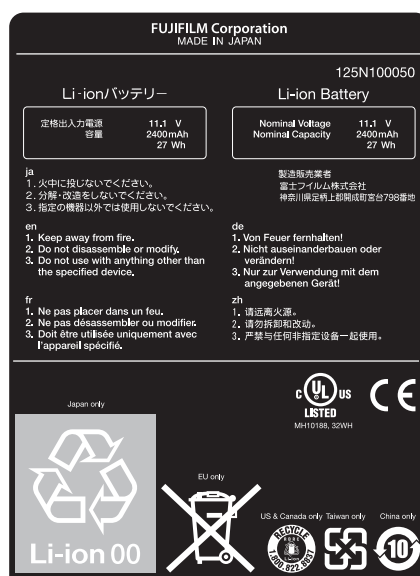
DR-ID 600MP Caution Label 2 /
DR-ID 613SE Caution Label 1



DR-ID 600MP Caution Label 3 /
DR-ID 613SE Caution Label 2



Battery Charger Rating Label






















Battery Pack Rating Label



AC Adapter (Battery Charger)
Rating Label

2.3.2 Safety and Other Symbols

The following safety symbols are used in the labels or on its body.

Symbol	Description
	This symbol indicates compliance of the equipment with Directive 93/42/EEC.
	Caution (See “2.3.1 Locations of Labels” (page 2-3).)
	OFF (To indicate disconnection from the mains, at least for mains switches or their positions, and all those cases where safety is involved.)
	ON (To indicate connection to the mains, at least for mains switches or their positions, and all those cases where safety is involved.)
	Protective earth (ground)
	Alternating current
	This symbol indicates that the equipment is a Type B Applied Part.
	Ready (To indicate the machine is ready for operation.)
	Electric energy
	General mandatory action sign
	Stand-by
	<p>This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC) and your national law. This product should be handed over to a designated collection point.</p> <p>Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE.</p> <p>At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources.</p> <p>For more information about waste, please contact FUJIFILM dealers.</p>
	Year of manufacture
	Caution for local load
	Entire surface load
	This symbol indicates that the flat panel sensor supports the automatic X-ray detection function.
	No stepping on surface
	Refer to instruction manual/booklet
	Do not drop the flat panel sensor to the user/patient.

Chapter 3 Basic Operation

3.1 Preparing the Flat Panel Sensor

This section describes how to prepare the flat panel sensor.

3.1.1 Type of Flat Panel Sensor

DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE and DR-ID 613SE :

Wireless communication mode or wired communication mode is available. When used in wireless communication mode, an access point*¹, battery pack (optional) and battery charger (optional) are required.

*1 In the countries other than the U.S., an access point is not included as a component of the system. For details including installation, consult our official dealer.

- Product compliant with IEC60950, UL60950, PSE or JIS
- Compliant with IEEE802.11n [W52] (in the 5.2GHz band) /36, 40, 44, 48ch
- WLAN interface: 1000BASE-T/100BASE-TX (minimum requirements)
- LAN interface: 1000BASE-T/100BASE-TX (minimum requirements)
- Available OS: Linux
- Compliant with UL
- Compliant with FCC part15



CAUTIONS

Use only one access point. A communication error may occur if two units or more are used.

3.1.2 Number of the Connectable Flat Panel Sensors

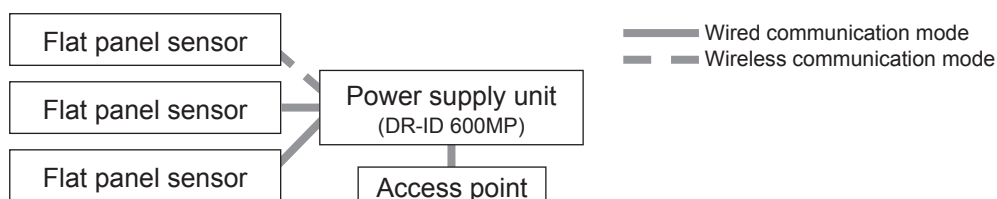
To enable the flat panel sensor, its ID needs to be registered in advance by a FUJIFILM dealer.

Up to five flat panel sensors can be registered.

Up to three flat panel sensors*² can be connected to the power supply unit at the same time.

*2 When three flat panel sensors are simultaneously used with the power supply unit and in wired communication mode, two power supply units are required.

(Connection example)



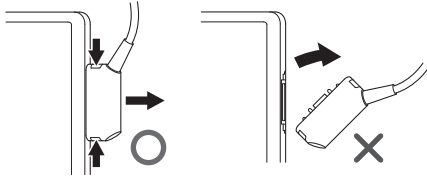
When multiple flat panel sensors are connected, make sure that the READY lamp among the status lamps of the flat panel sensor to be used for an exposure is lit.

3.1.3 Connecting/Disconnecting the Flat Panel Sensor Connector

When used in wireless communication mode, disconnect the connector.

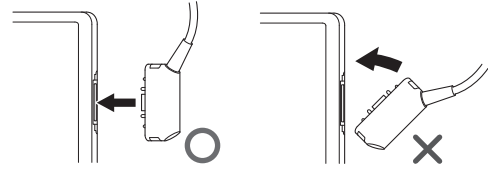
1 Disconnect the connector.

Press the latches on both sides of the connector.



2 Connect the connector.

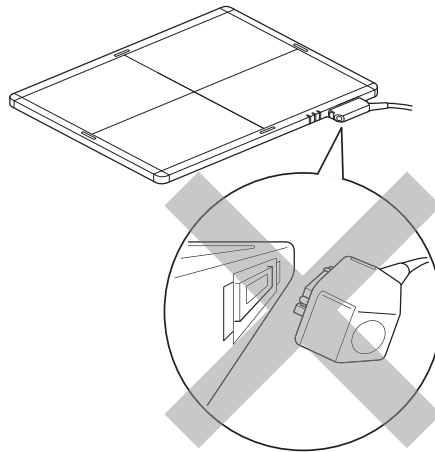
Press the connector into the insertion section.



Make sure that the latches on both sides are properly engaged when connecting the connector. If the flat panel sensor is used with the connector inserted incompletely, the flat panel sensor may turn off.



Connect/Disconnect the connector straight to the flat panel sensor. If connected/disconnected at an angle, the connector may be damaged.



3.1.4 Inserting/Removing the Flat Panel Sensor into/from the Radiographic Examination Stand

Follow the procedure below to insert/remove the flat panel sensor into/from the radiographic examination stand.

❶ For details, see the Operation Manual for the radiographic examination stand



CAUTIONS

For the positioning at the time of inserting/removing the flat panel sensor, see the Operation Manual for the radiographic examination stand.



CAUTIONS

Be careful not to have your fingers caught when inserting/removing the flat panel sensor into/from the radiographic examination stand.



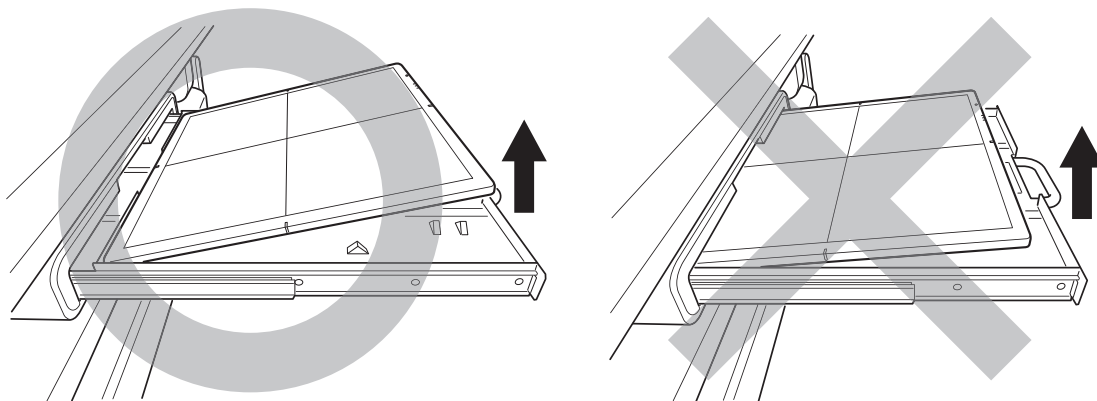
CAUTIONS

When pulling out/pushing in the tray of the radiographic examination stand after setting the flat panel sensor on it, be careful not to drop the flat panel sensor or damage the tray.



CAUTIONS

Before inserting/removing the flat panel sensor into/from the radiographic examination stand, pull out the tray completely. Otherwise, the flat panel sensor may be damaged.



[1] Upright type

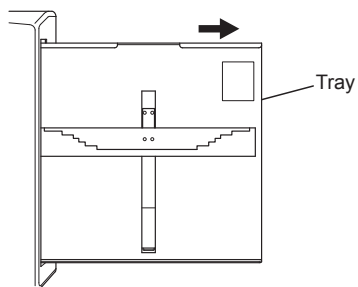
When inserting from the right-hand side



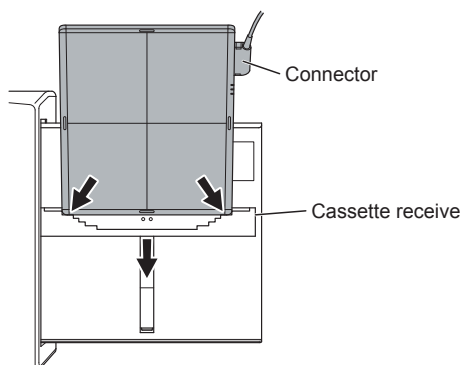
CAUTIONS

When inserting the flat panel sensor into the radiographic examination stand, direct the exposure plane toward the X-ray tube.

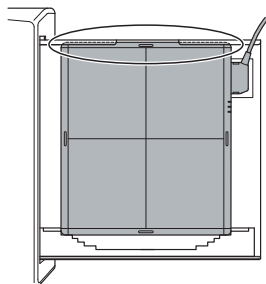
1 Pull out the tray.



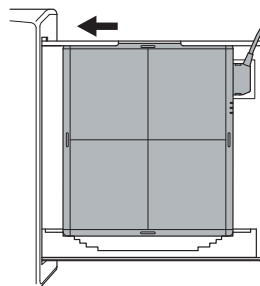
2 Insert the flat panel sensor into the cassette receive while the connector directed to the upper right, and then move it downwards.



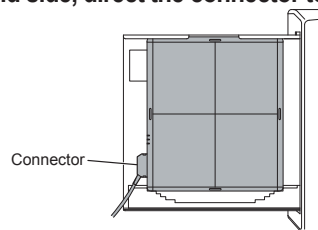
3 Set the flat panel sensor to the upper part of the tray.



4 Push the tray back into place after setting the flat panel sensor.



When inserting the flat panel sensor from the left-hand side, direct the connector to the lower left.



5 Remove the flat panel sensor after use.

Pull out the tray, push the cassette receive downwards, and then remove the flat panel sensor. Push the tray back into place.

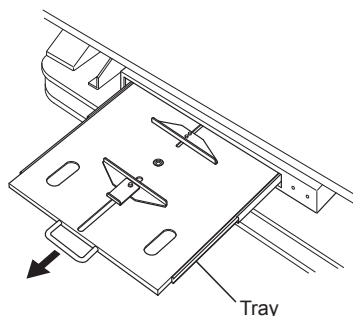
[2] Bed type



CAUTIONS

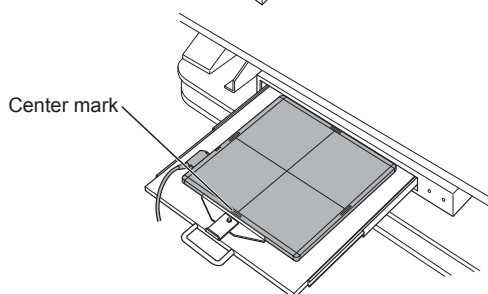
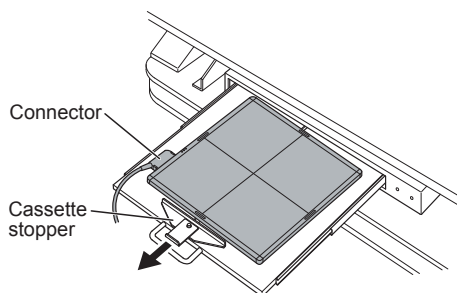
When inserting the flat panel sensor to the radiographic examination stand, direct the exposure plane upwards.

- 1** Pull out the tray by using the handle.

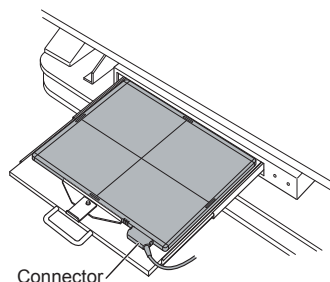


- 2** Pull the cassette stopper, and set the flat panel sensor so that its center mark is aligned with the center of the stopper.

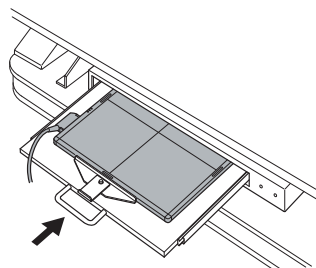
Position the connector of the flat panel sensor as shown in the figure below.



When setting the flat panel sensor horizontally, position the connector as shown in the figure below.



- 3** Push the tray back into place by using the handle after setting the flat panel sensor.



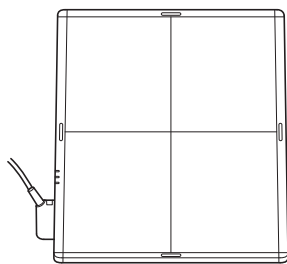
- 4** Remove the flat panel sensor after use.

Hold the handle and pull out the tray. Remove the flat panel sensor while pulling the cassette stopper, and then push the tray back into place.

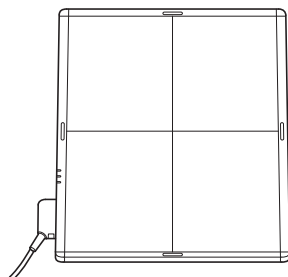
3.1.5 Changing the Direction of the Flat Panel Sensor Connector

The direction of the connector of the flat panel sensor can be changed, depending on how it is inserted into the radiographic examination stand.

To change the direction, contact a FUJIFILM dealer.



When shipped



After changing the direction

3.1.6 Charging the Battery Pack (Optional) for the Flat Panel Sensor

Use the battery charger recommended by FUJIFILM Corporation.

For details on operations, refer to the instruction manual for the battery charger.

3.1.7 Installing/Removing the Battery Pack (Optional) for the Flat Panel Sensor

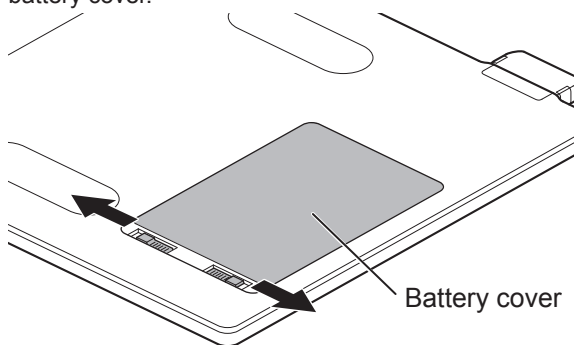


Follow the procedure below to install/remove the battery pack (optional) for the flat panel sensor.

When installing/removing the battery pack, place the flat panel sensor on a flat place.

1 Remove the battery cover.

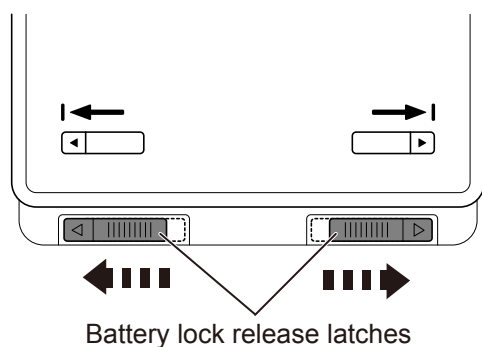
Place the flat panel sensor with the back side facing upward, and then simultaneously slide both the battery lock release latches outward to remove the battery cover.



2 Install the battery pack.

Make sure that the battery lock release latches are released.

When the battery lock release latches are released



Slide the battery pack along the dent of the battery section of the flat panel sensor toward the connector terminal. Align the guide mark of the battery pack with that of the flat panel sensor, and push the battery pack in to install it.

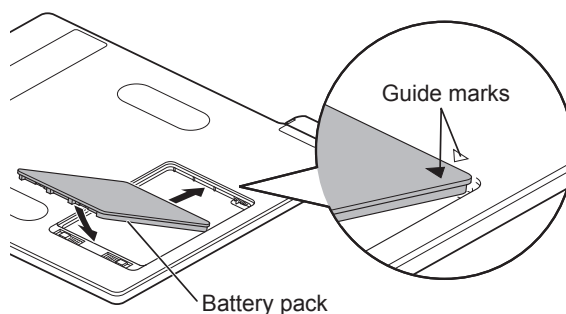
Make sure that battery pack is securely installed.



Pushing the battery pack in with the guide marks misaligned may damage the connector terminal.



When the battery pack is installed, the power is automatically turned on.



- To remove the battery pack, perform the same procedure as Step **1** (removing the battery cover).
- To install the battery cover, perform the same procedure as Step **2** (installing the battery pack)

3.2 Starting Up and Shutting Down the DR-ID 670

This section explains how to start up and shut down the DR-ID 670.

3.2.1 Starting Up the DR-ID 670

- 1** Press the ON side of the main switch of the power supply unit.



Start up the DR-ID 670 with the initial settings properly made by our official dealer.

3.2.2 Shutting Down the DR-ID 670

- 1** Press the OFF side of the main switch of the power supply unit.

Chapter 4 Daily Inspection and Maintenance

4.1 Daily User Inspection and Maintenance

During maintenance and inspection, strictly observe precautions contained in “Chapter 1 For Safe Operation” in this manual for you to use the DR-ID 670 under best conditions.

4.1.1 Periodical Inspection

Inspection Every Three Months

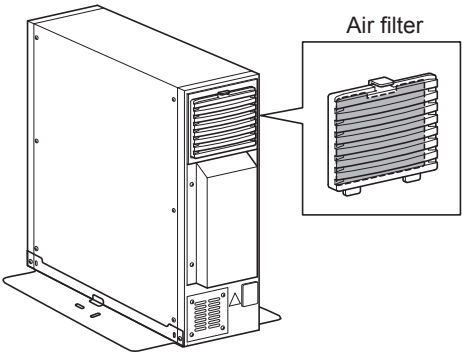
Using a vacuum cleaner, remove any dirt or dust accumulated in each unit of the equipment once every three months. Clean then with a slightly moistened soft cloth and wipe off any moisture with a dry cloth.

● See “2.2 Unit Names and the Functions” (page 2-2).

No.	Unit	No.	Unit	No.	Unit
1	Flat panel sensor	2	Power supply unit	3	Power supply unit Air filter (1)

Air filter

Clean the air filter on the rear of the power supply unit with a vacuum cleaner. Push down the lever at the top of the louver-and-filter assembly, and clean the air filter with a vacuum cleaner after detaching it from the assembly.



Be sure to turn off the equipment before cleaning the air filter.

4

Daily Inspection and Maintenance

Appendix A Specifications

A.1 Specifications

Specifications of the DR-ID 670 are shown below.

A.1.1 Reduced Equivalent (DR-ID 670)

Peak reduced equivalent on the front panel of the flat panel sensor: 0.5 mmAl

A.1.2 Power Supply Conditions

Rated voltage : 100-240V \pm 10% ~
Input current : 1-0.42A
Frequency : 50-60Hz

A.1.3 Environmental Conditions

(1) Operating Conditions

Temperature : 15°C (15%RH) - 30°C (80%RH)
Humidity : 15%RH (15°C) - 80%RH (30°C) (no dew condensation)
Atmospheric pressure : 700hPa - 1060hPa

(2) Non-operating Conditions

(Environmental conditions under which power can be supplied)

Temperature : 5°C - 35°C
Humidity : 10%RH - 80%RH (no dew condensation)
Atmospheric pressure : 700hPa - 1060hPa



CAUTIONS

When the flat panel sensor is used in high temperature condition for long period of time, it may cause image artifacts and/or failure of the device.

A.1.4 Image Performance

Each flat panel sensor complies with IEC 62220-1 (MEDICAL ELECTRICAL EQUIPMENT - CHARACTERISTICS OF DIGITAL X-RAY IMAGING DEVICES -) as a general X-ray radiography equipment.

To ensure optimal image quality, it is recommended that you do not use the flat panel sensor near devices (motor, transformer, switching supply, etc.) that generate electromagnetic noise.



Appendix Z Precautions for Exposure

Z.1 Precautions for the Automatic X-ray Detection Function

Z.1.1 Precautions for Making an Exposure

- 1 If the READY and POWER lamps of the flat panel sensor are not lit green, the flat panel sensor cannot detect X-rays automatically. Even if both of the lamps are not lit green, radiation can be delivered to the flat panel sensor but an image will not be output. Make sure that the lamps are lit green before making an exposure.
- 2 Check the tube current of the X-ray equipment in advance, and set exposure conditions based on the tube current by referring to the table below. If the conditions are not met, X-rays cannot be detected automatically and an image may not be acquired.

Tube current	Tube voltage	Exposure time	SID	Radiation field
More than 40 mA	Set the tube voltage according to the anatomical region and body thickness.	More than 5 ms	Set the SID according to the anatomical region.	Do not limit the radiation field to the bone region (*1) only.
More than 20 mA and less than 40 mA	Set the tube voltage to more than 50 kV according to the anatomical region and body thickness.		Set the SID to 100 cm (39.4 in.) or less and do not limit the radiation field to the bone region (*1) only. Alternatively, set the SID according to the anatomical region and include the directly exposed area (*2).	
More than 10 mA and less than 20 mA			100 cm (39.4 in.) or less	Include the directly exposed area (*2).
Less than 10 mA	The automatic X-ray detection function cannot be used.			

*1 When making an exposure, for example, for a finger or knee, set the radiation field to at least 6 cm × 10 cm (2.4 in. × 3.9 in.) for the former and at least 10 cm × 10 cm (3.9 in. × 3.9 in.) for the latter, so that the field is not limited to the bone region only.

*2 The areas of the flat panel sensor, which are directly exposed to X-rays that do not pass through the subject, must have a width of more than 3 cm (1.2 in.) from the subject.

- 3 As illustrated below, if the subject whose thinnest part is at least 40 cm (15.7 in.) in thickness covers the entire surface of the flat panel sensor, it cannot detect X-rays automatically and an image may not be acquired. In this case, make an exposure so that direct exposure area is included in the exposure region, or use the High Sensitivity Mode.

In case of using the High Sensitivity Mode, a white image might be obtained by a shock.

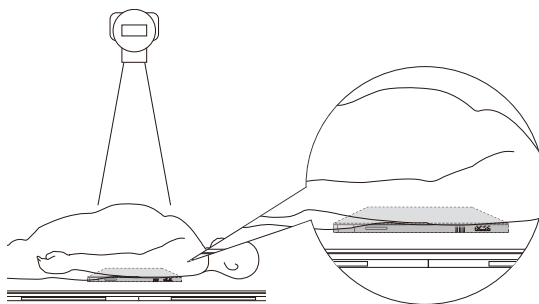


Figure of an exposure for the subject covering the entire surface of the flat panel sensor

- 4 When an exposure menu is registered and the system is ready for an exposure, the flat panel sensor enters X-ray detection mode. If an exposure is not made for a period of time while the exposure menu is registered, the operating time of the flat panel sensor's battery pack may be reduced to half. To avoid this, do not keep the system on standby, unless you make an exposure.

Z.1.2 Precautions Related to the X-ray Exposure Time

When delivering radiation, do not set the exposure time beyond the maximum limit specified for the flat panel sensor at the time of installation. Otherwise, vertical artifacts may appear in the image.

Z.2 Other Precautions

Z.2.1 Precautions for Exposure of a Subject in Relatively Large Contrast

- 1 Exposures using a contrast medium may cause artifacts around it.
- 2 When exposing a subject with any metal objects implanted, artifacts may appear around them.
- 3 For exposures with objects of large X-ray absorption, such as lead characters and metals for measurement, artifacts may appear around them. Place such objects outside a subject.

Z.2.2 Precautions for DR System

Generally, when performing a high sensitivity exposure shortly after an exposure that the flat panel sensor excessively receives direct X-ray, the output image may contain image lags of the previous exposure. This phenomenon rarely occurs and does not occur insofar as normal sensitivity exposures are performed.

Exposures at longer intervals can reduce occurrences of this phenomenon. Also observe precautions as follows.

- Continuous high sensitivity exposures to vertebral body part (chest/lumbar spine) should be performed at longer intervals than normal exposures.
- A high sensitivity exposure shortly after a high-dose exposure should be performed at sufficiently long interval.
- When performing high-dose exposures repeatedly, do not use collimation of the radiation field, lead characters or metals for measurement at the same position.

Z.2.3 Precautions for Assuring the Radiation Field



CAUTIONS

- It is important to read the following before using the DR-ID 670 digital detector clinically.
- Do not make the radiation field larger than the size of the flat panel sensor. Especially when the high tube voltage is set, the radiation field size should not be larger than the subject unless necessary.

The DR-ID 670 is a digital X-ray detector designed for use both within and outside of a standard radiographic bucky. Radiation field can be set up to 14" × 17" for the DR-ID 601SE/DR-ID 611SE, 17" × 17" for the DR-ID 602SE/DR-ID 612SE and 24 cm × 30 cm for the DR-ID 613SE. The DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE/DR-ID 613SE may be used in any situation where a film cassette may be used. The collimator will open up to 14" × 17" for the DR-ID 601SE/DR-ID 611SE, 17" × 17" for the DR-ID 602SE/DR-ID 612SE and 24 cm × 30 cm for the DR-ID 613SE, when the DR-ID 670 cassette is inserted in the bucky tray of X-ray systems with positive beam limitation (PBL).

Follow the X-ray system manufacturer's instructions to assure the indicated field size matches and does not exceed the actual radiation field size for the available range of SIDs.

Z.2.4 Precautions Related to Continuous Operation

If you plan to continuously run the system for over 24 hours, perform post-operation check, and then restart the system.

Otherwise, calibration will not be performed normally, and image quality cannot be guaranteed as a result.

Z.2.5 Precautions during Calibration

Observe the following while the READY status lamp of the flat panel sensor is blinking, as it is being calibrated.

- Do not subject the flat panel sensor to shock.
- Do not deliver radiation.
- Do not connect or disconnect the connector.

Z.2.6 Precautions for Exposing the Flat Panel Sensor to X-ray

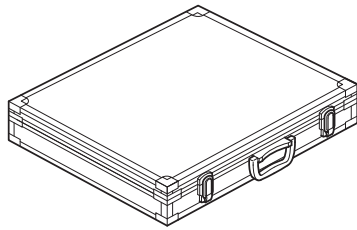
When you expose the flat panel sensor to X-ray at any other time except during radiography, artifacts could appear in the image. If artifacts appeared in the image due to X-ray irradiation, perform a test X-ray radiography after waiting for more than 2 minutes and then restart exposure after confirming that the artifacts disappear.

Appendix O Use of Optional Items

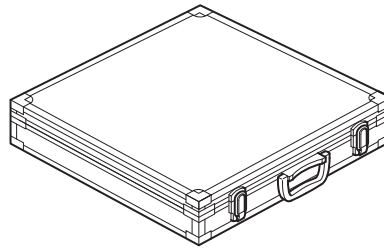
O.1 Optional Items

Name	Description
SE storage case	A case used for carrying and storing the flat panel sensor. ➤ For the external view and precautions, see “O.2 Using the SE Storage Case” (page O-2).
Retaining bracket for MP	A set of an anchor and a fixture, which is used for securing the power supply unit to the floor. ➤ For the external view, see “O.3 Using the Retaining bracket for MP” (page O-3).
Connection cable for the flat panel sensor (power supply unit)	A cable that connects the flat panel sensor and the power supply unit. This cable is used for adding the second and subsequent flat panel sensors, changing over the connection between the flat panel sensors, and other usages.
Relay unit for AC bucky	A relay unit consisting of the relay and terminal block for the AC bucky. Four types are available: For 100V, 120V, 200V, and 220V
Magnetic clamp for flat panel sensor cable	A clamp for fixing the SE cable to the radiographic examination stand, etc.
Battery pack	A battery pack for the flat panel sensor. ➤ For precautions, charging and installing/removing, see pages 1-5, 1-6, 3-6 and 3-7.
Cradle	A device used, when the flat panel sensor is moved to other X-ray room, to establish communication between the flat panel sensor and the power supply unit in the new location. The device is also used to keep the sensor upright when storing. ➤ For the external view and precautions, see “O.4 Cradle” (page O-4).

O.2 Using the SE Storage Case



SE storage case for 35
(DR-ID 601SE/DR-ID 611SE)



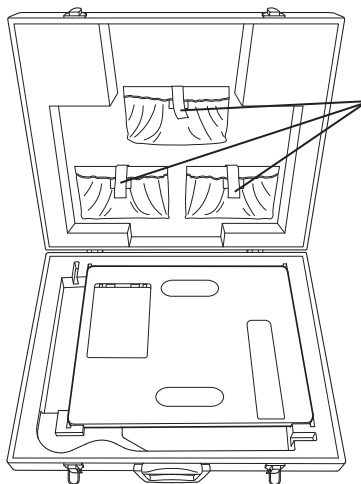
SE storage case for 43
(DR-ID 602SE/DR-ID 612SE)



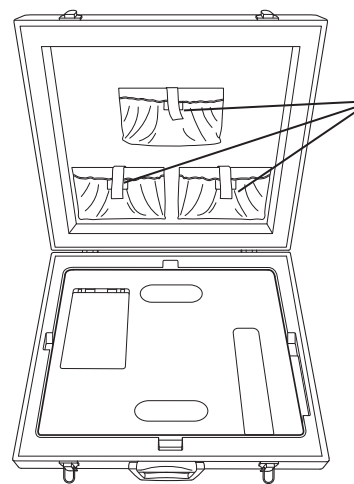
CAUTIONS

- Do not store the SE storage case in a location with the following conditions.
 - Where the SE storage case is exposed to direct sunlight.
 - Where the temperature and humidity change dramatically.
 - Where there is excessive dust.
 - Where chemicals are stored.
 - Where the SE storage case may be exposed to water due to water leakage or ingress.
- Store the flat panel sensor and the cable properly in the SE storage case. Otherwise, they may be caught under the case lid and damaged.
- Do not connect the flat panel sensor to the connector while it is stored in the SE storage case.
- Do not store anything other than the flat panel sensor in the SE storage case.
- Carefully carry the SE storage case when the flat panel sensor is inside.
- The SE storage case and/or the flat panel sensor inside may be damaged if the case is subject to an impact.
- Do not open/close the SE storage case in a location where there is excessive dust or dirt.
- Do not put the SE storage case on an unstable place. If it falls or drops, personal injury may result.
- Be careful not to have your hand or an object caught when closing the SE storage case.

When storing the flat panel sensor in the SE storage case, place it with the exposure plane down. For details, see the illustrations below.

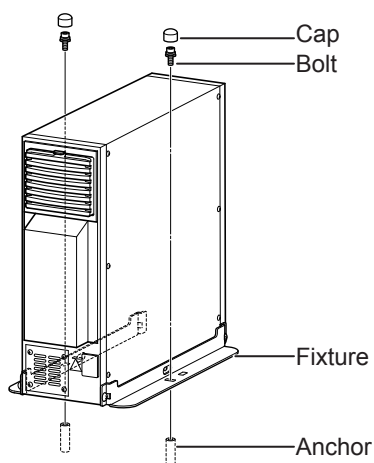


SE storage case for 35
(DR-ID 601SE/DR-ID 611SE)



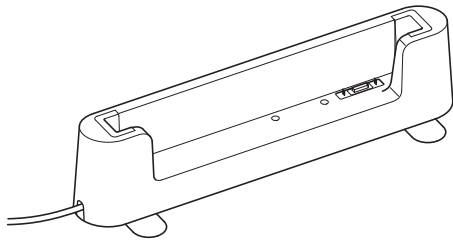
SE storage case for 43
(DR-ID 602SE/DR-ID 612SE)

O.3 Using the Retaining Bracket for MP

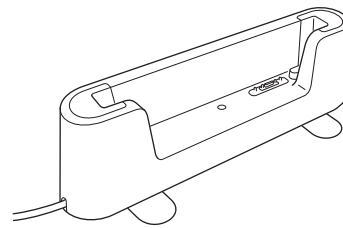


Contact a FUJIFILM dealer for installation of the Retaining bracket for MP.

O.4 Cradle



Cradle
(DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE)



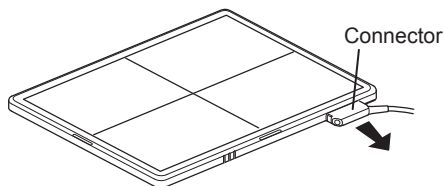
Cradle for 24
(DR-ID 613SE)



CAUTIONS

- Handle the Cradle carefully. Do not hit or drop the Cradle or subject it to severe shock to avoid possible damage.
- If any damage such as cracking, chipping or peeling is found on the Cradle, use it after repair. Otherwise, personal injury may result. Consult a FUJIFILM dealer for repair.
- If excessive force is applied to the Cradle, it may be damaged. Also, do not apply excessive force to the flat panel sensor inserted in the Cradle.
- When carrying the Cradle, if you accidentally drop it, your foot may be injured.
- Do not make an exposure when the flat panel sensor is inserted in the Cradle.
- Do not pull the cable forcibly. Otherwise, the cable may be broken or the Cradle may be damaged.

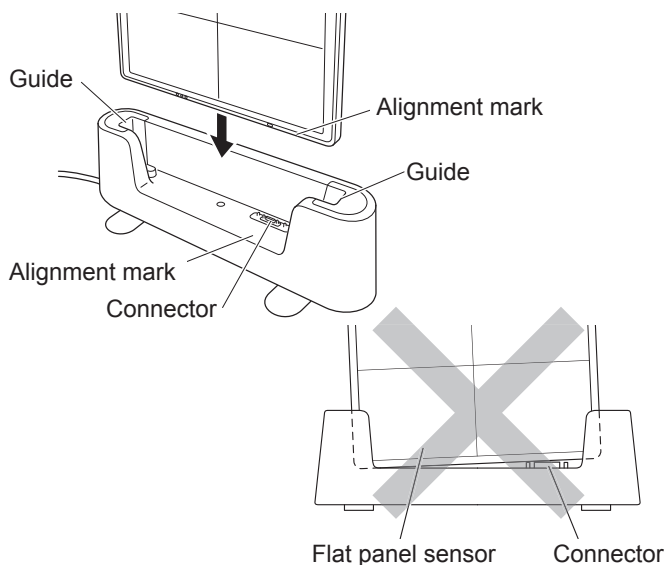
- 1 Remove the SE cable or the cover from the flat panel sensor.**



For connection and disconnection of the SE cable of the flat panel sensor, see "3.1.3 Connecting/Disconnecting the Flat Panel Sensor Connector".

- 2 Insert the flat panel sensor.**

Confirm the position of the connector, align the flat panel sensor with the Cradle, and then slowly insert the sensor straight all the way along the guides at both sides.

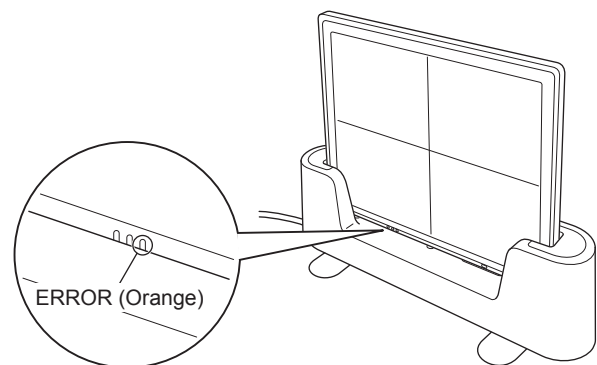


- 3 Check the status lamps of the flat panel sensor (when the SE cable is connected).**

Make sure that the ERROR (Orange) status lamp changes as follows after inserting the flat panel sensor into the Cradle.

	Before insertion	After insertion
Wireless communication possible	Not lit	Turns off after turning on for about 1.0 second or below
Wireless communication not possible	Lit	Turns off

If the ERROR status lamp changes as above, communication between the flat panel sensor and the power supply unit is established normally.



- 4 Remove the flat panel sensor.**

When performing an exposure, remove the flat panel sensor from the cradle.

Maintenance and Inspection

1 Maintenance and Inspection Items Assigned to Specified Dealer

For periodical inspection of the equipment and necessary arrangements, consult our official dealer or local representative.

Periodical Maintenance

Make sure that the periodical maintenance and inspection assigned to our official dealer are performed as specified.

Maintenance and Inspection Items Assigned to Specified Dealer

Periodical Maintenance and Inspection Items	Period
Checking of the image	Every year
Checking of the operation record by referring to the error log	Every year
Checking of the internal units	Every 2 years
Checking of the S value	Every 6 months

Main Periodical Replacement Parts

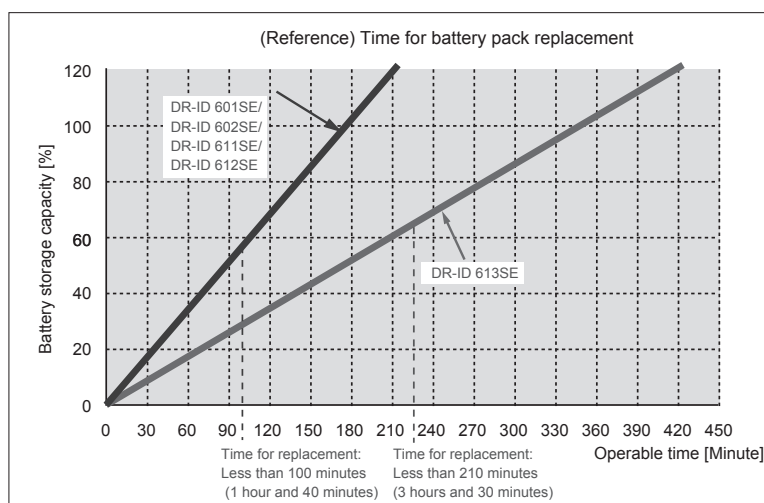
Name of Periodical Replacement Parts	Period
Relay (optional)	Every 1.5 years (Number of exposures : 90,000)

* It is recommended that the battery pack be replaced, if the battery storage capacity becomes lower than 60%.

The battery pack should be replaced when the operable time is less than the following.

- DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE: 100 minutes (1 hour and 40 minutes)
- DR-ID 613SE: 210 minutes (3 hours and 30 minutes)

* Depending on the usage environment, etc., the displayed time is slightly different from the actual operable time.



The cycles of periodical maintenance and inspection and of parts replacement differ depending on the usage and the daily operation time.

For details, contact us directly or our official dealer.

Radio frequency (RF) compliance information

Compliance with Part 15 of FCC Rules and Industry Canada licence-exempt RSS standard(s).

This device complies with Part 15 of FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

Le présent appareil est conforme aux la partie 15 des règles de la FCC et CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The available scientific evidence does not show that any health problems are associated with using low power wireless devices.

There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects.

Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE/DR-ID 613SE has been tested and found to comply with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules.

Les connaissances scientifiques dont nous disposons n'ont mis en évidence aucun problème de santé associé à l'usage des appareils sans fil à faible puissance. Nous ne sommes cependant pas en mesure de prouver que ces appareils sans fil à faible puissance sont entièrement sans danger. Les appareils sans fil à faible puissance émettent une énergie radioélectrique (RF) très faible dans le spectre des micro-ondes lorsqu'ils sont utilisés. Alors qu'une dose élevée de RF peut avoir des effets sur la santé (en chauffant les tissus), l'exposition à de faibles RF qui ne produisent pas de chaleur n'a pas de mauvais effets connus sur la santé. De nombreuses études ont été menées sur les expositions aux RF faibles et n'ont découvert aucun effet biologique. Certaines études ont suggéré qu'il pouvait y avoir certains effets biologiques, mais ces résultats n'ont pas été confirmés par des recherches supplémentaires. DR-ID 601SE/DR-ID 602SE/DR-ID 611SE/DR-ID 612SE/DR-ID 613SE a été testé et jugé conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC.

5.15-5.25GHz band is restricted to indoor operations only.

Labande 5150-5250 MHz est restreints à une utilisation à l'intérieur.

Compliance with FCC requirement 15.407(C) Data transmission is always initiated by software, which is the passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted.

In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.

(This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.)

Compliance with 1999/5/EC

Manufacturer's Name: FUJIFILM Corporation
Manufacturer's Address: 26-30, Nishiazabu 2-Chome, Minato-Ku, Tokyo 106-8620 JAPAN

declares that the product:

Model Number: DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE and DR-ID 613SE

The product complies with the requirements of the R&TTE Directive 1999/5/EC.

The formal "Declaration of Conformity" can be obtained in the following-mentioned address.

Address: 798, Miyanodai, Kaisei-machi, Ashigarakami-gun, Kanagawa 258-8538 JAPAN

The shipment schedule country is as follows.

AT	BE	CH	CZ	DK
DE	ES	FI	FR	GB
GR	HU	IS	IT	LU
LV	NL	NO	PL	PT
SK	SE			



CS Česky [Czech]	FUJIFILM tímto prohlašuje, že tento DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
DA Dansk [Danish]	Undertegnede FUJIFILM erklærer herved, at følgende udstyr DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
DE Deutsch [German]	Hiermit erkläre FUJIFILM, dass sich das Gerät DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
EN English	Hereby, FUJIFILM, declares that this DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
ES Español [Spanish]	Por medio de la presente FUJIFILM declara que el DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
ET Eesti [Estonian]	Käesolevaga kinnitab FUJIFILM seadme DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
FI Suomi [Finish]	FUJIFILM vakuuttaa täten että DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
FR Français [French]	Par la présente FUJIFILM déclare que l'appareil DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

EL Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ FUJIFILM ΔΗΛΩΝΕΙ ΟΤΙ DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
HU Magyar [Hungarian]	Alulírott, FUJIFILM nyilatkozom, hogy a DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
IS Íslenska [Icelandic]	Hér með lýsir FUJIFILM yfir því að DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC
IT Italiano [Italian]	Con la presente FUJIFILM dichiara che questo DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
LV Latviski [Latvian]	Ar šo FUJIFILM deklarē, ka DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
LT Lietuvių [Lithuanian]	Šiuo FUJIFILM deklaruoją, kad šis DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
MT Malti [Maltese]	Hawnhekk, FUJIFILM, jiddikjara li dan DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC.
NL Nederlands [Dutch]	Hierbij verklaart FUJIFILM dat het toestel DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
NO Norsk [Norwegian]	FUJIFILM erklærer herved at utstyret DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.
PL Polski [Polish]	Niniejszym FUJIFILM oświadcza, że DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC
PT Português [Portuguese]	FUJIFILM declara que este DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
SK Slovensky [Slovak]	FUJIFILM týmto vyhlasuje, že DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
SL Slovensko [Slovenian]	FUJIFILM izjavlja, da je ta DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
SV Svenska [Swedish]	Härmed intygar FUJIFILM. att denna DR-ID 601SE, DR-ID 602SE, DR-ID 611SE, DR-ID 612SE, DR-ID 613SE står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Singapore

Complies with
IDA Standards
DA106163

UAE

TRA
REGISTERED No:ER0072502/11
DEALER No:DA0072499/11

DR-ID 601SE

TRA
REGISTERED No:ER0084674/12
DEALER No:DA0072499/11

DR-ID 602SE

TRA
REGISTERED No:ER0084478/12
DEALER No:DA0072499/11

DR-ID 611SE

TRA
REGISTERED No:ER0099703/12
DEALER No:DA0072499/11

DR-ID 613SE

Thailand

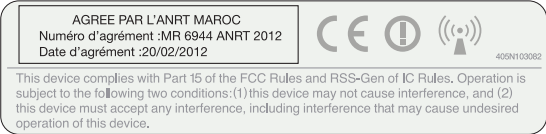
This telecommunication equipments conforms to technical standard NTC TS 1012-2551.

Mexico

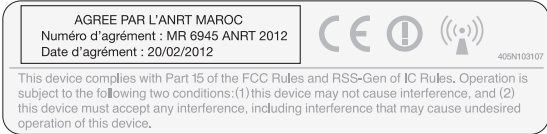
La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Radio Law Certification Labels

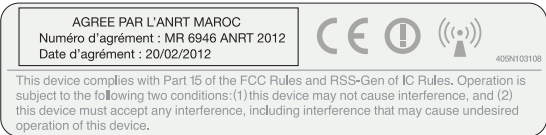
Morocco



Radio Law certification Label (for Morocco) (DR-ID 601SE)



Radio Law certification Label (for Morocco) (DR-ID 602SE)

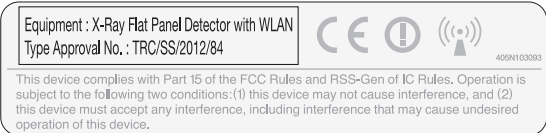


Radio Law certification Label (for Morocco) (DR-ID 611SE)

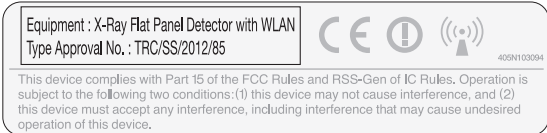


Radio Law certification Label (for Morocco) (DR-ID 613SE)

Jordan

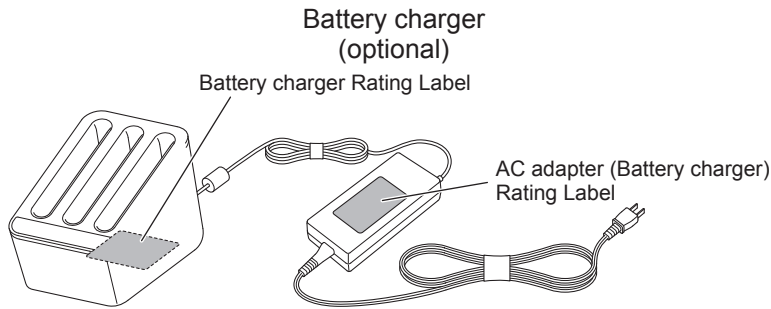


Radio Law certification Label (for Jordan) (DR-ID 601SE)



Radio Law certification Label (for Jordan) (DR-ID 602SE)

Rating Labels



Australia, New Zealand and Mexico

Li-ion Battery charger
CARGADOR DE BATERIAS **FUJIFILM**

MODEL 125N100052
INPUT 16V \Rightarrow 4.3A
OUTPUT 12.3V \Rightarrow 1.7A x3ch

分解・改造をしないでください
Do not disassemble or modify.
指定のアダプタ以外は使用しないでください
Do not use with anything other than the specified adaptor.
指定の電池パック以外は充電できません
Specified battery pack : FUJIFILM Corporation 125N100050
(11.1V 2400mAh 27Wh)

FUJIFILM Corporation
Parts NO. 125Y100056
MADE IN JAPAN

Li-ion Battery charger
Cargador de Bateria **FUJIFILM**

MODEL 125N100052
INPUT 16V \Rightarrow 4.3A
OUTPUT 12.3V \Rightarrow 1.7A x3ch

Do not disassemble or modify.
Do not use with anything other than the specified adaptor.
Specified battery pack : FUJIFILM Corporation 125N100050
(11.1V 2400mAh 27Wh)

FUJIFILM Corporation
Parts NO. 125Y100056
MADE IN JAPAN

Battery Charger Rating Label (for Australia, New Zealand and Mexico)

AC ADAPTER **FUJIFILM**
ADAPTADOR DE ca/cc 125Y100052

MODEL RC120G-16D

INPUT 100-240V \sim 1.5A
50-60Hz
OUTPUT 16V \Rightarrow 6.5A

MADE IN JAPAN
SER. NO. **F**

FUJIFILM Corporation

CAUTION : FOR INDOOR USE ONLY.
DO NOT SHORTCIRCUIT
OUTPUT TERMINALS.
 注意 : 屋内専用
出力プラグをショート
させないで下さい。
 DANGER : DO NOT OPEN. DANGEROUS
VOLTAGES INSIDE.
 危険 : 内部に高電圧部があり危険
です、開けないで下さい。

AC ADAPTOR **FUJIFILM**
ADAPTADOR DE ca/cc 125Y100057

MODEL RC120G-16D

INPUT 100-240V \sim 1.5A
50-60Hz
OUTPUT 16V \Rightarrow 6.5A

MADE IN JAPAN
SER. NO. **F**

SAFETY MARK

EFFICIENCY LEVEL 1 1 2 0 3 3 - 1 1

Energy Verified
Rendement Énergétique Vérifié

39026 יבואן דינקו בע"מ קרן היסוד 22 טירת הכרמל, 39026
MADE IN JAPAN
SER. NO. **F**

DANGER : DO NOT OPEN. DANGEROUS
VOLTAGES INSIDE.

AC Adapter (Battery Charger) Rating Label
(for Australia, New Zealand and Mexico)

FUJIFILM



Manufacturer :

FUJIFILM Corporation

26-30, NISHIAZABU 2-CHOME, MINATO-KU, TOKYO 106-8620, JAPAN



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European Authorized Representative:

FUJIFILM Europe GmbH

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