

VER. 0050.4

ADX6000s

iRayA6 (ADX6000s)

User Manual

More Safe / More Convenient / More Durable



1. General Information	1-1	Notice	04
	1-2	Introduction	05
	1-3	Symbols Used In this Manual	08
	1-4	Symbols Marked on the iRayA6	09
2. Warning and Instructions	2-1	Symbols and Details	10
	2-2	Precautions to Take When Using	10
	2-3	Precautions to Take When Storing	11
3. Caution and Instructions	3-1	Symbols and Details	12
	3-2	Precautions to Take When Using and Storing	13
	3-3	Other Precautions to Take	13
4. Items to Check	4-1	Symbols and Details	14
	4-2	Items to Check	14
5. Product Features	5-1	Outline	15
	5-2	Product Features	15
	5-3	Product Specifications	16
6. Product Composition	6-1	Outline	18
	6-2	Product Composition	18
	6-3	Product Explanation	20
7. Operating the Device	7-1	Power On/Off	22
	7-2	X-ray Radiography	23
	7-3	Settings Menu	31
	7-4	Wired Remote Control	32
	7-5	Battery	33
	7-6	SSD Cage	38

8. Maintenance, Storage, and Repair	8-1	Maintenance and Storage	<u>40</u>
	8-2	Storage Method	<u>40</u>
	8-3	Maintenance Schedule	<u>41</u>
	8-4	Repair	<u>45</u>
9. Items to Inspect Before Requesting for Repairs	9-1	Items to Inspect Before Requesting for Repairs	<u>46</u>
10. Product Specification and Product Warranty	10-1	Product Specifications	<u>47</u>
	10-2	Product Warranty	<u>48</u>
11. iRayA6 Technical Documents	11-1	High Voltage Generator	<u>49</u>
	11-2	Electromagnetic Compatibility	<u>52</u>
	11-3	Product transportation, storage conditions. and conditions of use	<u>53</u>
	11-4	Labels	<u>54</u>
	11-5	Radiation Protection	<u>57</u>
	11-6	SID for Proper Usage	<u>59</u>
	11-7	Leakage Radiation	<u>60</u>
	11-8	Strayed Radiation	<u>64</u>

1. General Information

1-1

Notice

The iRayA6 is a portable, handheld general medical X-ray device. It is a diagnostic device that has been developed to not only take X-rays analogically, but also take X-rays digitally utilizing various detectors.

This manual contains instructions, procedures, technical drawings and descriptions of the iRayA6. Do not operate this device until you have read and reviewed this accompanying user manual thoroughly.

iRayA6 is a trademark registered by Dexcowin Co., Ltd in Korea and other countries.

For further information not covered in this manual and any incidents concerning this device, please report it to the manufacturer at:

DEXCOWIN CO., LTD.
Email: info@dexcowin.com
Phone: (+82) 2 3402 5500
Fax: (+82) 2 3402 5539

Model: ADX6000S
Version: 0050.4 (EN)
Country: USA (EN)
Initial Date: 11-06-2020
Revision Date: 29-07-2024

Thank you for choosing the iRayA6 (ADX6000FB). The iRayA6 is a diagnostic device that can be used on patients. This device is designed for taking diagnostic X-rays.

The iRayA6 has different strong, user-friendly features as follows.

- A 4.3-inch touch pad TFT-LCD screen
- The Graphic User Interface (GUI) is designed intuitively for easy operation.

It is recommended that this user manual be read carefully prior to using the device. Reading the manual reduces the risk both the user and patient face when operating the device.

If any serious incidents occur relating to the device, please report it to the manufacturer or the local authorities.

Indications for Use

- The iRayA6 is a portable X-ray device intended to be used for general diagnostic purposes.
- This device is not intended to take mammograms.
- It is intended to be used by a qualified and trained medical professional or technician.



WARNING

The ADX6000FB is not intended to replace a radiographic system with a higher tube current and voltage (kVp), which may be required to take more detailed X-rays. People with a bigger build may have less clear X-ray images.

Prescription-Use Statement

- Caution: The federal law states that only licensed health care professionals can purchase this product. The device is for prescription use only.

Contraindication

- The iRayA6 should not be used on patients that are pregnant or could possibly be pregnant.



PRODUCT USAGE

This product is a medical device, and it should only be used as portable radiography device to take X-rays.







WARNING

This X-ray unit may be dangerous to patients and operators unless safety measures, operating instructions and maintenance schedules are observed.














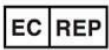


CAUTION

For proper usage and safety purposes, please ensure that only licensed health care professionals (e.g., doctors, radiologists) use this product after fully familiarizing themselves with the contents of this user manual.

	RADIATION WARNING	Indicates that there is a possibility of danger due to exposure to radiation
	WARNING	This symbol warns the operator that failure to follow safety guidelines could lead to bodily injury or death.
	CAUTION	Indicates the possibility of danger if the device is used incorrectly
	CHECK	Indicates the necessary guidelines that users should follow during product installation, operation, and maintenance

Symbols Used on iRayD6's Packaging

	KEEP AWAY FROM RAIN	Indicates that the transported package should be kept away from rain or damp areas
	FRAGILE	Indicates that the contents of the transported package are fragile and should be handled with care
	THIS WAY UP	Indicates which side of the transported package should face upward

	ELECTRICAL PROTECTION	Indicates Insulated patient application (Type B)
	RADIATION WARNING	Indicates a radiation hazard
	WARNING	Indicates a hazard
	CONSULT ACCOMPANYING DOCUMENTS	This symbol advises the reader to refer to the user manual and other accompanying documents
	MODEL NUMBER	This symbol indicates the device's model number
	MANUFACTURER INFORMATION	Indicates the name and address of the manufacturer
	MANUFACTURE DATE	Indicates the device's manufacture date in the form YYYY-MM
	SERIAL NUMBER	Indicates the device's serial number, a unique identifier assigned incrementally or sequentially to an item, to uniquely identify it.
	REPRESENTATIVES INFORMATION	The manufacturer's EU representative information is indicated along with this symbol.
	SEPARATE COLLECTION FOR ELECTRICAL AND ELECTRONIC EQUIPMENT	This symbol indicates the need for a separate collection of electrical and electronic equipment in compliance with the Waste Electrical and Electronic Equipment (WEEE) Directive. This symbol indicates that electrical and electronic equipment waste must not be disposed as unsorted municipal waste and must be collected separately. Please contact the manufacturer or an authorized disposal company to decommission your equipment according to local regulations
	CE MARK	This symbol indicates CE certification

2. Warning and Instructions

2-1

Symbols and Details



WARNING

This sign indicates that the operator may experience physical harm or even death while operating the device.

2-2

Precautions to Take When Using



WARNING

This X-ray unit must be operated by trained personnel in a controlled setting.

Precautions to Take When Using the Device

- ─ Do not exceed X-ray exposure dosage required for image diagnosis.
- ─ When using the device, if radiation exposure safety regulations and operation related guidelines are not followed, both patients and operators can be at risk.
- ─ Only legally qualified personnel can operate this device.
- ─ Please use this device only for its designated purpose.
- ─ When using this device, if patients experience any abnormalities, stop operating the device to ensure the safety of the patients.
- ─ Do not randomly alter the device while using it.
- ─ If any malfunctions occur such as oil leakage, shut down the device immediately, and contact the closest service center.

Warnings for Battery Usage

- If non-standard batteries are used, there is a chance the device may breakdown.
- Avoid shocking the batteries and puncturing the batteries with sharp objects.
- If the batteries are kept in a high temperature environment, the battery may incur damage.
- Do not expose the batteries to a wet environment.
- Keep and store the batteries away from children and pets.
- Please do not disassemble the device as this may cause the batteries to incur damage.

Precautions to Take When Inspecting the Product

- Do not touch the device, charger, or power plug with wet hands or electrical shock may occur.
- During the cleaning process, remove the battery from the device. Use only a dry cloth to clean the device.

2-3

Precautions to Take When Storing

Precautions to Take When Storing the Device

- Do not store the device in a damp, dusty or corrosive environment as such conditions will cause damage to the device.
- Do not store the device in an environment with frequent temperature changes or direct sunlight for long periods of time.
- Do not store the device with explosive gas or chemicals.
- Do not leave the battery pack connected to the device when storing it.
- The iRayA6 must be kept in a secure location (e.g., a safe) when not in use to prevent unauthorized personnel from accessing it.
- When finished using the device, detach the battery and store it in a safe, separate location to prevent unauthorized personnel from accessing it. This practice serves as a security measure.
- Another security measure is the automatic power shut off feature. The iRayA6 automatically shuts off if not in use after a certain period of time. The operator must press the power button for one second which will power on the device. Upon powering on the device, a beeping sound will be emitted and the manufacturer's logo will be displayed on the screen, informing the operator that the device is ready for use.

3. Caution and Instructions

3-1

Symbols and Details



CAUTION

This sign indicates the possibility of incurring damage to the body if the device is used incorrectly.

3-2

Precautions to Take When Using and Storing

Precautions to Take When Storing the Device

- ─ Do not store the device in a damp, dusty or corrosive environment as such conditions will cause damage to the device.
- ─ Do not store the device in an environment with frequent temperature changes or direct sunlight for long periods of time.
- ─ Do not store the device with explosive gas or chemicals.
- ─ Do not leave the battery pack connected to the device or charger during storage.

Precautions to Take When Using the Device

- ─ Pay attention to operating temperature (10-30°C) and humidity (30-60%) levels for normal operation.
- ─ When transporting the device, make sure the device does not incur damage.
- ─ Wear a lead apron or equivalent radiation protection gear when operating the device.
- ─ Do not use the device in a dusty, dirty, or corrosive environment.
- ─ Do not pull the cable from the battery pack cradle and charger as it could cause the device to malfunction.



CAUTION

Federal law only allows authorized healthcare professionals to purchase this device.

- If the device malfunctions, contact the closest service center to get the device repaired.
- This device should not be handled by any patients. Make sure it is never left unattended near a patient.
- When discarding the product, it must be in compliance with the Waste Electrical and Electronic Equipment (WEEE) Directive.



This symbol indicates the need for separate collection for electrical and electronic equipment in compliance with the Waste Electrical and Electronic Equipment (WEEE) Directive. This also indicates that electrical and electronic equipment waste must not be disposed as unsorted municipal waste and must be collected separately. Please contact the manufacturer or an authorized disposal company to decommission your equipment according to local regulations.

4. Items to Check

4-1

Symbol and Details



CHECK

This symbol indicates directions must be followed for product installation, operation, and maintenance.

4-2

Items to Check

- ─ Check the battery and device to confirm device operates properly before using.
- ─ Check the area of the device that may come into direct contact with patients.
- ─ Be sure to use the device in proper sequence of operation.
- ─ Use the device in a stable environment with proper ventilation.
- ─ Make sure the battery is properly charged, and if the remaining battery level is not sufficient, please recharge the battery.
- ─ The supplied charger is to be used exclusively with this device. Do not use the charger supplied for any other device.
- ─ Make sure the device does not come into contact with metal objects and that foreign substances do not touch the battery pack terminal. Keep the battery clean by using a dry cloth.
- ─ Be sure to inspect the device and its parts on a routine basis.

5. Product Features

5-1

Outline

In section five, features and specifications of this device are explained for safe operation.

5-2

Product Features

Features

- **Medical Device Name** Portable X-ray System
- **Model Name** ADX6000s
- **Product Name** iRayA6
- **Display** 4.3" Touch Panel TFT-LCD
- **Software** Self manufactured, UI and handling possible
- **Exposure** Ranges from 0.05-1.50 seconds; the time can be adjusted in 0.01
Second intervals
- **Battery** Rechargeable five cell high-capacity battery pack

Product Specifications

■ Device Main Body

- Item name: Portable X-ray Radiography Device
- Grade: Class IIb (MDD 93/42/EEC as amended by 2007/47/EC)
- Tube voltage: 50 – 80 kV (variable)
- Tube current: 1 – 5 mA (variable)
- Output power (electric power in the high voltage circuit: 400W Max)
- Percentage ripple in constant potential high-voltage generators: not exceed 4%
- Loading time: The irradiation time is the time between the points at which 75% of the tube voltage is reached.
- Input power: 735W Max
- X-ray tube focal spot size: 0.8mm
- Cooling method: Oil Cooling Method
- Total filtration: 3.1 mm Al At 80kV/HVL 0.2 mm Al
(Inherent Filtration: 1mmAl, Fixed added filter: 1.9mmAl, Collimator: 0.2mmAl)
- Target Angle: 16°
- Time setting function: 0.05 - 1.35[sec.]
- Main body size: 320(L)x144(W)x178(H)(mm)
- Main body weight (including battery): 3.8kg

Battery Pack

- Model Name: LIP1902A
- Cell Material Quality: Lithium Polymer
- Charging Condition
 - Charging current: 1.0A
 - Charging voltage: 21VDC
 - Temperature range: 0 - 40°C
- Usage Condition
 - Maximum current: 63A
 - Output voltage: DC 18.5V
 - Temperature range: -20 - 60°C

Battery Pack Charging Adapter

- ─ Model Name: JBL7451212000302FJ
- ─ Input Voltage: 100 - 240VAC, 50 - 60Hz, 1.0A
- ─ Output Voltage: DC 21V
- ─ Output Current: 2.0A

Loading Factors

- A) Optimal Radioscopy and Radiography Settings: Utilizing the highest available x-ray tube current from the medical equipment, the specified nominal x-ray tube voltage for both radioscopy and radiography is set at 80kV and 5mA.
- B) Maximum X-Ray Tube Current for Radioscopy and Radiography: When operating at the highest obtainable x-ray tube current, the medical equipment can achieve an x-ray tube voltage of up to 80kV and 5mA.
- C) Optimal Power Combination in the High-Voltage Circuit: The ideal combination of x-ray tube voltage and current for radioscopy and radiography, which results in the highest electrical power in the high-voltage circuit, is identified as 80 kV and 5 mA, as referenced in section 203.4.101.
- D) Nominal Electric Power Output: The medical equipment can generate a peak nominal electric power output of 400W, achievable at a loading time of 0.1 seconds with an x-ray tube voltage of 100kV. If these parameters are not selectable, the closest available settings will be used, accompanied by the respective x-ray tube voltage, current, and loading time, in accordance with section 203.4.101.
- E) Minimum Current Time Product or Optimal Loading Factors: For medical equipment showcasing precalculated or measured current time products, the minimum current time product or the optimal combinations of loading factors resulting in the minimum current time product is presented as 0.05mAs. If this value is influenced by the x-ray tube voltage or specific combinations of loading factor values, a comprehensive table or curve will be provided to demonstrate the correlation, facilitating informed adjustments to the setup.

6. Product Composition

6-1

Outline

In section six, product parts are explained. Please read this manual before operating the device.

6-2

Product Composition

The iRayA6 consists of the following below:

- ─ Main Body: 1EA
- ─ Battery Pack: 2EA
- ─ Battery Cradle: 1EA
- ─ Battery Charger: 1EA
- ─ Charger Power Cord: 1EA
- ─ Wired Remote Control (optional): 1EA
- ─ User Manual: 1EA
- ─ Product Warranty: 1EA
- ─ Storage Case: 1EA
- ─ SSD Cage (optional): 1EA
- ─ Back Scatter Shield (optional): 1EA



Main Body



Battery Pack



Charging Cradle



Detachable Handle



Battery Charger/
AC Power Cord



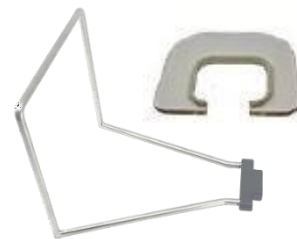
Wired Remote Control
(optional)



User Manual/
Product Warranty



Storage Case

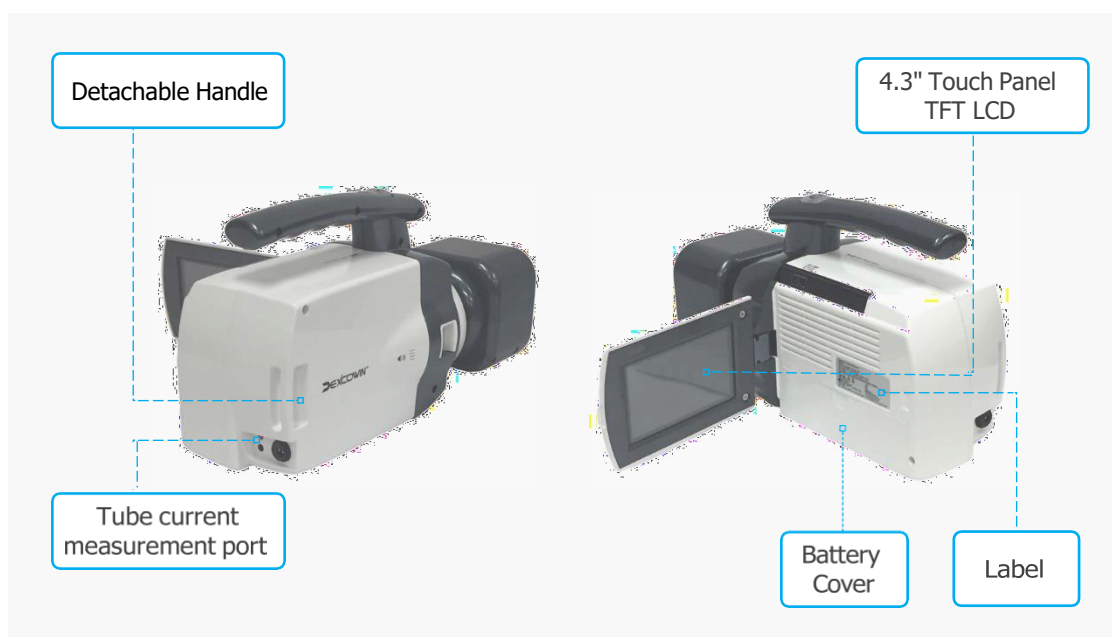
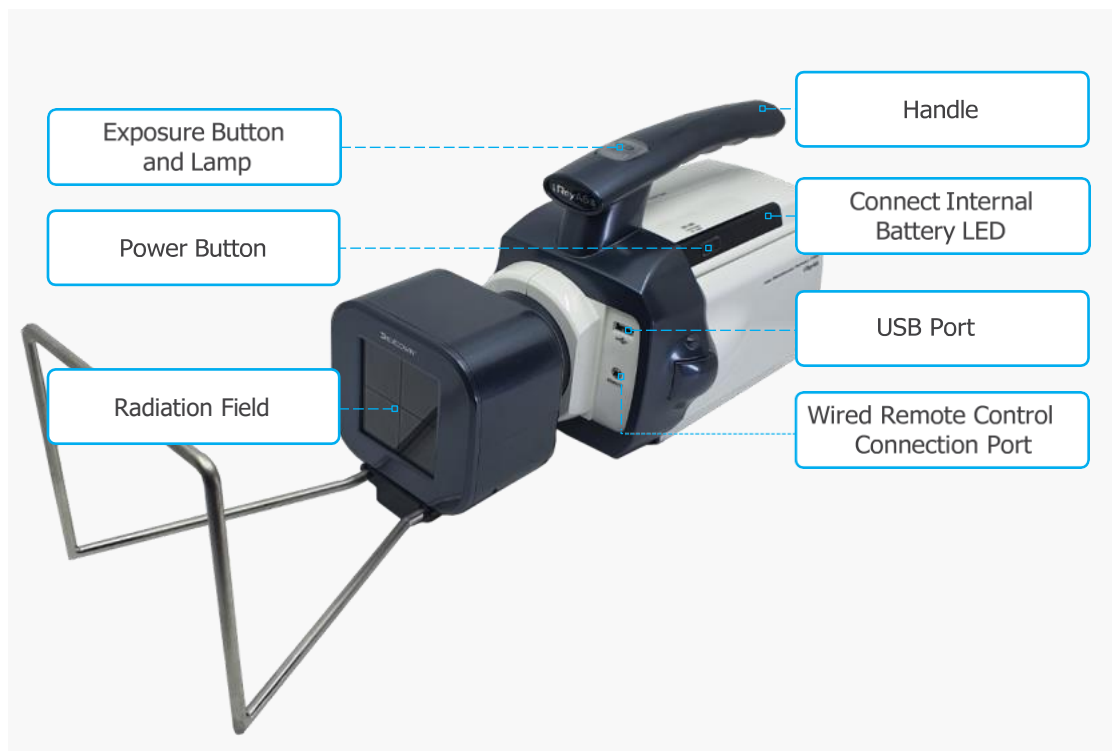


SSD Cage/Back Scatter
Shield (optional)

[Figure 6.1 Product Composition]

Description of Main Body

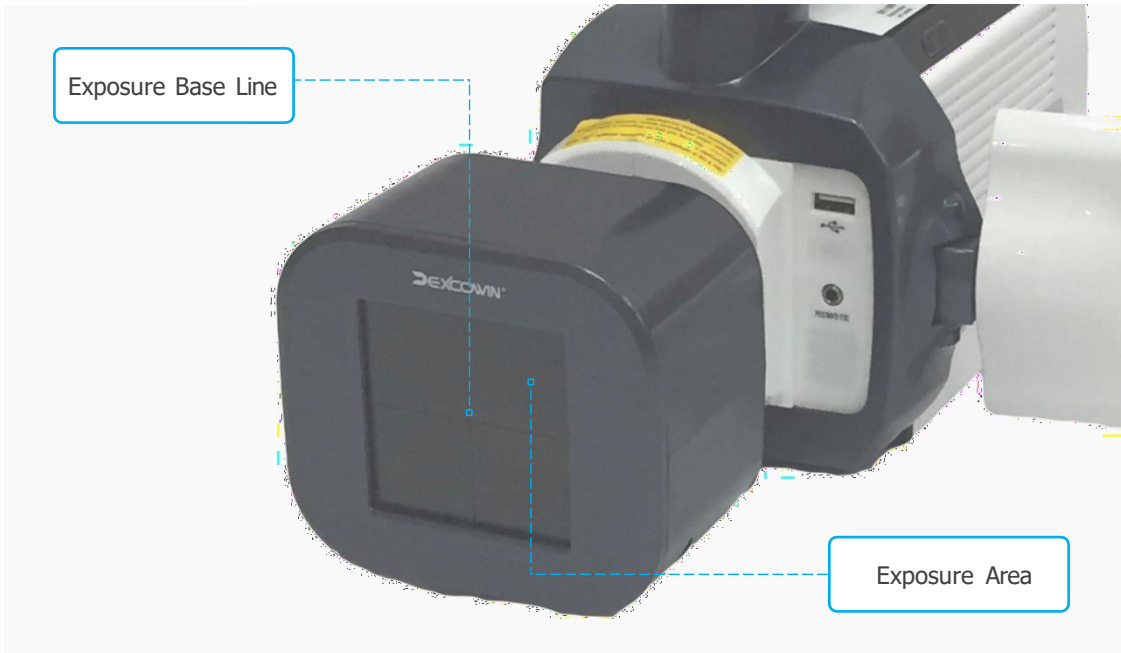
■ Each part of the main body is shown below.



[Figure 6.2 Description of Main Body]

Radiation Field Name

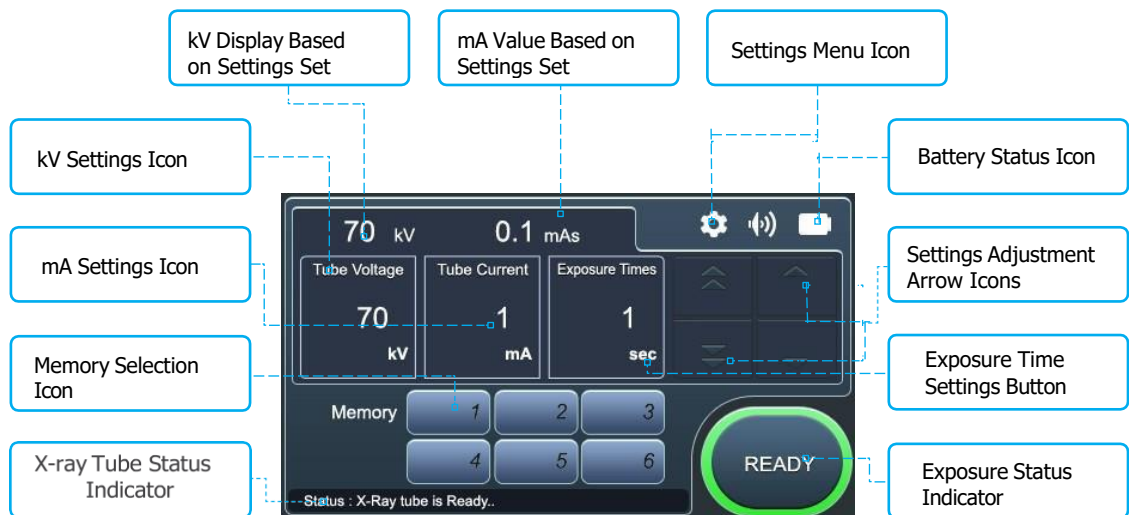
- Labels for the radiation field are displayed below.



[Figure 6.3 Labels for the Radiation Field]

GUI Screen Composition and Functions

- Description of main menu screen



[Figure 6.3 Description of Main Menu Screen]

7. Operating the Device

7-1

Power On/Off

To turn on the device, press the power button for one second. When the power is on the device will emit a beeping sound. The sound activates the computer/operating system which is embedded in the device, and the manufacturer's logo appears, as shown in Figure 7.1.



[Figure 7.1 Manufacturer's Logo]

Two seconds after the manufacturer's logo appears, the main menu screen will appear, as shown in Figure 7.2. Users can touch icons on the main menu screen to change values.

To shut down the device, press the power button for one second. The light that surrounds the power button will flicker and the device will emit a beeping sound. After the internal embedded computer shuts down, the device will shut down.



[Figure 7.2 Main Menu Screen]



CAUTION

iRayA6 has an automatic power shut off function to reduce battery consumption. The default setting is set so that the device shuts off after not having been used for five minutes and can be changed.

Tube Voltage Settings

- The tube voltage ranges from 50 to 80kV and can be changed. To change the tube voltage value, tap on the “Tube Voltage” icon as shown in Figure 7.3.



[Figure 7.3 Icons to Change Tube Voltage Settings]

- If the “Tube Voltage” icon is selected, use the arrow icons to adjust the value.
- Tube voltage: The tube voltage ranges from 50 to 80kV, and it can be adjusted in one or 10kV increments. Using the two arrow icons on the left side adjusts the voltage in 10kV increments while the two arrow icons on the right side adjust the voltage in 1kV increments.
- Select whichever arrow icon is necessary to change the tube voltage value.
- The actual tube voltage may have an error of $\pm 10\%$ than the displayed value.

Tube Current Settings

- The tube current ranges from one to five mA and can be changed.
- To adjust the X-ray tube current, press the “Tube Current” icon.



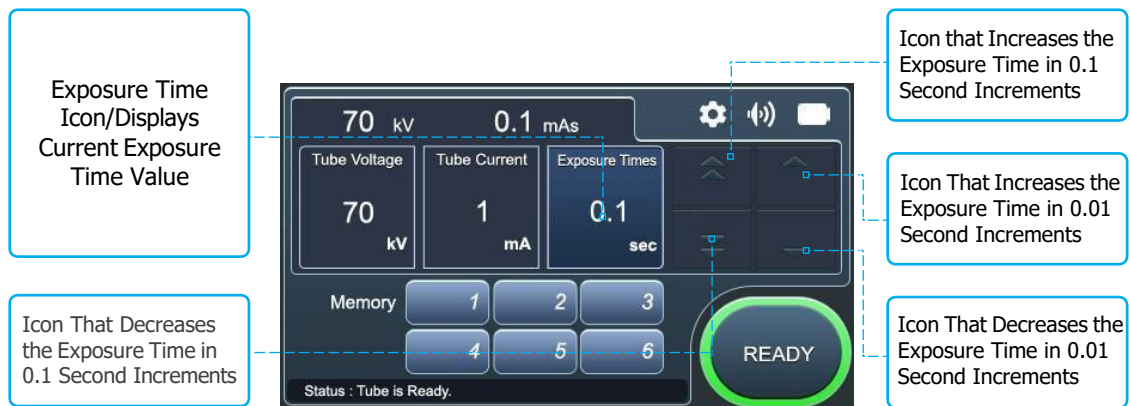
[Figure 7.4 Icons to Change Tube Current Value]

If the “Tube Current” icon is selected, use the arrow icons to adjust the value.

- Tube current: The tube current ranges from one to five mA and it can be adjusted in one mA increments or 0.1mA increments. Using the arrow icons on the left changes the tube current value in 1mA increments and using the arrow icons on the right changes the tube current in 0.1mA increments.
- The actual tube current may have an error of $\pm 20\%$ than the displayed value.
- When the exposure dose is changed, the dose value (mAs) based on exposure time is displayed on the screen.

Exposure Time Settings

- The exposure time ranges from 0.05 to 1.5 seconds and can be adjusted.
- To change the exposure time, tap the “Exposure Time” icon as shown in Figure 7.5.

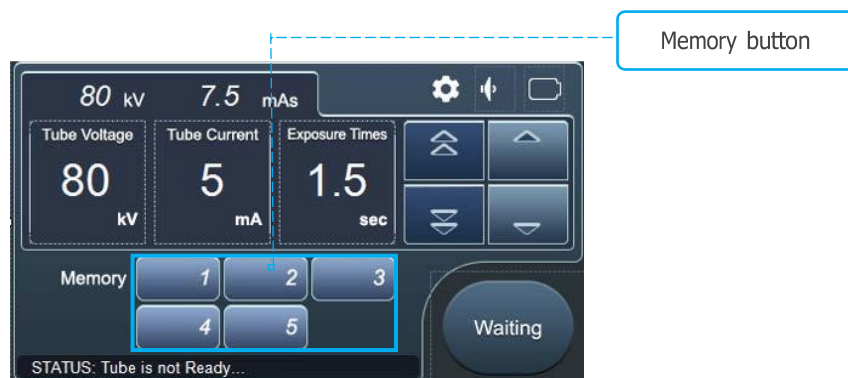


[Figure 7.5 Buttons for exposure time adjustment]

If the “Exposure Time” icon is selected, use the arrow icons to adjust the value.

- Exposure time: The exposure time ranges from 0.05 to 1.5 seconds and can be adjusted in 0.01 or 0.1 second increments. To adjust the exposure time in 0.01 second increments, use the arrow icons on the right and to adjust the exposure time in 0.1 second increments, use the arrow icons on the left side.
- The actual irradiation time may have an error of $\pm 5\%$ or $\pm 20\text{ms}$, the smaller of the two values.

Memory Settings



[Figure 7.6 Memory Icons]

Based on the selected memory setting, the values are optimized for the specific anatomical region being imaged. Users who prefer to customize these parameters can do so by utilizing the arrow keys adjacent to the "Exposure Times" icon. The following information delineates each memory icon along with its corresponding values and the anatomical region that is optimized for imaging with each respective icon.

- #1 (Thorax): 80kV, 5mA, 0.4sec
- #2 (Abdomen): 80kV, 5mA, 0.8sec
- #3 (Lateral Chest): 80kV, 5mA, 0.6sec
- #4 (Lateral Abdomen): 80kV, 5mA, 0.8sec
- #5 (other anatomical regions): 70kV, 3mA, 0.4sec

X-ray Exposure

- After configuring all settings, confirm that the X-ray tube is ready to emit radiation before generating an X-ray. If the device status says “READY” and is ready for exposure, there will be a green circle around the “READY” message as seen in Figure 7.9. Also, the X-ray tube status message will say, “Status: X-ray Tube is ready.” If the device is not ready to generate an X-ray, the exposure status message says “Waiting” and the icon changes into a deep navy-blue color. Also, the X-ray tube status message will say, Status: Tube is not Ready.” The user must wait 10 seconds after generating an X-ray to generate another one. After waiting 10 seconds, the device will say “READY” and the tube status message will say, “Status: X-ray Tube is Ready.”



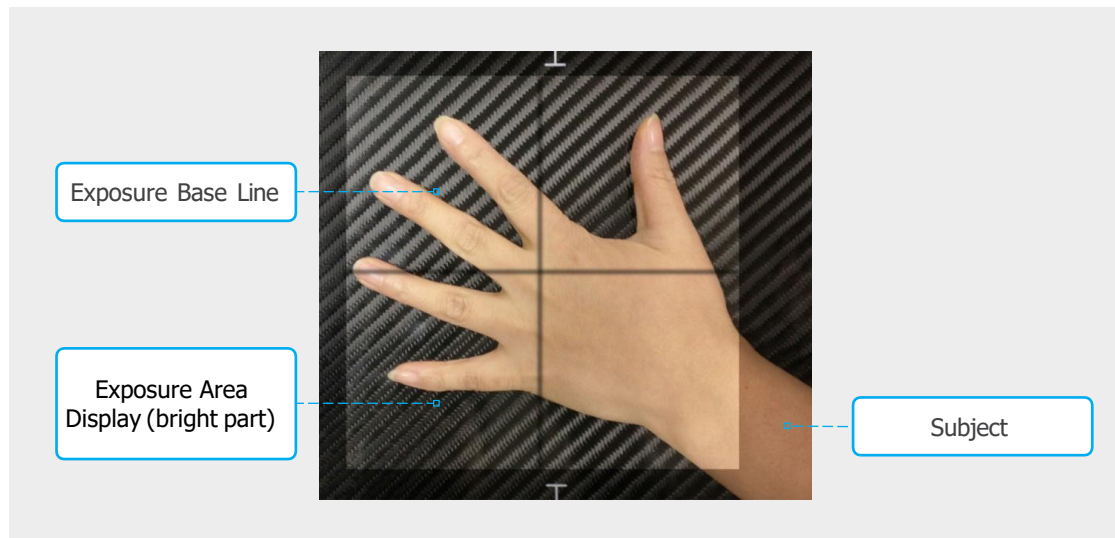
[Figure 7.9 Messages That Are Displayed When Generating an X-ray]

- When the device is ready to generate an X-ray, press the exposure button (EX button) on the handle. Then tap the exposure button located on the handle on more time.
- When the exposure button is pressed once, a light is emitted from the device initially and the Exposure Status Indicator message will say “READY.” Once the exposure button is pressed again, the Exposure Status Indicator message will say “Waiting.”



[Figure 7.10 X-ray Is Ready to be Generated]

- To take an X-ray with increased precision, press the EX button on the handle. A blue light will be emitted from the device, allowing the user to pinpoint where the X-ray is being taken.



[Figure 7.11 X-ray Exposure Field Settings]



WARNING

If the SSD cage is to be used, do not remove the SSD cage to bring the X-ray source closer to the patient. Do NOT make any other modifications to the device. Do NOT place extremities (e.g., hands, feet, fingers, toes) inside the cage area to bring the X-ray source closer to the patient. This will only increase the amount of radiation the patient is exposed to. In addition, according to IEC regulations, the patient should be more than 15cm away from the SSD cage.

In order to set exposure range as shown in Figure 7.11, locate the exposure base line in the center of the radiography target area, and adjust the exposure area by changing distance based on radiography target size.

- Once the patient has been positioned properly, based on the exposure area display, generate an X-ray by pressing the EX button again. Users should keep pressing the exposure button until exposure is complete, and if the button is released in the middle of X-ray generation, irradiation will stop immediately. An X-ray is generated when a beeping sound is emitted and the EX button turns yellow.
- When trying to generate an X-ray, the user simply needs to press the exposure button on the handle. This should be a three-step process. Each step is distinguishable by the sound that is emitted.
 - Step One: Exposure start notice - The beeping sound indicates that an X-ray can be generated
 - Step Two: Heating time notice - Heating time is changed based on level of X-RAY exposure intensity, dose, and the battery. The time can be changed from minimum 120ms to a maximum of 2000ms. Heating time is notified by a sound that lasts for 0.5 seconds.
 - Step Three: Under exposure notice - When a continuous sound is emitted, the user is notified of the exposure progress.



CHECK

The iRayA6 emits radiation only when the EX button is pressed. Once the button is released (in the middle of irradiation), X-ray generation is suspended.



CAUTION

Please do not take an X-ray of a substance that can reduce X-Ray intensity between X-Ray radiation aperture and subject.

- After radiation is emitted, the main menu screen changes as shown in the figure below.



[Figure 7.12 Main Menu Screen After Radiation Is Emitted]

Relation between X-ray Generating Time

- Correct exposure time varies depending on the age, gender and bone density of the patient. The recommended exposure dose is from 300µGy to 600µGy when measuring without an object.
- **Radiation Exposure Sensitivity**
Radiation exposure is a concern for all people of all ages; however, children are more sensitive to radiation exposure. Radiation risk is higher in young children as they have more rapidly dividing cells than adults. The younger the patient, the more sensitive they are. For more information, please refer to the following webpage:
[The FDA Pediatric X-ray Imaging Webpage](#)
- **Diagnostic Reference Level**
The chart shows comparisons of effective radiation dose with background radiation exposure for radiological procedures:

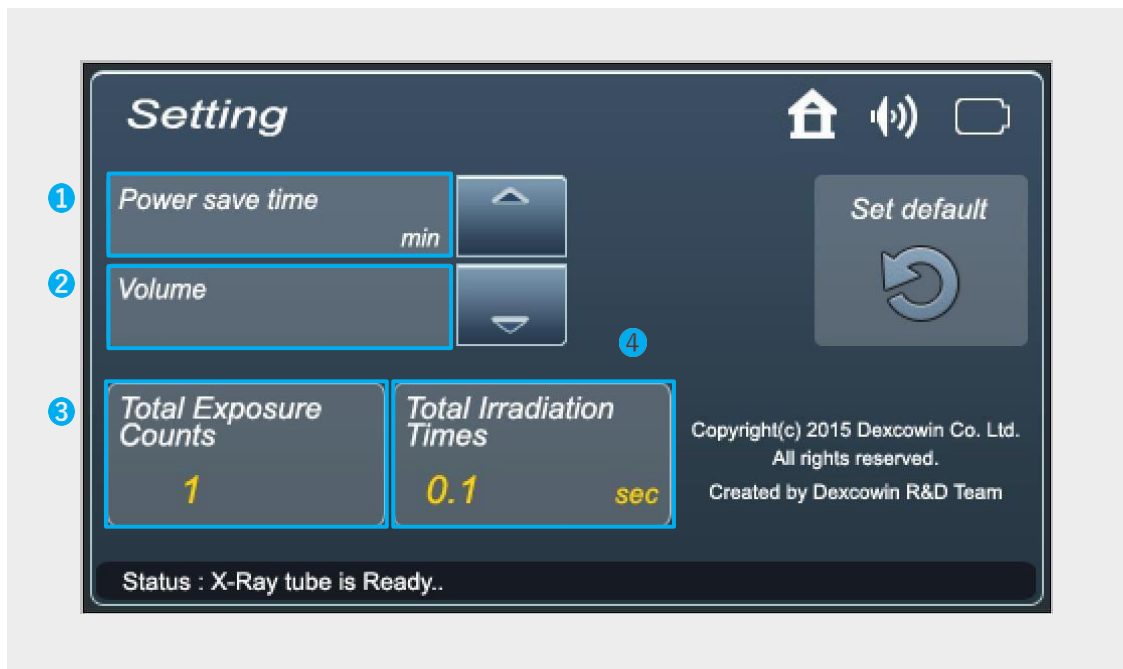
Table 7-1 Diagnostic Reference Level

	Procedure:	* Approximate effective radiation dose:	Comparable to natural background radiation for:	** Additional lifetime risk of fatal cancer from examination:
BONE	Radiography (X-ray)-Spine	1.5 mSv	6 months	Very Low
	Radiography (X-ray)-Extremity	0.001 mSv	3 hours	Negligible

[Reference Site](#)

Settings Menu

- Tap the settings icon on the main menu screen. Then the screen shown below will appear.



[Figure 7.13 Settings Menu Screen]

- ❶ Power save time: Indicates the time that the product will automatically turn off if it is not turned off. To change the value, press the arrow icons next to it.
- ❷ Volume: Indicates the degree of loudness or intensity of the sound the device emits. If you want to change the value, change it by pressing the up and down button next to it.
- ❸ Total Exposure Counts: Indicates the total number of times X-rays have been taken.
- ❹ Total Irradiation Times: Indicates the total amount of times X-rays have been taken.

Wired Remote Control Usage

- Connect the wired remote control to the connection port located on the front of the iRayA6.
- The wired remote control has the same functionality as the exposure button located on the handle. If the iRay6 is mounted on a tripod (that can be purchased separately), the X-ray operator can step away and take X-rays, further protecting the operator from radiation.
- When pressing the exposure button once gently, the aiming light turns on. Once the operator adjusts where the X-ray is taken using the aiming light and presses the exposure button again, an X-ray is generated.
- The wired remote control only doubles as an exposure button. Other settings can be configured in the settings menu.



[Figure 7.14 Wired Remote Control Connection]

Inserting the Battery into the Main Body

- When inserting the battery, make sure the device is powered off.
- When detaching the battery cover, press on the groove and detach the cover.

**CHECK**

If the battery level is displayed as low on the display, replace the battery pack. The device will shut down automatically if the battery is not replaced.

- As shown in Figure 7.15, the battery pack cover is detached by grabbing the area shown in the red circle and pulling downwards.



[Figure 7.15 Detaching the Battery Cover]

- After detaching the battery cover, a battery pack should be inserted into the main body. As shown in Figure 7.16, the battery pack should be inserted with the red arrow pointing upwards. The battery should align perfectly with the main body.



[Figure 7.16 Inserting the Battery Pack]

- Close the battery cover after confirming the battery is fully charged or has been replaced.
- Turn the power on to confirm whether the device is operating properly.

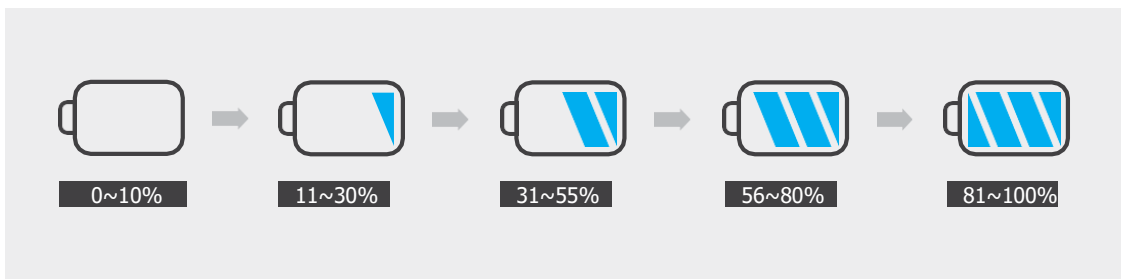


WARNING

The user should use the battery designated by the manufacturer. If the user uses a different battery, it may cause the device to malfunction.

Battery Level and Charging the Battery

- The iRayA6 battery has a high output and is designed to be charged separately from the main body.
- When the battery is fully charged, the device will emit a beeping sound and the device will power on.
- While operating, when the battery needs to be replaced, a message saying that the battery level is LOW will pop up, and the device will not be able to emit radiation. Also, a pop-up message will appear telling the user to replace the battery.
- Battery level display and how much battery level is left is displayed on the right side of the LCD screen as shown in Figure 7.17. If the battery level remaining is between 0 ~ 10%, replace with a charged battery.



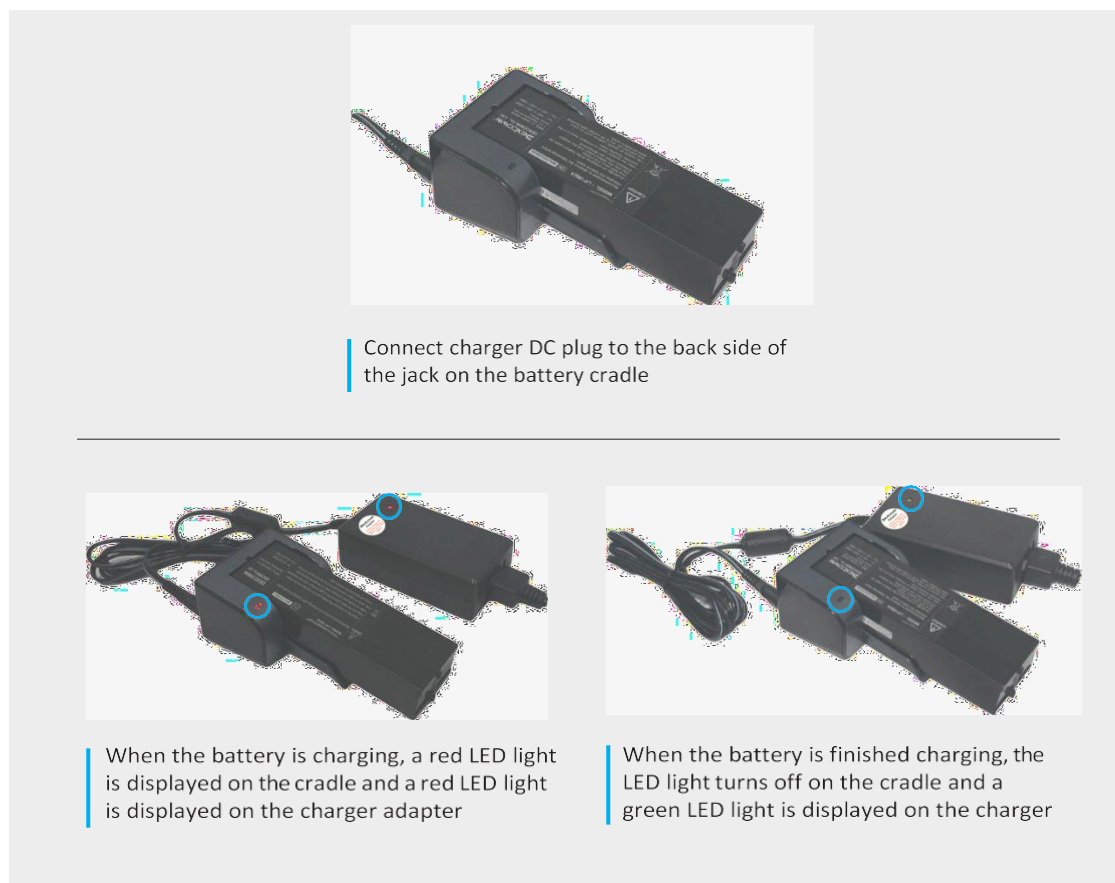
[Figure 7.17 Battery Level Display]

- The battery charger consists of a charger adapter and an AC power cord.
- The charging cradle and adapter are shown in Figure 7.18.
- Connect the battery cradle to the charger. Then connect the battery to the cradle. Use the bundled AC power line to connect the charger adapter, and connect to AC power code. AC power voltage range and frequency is 100 – 240V AC / 50 - 60Hz. Be sure to confirm if it is rated power before connecting AC power.
- Have the battery charge on the cradle. As shown in Figure 7.19, make sure the battery fits in the cradle properly. Both ends of the battery should fit in the main body.

- When charging the battery, a red LED light is displayed on the charger cradle and a red LED light is displayed on the charger adapter. When the battery is finished charging, the LED light turns off on the charging cradle and a green LED light is displayed on the charger adapter.



[Figure 7.18 Battery Cradle and Charger Adapter]



[Figure 7.19 Battery Cradle and Battery Settings]

**CAUTION**

Use only Dexcowin's adapter and cord originally packaged with the device to prevent damage to the battery or accidents from occurring. Otherwise, the warranty will be void and the manufacturer will be exempt from any liability.

**WARNING**

The user should use the battery charger specified by the manufacturer when charging the battery. If the battery is charged using another charged, it may cause the battery to malfunction.

SSD Cage



[Figure 7.20 SSD Cage]

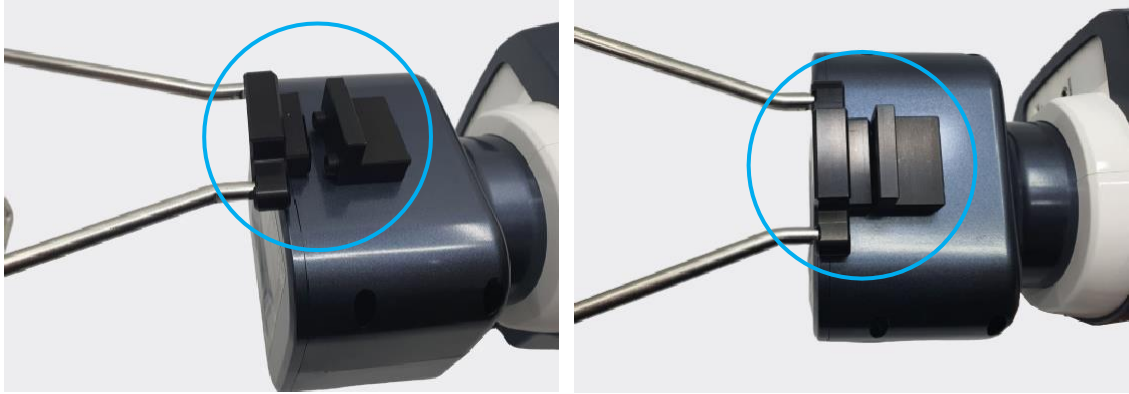
- Dexcowin provides an SSD cage for patients to be protected against radiation.
- Always attach the SSD cage to the iRayA6 when it is being used.

**WARNING**

Do NOT remove the SSD cage from the iRayA6 to bring the X-ray source closer to the patient. Do NOT make any other modifications to the device. Do NOT place extremities (example: hands, feet, fingers, toes) inside the cage area to bring the X-ray source closer to the patient, as this only increases the patient's exposure to radiation. In addition, according to IEC regulations, the patient should be more than 15cm away from the SSD cage.

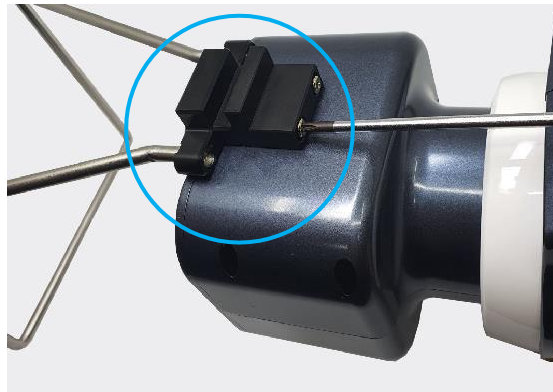
How to Assemble

Step 1: As shown below, connect the SSD cage to the iRayA6.



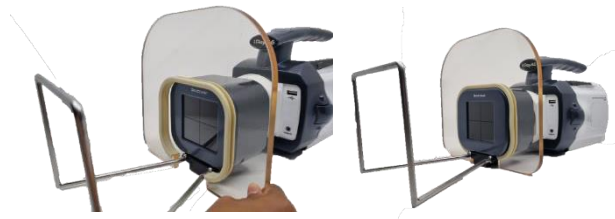
[Step 1] Connect SSD to collimator

Step 2: As shown above, secure the SSD cage to the iRayA6 with screws.



[Step 2] Secure SSD cage to the collimator with screws

Step 3: As shown below, connect the shield to the iRayA6 with the attached SSD cage.



[Figure 7.21 How to Attach the SSD Cage]

8. Maintenance, Storage, and Repair

8-1

Maintenance and Storage

- ─ Store device and battery pack in a safe area that only qualified personnel have access to.
- ─ The X-ray radiation field that comes into direct contact with the patient should be maintained and cleaned regularly by using a small amount of rubbing alcohol on a soft cloth and wiping the device.
- ─ Do not use the device near heaters or heating devices, etc.
- ─ Do not disassemble any part of this device. If the attached warranty seal is damaged in any way after the device is sold, the user will be charged for repairs that need to be made.
- ─ Take the iRayA6 to a designated service center for maintenance, and have it checked on a regular basis.

8-2

Storage Method

Check for Product Storage

- ─ Avoid storing device where the humidity level is high or in direct sunlight.
- ─ Avoid storing in a dusty, dirty, corrosive (salty) environment and make sure the device is stored on a flat surface.
- ─ Make sure device is stored in an area with ventilation.
- ─ Avoid storing the device with chemical substances or explosive gases.
- ─ Do not store in environments with extremely high or low temperatures.
- ─ If the device is not going to be used for a long time, store the product separately after removing the battery from main body.

Charger Adapter Storage

- ─ Make sure there is no foreign substance in the charger adapter DC jack terminal. Clean the terminal with a dry soft cloth before storing.
- ─ Clean the device with a dry soft cloth before storing.
- ─ Do not connect a battery that is not supplied by Dexcowin to the charger. The charger is exclusively for the iRayA6.

On-going Maintenance

- Periodically review Section '1.1.1 Indication for use' and '1.1.2 Prescription-use statement' for use and product labeling in order to verify understanding of indications for use for the iRayA6.
- Clean the iRayA6 regularly; it is recommended that the iRayA6 be cleaned every time it comes into contact with a patient. Make sure the power is off when cleaning the device. Use only a dry, soft cloth to clean the device. Usage of any sprays or wet tools on the device may cause damage to it.
- The battery pack has a limited life span. The strength of the battery will reduce gradually. When the device shows delays in performance and charging the battery does not correct this problem, the user may need to purchase a new battery pack.
- Section 2 Warning and instructions. Section 3 Caution and instructions. Section 4 Items to Check. (Users should regularly familiarize themselves with the use of this information and materials)
- When a malfunction occurs, please refer to section 9 to inspect the item. Please contact the manufacturer/dealer immediately if the product seems to have any abnormalities.
- Users should be aware of the Technique Chart in section 11.6. Please read it carefully. X-rays should reflect changes noted in each section.

Annual User Check

- Users should review the following material yearly, and be sure to record their results in the Maintenance Log Sheets located in Section 8.3.4.
- Power button verification: When the power button is pressed for one second, a green LED light will appear around the power button and a beeping sound will be emitted to signal that the device has powered on. To shut down the device, press the power button for one second. Please check after thirty seconds to verify that the machine has indeed turned off.
- Touch LCD verification: Touch each corner on the 4.3-inch LCD touch panel to check whether the panel operates normally. Also, make sure to configure the settings properly for kV, mA, and exposure time.
- Exp button verification: In the main menu screen, tap the LED screen once. The collimator LED should turn on and the exp button's blue LED should turn on. In this state, press the Exp button again. The LED on the Exp button should turn yellow to confirm radiation has been emitted.
- Remote control verification: Connect the Remote control to ensure that the Exp button does not operate. Now check to see whether the Remote button operates like the Exp button.
- Deadman button verification: Set the exposure time to 1.5 seconds. Then use the Exp button to emit radiation. Before the exposure time reaches 1.5 seconds, release the button to stop radiation from being emitted.
- X-rays on LED and audible signal verification: While taking an X-ray to verify the X-ray beam size, verify that the x-rays on the LED illuminate and that an audible signal is heard.
- Light field size verification: With the device positioned 70cm from the wall, adjust the shutters until they are fully open. Enable the device and measure the light field that is displayed on the wall. It should be approximately 26.2 cm x 26.2 cm.
- Environment setting verification: Under the Environment setting screen, check that the appropriate settings have been configured.
- Charger verification: Connect the battery pack to the charger, and make sure that the LED light signaling proper charging turns on.

Annual (Optional) Calibration

- The iRayA6 is factory calibrated and tested prior to release and there are no adjustment options. However, the optional checks listed below may be performed by a qualified technician as desired.
- Set up a calibrated Performance Meter (e.g., Piranha554) according to manufacturer's specifications to detect and report the following: X-ray Tube Voltage, Radiation Time, and Dose.
- Measurement Method: Final performance measurements are made using a Piranha554. Exposure time is measured from the moment X-rays are detected until they are no longer detected (which means 90% crossing setting is selected with no timer delay). Linearity is calculated per IEC60601-2-7, 50.102.2a. Alignment of the light field with the x-ray field is tested by IEC60601-1-3, 29.202.9. Image quality testing may be performed with the iRayA6 and the detector by IEC 61223-3-4, 5.8, 5.9.
- Enable the iRayA6 and with the collimator perpendicular to the test detector, take X-rays into the test detector and capture the resulting data.
- Compare the results with the factory release parameters (indicated in the chart below). For results outside these parameters, discontinue use and contact DEXCOWIN.

Table 8-1. Acceptable Test Ranges

Test Description	Acceptance Limits	Exposure Time (mSec)			
		50ms	100ms	300ms	1350ms
kVp Accuracy	50kV \pm 10%	45kV-55kV	45kV-55kV	45kV-55kV	45kV- 55kV
kVp Accuracy	80kV \pm 10%	72kV-88kV	72kV-88kV	72kV-88kV	72kV- 88kV
Timer Accuracy	Set point \pm 10%	45mS-55mS	90mS-110mS	270mS-330mS	1215mS-1485mS

Maintenance Log Sheets

Maintenance Test	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Date /Initial	Date /Initial	Date /Initial	Date /Initial	Date /Initial	Date /Initial
1. Power button						
2. Touch LCD						
3. Exp button						
4. Remote button						
5. Dead-man button						
6. Detector connect						
7. X-rays on LED and audible signal						
8. Light field size						
9. Self-exposure						
10. Image acquisition						
11. File manager						
12 Image process						
13. File format save						
14. Environment setting						
15. Charger						
16. Calibration (Annual)						

- Repairs can only be undertaken by Dexcowin personnel. Contact Dexcowin or a local distributor.
- DEXCOWIN Co., Ltd.:
Phone: 82-2-3402-5500, Fax: 82-2-3402-5539, Email: info@dexcowin.com
- If the device needs to be returned, contact Dexcowin or a local distributor for a Return Material Authorization and shipping instructions to return the product to the proper facility.
- Providing the serial number that is affiliated with the iRayA6 is required.

9. Items to Inspect Before Requesting for Repairs

9-1

Items to Inspect Before Requesting for Repairs

If any abnormalities are found when operating the device, check the following items listed below before requesting for repairs.

SYMPTOM		STEPS TO TAKE
Power Defect	After powering on the device, the sound or LCD screen do not work	Confirm the battery has been charged and is connected correctly. If the device will not be used for a long time, remove the battery so the battery can be charged and to prevent damage to the device.
	LCD screen does not display anything after power on sound is emitted	While the system is booting, the LCD screen may not display anything for a while. Wait until the device is finished booting and the manufacturer's logo appears. If the screen does not display anything after a few minutes has passed, contact the nearest service center.
	While using (including when taking X-rays) the power turns off automatically,	Check the remaining battery level. This device automatically powers off to reduce battery consumption.
Exposure Defect	It says X-ray can emit radiation, but upon emission, no sound is emitted	Be sure that the settings are configured properly before taking an X-ray. If the battery level is low, replace the battery. X-rays may not be generated if the battery level is too low.
Radiation Field Defect	The aiming light does not work	To turn on the aiming light, press the exposure button once and it will turn blue. A white light will then be emitted. Confirm if front of radiation field is blocked by any light entering the device. If an abnormality is found, please contact the designated service center.
Others	Low battery sign is displayed on the LCD screen	Check the remaining battery level and if the remaining level is low, replace the battery pack with one that has been charged.
	The battery does not charge	Check the LED light of the battery charger adapter. The LED light of the battery charger adapter should be red while charging, and green when it is fully charged. Check whether the battery charger adapter and battery pack are connected properly.

10. Product Specifications and Product Warranty

10-1

Product Specifications

CLASSIFICATION	DETAILS
Product Name	Portable X-ray System
Grade	Class IIb (MDD 93/42/EEC as amended by 2007/47/EC)
Input Power	INTERNALLY POWERED ME EQUIPMENT
Waterproof Rating	IPX0 (General Equipment)
Fireproof	This equipment is not suitable for use in the presence of flammable anesthetics or oxygen
Mode of Operation	Discontinuous operation
Tube Voltage	50 - 80kV (Variable)
Tube Current	1 - 5mA (Variable)
Focal Point Size	0.8 mm
Voltage Consumption	735W (MAX)
Voltage Usage	DC 18.5V
Minimum Source to Skin Distance	30cm (from focal spot to SSD tip)
Cooling System	Oil cooling Method
Total Filtration	More than 3.1mmAl(At 80kV) (Inherent Filtration: 1mmAl, Fixed added filter: 1.9mmAl, Collimator: 0.2mmAl)
Time Setting	0.05- 1.50 [seconds] (can be adjusted in 0.01/0.1 second increments)
KV setting	50 - 80kV (can be adjusted in 1kV increments)
mA setting	1 - 5mA (can be adjusted in 0.1mA increments)
Distance to Subject	Radiation field device, radiation field area and distance designation
Main Body Size	322mm(L)x158mm(W)x178mm(H)
Main Body Weight	3.8kg (Including battery)

- ─ Dexcowin offers a manufacturer warranty for all products by one year from the date of purchase or installation.
- ─ This product is manufactured under strict quality assurance standards and inspection processes.
- ─ If the device malfunctions even when operating it properly, repair services will be provided free of charge.
- ─ If the device malfunctions due to incorrect usage or negligence, the user will be charged for repair services even if the malfunction occurs during the warranty period.
- ─ The warranty for a battery is not extended or the extension of the warranty policy is not applicable to the battery.
- ─ We strongly recommend the battery be replaced every year. It must be replaced at least every two years to prevent any accidents from occurring.
- ─ If the user does not replace the battery within the recommended time frame and the device malfunctions, Dexcowin will be exempted from any liability.
- ─ For other questions or product related inquiries, please contact Dexcowin Co., Ltd.'s, customer service center.

Korea HQ

#901-905, 25, Gasan Digital 1-ro, Geumcheon-gu,
Seoul, 08594 Korea

Office: TEL 82-2-3402-5500, FAX 82-2-3402-5539

Email: info@dexcowin.com

EC	REP
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S.B. Pharma GmbH

Bunsenstr.14 53121 Bonn, Germany

11. iRayA6 Technical Document

11-1

High Voltage Generator

X-RAY Tube: D-0813B

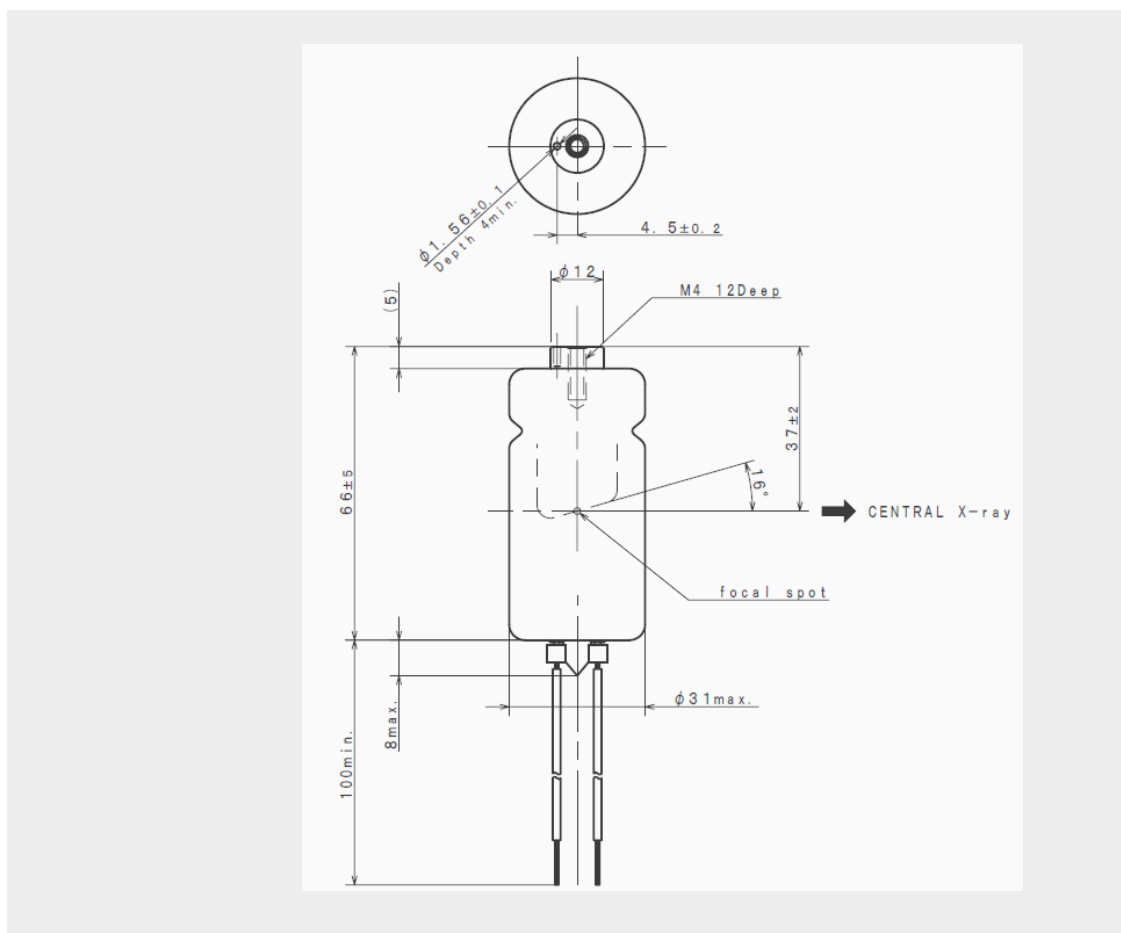
① Manufacturer: TOSHIBA

② Electrical Characteristics

- Operating Tube Voltage.....40~ 80kV
- Focal Spot.....0.8 mm
- Input Power (at 1.0s)..... 1260W

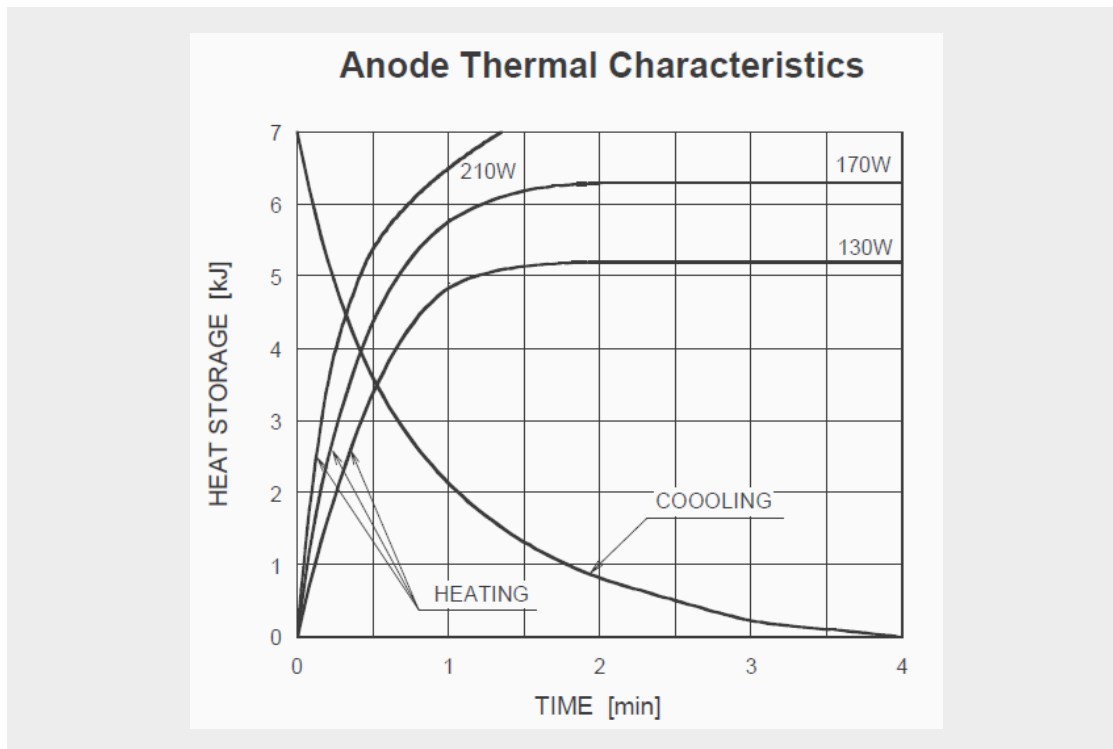
③ Mechanical Characteristics

- Dimensions



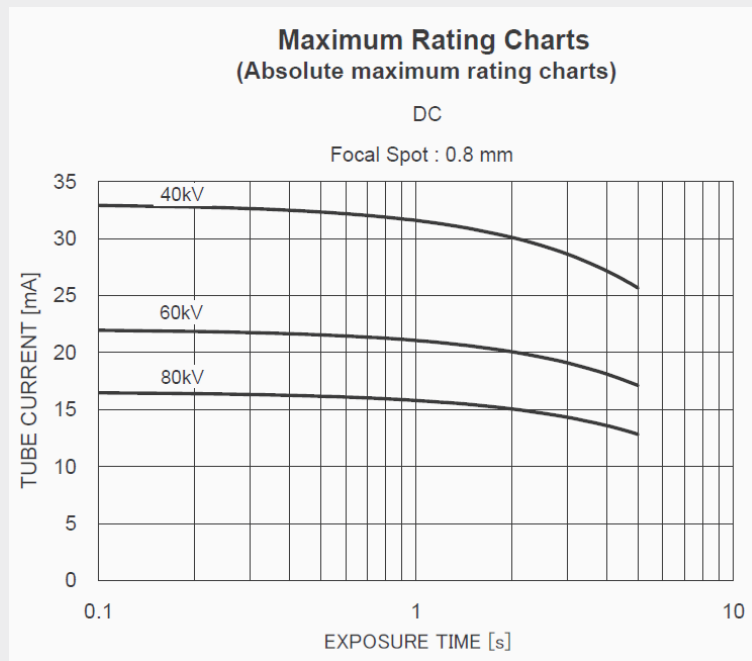
[Figure 11.1 Dimensions of the X-ray Tube]

- Target angle..... 16 Degrees
- Material.....Tungsten
- Inherent Filtration At least 1.0 mmAl equivalent at 70kV
- Anode Thermal Characteristics



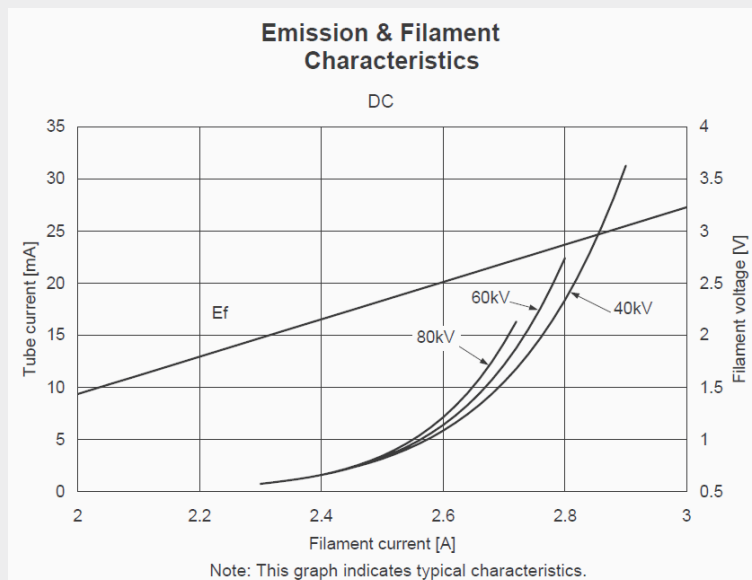
[Figure 11.2 Anode Heating/Cooling Curve]

- ④ Absolute Maximum and Minimum Ratings
 - Maximum Tube Voltage 80 kV
 - Maximum Tube Current..... 33mA
- ⑤ Standard Load.....400W/H



[Figure 11.3 Maximum Tube Current Curve by Exposure Time]

■ Maximum Filament Current.....3.0 A



[Figure 11.4 Emission & Filament Characteristics]

**WARNING**

Other cables and accessories may negatively affect EMC performance. Use of other accessories may result in non-compliance.

The iRayA6 should not be used adjacent to or stacked with other equipment and if adjacent or stacked use is necessary, the iRayA6 should be observed to verify normal operation in the configuration in which it will be used.

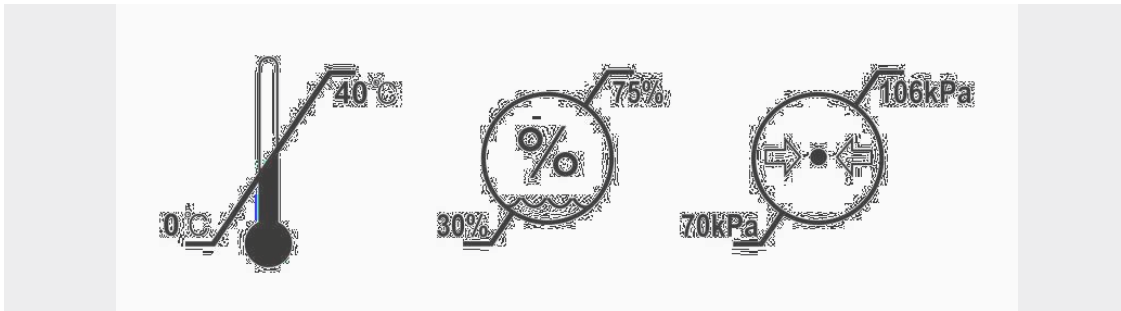
The iRayA6 has been tested and found to comply with the limits for medical devices in IEC/EN 60601-1-2. These limits are designed to provide reasonable protection against harmful interference in a typical medical installation.

This device 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 its vicinity. However, there is no guarantee that interference will not occur if installed in a particular way. If this device does cause harmful interference to other devices, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by taking one or more of the following measures:

- ─ Reorienting or relocating the receiving device.
- ─ Increasing the distance between the devices.
- ─ Consulting the manufacturer or a field service technician for assistance.

Transportation and Storage Conditions

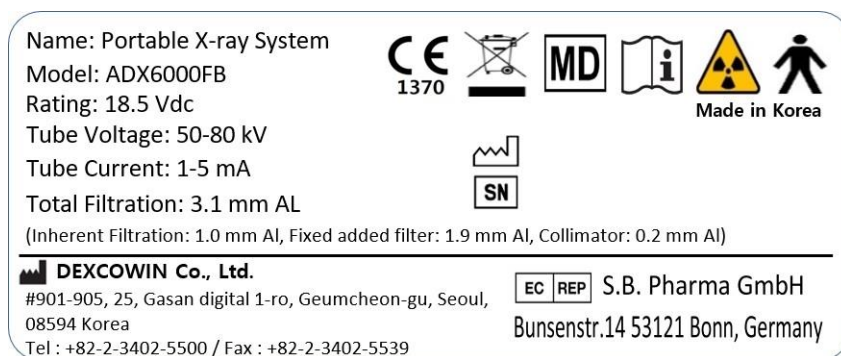
- ❶ Temperature: 0 - 40 °C
- ❷ Humidity: 30 - 75 %
- ❸ Atmospheric pressure: 70 - 106 Kpa
- ❹ Transportation label



Optimal Conditions of Use

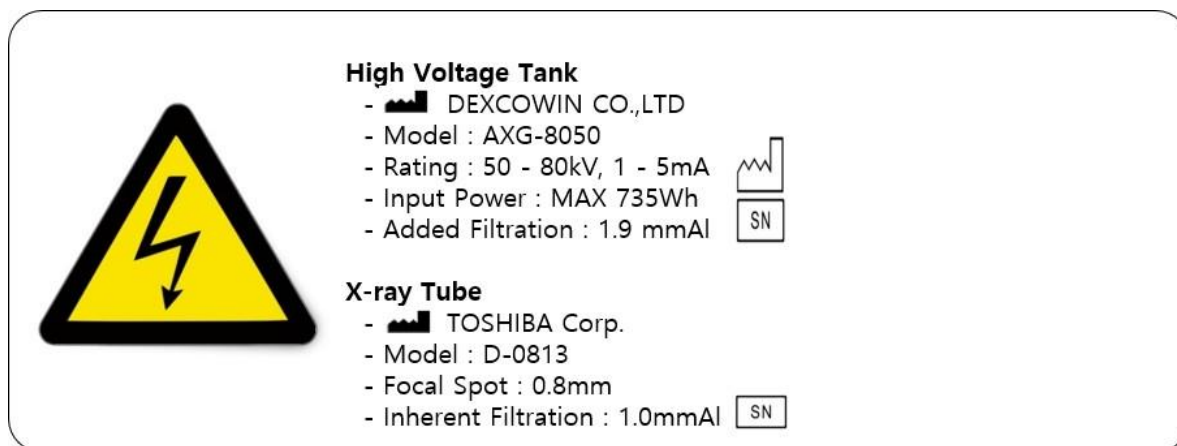
- ❶ Temperature: 10 - 30 °C
- ❷ Humidity: 30 - 60 %
- ❸ Atmospheric pressure: 900 - 1060 Hpa

Product Label



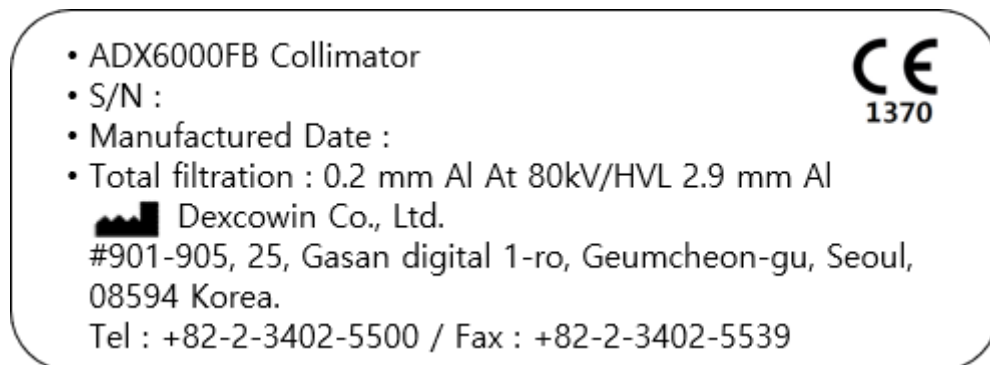
[Figure 11.5 Product Label]

High Voltage Tank (X-ray generator) Label




[Figure 11.6 High Voltage Tank Label]

Collimator Label



[Figure 11.7 Collimator Label]

Charging Cradle Label

DEXCOWIN®	
•Product Name : Battery cradle	Serial No. :
•Model Name : CR-ADX	
•Input Voltage : 21V DC, 1A	
•Output Voltage : 21V DC, 1A	
	<ul style="list-style-type: none">- Use the CR-ADX in a dry indoor place.- Be careful no water or any foreign substance get into the product.- Warranty is no longer valid if disassembling the product by your own decision- Do not pull out connection cable unreasonably.- Do not insert/remove the battery by force.

[Figure 11.8 Charging Cradle Label]

**WARNING**

This X-ray device must be operated by trained personnel in a controlled setting.

ADX6000FB IEC 60601-1-3, IEC60601-2-54, from regulatory limits on radiation safety and protection compliant.

The iRayA6 was designed to be used in both clinical settings (e.g., a radiology department) and controlled settings where transportation or use of other X-ray devices might be difficult due to the device's size and/or mobility.

The ADX6000FB provides a high degree of protection from unnecessary radiation. However, no practical design can provide complete protection nor prevent operators from exposing themselves or others to unnecessary radiation.

It is important to restrict use and follow all applicable government radiation protection regulations. Pregnant women should not be exposed to radiation unless necessary. Proper safety precautions should be taken for this operator to minimize radiation exposure to the fetus.

Operators must be fully acquainted with industry safety recommendations, established maximum permissible doses, and local jurisdiction requirements for use. Beyond these requirements and the instructions provided by DEXCOWIN no additional skills, training, or knowledge is required.

Do not operate the iRayA6 until the patient and operator are positioned and ready to be exposed to radiation to prevent interruption and inadvertent exposure to radiation.

This X-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed. Safety equipment used with this device should be fully tested and certified.

This X-ray device must only be operated by trained personnel in a controlled setting.

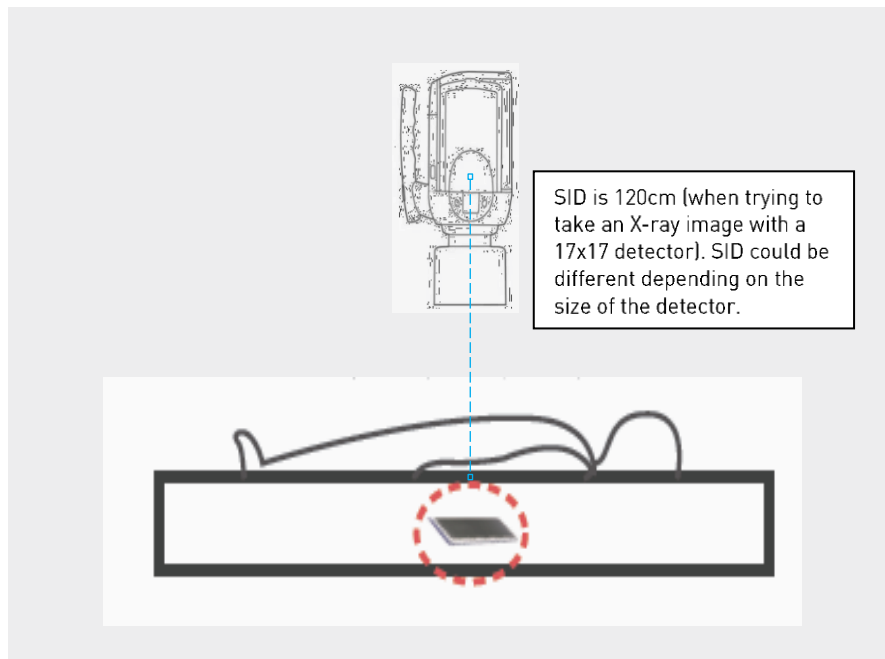
Within such a setting, ensure that only the patient is in the direct contact with the X-ray, and that any ancillary personnel are a minimum of two meters (approximately 6.5 feet) away from the patient. If it is necessary for any ancillary personnel to be closer than two meters, these

personnel should stay out of direct contact with the X-ray and wear personal protective equipment (PPE), such as an apron (with 0.5mm lead equivalent) and a thyroid collar.

However, any structural enclosures (e.g., barriers or walls) in the controlled setting will reduce the zone requiring PPE use. Safety equipment used with this device should be fully tested and certified.

Operators should always wear PPE while using the iRayA6 to be protected from backscatter radiation. Both an apron (with 0.5mm lead equivalent) and thyroid collar are recommended. For those operators who take over 5000 X-rays a year, radiation protective eyewear is also recommended. Safety equipment used with this device should be fully tested and certified.

- The iRayA6 has validated the ability to capture diagnostic quality images of the body.
- The SID that radiation can cover the 17 X 17 inch detector is about 1.2 meters. The SID could be changed due to the size of the detector.
- Please set distance by moving the iRayA6 so that the collimator light can cover the active area of the detector.
- This X-ray unit must only be operated by trained personnel in a controlled setting.



[Figure 11.10 Exposure Description]

Pediatric Technique Chart

The exposure table on an adult should never be used on a pediatric patient because this would cause the patient to be overexposed to radiation. Many studies for pediatric patients have shown that they are more sensitive to radiation than adult patients. Therefore, operators should take care of minimizing radiation exposure when taking images of a pediatric patient.

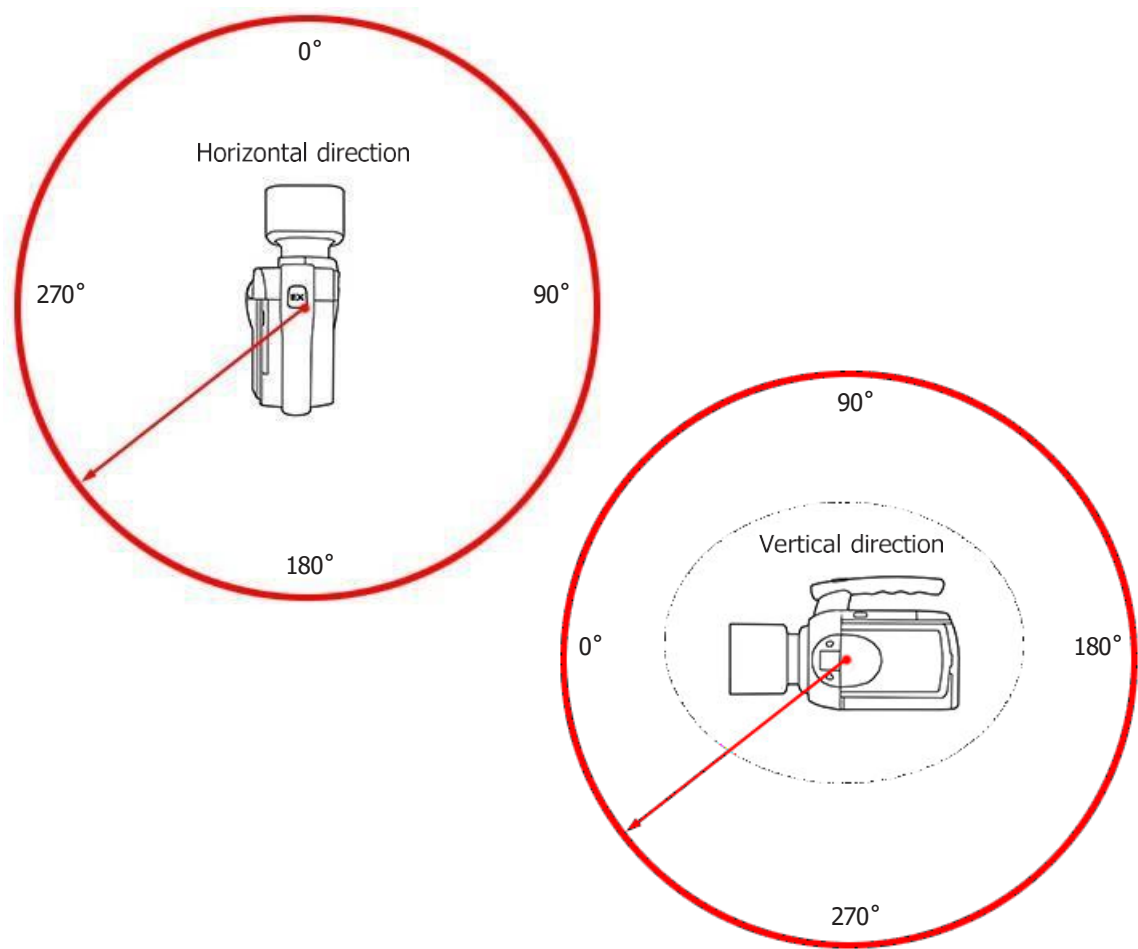
- Please use caution when taking X-ray images of a pediatric patient and make sure to follow the exposure table.
- Verify the body part that is to be exposed to radiation and set exposure conditions properly based on partial exposure condition table for a pediatric patient. The Partial exposure time table is made by SID 70cm. It may not be accurate if SID is changed.
- Pediatric patients tend to move more frequently during X-ray procedures. It may cause the X-ray image to be undiagnosable. Therefore, the operator has to take the X-ray when the patient is calm and immobile.
- In addition, parents or guardians of the patient can safely remain in the same room due to the low radiation output of the iRayA6 (ADX6000FB). The parent of the pediatric patient can assist the operator so the pediatric patient stays calm and still during the X-ray procedure.
- The Pediatric patient and parent/guardian must wear PPE during the procedure to avoid being unnecessarily exposed to radiation.

11-7

Leakage Radiation

Measurement 1[m] from Focal Spot

- The following is leakage radiation at 1[m] from the focal spot.
- Unit: [mR/h, (mGy/h)]



[Figure 11.11 Measurement Direction 1[m] from the Focal Spot]

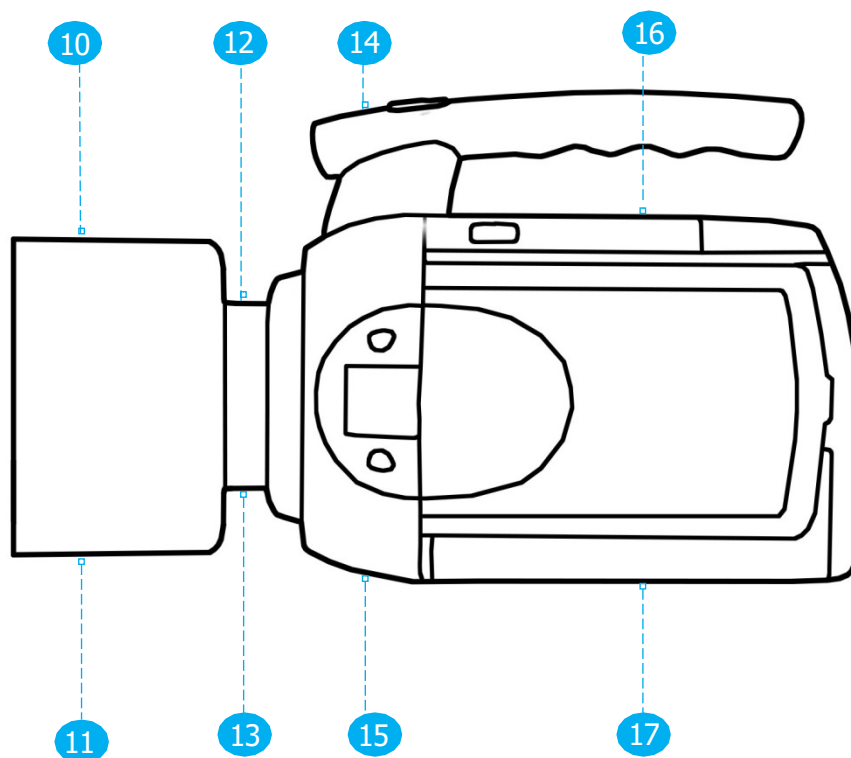
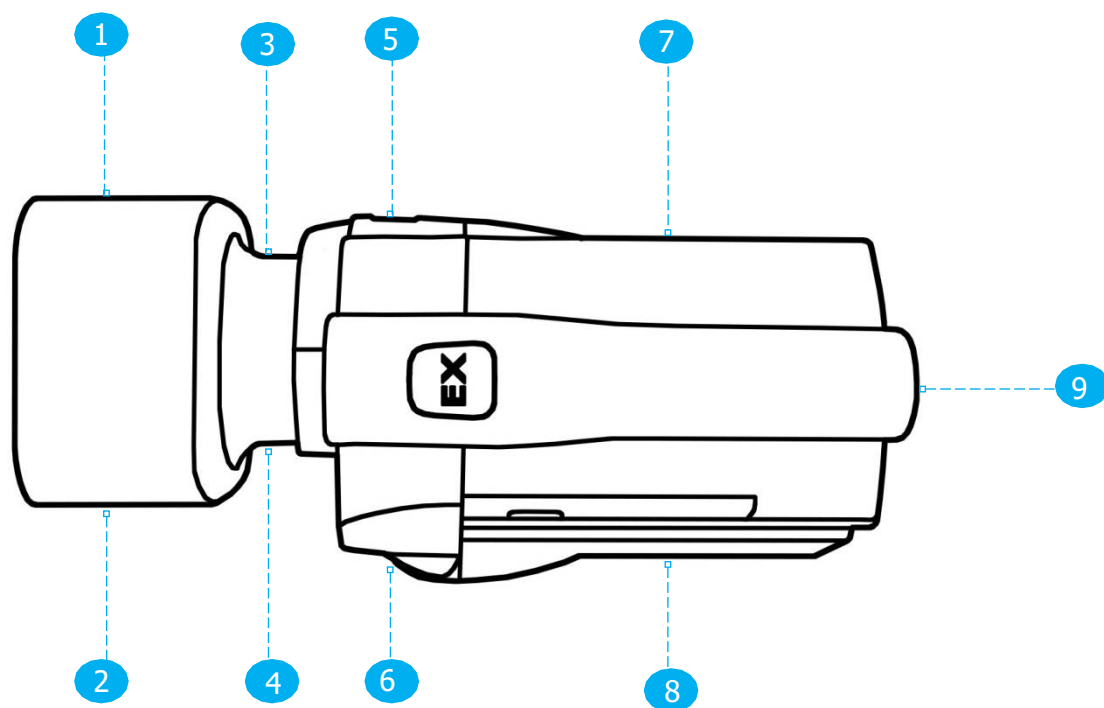
Table 11-34 Leakage Radiation 1[m] from the Focal Spot

DIRECTION	HORIZONTAL			VERTICAL		
Section	Test 1	Test2	Test3	Test1	Test2	Test3
0°(360°)	ND	ND	ND	ND	ND	ND
45°	ND	ND	ND	ND	ND	ND
90°	ND	ND	ND	ND	ND	ND
165°	ND	ND	ND	ND	ND	ND
180°	ND	ND	ND	ND	ND	ND
225°	ND	ND	ND	ND	ND	ND
270°	ND	ND	ND	ND	ND	ND
315°	ND	ND	ND	ND	ND	ND

Unit: [mR/h, (mGy/h)] ND: Not Detected

Measurement 1[cm] from the Case's Surface

- The leakage radiation measured at 1 cm from the surface of the iRayA6 was operated at 17 different points and the locations are shown in Figure 11.12. The results are recorded in Table 11-35.
- Unit: [mR/h, mGy/h]
- The leakage radiation measured at 1 cm from surface is below 12 [mR/h] (0.12 [mGy/h]).



[Figure 11.12 Measurement Points 1[cm] from the Case's Surface]

Table 11-35 Leakage Radiation 1[cm] from the Case Surface

NUMBER	TEST 1		TEST 2		TEST 3	
	mR/h	mGy/h	mR/h	mGy/h	mR/h	mGy/h
1	5.31	0.0531	5.36	0.0536	5.38	0.0538
2	6.03	0.0603	5.98	0.0598	5.99	0.0599
3	10.54	0.1054	10.57	0.1057	10.61	0.1067
4	11.01	0.1101	10.98	0.1098	10.94	0.1094
5	7.51	0.0751	7.56	0.0756	7.49	0.0749
6	8.08	0.0808	8.03	0.0803	7.98	0.0798
7	1.28	0.0128	1.34	0.0134	1.31	0.0131
8	0.28	0.0028	0.35	0.0035	0.29	0.0029
9	0.26	0.0026	0.25	0.0025	0.27	0.0027
10	5.82	0.0582	5.87	0.0587	5.90	0.0590
11	5.65	0.0565	5.67	0.0567	5.72	0.0572
12	11.65	0.1165	11.68	0.1168	11.71	0.1171
13	11.77	0.1177	11.78	0.1178	11.73	0.1173
14	6.81	0.0681	6.85	0.0685	6.88	0.0688
15	7.97	0.0797	7.99	0.0799	8.03	0.0803
16	2.35	0.0235	2.37	0.0237	2.35	0.0235
17	1.20	0.0120	1.22	0.0122	1.25	0.0125

Unit: [mR/h, mGy/h], ND: Not Detected

11-8

Stray Radiation

Set the significant zone of occupancy

Personal protection equipment such as a lead apron must be worn when taking X-rays in the significant zone of occupancy as shown in Figure 11.13.

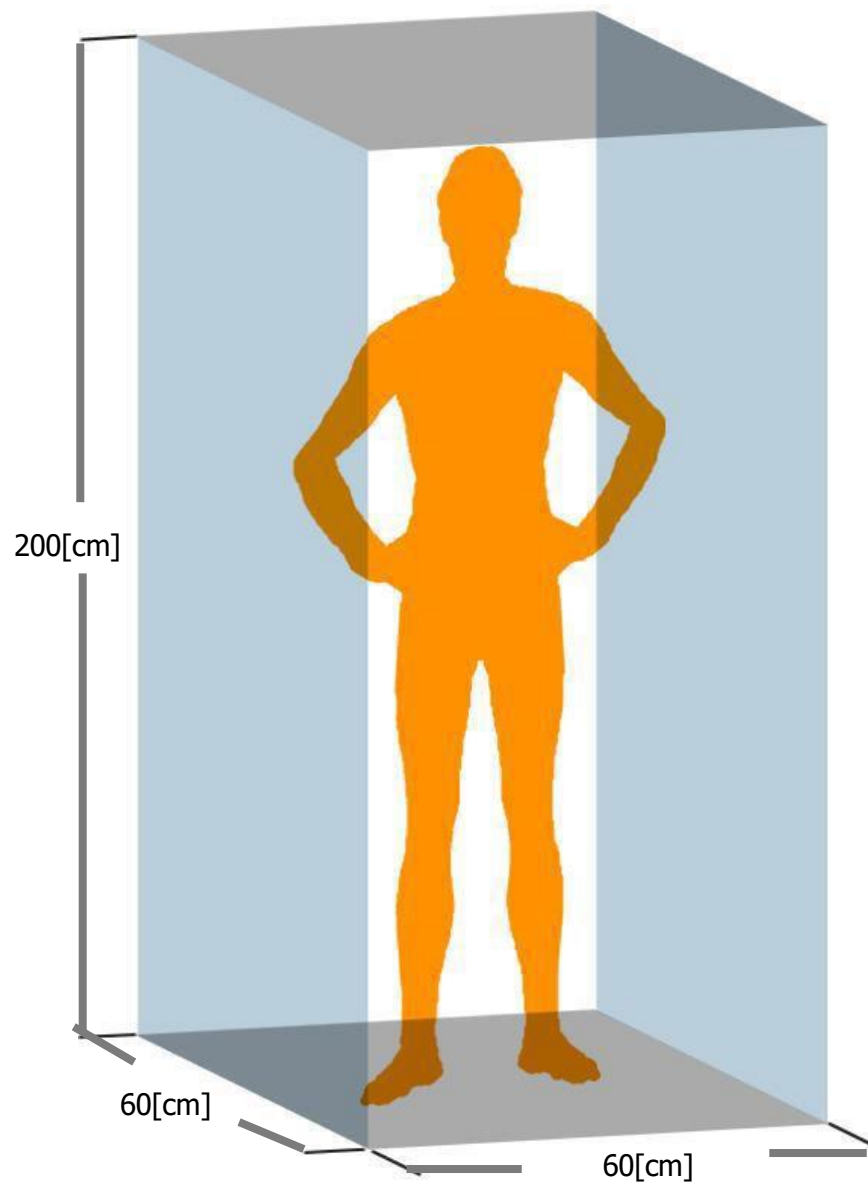


Figure 11.13 [Significant Zone of Occupancy]

Test method and result of stray radiation

- The device and environment setup to measure stray radiation is shown in Figure 11.14.
- After setting up, measure the stray radiation in the significant zone of occupancy.
- Considering the environment of the device, set up the distance between the Focal spot and water equivalent phantom to 20 cm (0 cm from and 50 cm (30cm from collimator) and measure.
- The measuring points in the significant zone of occupancy are every 10cm point from 0cm to 200cm and the measuring point at each height are depicted as red circles as shown in Figure 11.14.
- Exposure time for each measurement is one second.

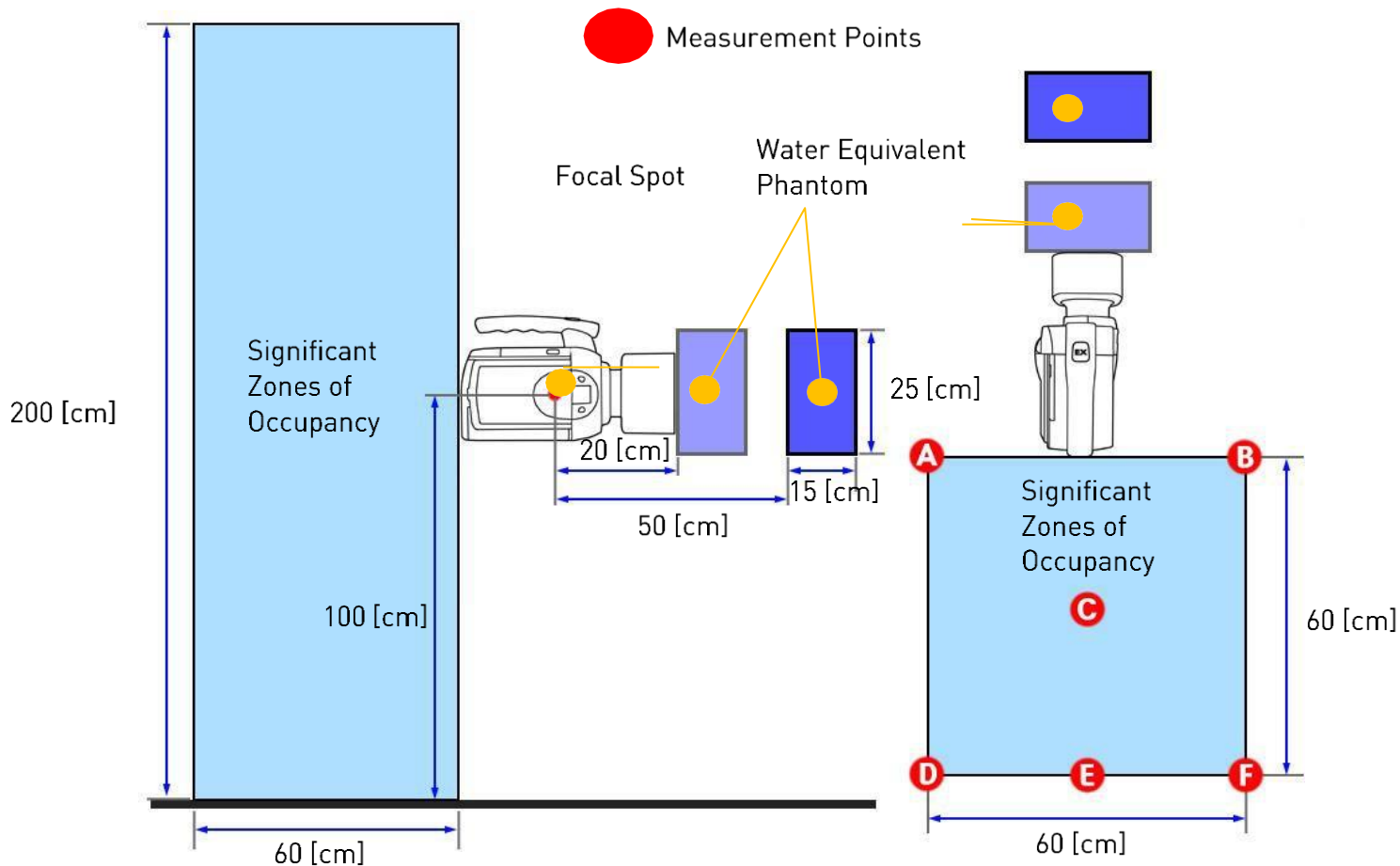


Figure 11.14 [Test Method of Stray Radiation]

- The measurement results of stray radiation at 20cm from the focal spot are shown in Table 11-36.

Table 11-36 Stray Radiation 16[cm] from the Focal Spot

	POINT A	POINT B	POINT C	POINT D	POINT E	POINT F
0 cm	0.914	1.465	1.217	1.036	1.859	1.047
20 cm	1.214	1.645	1.426	1.417	1.994	1.511
40 cm	1.754	3.160	2.008	1.317	4.663	2.327
60 cm	2.630	3.665	2.222	6.000	4.982	7.267
80 cm	8.889	7.367	1.674	9.011	6.233	8.956
100 cm	14.600	16.917	0.480	4.622	0.336	4.689
120 cm	11.281	15.222	4.723	5.277	2.614	6.089
140 cm	9.305	11.375	8.889	4.734	5.240	5.567
160 cm	8.342	9.700	8.322	4.228	4.714	4.068
180 cm	7.271	8.290	5.917	2.382	3.179	3.162
200 cm	5.833	7.250	5.800	2.347	2.261	2.703

Unit: [mR/h]
ND: Not Detected

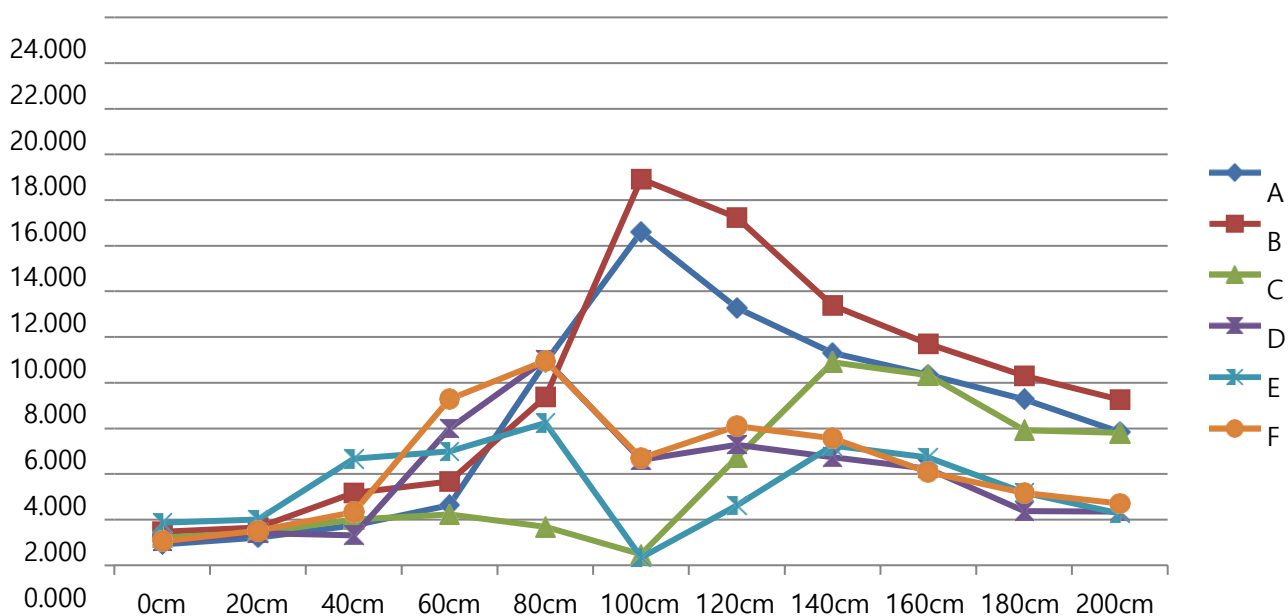


Figure 11.15 [Graph of stray radiation at 20[cm] from focal spot]

- The measurement results of stray radiation at 50cm from the focal spot are shown in Table 11-37.

Table 11-37 Stray Radiation 50[cm] from the Focal Spot

	POINT A	POINT B	POINT C	POINT D	POINT E	POINT F
0 cm	5.675	4.332	2.248	2.153	2.224	2.716
20 cm	7.221	6.153	2.985	2.985	2.500	2.568
40 cm	13.650	16.323	5.000	3.778	5.478	4.222
60 cm	14.225	16.881	8.989	5.578	5.711	8.767
80 cm	16.533	17.433	7.422	7.522	8.411	5.056
100 cm	23.333	21.310	0.624	6.604	0.708	3.867
120 cm	15.311	13.567	6.123	9.100	3.500	8.600
140 cm	10.300	9.435	12.712	6.033	8.300	9.933
160 cm	13.238	15.320	11.647	10.867	7.100	8.264
180 cm	8.635	7.322	9.312	5.867	6.033	6.822
200 cm	7.332	5.218	6.773	4.467	3.467	2.556

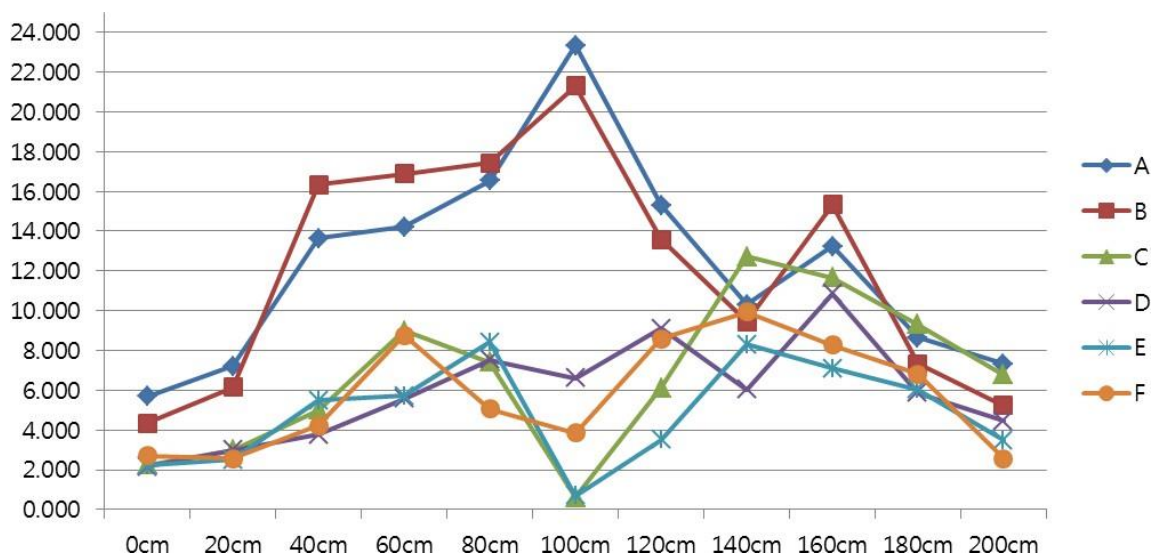


Figure 11.16 [Graph of stray radiation at 50[cm] from focal spot]

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