

# ***Kodak DryView* 8900 Laser Imager**



## **User Guide**



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Rochester, NY 14653

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**5E6155**

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# Warranty and Limitation of Liability

## Important Notice to Purchaser:

Kodak warrants that Kodak hardware products will be free from defects in parts, materials and manufacture for a period of one (1) year from date of installation. For defects occurring during the warranty period and about which Kodak has received notice during the warranty period, Kodak will provide Customer with free replacement parts and labor to replace warranty-covered items.

**THIS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESS AND IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND THOSE ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE.** The express warranty does not apply to the following: expendable parts; defects or damage due to neglect, misuse, operator error, improper installation or alteration of Kodak hardware products or operation of Kodak hardware products out of specification. **EXCEPT FOR THE EXCLUSIVE REMEDY STATED ABOVE, KODAK IS NOT LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, HOWEVER OCCURRING AND REGARDLESS OF THE LEGAL THEORY ASSERTED, INCLUDING NEGLIGENCE AND STRICT LIABILITY. Kodak shall in no event be liable for any of the following:**

- Performance or non-performance of any network utilized by the Customer.
- Performance or non-performance of any third party equipment or software.
- Impact of any Kodak product upon a network or third party equipment or software.

## Warranty and Limitation of Liability





# Table of Contents

Important Notice to Purchaser .....	5
<b>1 Safety and Related Information</b>	
Safety, Warnings, and Cautions .....	1-1
Safety Labels .....	1-5
Safety and Health Compliance.....	1-10
Safety.....	1-10
EMC.....	1-11
EU Directives .....	1-13
CE Marking.....	1-13
User Guide Conventions.....	1-14
Please Note.....	1-14
<b>2 Overview</b>	
Kodak DryView 8900 Laser Imager.....	2-1
System Components .....	2-2
How the Laser Imager Works.....	2-3
<b>3 Operation and Maintenance</b>	
System Power Up and Power Down .....	3-1
Power Up.....	3-1
Shut Down .....	3-2
Levels of Operation.....	3-2
Power Failures.....	3-3
Using the Touch Screen Local Panel .....	3-4
Status Screen .....	3-4
Main Menu .....	3-6
Door Control Screen.....	3-7
System Functions Screen.....	3-8
System Information Screen .....	3-9
Version Information.....	3-10

## Table of Contents

---

Job Management Screen.....	3-10
View List.....	3-11
Image Sources Screen.....	3-12
Image Source Editor.....	3-13
Operation.....	3-13
Opening the Front Door.....	3-13
Opening the Film Drawers.....	3-13
Film Drawers and Front Door Manual Override Latches.....	3-14
Opening the Hood.....	3-15
Loading Film Cartridges.....	3-16
Recycling Empty Film Cartridges.....	3-17
Requesting a Calibration Test Print.....	3-18
Requesting a Density Test.....	3-18
Automatic Image Quality Control (AIQC).....	3-18
Operating in Manual Mode.....	3-19
Operator Maintenance.....	3-19
Cleaning the Laser Imager.....	3-19
Installing New Charcoal Filters.....	3-19
Preventive Maintenance.....	3-21
Key Operator Information.....	3-22
Key Operator Passcode.....	3-22
Setting Time and Date.....	3-23
Audible Alarm (On/Off).....	3-25
Selecting Bins.....	3-26
Changing Dmax.....	3-28
Deleting Print Jobs.....	3-30
Reprinting Print Jobs.....	3-32
Image Resizing Icons.....	3-33

## 4 Troubleshooting

Status, Error Messages, and Notifications.....	4-1
Local Panel Status Messages.....	4-1
Local Panel Error Messages or Notices.....	4-2
Restart the Laser Imager.....	4-3
Clearing Film Jams.....	4-18
Manually Closing the Film Cartridge Lid.....	4-19

Film Pickup Problems in Area 1U, 1M, or 1L.....	4-20
Clearing Film Jams from Area 2 .....	4-21
Clearing Film Jams from Area 3 .....	4-22
Clearing Film Jams from Area 4 .....	4-23
Clearing Film Jams from Area 5 .....	4-25
Clearing Film Jams from Area 6 .....	4-26
Calling for Support.....	4-27

## 5 Specifications

Dimensions .....	5-1
Electrical.....	5-1
Laser Specifications.....	5-2
Operating Environment .....	5-3
Storage Environment.....	5-3
Environmental Effects.....	5-3
Film Sizes .....	5-3
Film Types.....	5-4
Film Throughput .....	5-4
Agency Compliance .....	5-4

## 6 Film Technical Information

General Description .....	6-1
Spectral Sensitivity .....	6-1
Image Quality.....	6-2
Automatic Image Quality Control .....	6-2
Environmental Impact.....	6-3
Storing and Handling Undeveloped Film .....	6-3
Handling Developed Film.....	6-3
Archiving Developed Film .....	6-4
Exposing to Moisture .....	6-4
Dissipating Odor.....	6-4
Dissipating Heat.....	6-5
Recycling Film .....	6-5

## Glossary





# 1 Safety and Related Information

## Safety, Warnings, and Cautions

Please read and understand all instructions before using this product.



### **RISK OF ELECTRIC SHOCK:**

This equipment is operated with hazardous voltage which can shock, burn or cause death.

- Remove wall plug before servicing equipment. Never pull on cord to remove from outlet. Grasp plug and pull to disconnect.
- Do not operate equipment with a damaged power cord.
- Do not use an extension cord to power this equipment.
- Do not operate equipment with any of the safety interlocks overridden.
- Position the power cord so it will not be tripped over or pulled.
- Connect this equipment to a grounded wall outlet.



### **WARNING:**

*This equipment contains moving parts that may be accessible to the user. Loose clothing, jewelry or long hair may cause personal injury or damage to the equipment.*

- Do not operate equipment with the covers open.
- Do not operate equipment with any of the safety interlocks overridden.



### **WARNING:**

*This equipment is not contained in a sealed cabinet. Do not use this equipment in locations where it can come in contact with liquids, including body fluids.*



**CAUTION:**

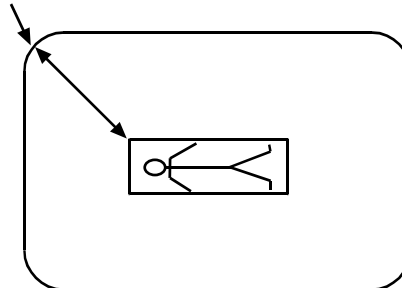
Do not use in the presence of flammable anesthetics, oxygen, or nitrous oxide. This equipment does not have a gas-sealed electronics enclosure and could ignite any flammable or explosive gases present in its environment.



**CAUTION:**

This equipment is intended to connect to other medical devices. Only a Kodak Authorized Service Provider may perform installation and service maintenance. This device is NOT to be located within the patient environment. Therefore, the equipment must not be located closer than 1.83 meters from a patient bed or chair.

1.83 m



**CAUTION:**


This device should not be used in close contact with MRI devices, due to possible very high magnetic fields near an MRI unit. For magnetic field specifications, see “Operating Environment” on page 5-2.




**CAUTION:**


Do not substitute or modify any part of this equipment without approval of Eastman Kodak Company.

 **CAUTION:**  
Federal law prohibits dispensing without a prescription.

 **CAUTION:**  
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 radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning 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 antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

 **CAUTION:**  
Do not use isopropyl alcohol to clean the exterior surfaces of the laser imager. Isopropyl alcohol can dissolve the exterior paint on the laser imager.

 **CAUTION:**  
Filters are considered to be non-hazardous waste by the US EPA Resource Recovery Act. Under RCRA, you may dispose of filters in a landfill or incinerator with energy recovery in a municipal, commercial or industrial facility. Contact your state or local government to determine if additional disposal requirements apply.

 **CAUTION:**  
The UPS battery must be replaced by a Kodak Authorized Service Provider. The UPS battery contains lead and poses a

**hazard to the environment and human health if not disposed of properly. Due to the toxicity of lead, the US EPA's Resource Conservation and Recovery Act (RCRA) and state solid/hazardous waste authorities consider a spent lead-acid battery a regulated waste. Treat this battery as a hazardous waste if it is not recycled. A recycling infrastructure is widely available in the US to manage this battery type.**



**CAUTION:**

**Lithium batteries must be replaced by a Kodak Authorized Service Provider. The DryView 8900 uses a lithium battery to power the clock and calendar circuitry. There is a danger of explosion if the battery is replaced incorrectly. The battery will be replaced only with the same or equivalent type recommended by the Motorola Inc. The US EPA's RCRA does not regulate disposal of this lithium battery. Users should discard spent batteries in municipal trash unless their community offers a battery collection program.**



**CAUTION:**

**This product contains lead and mercury. The lead is located in the solder on the circuit boards. Mercury is located in the back light of the local panel. Disposal of components containing these materials may be regulated due to environmental considerations. For disposal or recycling information at the end of usable service, please contact your local authorities or visit the Electronics Industry Alliance web site at: <http://www.eiae.org>.**

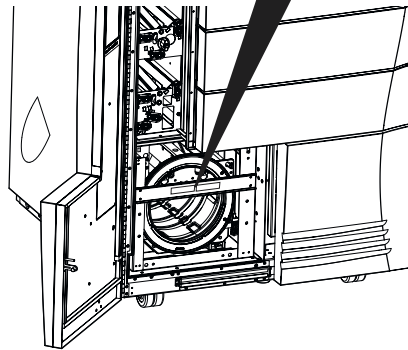


**LASER WARNING:**

**The equipment uses a 100-milliwatt invisible laser. Laser radiation may be present when the machine operates without the rear cover installed. Use of controls or adjustments, or performance of procedures other than those specified herein, may result in eye damage.**

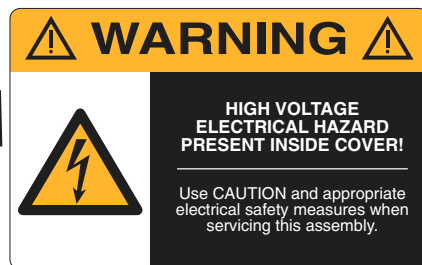
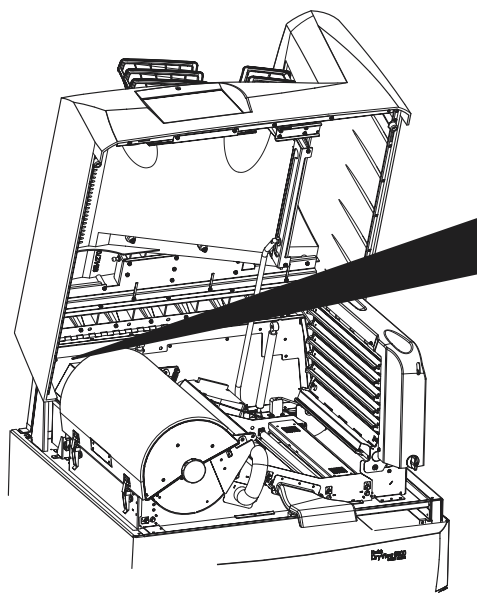
### Safety Labels

Safety labels are attached to the laser imager in compliance with international standards.



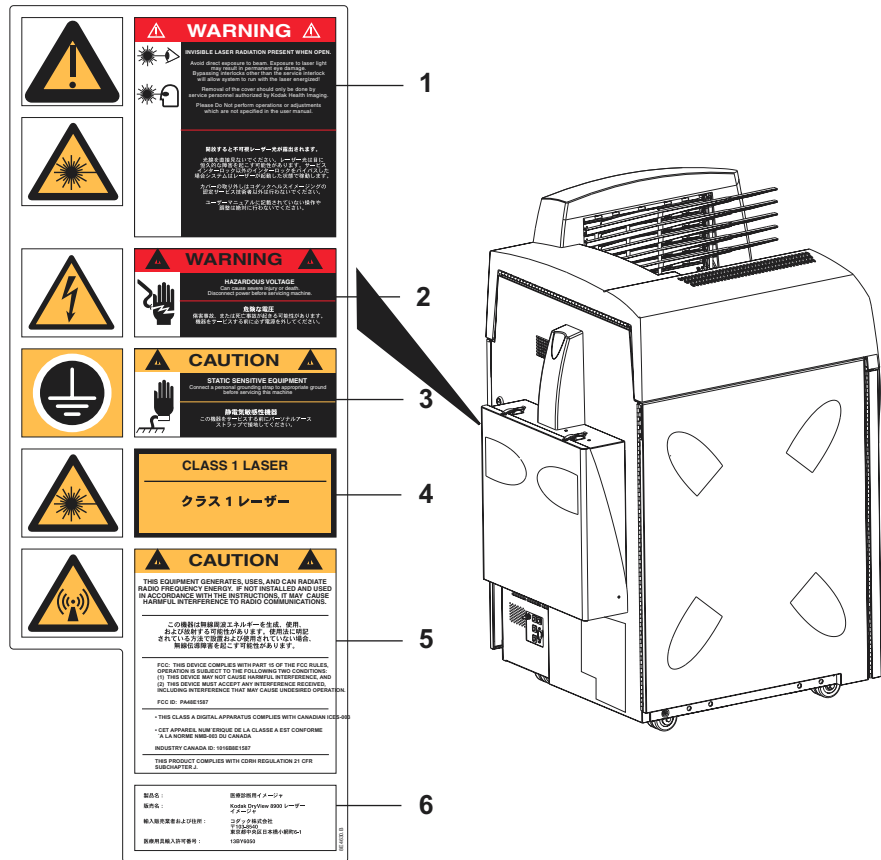
#### Pinch Points and Laser Radiation Warning Labels

- 1 Pinch Points.** This label warns operators that parts of the body may become trapped between moving and fixed parts of the laser imager.
- 2 Laser Interlock.** This label warns operators that laser energy is present. Defeating interlocks allows the laser imager to run with the laser energized. Avoid direct exposure to the laser beam. Exposure to laser energy may result in permanent eye damage.



### High Voltage Warning Label

This label warns operators that high voltage is present under panels or enclosures where labels are attached. Only Kodak Authorized Service Providers should attempt access.

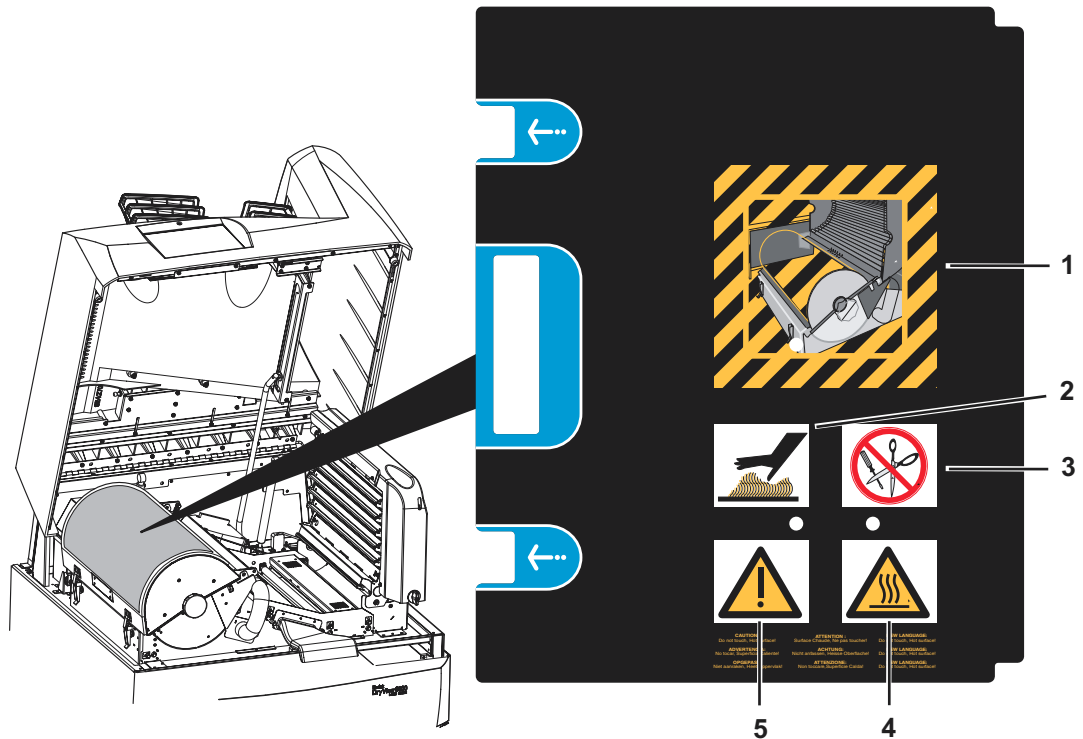


Warning and Caution Labels

- 1 Invisible Laser Radiation Present When Open.** This label warns operators that invisible laser radiation is present under panels where labels are attached. Avoid direct exposure to the laser beam. Exposure to laser energy may result in permanent eye damage. Defeating interlocks allows the laser imager to run with the laser energized.

- 2 **Hazardous Voltage.** This label warns operators that high voltage is present under panels where the label are attached. Only Kodak Authorized Service Providers should attempt access.
- 3 **Static Sensitive Equipment.** This label identifies static-sensitive components. Connect a personal grounding strap to appropriate ground before servicing this laser imager. Only Kodak Authorized Service Providers should service the laser imager.
- 4 **Class I Laser.** This label indicates that the laser imager complies with IEC requirements for Class I systems.
- 5 **Radio Frequency Energy.** This label indicates that the laser imager can radiate radio frequency energy. If not installed and used in accordance with the instructions, the laser imager may cause harmful interference to radio communications.
- 6 **Manufacturer Identification.** This label indicates the product name, manufacturer's name, importers name, and license number.





**Processor Drum Cover Label**

- 1** Processor drum cover pictogram. This pictogram illustrates the processor drum cover open. When open, the operator needs take take caution avoiding heat and use of sharp objects.
- 2** Caution - hot surface pictogram. This label warns operators to use care near the processor drum to avoid possible burns.
- 3** Caution - no sharp objects pictogram. This label warns operators to avoid using sharp objects near the processor drum.
- 4** ISO label warns operators to use care near the processor drum to avoid possible burns.
- 5** ISO label identifies a possible warning or caution and indicates applicable information in the User Guide.

### Safety and Health Compliance

This equipment has been tested for and complies with the following Safety and Emissions Standards. Certificates of compliance and Declarations of Conformity have been issued as shown below.

#### Safety

##### United States

21 CFR 1040.10 Class I: FDA CDRH Code of Federal Regulations Title 21 Food and Drugs, Volume 8, Chapter I Subchapter J Part 1040: Performance Standards for Light-Emitting Products, Section 10 - Laser Products.

FDA 95-415 Premarket Notification 510(K): Regulatory Requirements For Medical Devices.

UL 60950: Safety of Information Technology Equipment, including Electrical Business Equipment (Bi-National Standard).

IEC 60601-1-1 Medical electrical equipment - Part 1: General requirements for safety - Section : Collateral standard: Safety requirements for medical electrical systems.

IEC 60825-1: Safety of laser products - Part 1 : Equipment classification, requirements and user's guide.

##### Canada

C22.2 NO 950-95-CAN/CSA, Safety of Information Technology Equipment, Including Electrical Business Equipment (Gen Instr 1) (UL 1950-95).

IEC 60601-1-1 Medical electrical equipment – Part 1: General requirements for safety – Section : Collateral standard: Safety requirements for medical electrical systems.

IEC 60825-1: Safety of Laser products – Part 1: Equipment classification, requirements and user's guide.

##### Europe

EN60950: Safety of Information Technology Equipment, Including Electrical Business Equipment (IEC 60950: 1991, Modified) (Includes Amendment A1, A2, A3, A4, and A11).

EN60601-1-1: Medical electrical equipment - Part 1: General requirements for safety - Section 1: Collateral standard: Safety requirements for medical electrical systems.

EN60825-1: Safety of laser products - Part 1: Equipment classification, requirements and user's guide.

### **Rest of World**

IEC 60950: Safety of information technology equipment.

IEC 60601-1-1: Medical electrical equipment - Part 1: General requirements for safety - Section 1: Collateral standard: Safety requirements for medical electrical systems.

IEC 60825-1: Safety of laser products - Part 1: Equipment classification, requirements and user's guide.

## **EMC**

### **United States**

FCC Rules and Regulations, Title 47, Part 15, Subpart B, Class A: Radio Frequency Devices: Unintentional Radiators.

This equipment has been tested and been found to comply with the limits for a Class A digital device pursuant to part 15 of the FCC rules. Those limits are designed to provide reasonable protection against harmful interference in a residential installation.

FCC Rules and Regulations, Title 47, Part 15, Subpart C, Radio Frequency Devices: Intentional Radiators. This Device Contains “FCC ID: PA 48E1587”

### **Canada**

CAN/CSA-C108.6-M91, Class A: Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment.

Intentional Radiation. This Device contains “IC: 1016B-8E1587”

This Class A digital apparatus complies with Canadian ICES-003.

CET APPAREIL NUM ENRIQUE DE CLASSE A EST CONFORME A LA NORME NMB-003 DU CANADA.

This Class A digital apparatus meets all requirements of the Canadian Interference – Causing Equipment Regulations.

### **Europe**

EN55011 (CISPR 11) Class A Group 1: Limits and Methods of Radio Interference Characteristics of ISM Equipment.

European Telecommunication Standard (ETS) EN 300 330 : Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Short Range Devices (SRD); Technical Characteristics and Test Methods for Radio Equipment in the Frequency Range 9 kHz to 25 MHz and Inductive loop Systems in the Frequency Range 9 kHz to 30 MHz.

European Telecommunication Standard (ETS) EN 300 683 : Radio Equipment and Systems (RES) ; ElectroMagnetic Compatibility (EMC) Standard for Short Range Devices (SRD) operating on frequencies between 9 kHz and 25 GHz.

EN61000-3-2 (IEC 61000-3-2): Electromagnetic compatibility (EMC) - Part 3: Limits - Section 2: Limits for harmonic current emissions (equipment input current  $\leq 16$  per phase).

EN 61000-3-3 (IEC 61000-3-3): Electromagnetic compatibility (EMC) - Part 3: Limits - Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current  $\leq 16$  A.

EN 61000-4-2 (IEC 61000-4-2): Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test.

EN 61000-4-3 (IEC 61000-4-3): Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 3: Radiated, radio-frequency, electromagnetic field immunity test.

EN 61000-4-4 (IEC 61000-4-4): Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 4: Electrical fast transient/burst immunity test.

EN 61000-4-5 (IEC 61000-4-5): Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 5: Surge immunity test.

EN 61000-4-6 (IEC 61000-4-6): Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 6: Immunity to conducted disturbances, induced by radio-frequency fields.

EN 61000-4-8 (IEC 61000-4-8): Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 6: Immunity to Power frequency Magnetic fields.

EN 61000-4-11 (IEC 61000-4-11): Electromagnetic compatibility (EMC) - Part 4: Testing and measuring techniques - Section 11: Voltage dips, short interruptions and voltage variations immunity tests.

EN60825-1: Safety of laser products - Part 1: Equipment classification, requirements and user's guide.

### **Rest of World**

CISPR 11 Class A Group 1: Limits and Methods of Measurement of Radio Interference Characteristics of ISM Equipment.

### **EU Directives**

EU Directives include:

93/42/EEC Title: Council Directive Concerning Medical Devices.

99/05/EEC Title: Council Directive Concerning Radio and Telecommunications Terminal Equipment.

73/23/EEC Title: Council Directive on the Harmonization of the Laws of Member States Relating to Electrical Equipment Designed for Use within Certain Voltage Limits.

89/336/EEC Title: Council Directive on the Approximation of the Laws of the Member States Relating to Electromagnetic Compatibility.

### **CE Marking**

Documents concerning the conformance of this product to Council Directive 93/42/EEC of 14 June 1993 concerning Medical Devices can be obtained from the Eastman Kodak Health Imaging Systems European Representative at:

Kodak GmbH  
Quality Services  
Product Safety

70323 Stuttgart  
Germany  
Phone: ++49 711 406 2993  
Fax: ++49 711 406 3513

### User Guide Conventions

The following special messages emphasize information or indicate potential risks to personnel or equipment.

**NOTE:** Notes provide additional information, such as expanded explanations, hints, or reminders.

**IMPORTANT:** *Important notes highlight critical policy information that affects how you use this guide and this product.*



#### **CAUTION:**

**Cautions point out procedures that you must follow precisely to avoid damage to the system or any of its components, loss of data, or corruption of files in software applications.**



#### **WARNING:**

***Warnings identify procedures that you must follow precisely to avoid injury to yourself or others.***



#### **LASER WARNING:**

Laser warnings warn personnel that access to laser radiation is possible and all personnel must avoid direct exposure to the beam.

### Please Note

The information contained herein is based on the experience and knowledge relating to the subject matter gained by Eastman Kodak Company prior to publication. No patent license is granted by this information. Eastman Kodak Company reserves the right to change this information without notice and makes no warranty, express or implied, with respect to this information. Kodak shall not be liable for any loss or damage, including consequential or special damages, resulting from the use of this information, even if loss or damage is caused by Kodak's

negligence or other fault.

## Safety and Related Information







# 2 Overview

## **Kodak DryView 8900 Laser Imager**

The *Kodak DryView 8900* Laser Imager is a continuous-tone laser imager with an internal photothermographic film processor. Heat, rather than photo chemicals, is used to develop the film. The laser imager receives the digital image data through a DICOM medical imaging protocol.

The laser imager prints images on *DryView* Laser Imaging Film which is packed in 125-sheet cartridges. Three cartridges can be loaded into the laser imager simultaneously. The laser imager can accept blue or clear base in any of the following five film sizes:

- 8 x 10 in. *DryView* Film (20 x 25 cm)
- 10 x 12 in. *DryView* Film (25 x 30 cm)
- 11 x 14 in. landscape *DryView* Film (28 x 35 cm)
- 14 x 14 in. *DryView* Film (35 x 35 cm)
- 14 x 17 in. *DryView* Film (35 x 43 cm)