Table of Contents

Horizon® SF

Multi-media Imager

EN - English

Documentation and Notice

Codonics Products are Class I products intended for use by Healthcare Professionals.
Products packaging and labeling, including Graphic User Interface (GUI) for operation are offered in English and meet MDR, Annex I, Chapter III, 23.4, taking account the training and the knowledge of the potential user.

*Web information, Key Specifications, Intended Use, User manual Appendix, Quick Start Guide & Setup IFU are available in simple translation Member State Languages; primary IFU are available in English.

Overview

The Horizon SF combines small format diagnostic film, color paper and grayscale paper printing to provide the world's most versatile medical imager. Horizon's multiple media options help to immediately cut your costs, build referring physician loyalty and attract new business. Featuring color paper to show off your latest imaging techniques, low-cost, room light viewable grayscale paper and a compact, counter-top design, Horizon obsoletes film-only imagers. High speed image processing, networking and spooling are all standard.

Specifications

Print Technology: Dye-diffusion and direct thermal (dry, daylight safe operation)
Spatial Resolution: 320 DPI (12.6 pixels/mm)
Throughput: Up to 100 films per hour
Time To Operate: 5 minutes (ready to print from "off")
Grayscale Contrast Resolution: 12 bits (4096)
Color Resolution: 16.7 million colors
256 levels each of cyan, magenta, and yellow
Media Inputs: Three supply cassettes, 50 -100 sheets each, one color ribbon
Media Outputs: Three receive trays, 50-sheet capacity each
Media Sizes: 8" x 10" (blue and clear) DirectVista® Film
A, A4 DirectVista Grayscale Paper
A, A4 ChromaVista® Color Paper
Dmax: >3.0 with DirectVista Film
Archival: >20 years with DirectVista Film, under ANSI extended-term storage conditions
Supply Cassettes: All media is pre-packaged in factory sealed, disposable cassettes
Interfaces: Standard: 10/100 Base-T Ethernet (RJ-45), Serial Diagnostic Port, Serial Console
Network Protocols: Standard: FTP, LPR
Optional: DICOM (up to 24 simultaneous connections),Windows network printing
Image Formats: Standard: TIFF, GIF, PCX, BMP, PGM, PNG, PPM, XWD, JPEG, SGI (RGB), Sun Raster, Targa
Optional: DICOM, PostScript™ compatibility
Image Quality: Automatic calibration using built-in densitometer

Image Control: Gamma, Contrast, Saturation, Medical Color Matching (MCM™), Polarity, Rotation, Scaling, Antialiasing
Sheet Control: Density Adjustment (Dmax), Look-Up Tables (LUT), Image Warnings, Captions, Sheet Coverage, Border Color, Border Fill, Crop Anchor
Sheet Formatting: 1:1-1:81; Variable Multi-Formatting (VMF™), Fixed Multi-Formatting (FMF™)
Control Panel: Large, backlit LCD display, Status lights include Online, Alert, Fault, Active Power and Menu navigation buttons
Processor: Intel
Memory: 256MB RAM
Hard Disk: 40GB (18GB available for spooling)
Removable Disk: 100MB ZIP™ Disk for software upgrades
Smart Card: 32 KB for storing configuration data
Power: Universal Input: 100-120/230V~ 50/60 Hz, 600W printing, 150W idle
Heat Emission: Maximum 600W, 2,050 BTUs /hr. printing, 150W, 512 BTUs /hr. idle
Weight: 66 lbs. (30 kg.)
Engine Dimensions: 14.5" (37 cm) H, 20.5" (52 cm) W, 24" (61 cm) L
Environment: Operating Temperature: 15-30C
Storage: -22.2 - 50.6C
Operating Humidity: 10-70% R.H. (non-condensing)
Regulatory: Full medical device compliance including Class 2 FDA and Class 1 MDD CE, GMP/QSR, ISO13485:2003, 60601-1 Safety, and EMC/EMI (55011(B) & 60601-1-2) for Healthcare Facilities

Conventions Used in the User Manual

Bulleted Lists

Bullets are used to display a list of nonprocedural items. For example:

The control panel contains:

- A display panel
- Keys
- Indicators

Numbered Steps

The  icon indicates the beginning of a procedure. The steps in a procedure are numbered. For example:

1. Press the MENU key.

The Main Menu displays on the control panel. The selector arrow (►) automatically points to the first menu option.

2. To scroll through the menu options, press the up and down keys.

The selector arrow (►) moves up and down through the list. The bottom portion of the control panel display shows a message associated with the currently selected menu option.

Control Panel Navigation

Menu paths are used in some procedures instead of documenting every step needed to navigate to a specific menu option. For example:

From the Main Menu, select the following options:

Default Media
Grayscale
DV Film Blue

Control Panel Keys

Control panel keys are shown in small black ovals to resemble the actual keys, for example, "Press the **ENTER** key."

Control Panel Menu Options

Control panel menu options are shown in bold type, for example, "Select the **Gamma** menu option."

Notes and Tips

Notes contain additional information related to a topic or procedure. For example:

NOTE: If your network is managed by a network administrator or an information technology (IT) department, it would be considered a complex network. You should have the responsible person perform any network-related administrative tasks.

Tips provide additional insights about a topic or procedure (such as, why you may want to do something or a faster way to perform an operation). For example:

TIP: *Specifying print settings in a multi-user environment*
If the Horizon imager is accessed by multiple users, it is typically better for individual users to enter print values through the DICOM application interface rather than change the default settings through the control panel.

Cautions and Warnings

Cautions alert you to actions or situations that could cause harm to equipment or data. For example:

CAUTION Any changes you make to the imager default settings will also affect prints made by other users. Use caution when changing default settings.

Warnings alert you to actions or situations that could result in personal injury. For example:

WARNING With the imager cover open, touch only those internal components that are colored green.

Text Files and Displayed Text

Monospaced type is used for the contents of an ASCII file or machine text displayed in a terminal command window.

User Data

Bold monospaced type is used to indicate specific characters or words that you enter at a host workstation when performing advanced imager operations. ***If the type is also italicized***, it indicates variable text. For example:

1. From your workstation, open a UNIX or MS-DOS command window.
2. Enter the command **telnet** ***hostname*** or **telnet** ***IP Address*** (using either the Horizon imager hostname or IP Address).
3. At the login prompt, enter the command **status**.

Important Information and Filenames

Bold type is used for emphasis, command names, and paths or filenames. For example:

- The Horizon imager default settings can be changed both at the control panel and using text files.
- The hostname and IP Address must be added to the **/etc/hosts** file.

New Terms

Italic type is used when a term is introduced and defined. For example:

- The Horizon imager has a complete set of *default settings* that contain preconfigured values for every aspect of a printed sheet.

Purpose and Scope

Refer to this user manual for procedures on how to perform the most common imager operations, including:

- Setting up the imager
- Loading media
- Sending print jobs from DICOM Print Service Classcompliant applications running on imaging devices or image viewing workstation
- Sending print jobs from workstations via PostScript
- Sending print jobs using FTP and LPR
- Changing the imager's default image and sheet settings
- Adjusting the appearance of printed images for user preference
- Performing preventive maintenance
- Performing film calibration
- Troubleshooting common problems

NOTE: Some features and functions described here may not apply to older versions of the software.

This User's Manual is intended to be as simple and straightforward as possible for the everyday user. If you need more detailed or more technical information on a feature or topic, or wish to perform more advanced operations, refer to the *Horizon Imager Technical Manual* (Catalog no. HORIZON MNLT). The Technical Manual serves as a companion document to this manual

Product Information

For technical assistance with the Horizon, call Codonics Technical Support at the following number:

Phone: +1.440.243.1198
Toll Free: 800.444.1198 (USA only)

Technical Support is available anytime. Technical Support is also available online via email and the Codonics web site:

Email: support@codonics.com
Web Site: www.codonics.com

General product information can also be requested by sending email to:

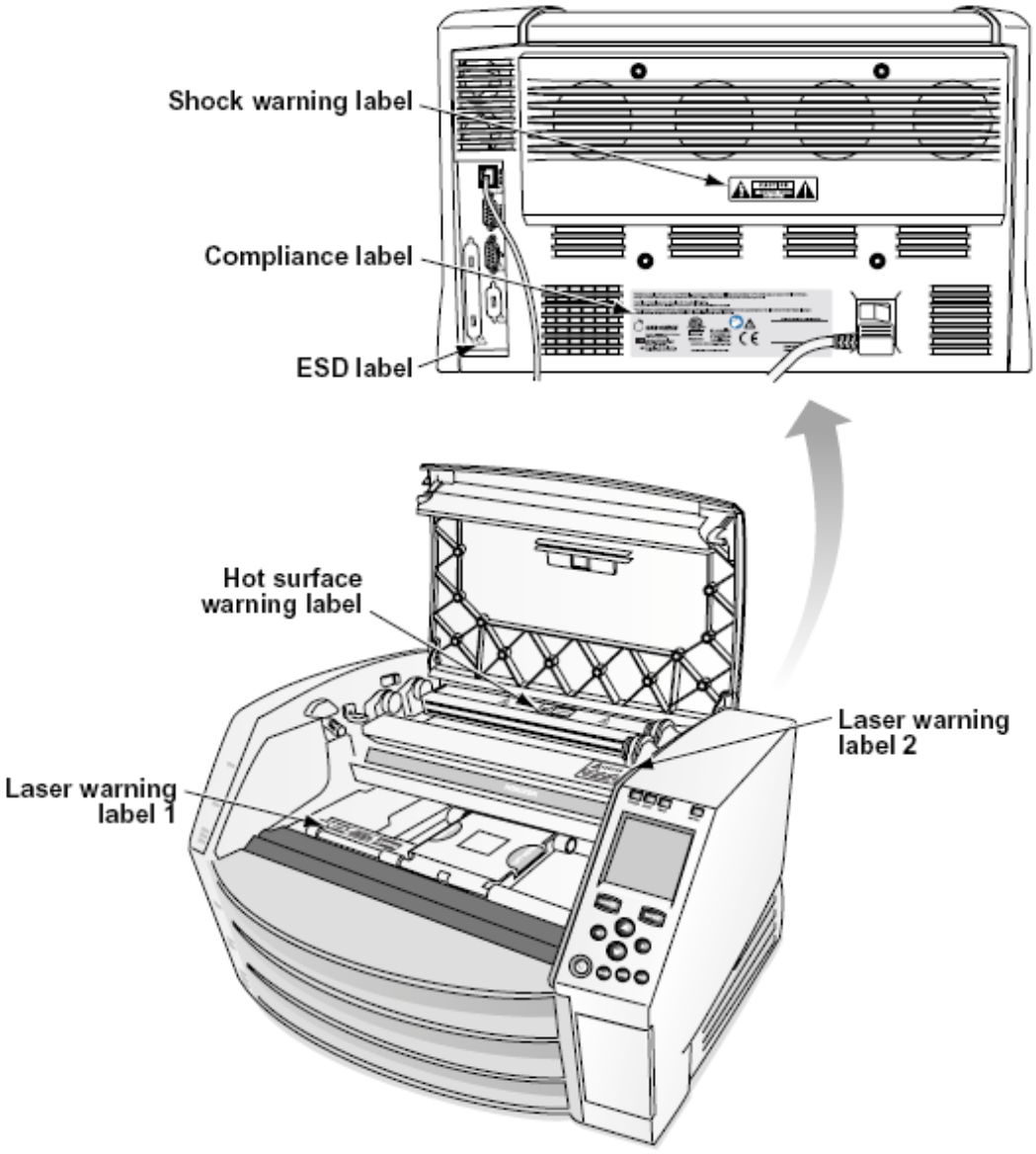
Email: info@codonics.com

Please include your postal mailing address and telephone number in the email message. Basic product information is returned via email unless otherwise requested.

Warnings and Limitations of Use

Location of Safety and Compliance Labels

The following figure shows the locations of the imager's safety and compliance labels.



Voltage Warning

The exclamation point within an equilateral triangle and person reading a manual symbol are intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this device.

NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. REMOVAL OF LABELS, COVERS, OR ENCASEMENT FASTENERS VOIDS THE WARRANTY.

THIS APPARATUS MUST BE ELECTRICALLY GROUNDED.

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS IMAGER TO RAIN OR MOISTURE.

EQUIPMENT IS NOT TO BE USED AS A COMPONENT OF A LIFE SUPPORT SYSTEM. Life support devices or systems are devices or systems that support or sustain life, and whose failure to perform can be reasonably expected to result in a significant injury or death to a person. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

WARNING Grounding reliability can be achieved only when the Horizon is connected to a receptacle marked "Hospital Only" (that is, "Hospital Grade").
WARNING The power cord connected to the Horizon is the main disconnect for the system.
WARNING To disconnect overall power to the Horizon prior to servicing it, power of the system (refer to "Powering Off the Imager".
WARNING Do not modify this equipment without authorization of the manufacturer
WARNING External equipment intended for connection to signal input, signal output, or other connectors, shall comply with relevant IEC standard (e.g., IEC 60950 for IT equipment and the IEC 60601 series for medical equipment). In addition, all such combinations - systems - shall comply with the IEC 60601-1 standard for Medical Electrical Equipment Systems. Equipment not complying to IEC 60601 shall be kept outside the patient environment, as defined in the standard. Any person who connects external equipment to signal input, signal output, or other connectors has formed a system and is therefore responsible for the system to comply with the requirements of IEC 60601-1-1. If in doubt, contact a qualified technician or Codonics Technical Support for approved configurations.
WARNING Do not touch a patient while also accessing the internal components that are under the top cover or receive trays.

Laser Warning

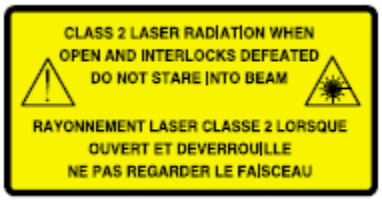
The Horizon imager uses a laser to read barcode information on the media cassettes. The laser module is a 650 – 670nm device of 1.26 mW or less. As such it has been found to comply with the 21 CFR 1040.10 and 1040.11 and IEC 60825 laser standards as a low power Class 1 device.

For safety reasons, the laser is turned on only for a short time when a cassette is inserted. Still, one should use caution and never stare at the laser beam, should avoid exposure to the laser, and

should never override any of the interlocks and safety mechanisms. These measures are taken for your protection.

WARNING Use of controls or adjustments to the performance of procedures other than those specified in this manual may result in hazardous radiation exposure.
The laser apertures are marked with a single label, shown below. There are three apertures that correspond to the three cassette locations, one for each, on the same side of the Horizon imager as this label.

Safety interlocks are marked by the following label. They are located on the same side of the Horizon imager as this label.



Temperature Warning

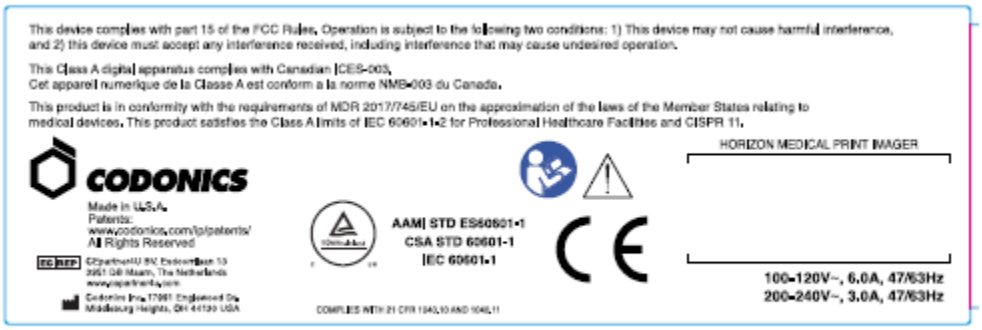
Because the Horizon imager is a thermal print device, the surface of the thermal print head heat sink gets hot. Avoid directly touching any components not colored green when accessing the interior of the imager if the imager has been printing. (During some preventative maintenance tasks, you will be touching internal components with cleaning pads or swabs.)

The temperature warning label is shown below.

Compliance

Codonics is in compliance with various regulations.

The Compliance label, which is affixed at the back of the imager, is shown below.



Compliance label

Serial Number, Configuration, Date Code, and Modification Codes

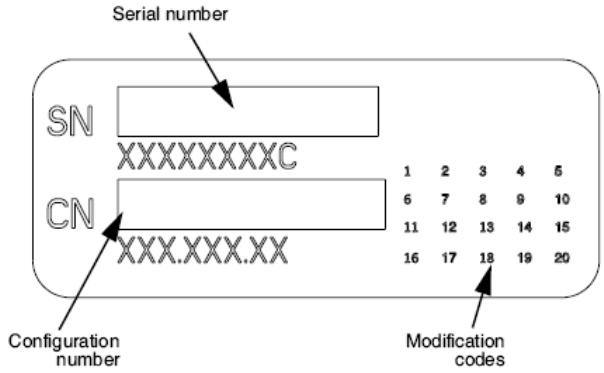
The Serial number label is placed onto the Compliance label. It includes the following information.

The serial number (SN), which uniquely identifies the unit.

The Configuration number (CNFG), which details the build configuration.

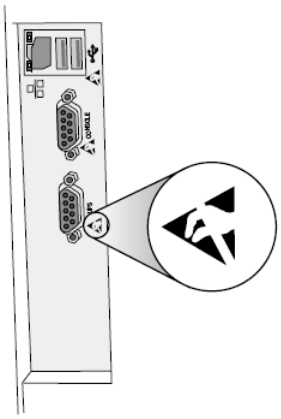
The modifications codes, which are to the right of the CNFG number and are a series of 20 numbers. When any of these numbers are blocked out, that identifies a modification that was made to the unit.

The date code in YYYY-MM format below the factory date code symbol.



ESD Caution

Connections to other pieces of equipment are made at the rear of the Horizon imager. These connectors are marked with a precautionary ESD warning symbol, as shown below. Do not touch any of the pins of these connectors. When making connections to the imager, it is best done while the imager is plugged in but not powered on. ESD may cause erratic behavior of the imager when powered on. Should this occur, power to the imager may have to be cycled. It is recommended that all staff involved in making connections to the imager be aware of these ESD precautions.



Rear panel

Potential for Radio Frequency Interference on Imager Operation

Both portable and mobile RF communications equipment can affect medical electrical equipment, including the Horizon imager. Keep such RF communications equipment out of the immediate area.

Potential for Radio and Television Interference

The Horizon imager generates and uses radio frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with Class B emission

limits for a computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operating in a commercial environment. Operation of the equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be appropriate to correct the interference. If your imager does cause interference to radio or television reception, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the imager with respect to the receiver

If necessary, you should consult Codonics technical support or an experienced radio/television technician for additional suggestions. You may find the following booklet prepared by the Federal Communications Commission helpful: *How to Identify and Resolve Radio-TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

This product is in conformity with the requirements of EC Council directive MDR 2017/745/EU (CE) on the approximation of the laws of the Member States relating to medical devices. This product satisfies the Class A limits of IEC60601-1-2 and CISPR 11. A declaration of conformity with the requirements of the Directive has been signed by the Director of Operations. Horizon is approved for export via FDA Certificates to Foreign Government and registered as a medical device for import. A current list of countries is available on request.

Guidance Regarding Electromagnetic Emissions and Immunity

Suitable Environments:

- Horizon is intended for use in professional healthcare facility environments, including hospitals and medical clinics.
- Horizon has not been evaluated for use near HF surgical equipment. If use near HF surgical equipment is desired, the user is responsible for verifying proper operation of the Horizon. If Horizon does not perform correctly in this environment, move the Horizon farther from the source of the electromagnetic disturbance.
- Horizon has not been evaluated for use in emergency medical vehicles.

As a support device, Horizon does not provide essential performance.

WARNING Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

WARNING Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

WARNING Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Horizon, its cables, or accessories. Otherwise, degradation of the performance of this equipment could result.

Electromagnetic Emissions Standards and Test Levels:

Test / Standard	Compliance Level
RF Emissions CISPR 11	Group 1, Class A
RF Emissions FCC Part 15	Class A
Conducted Emissions CISPR 11	Group 1, Class A
Harmonic Distortion IEC 61000-3-2	Class A
Voltage Fluctuations and Flicker IEC 61000-3-3	Complies

Electromagnetic Immunity Standards and Test Levels:

Test / Standard	Compliance Level
Electrostatic Discharge	±8kV contact
IEC 61000-4-2	±2kV, ±4kV, ±8kV, ±15kV air

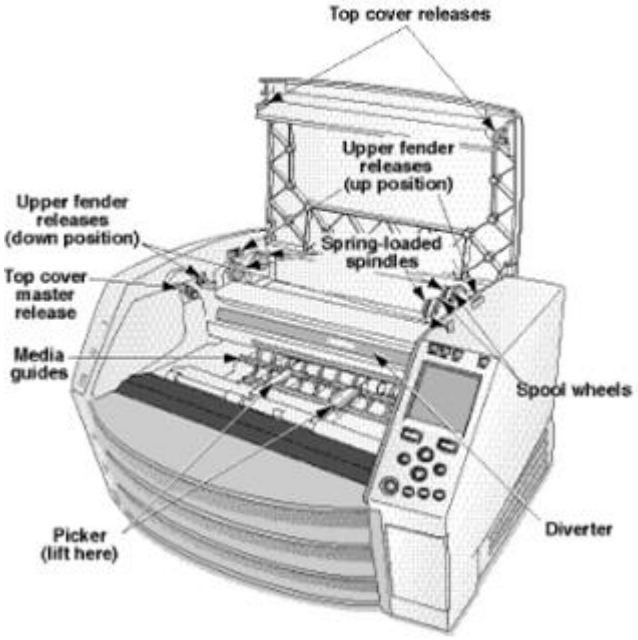
Electromagnetic Immunity Standards and Test Levels: (Continued)

Test / Standard	Compliance Level
Radiated RF Immunity IEC 61000-4-3	3 V/m 80 MHz - 2.7 GHz 80 % AM at 1 kHz
Proximity fields from RF wireless equipment IEC 61000-4-3	Complies
Electrical Fast Transient / Burst IEC 61000-4-4	AC Port: ± 2 kV, 100 kHz repetition frequency SIP/SOP Ports: ± 1 kV, 100 kHz repetition frequency
Surge IEC 61000-4-5	Line-to-Line: ± 0.5 kV, ± 1.0 kV Line-to-Ground: ± 0.5 kV, ± 1.0 kV, ± 2.0 kV
Conducted Immunity IEC 61000-4-6	AC Port and SIP/SOPs: 3V, 0.15 MHz - 80 MHz 6V, in ISM bands between 0.15 MHz and 80 MHz 80 % AM at 1 kHz
Magnetic Field Immunity IEC 61000-4-8	30 A/m, 50 Hz or 60 Hz
Voltage Dips IEC 61000-4-11	0% U_T, 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% U_T, 1 cycle AND 70% U_T, 25/30 cycles, Single phase: at 0°
Voltage Interruptions IEC 61000-4-11	0% U_T, 250/300 cycle

Safety Precautions

- Never connect this imager to any outlet or power supply that has a voltage or frequency different than that specified on the rear of the imager.
- When servicing the imager, always power it off using the (power) key at the control panel, then turn the rocker switch in the back to the **0** (off) position, then unplug the imager.
- Damage to the power cord may cause fire or shock hazard. When unplugging the power cord, hold it by the plug only and remove the plug carefully.
- If the power cord needs to be replaced, replace it only with another Codonics power cord manufactured specifically for your imager's power configuration.

- If the imager is smoking or making unusual sounds, power off and unplug the imager immediately.
- Do not insert foreign objects of any kind into the imager; doing so can constitute a safety hazard and cause extensive damage.
- Do not place any liquid containers on the imager. If, for some reason, liquid seeps into the imager, power off the imager and unplug the power cord from the source outlet. If used without corrective measures, the imager may be damaged.
- Do not use the imager near flammable gases.
- With the imager top cover open or the receive trays removed, touch only those internal components that are colored green (shown in the following figure). Remove rings, ties, jewelry, and other items, and tie back hair, so that they do not fall into or get caught in the imager.



Internal Components That Are Colored Green (called out in the illustration) Are Safe to Touch

Location Precautions

- The imager's operating ambient temperature range is 15–30ºC (59–86ºF), with a relative humidity of 10%–80%.
- If the imager is moved quickly from an extremely cold place to a warmer one, condensation is likely to form. Do not use the imager if condensation has formed. Wait until the condensation has evaporated. You can speed up the evaporation time by moving the imager to a dryer location.
- Ventilation slots and holes are provided on the sides and rear of the imager. Place the imager on a hard level surface and locate it at least 10 cm (4 in.) from walls to ensure proper ventilation

CAUTION Adequate ventilation is required for proper operation of the imager

CAUTION When positioning the Horizon Imager, ensure there is adequate space to access the rear power switch.

- Do not place imager in a high humidity or high dust area. Airborne dirt particles can cause image quality problems. Avoid placing the imager in areas where ventilation ducts, open doors, or frequent passers-by might expose the imager and media to high levels of debris.
- Do not locate the imager in hot-springs areas where hydrogen sulfide and acidic ions are likely to be generated.

- Do not locate the imager where there are oily fumes and vapors.
- Do not locate the imager in direct sunlight.
- Do not locate imager near sources of high RF energy.
- Do not locate the imager where it might be subject to jarring or vibrations, such as a table or desk in a hightraffic area. Jarring and vibrations can affect the print quality of images.
- Horizon satisfies the electrical safety limits of IEC60601-1 and CISPR 11 and is suitable for patient care area location. Check with local ordinances and installation guidelines to confirm approved location requirements.

Cleaning Precautions

- Many plastic components are used in the imager's construction. Coat flecking and deformation is likely to occur if the imager is wiped with chemical dusters, benzene, thinners, insecticides, or other solvents. Rubber and PVC materials left in contact with the imager for extended times will cause damage. Never use petroleumbased solutions or abrasive cleaners.
- To clean the imager cover, first power off the imager using the (power) key at the control panel, then turn the rocker switch in the back to the **0** (off) position, then unplug the imager. Clean the cover with a soft cloth slightly moistened with a mild soap and water solution. Allow the cover to completely dry before operating the imager again.

Media

For **ChromaVista**® color prints, the consumed ribbon contains facsimiles of any patient images printed to **ChromaVista** color sheets. Therefore, you must properly dispose of or destroy consumed ribbon to ensure the confidentiality of patient images.

The optical density of reflective and transmissive prints have a nominal range of: Dmin = 0.10 OD (reflective), 0.11 OD (transmissive) to Dmax = 2.10 OD (reflective), 3.1 OD (transmissive). Actual optical densities may vary based on media variations and on the instrument being used to measure density. For example, **DirectVista**® Clear film may have a lower Dmin and Dmax than **DirectVista** Blue film.

- The Horizon imager includes a built-in densitometer. The built-in densitometer is designed to produce consistent prints by compensating for variation from one film cassette to another and one imager to another. For applications that require absolute control of the maximum density, the results should be checked against a bench-top commercial densitometer. The internal densitometer can be calibrated to a desktop unit. See the *Horizon Imager Technical Manual* for more information.
- **DirectVista** media is optimized for grayscale prints, while **ChromaVista** is optimized for color prints. If **ChromaVista** is not giving you satisfactory results with grayscale images, you may want to consider using **DirectVista** media for those applications.
- Media variations between different production lots may produce subtle differences in image quality and color. These variations most often occur in color ribbons and are characterized as a slight color hue in grayscale images.
- Codonics film media is designed to be viewed using a light box suitable for viewing medical diagnostic images.
- Codonics paper/white film media is designed to be viewed under coolwhite, fluorescent light. Spectral differences and intensity variations in the viewing light sources can change the apparent color of images printed on paper/white film.
- Printed images that are subject to prolonged exposure to sunlight, ultraviolet light, or extreme heat may degrade in image quality. (For example, printed sheets should not be stored in an automobile on a sunny day.) Precautions should be used to avoid prolonged direct exposure.

Codonics Paper/White Film Media

The terms “white paper” and “white film” are synonymous references and used interchangeably in this manual.

File Transfer via FTP and LPR

- Different users who share a user name when transferring files to the imager may cause unpredictable and erroneous printed output. The imager associates information with the user name. Each user should have a unique user name when connecting to the imager via FTP and LPR.

Color Management

- Image settings—including gamma, contrast, Dmax, saturation, and MCM™ (Medical Color Matching™)—are intended to compensate for differences that may occur between image acquisition and image printing. These filters allow you to accurately render the final printed image. You should use care when applying these filters to avoid over compensation.
- The Default User Settings set at the control panel will potentially affect prints made by all users. Use caution when changing the default settings.

Image Scaling

- Scaling an image will filter the original image data and add or remove information, which may affect the accuracy of the final printed image. The amount of information added or removed will also vary with the magnitude of the scale factor applied. This can also affect the accuracy of the final printed image. You should be aware of the properties and limitations of each scaling algorithm and select the appropriate algorithm for the task.

Hardware Variations

- Components used in the imager may vary, causing differences in image quality. The thermal process of producing a print utilizes many components that are calibrated to provide consistency between imagers. There are subtle differences between imagers that can cause print variations. These differences usually apply to thermal print head calibration. Other factors such as age, usage, heat, mechanical wear, and shipping can affect image color and quality.
- The type of media used to install software updates and to backup imager configuration settings depends on hardware variations. If the imager has a built-in Zip drive, installations and backups are performed using 100-MB Zip disks. If the imager does not have a built-in Zip drive, USB flash drives are used with the USB ports on the rear panel. Throughout this manual, Zip disks and USB flash drives are referred to as *installation media* or *backup media*, depending on the operation being performed.

NOTE: If the imager has both a Zip drive and a USB port, always use the Zip disk to install software and save configuration settings.

Disposal Requirements

Disposal of this product and consumables shall be in accordance with all applicable laws and regulations in effect at the locality at the time of disposal.

European Disposal Requirements

Codonics imagers and electronic accessory devices are not to be discarded or recycled; rather they are to be returned to the manufacturer. Contact Codonics directly or by the link provided for the latest information concerning:

- Identification of the country-specific Importer/Distributor/Producer
- Product return and treatment of our electronic products

Manufacturer: Codonics Inc.
17991 Englewood Drive
Middleburg Heights, OH 44130 USA
Phone: +1.440.243.1198
Fax: +1.440.243.1334
E-mail: WEEE@codonics.com
www.codonics.com

Codonics electronic products and accessories bearing the following symbol are subject to European Directive on Waste Electrical and Electronic Equipment (WEEE) 2002/96/EC, amended by Directive 2003/108/EC. The EN 50419 symbol indicates separate collection and return required.

EN 50419 symbol

Indications for Use

CAUTION Approved FDA Class 2 device - Federal law restricts this device to be sold for use by or on the order of a physician.

The intended use of the Horizon Series Imagers is high-resolution hardcopy imaging of digital image source material and through the conversion of electronic signals from a wide variety of direct/indirect medical imaging modality outputs. The hardcopy output includes, however is not limited to, digital radiography, nuclear medicine, ultrasound, CT, MRI, CR, and Radiation Therapy planning. Images are suitable for medical image diagnosis use and referral. The system is intended for use by medical radiologists, imaging modality specialists, and communications to referring physicians.

The Horizon Series Imagers are dry, thermal, grayscale (G, GS,GSs,GS-Rad, G1, and G2 models) and grayscale/color (Ci, Ci-s, CiRAD, and SF models) direct thermal printer/imagers.

The Horizon XL is a special model adding 14 x 36in. and 14 x 51in. true size “long” media that permits digital direct orthopedic application hardcopy, including diagnosis and analysis of scoliosis, weight bearing spine/hip/knee, and long bone/hip prosthetic and orthopedic appliances work-up and surgical planning. Horizon XL is applicable to true-size hardcopy of whole body CT, MRI, and Angiographic and Venous flow imaging procedures.

Horizon Imagers are 510(k) cleared to market as FDA Class 2 devices, Regulation number 892.2040, Classification Product Code LMC: Horizon Series Medical Multimedia Dry Imagers K021054 and Horizon XL Medical Long Film Imager Hardcopy Multimedia K060440.

User Manual Warnings and Cautions

CAUTION Approved FDA Class 2 device - Federal law restricts this device to be sold for use by or on the order of a physician.

CAUTION Make sure that the table can support the weight of the imager [approximately 66.7 kg (147 lbs) with receive trays and three full supply cassettes installed].
WARNING The imager is heavy. To avoid injury, use two people to unpack and position the imager.
CAUTION Do not scratch or nick the sheet metal. Scratches and nicks in the basement will damage the printed side of ChromaVista sheets.
CAUTION Make sure that the imager is powered off before connecting the Ethernet cable. For information about powering the imager on and off, refer to "Powering the Imager On and Off".
CAUTION Do not touch any of the connector pins.
CAUTION If the thermal print head is not parked, power on the imager, then repeat steps 2 and 3 to properly power off the imager so that it does park.
CAUTION Push the ribbon carriage down slowly. Forcing it down too quickly may damage the carriage.
CAUTION If the imager is powered off using the POWER key, unprinted queued jobs are saved and will finish printing once the imager is powered on again (you can purge all jobs). However, if the imager is powered off using the rocker switch in the back or power is interrupted (for example, an unexpected power failure), queued jobs may be lost.
WARNING When servicing the imager, always power it off using the POWER key, turn the rocker switch in the back to the 0 (off) position, then unplug the imager.
CAUTION Use only Codonics media. Do not use plain paper, office transparencies, or other unapproved media as damage, improper operation, or malfunction may result. For information about the approved Codonics media types and sizes, and how to order cassettes, refer to "Ordering Media".
CAUTION Do not refill a cassette. Do not tamper with or remove the barcode label. The cassette's barcode information is essential for ensuring diagnostic image quality. Compromising the cassette in any way jeopardizes the quality and reliability of the imager.
CAUTION Do not remove or insert a cassette while a sheet is being printed, or you could affect the image quality of the printed sheet or cause a jam. Always pause the imager first.
CAUTION Do not remove the printed cassette cover; it protects the media from dust and other contaminants. Always hold and store the cassette with the open side up to prevent the sheets from falling out.
WARNING With the imager cover open, touch only those internal components that are colored green. Remove rings, ties, jewelry, and other items, and tie back hair, so that they do not fall into or get caught in the imager.
CAUTION Used ribbon retains the negative of the color images that were printed using that ribbon. If you are required to ensure patient confidentiality and privacy, the ribbon should be destroyed.
CAUTION Use caution when changing the imager default settings. Changes could affect prints made by other users.
CAUTION Changing the default settings will affect prints made by other users. Use caution when changing default settings. Typically, it is better to specify sheet and image parameter settings from the DICOM application or a PostScript printer's settings, or use a Job Settings file that contains the values you need. For information about Job Settings files, refer to the *Horizon Imager Technical Manual*.
CAUTION If the imager's settings were changed from the factory defaults prior to being shipped (for example, to accommodate a special OEM configuration), resetting to the factory defaults will not restore the "as shipped" settings. Instead, they will be reset to the standard factory default values.
CAUTION Resetting to the factory defaults will affect prints made by other users. Use caution when changing default settings. Typically, it is better to specify sheet and image parameter settings from the DICOM application or a PostScript printer's settings, or use a Job Settings file that contains the values you need. For information about Job Settings files, refer to the *Horizon Imager Technical Manual*.
CAUTION Changing the imager's Default Media and Default User Settings could affect subsequent prints made by other users. Use caution when changing default settings.
CAUTION Changing the imager's Default Media and Default User Settings could affect subsequent prints made by other users. Use caution when changing default settings.

WARNING With the imager cover open, touch only those internal components that are colored green. Remove rings, ties, jewelry, and other items, and tie back hair, so that they do not fall into or get caught in the imager.
WARNING The thermal print head may be hot.
WARNING When cleaning the print head, avoid the extreme ends of the print head, which are sharp.
CAUTION Use only the print head cleaning wipe when cleaning the thermal print head. Also, do not touch the glass surface of the thermal print head with your fingers; it could damage the print head. To avoid touching the glass surface, you may want to wear gloves when cleaning the thermal print head.
CAUTION The thermal print head must be completely dry before attempting to use the imager. Allowing the thermal print head to heat up again while still wet will damage the thermal print head.
WARNING With the imager cover open, touch only those internal components that are colored green. Remove rings, ties, jewelry, and other items, and tie back hair, so that they do not fall into or get caught in the imager.
CAUTION Use only the platen roller cleaning wipe when cleaning the platen. The platen roller could be damaged if you use the print head cleaning wipe.
WARNING With the receive trays removed, touch only those internal components that are colored green. Remove rings, ties, jewelry, and other items, and tie back hair, so that they do not fall into or get caught in the imager.
CAUTION Use only the platen roller cleaning wipe when cleaning the pick tires. The tires could be damaged if you use the print head cleaning wipe.
CAUTION Do not touch the pick tires (which may be white or green); body oils from your fingers are hard to remove and could eventually damage the tires.
WARNING With the receive trays removed, touch only those internal components that are colored green. Remove rings, ties, jewelry, and other items, and tie back hair, so that they do not fall into or get caught in the imager.
CAUTION Use only cleaning swabs from a Barcode Reader Cleaning Kit.
CAUTION Do not scratch or nick the sheet metal. Scratches and nicks in the basement will damage the printed side of ChromaVista sheets.
CAUTION Federal law restricts this device to be sold for use by or on the order of a physician.
WARNING With the top cover open, touch only those internal components that are colored green. Remove rings, ties, jewelry, and other items, and tie back hair, so that they do not fall into or get caught in the imager.
CAUTION Do not touch the pick tires (which may be white or green); body oils from your fingers are hard to remove and could eventually damage the tires.
CAUTION To avoid damaging internal components, use care when removing a sheet from the media path in the upper part of the imager.
CAUTION Never put a sheet back in the cassette. Dust or oil from your finger will affect the image quality.
WARNING With the top cover open, touch only those internal components that are colored green. Remove rings, ties, jewelry, and other items, and tie back hair, so that they do not fall into or get caught in the imager.
CAUTION Be careful not to scratch the polished sheet metal or damage the sensor near the upper guide notch.
CAUTION Make sure you do not overrotate the media guide, as shown below.
CAUTION Federal law restricts this device to be sold for use by or on the order of a physician.
CAUTION Use care when running the Purge Print Jobs function. This function will purge other users' print jobs as well as yours.
CAUTION All files uploaded using anonymous FTP are readable by other FTP users. DO NOT upload sensitive or classified information.

Horizon® SF

Multi-media Immaġinatur

MT - Malti

Dokumentazzjoni u Avviż

Codonics Prodotti huma Klassi Jien prodotti maħsuba għal użu minn Kura tas-saħħa Professjonisti. Prodotti ippakkjar u tikkettar, inkluż Grafika Utent Interface (GUI) għal operazzjoni huma offered fi Ingliż u tiltaqa MDR, Anness Jien, Kapitolu III, 23.4, tieħu kont il taħriġ u il għarfien ta ' il potenzjali utent.

* Web informazzjoni, Ewlenin Speċifikazzjonijiet, Maħsub Uża, Utent manwali Appendiċi, Malajr Ibda Gwidae & Setup IFU huma disponibbli fi sempliċi traduzzjoni Membru Stat Lingwi; primarja IFU huma disponibbli fi Ingliż.

Ħarsa ġenerali

Il Horizon SF tgħaqqad żgħir format dijanjostiku film, kulur karta u skala tal-griż karta stampar għal jipprovdu il tad-dinja l-aktar versatili mediku immaġinatur. Orizzont multipli midja għażliet għajnuna għal immedjatament maqtugħa tiegħek spejjeż, tibni jirreferu tabib lealtà u tattira ġdid negozju.
Jidhru kulur karta għal juru mitfi tiegħek l-aktar tard immaġini tekniki, bi prezz baxx, kamra dawl viżibbli skala tal-griż karta u a kompatt, counter-top disinn, Horizon skaduti film biss immaġini.
Għoli veloċità immaġni ipproċessar, netwerking u spooling huma kollha standard.

Speċifikazzjonijiet

Stampa Teknoloġija: Diffużjoni taż-żebgħa u dirett termali (niexef, dawl tax-xemx bla periklu operazzjoni)
Ġeografika Riżoluzzjoni: 320 DPI (12.6 pixels / mm)
Fluss: Fuq għal 100 films kull siegħa
Ħin Lil Ħaddem: 5 minutes (lest għal jistampa minn "Mitfi")
Skala tal-griż Kuntrast Riżoluzzjoni: 12 bits (4096)
Kulur Riżoluzzjoni: 16.7 miljun kuluri
256 livelli kull wieħed ta ' ċjan, maġenta, u isfar
Midja Inputs: Tlieta provvista kasetts, 50 -100 folji kull wieħed, waħda kulur żigarella
Midja Outputs: Tlieta jirċievu trejs, 50 folja kapaċità kull wieħed
Midja Daqsijiet: 8 ” x 10 ” (blu u ċar) DirectVista® Film
A, A4 DirectVista Skala tal-griż Karta
A, A4 ChromaVista® Kulur Karta
Dmax: > 3.0 ma ' DirectVista Film
Arkivju: > 20 snin ma ' DirectVista Film, taħt ANSI fit-tul ħażna kondizzjonijiet
Provvista Cassettes: Kollha midja huwa ippakkjat minn qabel fi fabbrika issiġillat, jintremew kasetts
Interfaces: Standard: 10/100 Bażi-T Ethernet (RJ-45), Serjali Dijanjostiku Port, Serjali Console
Netwerk Protokolli: Standard: FTP, LPR
Mhux obbligatorju: DICOM (up għal 24 simultanju konnessjonijiet), Windows netwerk stampar
Immaġni Formati: Standard: TIFF, GIF, PCX, BMP, PGM, PNG, PPM, XWD, JPEG, SGI (RGB), xemx Raster, Targa
Mhux obbligatorju: DICOM, PostScript ™ kompatibilità

Immaġni Kwalità: Awtomatiku kalibrazzjoni bl-użu inkorporat densitometru
Immaġni Kontroll: Gamma, Kuntrast, Saturazzjoni, Mediku Kulur Tqabbil (MCM ™), Polarità, Rotazzjoni, Skalar, Antialiasing
Folja Kontroll: Densità Aġġustament (Dmax), Ħares il-fuq Tabelli (LUT), Immaġni Twissijiet, Captions, Folja Kopertura, Fruntiera Kulur, Fruntiera Imla, Ħsad Ankra
Folja Ifformattjar: 1: 1-1: 81; Varjabbli Multi-Ifformattjar (VMF ™), Iffissat Multi-Ifformattjar (FMF ™)
Kontroll Panel: Kbir, imdawwal LCD wiri, Status dwal jinkludu Online, Twissija, Tort, Attiv Qawwa u Menu navigazzjoni buttuni
Proċessur: Intel
Memorja: 256MB ram
Iebes Diska: 40GB (18GB disponibbli għal spooling)
Li tista 'titneħħa Diska: 100MB ZIP ™ Diska għal softwer promozzjonijiet
Intelliġenti Karta: 32 KB għal ħażna konfigurazzjoni dejta
Qawwa: Universali Input: 100-120 / 230V ~ 50/60 Hz, 600W stampar, 150W wieqaf
Saħħan Emissjoni: Massimu 600W, 2,050 BTUs / siegħa. stampar, 150W, 512 BTUs / siegħa. wieqaf
Piż: 66 lbs. (30 kg.)
Magna Dimensjonijiet: 14.5 ” (37 cm) H, 20.5 ” (52 cm) W, 24 ” (61 cm) L
Ambjent: Joperaw Temperatura: 15-30C
Ħażna: -22.2 - 50.6C
Joperaw Umdità: 10-70% R.H. (mingħajr kondensazzjoni)
Regolatorju: Sħiħ mediku apparat konformità inkluż Klassi 2 FDA u Klassi 1 MDD CE, GMP / QSR, ISO13485: 2003, 60601-1 Sigurtà, u EMC / EMI (55011 (B) & 60601-1-2) għal Kura tas-saħħa Faċilitajiet

Konvenzjonijiet Użat fi il Utent Manwal

Bulleted Listi

Balal huma użat għal wiri a lista ta ' mhux proċedurali oġġetti. Għal eżempju:

Il kontroll panel fih:

- A wiri panel
- Ċwievet
- Indikaturi

Numerat Passi

Il  ikona tindika il bidu ta ' a proċedura. Il passi fi a proċedura huma innumerati. Għal eżempju:

1.Agħfas il MENU ċavetta.

Il Prinċipali Menu wirjiet fuq il kontroll panel. Il selettur vleġġa(▶) awtomatikament punti għal il-ewwel menu għażla.

2.Lil scroll permezz il menu għażliet, agħfas il sa u isfel ċwievet.

Il selettur vleġġa (▶) jiċċaqlaq sa u isfel permezz il lista. Il qiegħ porzjon ta ' il kontroll panel wiri turi a messaġġ assoċjat ma ' il bħalissa magħżula menu għażla.

Kontroll Panel Navigazzjoni

Menu mogħdijiet huma użat fi xi wħud proċeduri minflok ta ' dokumentazzjoni kull pass meħtieġa għal tinnaviga għal a speċifiku menu għażla. Għal eżempju:

Minn il Prinċipali Menu, agħżel il wara għażliet:

Nuqqas Midja
Skala tal-griż
DV Film Blu

Kontroll Panel Ċwievet

Kontroll panel ċwievet huma murija fi żgħir iswed ovali għal jixbhu il attwali ċwievet, għal eżempju, "Agħfas il **DĦUL** ċavetta. "

Kontroll Panel Menu Għażliet

Kontroll panel menu għażliet huma murija fi grassa tip, għal eżempju, "Agħżel il **Gamma** menu għażla. "

Noti u Ħjiel

Noti fihom addizzjonali informazzjoni relatati għal a suġġett jew proċedura. Għal eżempju:

NOTA: Jekk tiegħek netwerk huwa ġestiti minn a netwerk amministratur jew an informazzjoni teknoloġija (IT) dipartiment, dan kieku tkun meqjus a kumpless netwerk. Int għandu jkollhom il responsabbli persuna iwettaq kwalunkwe relatati man-netwerk amministrattiv kompiti.

Ħjiel jipprovdu addizzjonali għarfien madwar a suġġett jew proċedura (bħal kif, għaliex int jista ' trid għal agħmel xi ħaġa jew a aktar malajr mod għal iwettaq an operazzjoni). Għal eżempju:

TIP: *Speċifikazzjoni jistampa settings fi a multi-utent ambjent*
Jekk il Horizon immaġinatur huwa aċċessata minn multipli utenti, dan huwa tipikament aħjar għal individwali utenti għal daħħal jistampa valuri permezz il DICOM applikazzjoni interface anzi minn bidla il default settings permezz il kontroll panel.

Prekawzjonijiet u Twissijiet

Prekawzjonijiet twissija int għal azzjonijiet jew sitwazzjonijiet dak setgħet kawża ħsara għal tagħmir jew dejta. Għal eżempju:

ATTENZJONI Kwalunkwe bidliet int jagħmlu għal il immaġinatur default settings se also jaffettwaw stampi magħmula minn oħra utenti. Uża kawtela meta jinbidlu default settings.
Twissijiet twissija int għal azzjonijiet jew sitwazzjonijiet dak setgħet riżultat fi personali korriment. Għal eżempju:

TWISSIJA Ma ' il immaġinatur għata miftuħ, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar.

Test Fajls u Murija Test

Monospazjat tip huwa użat għal il kontenut ta ' an ASCII fajl jew magna test murija fi a terminali kmand tieqa.

Utent Dejta

Bold monospazjat tip huwa użat għal indika speċifiku karattri jew kliem dak int daħħal fi a ospitanti stazzjon tax-xogħol meta jwettaq avvanzat immaġinatur operazzjonijiet. ***Jekk il tip huwa ukoll korsiv***, dan tindika varjabbli test. Għal eżempju:

1.Minn tiegħek stazzjon tax-xogħol, miftuħa a UNIX jew MS-DOS kmand tieqa.

2.Daħħal il kmand **telnet** *hostname* jew **telnet** *IP Indirizz* (bl-użu jew il Horizon immaġinatur hostname jew IP Indirizz).

3.Fuq il Idħol fil-pront, daħħal il kmand **status**.

Importanti Informazzjoni u Ismijiet tal-fajls

Bold tip huwa użat għal enfasi, kmand ismijiet, u mogħdijiet jew ismijiet tal-fajls. Għal eżempju:

- Il Horizon immaġinatur default settings jista ' tkun mibdula it-tnejn fi il kontroll panel u bl-użu test fajls.
- Il hostname u IP Indirizz għandu tkun miżjud għal il **/eċċ/ hosts** fajl.

Ġdid Termini

Korsiv tip huwa użat meta a terminu huwa introdotti u definiti. Għal eżempju:

- Il Horizon immaġinatur għandu a komplut sett ta ' *default settings* dak fihom ikkonfigurat minn qabel valuri għal kull aspett ta ' a stampati folja.

Għan u Ambitu

Irreferi għal dan utent manwali għal proċeduri fuq kif għal iwettaq il l-aktar komuni immaġinatur operazzjonijiet, inklużi:

- Twaqqif sa il immaġinatur
- Tagħbija midja
- Mittenti jistampa impjiegi minn DICOM Stampa Servizz Klassikonformi applikazzjonijiet ġiri fuq immaġini apparat jew immaġni wiri stazzjon tax-xogħol
- Mittenti jistampa impjiegi minn stazzjonijiet tax-xogħol permezz PostScript
- Mittenti jistampa impjiegi bl-użu FTP u LPR
- Jinbidlu il tal-imager default immaġni u folja settings
- Aġġustament il dehra ta ' stampati immaġini għal utent preferenza
- Jwettaq preventiv manutenzjoni
- Jwettaq film kalibrazzjoni
- Issolvi l-problemi komuni problemi

NOTA: Xi wħud karatteristiċi u funzjonijiet deskritt hawn jista ' mhux japplikaw għal anzjani verżjonijiet ta ' il softwer.

Dan Tal-Utent Manwal huwa maħsuba għal tkun kif sempliċi u sempliċi kif possibbli għal il kuljum utent. Jekk int bżonn aktar dettaljat jew aktar tekniku informazzjoni fuq a karatteristika jew suġġett, jew xewqa għal iwettaq aktar avvanzat operazzjonijiet, irreferi għal il *Horizon Immaġinatur Tekniku Manwal* (Nru tal-Katalgu.HORIZONMNLT). Il Tekniku Manwal iservi kif a ħbieb dokument għal dan manwali

Prodott Informazzjoni

Għal tekniku għajnuna ma ' il Horizon, sejħa Codonics Tekniku Appoġġ fi il wara numru:

Telefon:+1.440.243.1198
Pedaġġ ħielsa: 800.444.1198 (L-ISTATI UNITI biss)

Tekniku Appoġġ huwa disponibbli għaċ. Tekniku Appoġġ huwa ukoll disponibbli online permezz email u il Codonics web sit:

Email:support@codonics.com
Web Sit: www.codonics.com

Ġenerali prodott informazzjoni jista ' ukoll tkun mitluba minn tibgħat email lil:

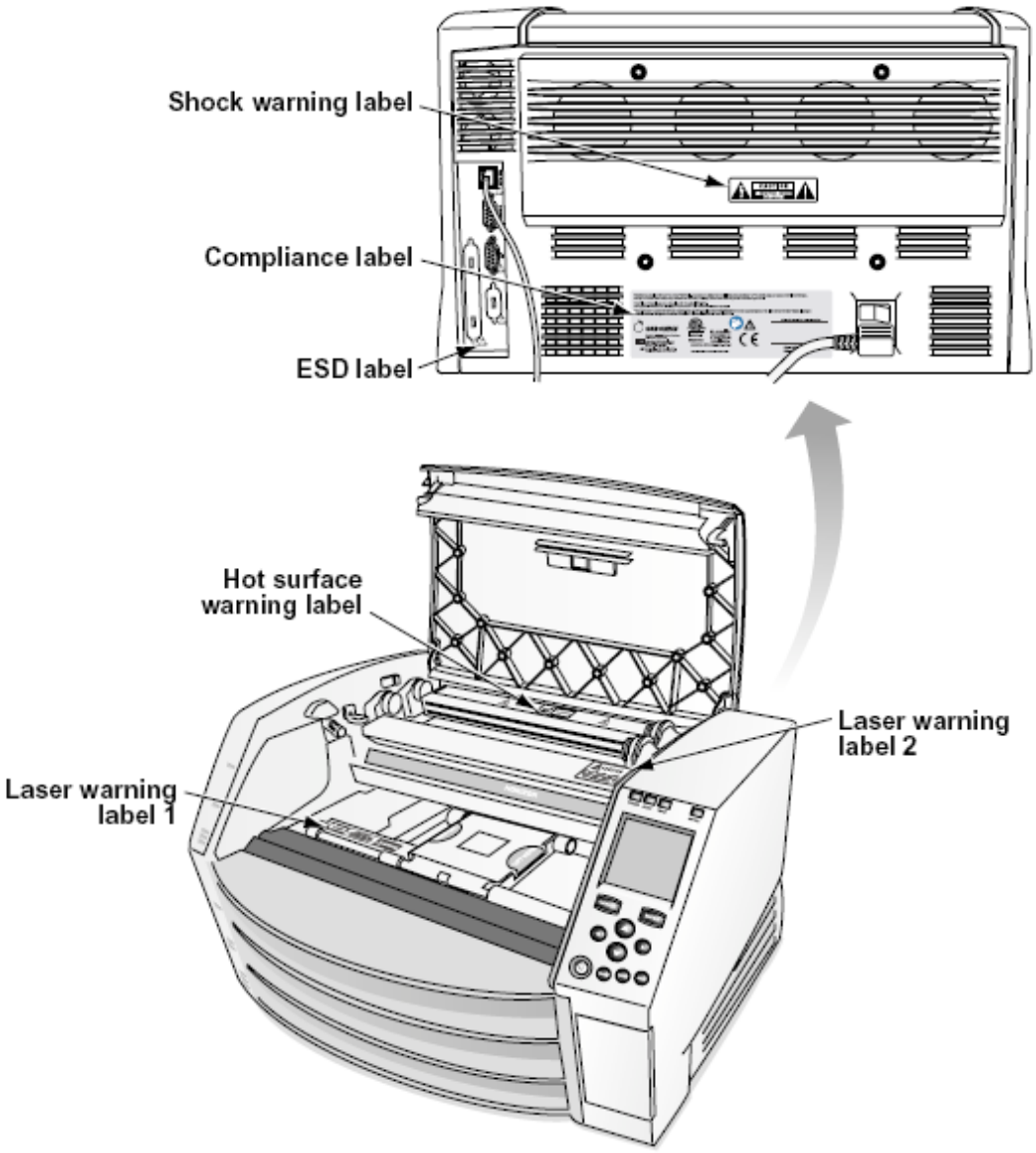
Email:info@codonics.com

Jekk jogħġbok jinkludu tiegħek postali posta indirizz u telefon numru fi il email messaġġ. Bażiku prodott informazzjoni huwa lura permezz email sakemm inkella mitluba.

Twissijiet u Limitazzjonijiet ta ' Uża

Post ta ' Sigurtà u Konformità Tikketti

Il wara figura turi il postijiet ta ' il tal-imager sigurtà u konformità tikketti.



vultaġġ Twissija

Il exclamation punt ġewwa an ekwilaterali trijanglu u persuna qari a manwali simbolu huma maħsuba għal twissija il utent għal il preżenza ta ' importanti joperaw u manutenzjoni (manutenzjoni) istruzzjonijiet fi il letteratura akkumpanjament dan apparat.

LE SERVIZZABBLI MINN UŻU PARTIJIET ĠEWWA. REFERENZA SERVIZZ LE KWALIFIKAT SERVIZZ PERSONAL. TNEĦĦIJA OF TIKKETTI, KOPERTURI, JEW KAXXA Qafliet VOIDS IL GARANZIJA.

DAN APPARAT GĦANDU BE ELETTRIKAMENT MALTA.

LE PREVENI NAR JEW XOKK PERIKLU, DO MHUX JESPONU DAN IMMAĠINATUR LE XITA JEW UMDITÀ.

TAGĦMIR MA JINTUŻAX BĦALA KOMPONENT TA 'SISTEMA TA' SOSTENN TAL-ĦAJJA. Apparat jew sistemi ta 'appoġġ għall-ħajja huma apparat jew sistemi li jsostnu jew isostnu l-ħajja, u li n-nuqqas tagħhom li jwettaq jista' jkun raġonevolment mistenni li jirriżulta f'korriment sinifikanti jew mewt lil persuna. Komponent kritiku huwa kwalunkwe komponent ta 'apparat jew sistema ta' sostenn tal-ħajja li n-nuqqas li twettaq jista 'jkun raġonevolment mistenni li jikkawża l-falliment tal-apparat jew tas-sistema ta' appoġġ tal-ħajja, jew li jaffettwa s-sikurezza jew l-effettività tagħha.

TWISSIJA L-ert affidabilità jista ' tkun miksuba biss meta il Horizon huwa konnessi għal a reċipjent immarkat "Sptar Biss " (dak huwa, "Sptar Grad ").
TWISSIJA Il qawwa korda konnessi għal il Horizon huwa il prinċipali skonnettja għal il sistema.
TWISSIJA Lil skonnettja ġenerali qawwa għal il Horizon qabel għal manutenzjoni dan, qawwa ta ' il sistema (irreferi għal "Tħaddim Mitfi il Immaġinatur".
TWISSIJA Agħmel mhux immodifika dan equipment mingħajr awtorizzazzjoni ta ' il manifattur
TWISSIJA Estern tagħmir maħsuba għal konnessjoni għal sinjal input, sinjal output, jew oħra konnetturi, għandu jikkonformaw ma ' relevanti IEC standard (eż., IEC 60950 għal IT tagħmir u il IEC 60601 serje għal mediku tagħmir). Fi Barra minn hekk, kollha tali kombinazzjonijiet - sistemi - għandhom jikkonformaw mal-istandard IEC 60601-1 għal Sistemi ta 'Tagħmir Mediku Elettriku. Tagħmir li ma jikkonformax mal-IEC 60601 għandu jinżamm barra mill-ambjent tal-pazjent, kif definit fl-istandard. Kull persuna li tqabbad tagħmir estern ma 'input tas-sinjal, output tas-sinjal, jew konnetturi oħra ffurmat sistema u għalhekk hija responsabbli biex is-sistema tikkonforma mar-rekwiżiti tal-IEC 60601-1-1. Jekk għandek xi dubju, ikkuntattja tekniku kwalifikat jewCodonics Tekniku Appoġġ għal approvat konfigurazzjonijiet.
TWISSIJA Agħmel mhux tmiss a pazjent waqt ukoll aċċess il intern komponenti dak huma taħt il quċċata għata jew jirċievu trejs.

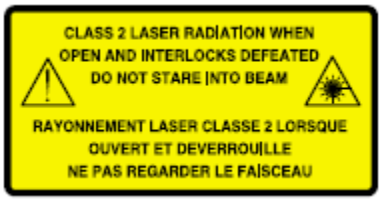
Laser Twissija

Il Horizon immaġinatur użi a laser għal aqra barcode informazzjoni fuq il midja kasetts. Il laser modulu huwa a 650 - 670nm apparat ta ' 1.26mW jew anqas. Kif tali dan għandu kien misjuba għal jikkonformaw ma ' il 21 CFR 1040.10 u 1040.11 u IEC 60825 laser standards kif a baxx qawwa Klassi 1 apparat.

Għal sigurtà raġunijiet, il laser huwa daru fuq biss għal a qasir ħin meta a cassette huwa mdaħħal. Għadu, waħda għandu użu kawtela u qatt ħares fi il laser beam, għandu evita espożizzjoni għal il laser, u għandu qatt override kwalunkwe ta ' il interlocks u sigurtà mekkaniżmi. Dawn miżuri huma meħuda għal tiegħek protezzjoni.

TWISSIJA Uża ta ' kontrolli jew aġġustamenti għal il prestazzjoni ta ' proċeduri oħra minn dawk speċifikat fi dan manwali jista ' riżultat fi perikoluż radjazzjoni espożizzjoni.
Il laser aperturi huma immarkat ma ' a waħdieni tikketta, murija hawn taħt. Hemm huma tlieta aperturi dak jikkorrispondu għal il tlieta cassette postijiet, waħda għal kull wieħed, fuq il l-istess ġenb ta ' il Horizon immaġinatur kif dan tikketta.

Sigurtà interlocks huma immarkat minn il wara tikketta. Huma huma jinsabu fuq il l-istess ġenb ta ' il Horizon immaġinatur kif dan tikketta.



Temperatura Twissija

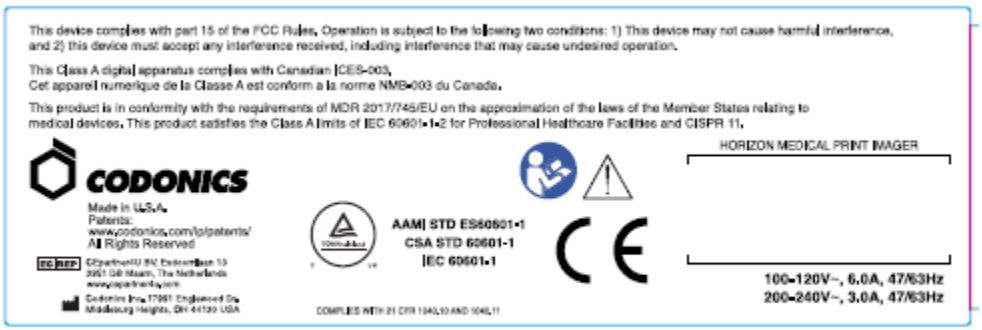
Minħabba il Horizon imager huwa apparat tal-istampar termali, il-wiċċ tas-sink tas-sħana tar-ras tal-istampar termali jisħon. Evita li tmiss direttament kwalunkwe komponent li mhux ikkulurit aħdar meta taċċessa l-intern tal-imager jekk l-imager kien qed jistampa. (Matul xi ħidmiet ta 'manutenzjoni preventiva, tkun qed tmiss komponenti interni bi pads tat-tindif jew tampuni.)

Il temperatura twissija tikketta huwa murija hawn taħt.

Konformità

Codonics huwa fi konformità ma ' varji regolamenti.

Il Konformità tikketta, liema huwa imwaħħal fi il lura ta ' il immaġni, huwa murija hawn taħt.



Compliance label

Serjali Numru, Konfigurazzjoni, Data Kodiċi, u Modifika Kodiċijiet

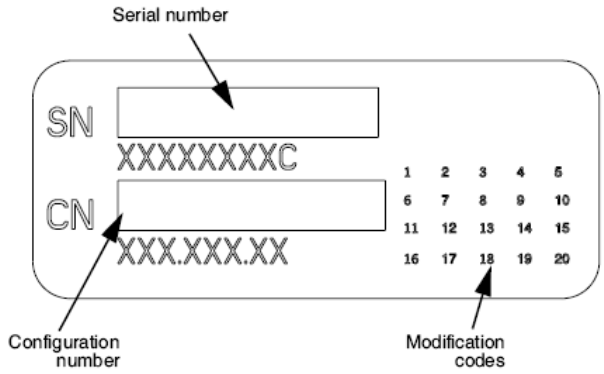
Il Serjali numru tikketta huwa mqiegħda fuq il Konformità tikketta. Huwa tinkludi il wara informazzjoni.

Il serjali numru (SN), liema unikament jidentifika il unità.

Il Konfigurazzjoni numru (CNFG), liema dettalji il tibni konfigurazzjoni.

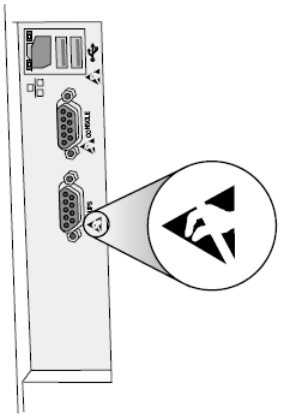
Il modifiki kodiċi, liema huma għal il dritt ta ' il CNFG numru u huma a serje ta ' 20 numri. Meta kwalunkwe ta ' dawn numri huma imblukkata barra, dak jidentifika a modifika dak kien magħmula għal il unità.

Il data kodiċi fi SSSS-XX format hawn taħt il fabbrika data kodiċi simbolu.



ESD Attenzjoni

Konnessjonijiet għal oħra biċċiet ta ' tagħmir huma magħmula fi il fuq wara ta ' il Horizon immaġinatur. Dawn konnetturi huma immarkat ma ' a prekawzjonarju ESD twissija simbolu, kif murija hawn taħt. Agħmel mhux tmiss kwalunkwe ta ' il labar ta ' dawn konnetturi. Meta jagħmlu konnessjonijiet għal il immaġni, dan huwa l-aħjar lest waqt il immaġinatur huwa imdaħħal fi iżda mhux imħaddem fuq. ESD jista ' kawża erratiku imġieba ta ' il immaġinatur meta imħaddem fuq. Jekk dan iseħħ, qawwa għal il immaġinatur jista ' jkollhom għal tkun ċiklata. Huwa huwa irrakkomandat dak kollha persunal involut fi jagħmlu konnessjonijiet għal il immaġinatur tkun konxji ta ' dawn ESD prekawzjonijiet.



Rear panel

Potenzjal għal Radju Frekwenza Interferenza fuq Immaġinatur Operazzjoni

It-tnejn portabbli u mobbli RF komunikazzjonijiet tagħmir jista ' jaffettwaw mediku elettriku tagħmir, inkluż il Horizon immaġinatur. Żomm tali RF komunikazzjonijiet tagħmir barra ta ' il immedjat żona.

Potenzjal għal Radju u Televiżjoni Interferenza

Il Horizon immaġinatur jiġġenera u użi radju frekwenza enerġija, u jekk mhux installat u użat kif suppost, dak huwa, fi stretta konformità ma ' il manifattur istruzzjonijiet, jista ' kawża interferenza għal radju u televiżjoni akkoljenza. Huwa għandu kien tip ittestjat u misjub li jikkonforma mal-limiti tal-emissjonijiet tal-Klassi B għal apparat tal-kompjuter skont l-ispeċifikazzjonijiet fis-Subparti J tal-Parti 15 tar-Regoli tal-FCC, li huma mfassla biex jipprovdu protezzjoni raġonevoli kontra tali interferenza meta joperaw f'ambjent kummerċjali. It-tħaddim tat-tagħmir f'żona residenzjali x'aktarx jikkawża interferenza, f'liema każ l-utent, bi spejjeż tiegħu, ikun meħtieġ li jieħu kwalunkwe miżura li tista 'tkun xierqa biex tikkoreġi l-interferenza. Jekk l-immaġinatur tiegħek jikkawża interferenza fir-

riċeviment tar-radju jew tat-televiżjoni, inti mħeġġeġ tipprova tikkoreġi l-interferenza b'waħda jew aktar mill-miżuri li ġejjin:

- Orjentat mill-ġdid il jirċievi antenna
- Irriloka il immaġinatur ma ' rispett għal il riċevitur

Jekk meħtieġ, int għandu ikkonsulta Codonics tekniku appoġġ jew an esperjenza radju / televiżjoni tekniku għal addizzjonali suġġerimenti. Int jista ' sib il wara ktejjeb ippreparat minn il Federali Komunikazzjonijiet Kummissjoni utli: *Kif għal Identifika u Issolvi Radju-TV Interferenza Problemi*. Dan ktejjeb huwa disponibbli minn il U.S. Gvern Stampar Uffiċċju, Washington, D.C. 20402, Stokk Le 004-000-00345-4.

Dan prodott huwa fi konformità ma ' il rekwiżiti ta ' KE Kunsill direttiva MDR 2017/745/UE (CE) fuq il approssimazzjoni ta ' il liġijiet ta ' il Membru Istati Membri relatati għal mediku apparat. Dan prodott jissodisfa il Klassi A limiti ta ' IEC60601-1-2 u CISPR 11. A dikjarazzjoni ta ' konformità ma ' il rekwiżiti ta ' il Direttiva għandu kien iffirmat minn il Direttur ta ' Operazzjonijiet. Horizon huwa approvat għal esportazzjoni permezz FDA Ċertifikati għal Barranin Gvern u irreġistrat kif a mediku apparat għal importa. A kurrenti lista ta ' pajjiżi huwa disponibbli fuq talba.

Gwida Rigward Elettromanjetiku Emissjonijiet u Immunità

Adattat Ambjenti:

- Horizon huwa maħsuba għal użu fi professjonali kura tas-saħħa faċilità ambjenti, inkluż sptarijiet u mediku kliniċi.
- Horizon għandu mhux kien evalwati għal użu qrib HF kirurġiċi tagħmir. Jekk użu qrib HF kirurġiċi tagħmir huwa mixtieq, il utent huwa responsabbli għal verifika xieraq operazzjoni ta ' il Horizon. Jekk Horizon ma mhux iwettaq sewwa fi dan ambjent, imxi il Horizon iktar 'il bogħod minn il sors ta ' il elettromanjetika disturb.
- Horizon għandu mhux kien evalwati għal użu fi emerġenza mediku vetturi.

Kif a appoġġ apparat, Horizon ma mhux jipprovdu essenzjali prestazzjoni.

TWISSIJA Uża ta ' dan tagħmir biswit għal jew f'munzelli ma ' oħra tagħmir għandu tkun evitat għaliex dan setgħet riżultat fi mhux xieraq operazzjoni. Jekk tali użu huwa meħtieġ, dan tagħmir u il oħra tagħmir għandu tkun osservati għal tivverifika dak huma huma joperaw normalment.

TWISSIJA Uża ta ' aċċessorji, transducers u kejbils oħra minn dawk speċifikat jew ipprovdut minn il manifattur ta ' dan tagħmir setgħet riżultatt fi żdied elettromanjetika emissjonijiet jew naqas elettromanjetika immunità ta ' dan tagħmir u riżultat fi mhux xieraq operazzjoni.

TWISSIJA Portabbli RF komunikazzjonijiet tagħmir (inkluż periferali tali kif antenna kejbils u esterni antenni) għandu tkun użat le eqreb minn 30 cm (12 pulzieri) għal kwalunkwe parti ta ' il Horizon, tagħha kejbils, jew aċċessorji. Inkella, degradazzjoni ta ' il prestazzjoni ta ' dan tagħmir setgħet riżultat.

Electromagnetic Emissions Standards and Test Levels:

Test / Standard	Compliance Level
RF Emissions CISPR 11	Group 1, Class A
RF Emissions FCC Part 15	Class A
Conducted Emissions CISPR 11	Group 1, Class A
Harmonic Distortion IEC 61000-3-2	Class A
Voltage Fluctuations and Flicker IEC 61000-3-3	Complies

Electromagnetic Immunity Standards and Test Levels:

Test / Standard	Compliance Level
Electrostatic Discharge	±8kV contact
IEC 61000-4-2	±2kV, ±4kV, ±8kV, ±15kV air

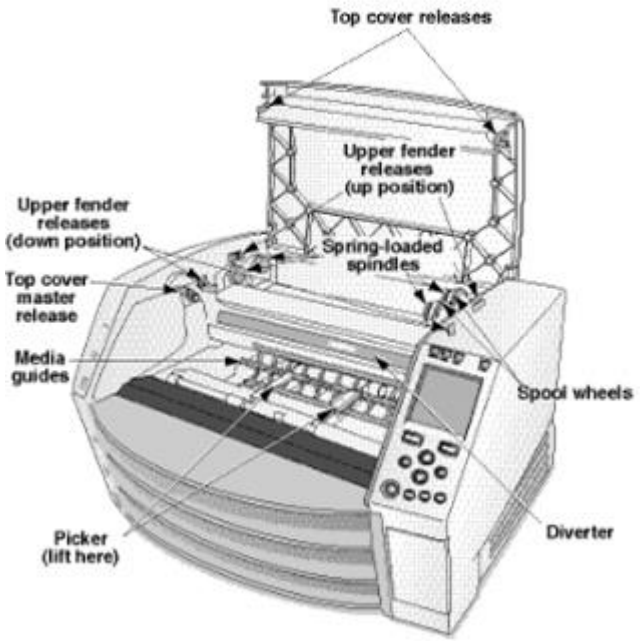
Electromagnetic Immunity Standards and Test Levels: (Continued)

Test / Standard	Compliance Level
Radiated RF Immunity IEC 61000-4-3	3 V/m 80 MHz - 2.7 GHz 80 % AM at 1 kHz
Proximity fields from RF wireless equipment IEC 61000-4-3	Complies
Electrical Fast Transient / Burst IEC 61000-4-4	AC Port: ± 2 kV, 100 kHz repetition frequency SIP/SOP Ports: ± 1 kV, 100 kHz repetition frequency
Surge IEC 61000-4-5	Line-to-Line: ± 0.5 kV, ± 1.0 kV Line-to-Ground: ± 0.5 kV, ± 1.0 kV, ± 2.0 kV
Conducted Immunity IEC 61000-4-6	AC Port and SIP/SOPs: 3V, 0.15 MHz - 80 MHz 6V, in ISM bands between 0.15 MHz and 80 MHz 80 % AM at 1 kHz
Magnetic Field Immunity IEC 61000-4-8	30 A/m, 50 Hz or 60 Hz
Voltage Dips IEC 61000-4-11	0% U_T, 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% U_T, 1 cycle AND 70% U_T, 25/30 cycles, Single phase: at 0°
Voltage Interruptions IEC 61000-4-11	0% U_T, 250/300 cycle

Sigurtà Prekawzjonijiet

- Qatt qabbad dan immaġinatur għal kwalunkwe iżbokk jew qawwa provvista dak għandu a vultaġġ jew frekwenza differenti minn dak speċifikat fuq il fuq wara ta ' il immaġinatur.
- Meta manutenzjoni il immaġni, dejjem qawwa dan mitfi bl-użu il (qawwa) ċavetta fi il kontroll bord, imbagħad dawwar il rocker swiċċ fi il lura għal il **0** (mitfi) pożizzjoni, imbagħad aqla ' il immaġinatur.
- Ħsara għal il qawwa korda jista ' kawża nar jew xokk periklu. Meta qtugħ il qawwa korda, żomm dan minn il tapp biss u neħħi il tapp b'attenzjoni.
- Jekk il qawwa korda bżonnijiet għal tkun mibdul, ibdel dan biss ma ' ieħor Codonics qawwa korda manifatturati speċifikament għal tiegħek tal-imager qawwa konfigurazzjoni.

- Jekk il immaġinatur huwa tipjip jew jagħmlu mhux tas-soltu ħsejjes, qawwa mitfi u aqla ' il immaġinatur immedjatament.
- Agħmel mhux daħħal barrani oġġetti ta ' kwalunkwe tip ġo il immaġni; tagħmel hekk jista ' jikkostitwixxu a sigurtà periklu u kawża estensiva ħsara.
- Agħmel mhux post kwalunkwe likwidu kontenituri fuq il immaġinatur. Jekk, għal xi wħud raġuni, likwidu tnixxi ġo il immaġni, qawwa mitfi il immaġinatur u aqla ' il qawwa korda minn il sors iżbokk. Jekk użat mingħajr korrettiv miżuri, il immaġinatur jista ' tkun bil-ħsara.
- Agħmel mhux użu il immaġinatur qrib fjammabbli gassijiet.
- Ma ' il immaġinatur quċċata għata miftuħa jew il jirċievu trejs imneħħija, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar (muri fi il wara figura). Neħħi ċrieki, rabtiet, dehbijiet, u oħra oġġetti, u tie lura xagħar, hekk dak huma agħmel mhux jaqgħu ġo jew ġib maqbuda fi il immaġinatur.



Intern Komponenti Dak Huma Kulur Aħdar (imsejjaħ barra fi il illustrazzjoni) Huma Sikur għal Tmiss

Post Prekawzjonijiet

- Il tal-imager joperaw ambjentali temperatura firxa huwa 15–30°C (59-86°F), ma ' a qarib umdità ta ' 10% –80%.
- Jekk l-immaġinatur jiġi mċaqlaq malajr minn post estremament kiesaħ għal wieħed iktar sħun, x'aktarx li tifforma l-kondensazzjoni. Tużax l-imager jekk tkun iffurmat il-kondensazzjoni. Stenna sakemm il-kondensazzjoni tevapora. Tista 'tħaffef il-ħin ta' l-evaporazzjoni billi tiċċaqlaq l-immaġinatur għal post li jnixxef.
- Ventilazzjoni slots u toqob huma ipprovdut fuq il naħat u fuq wara ta ' il immaġinatur. Poġġi il immaġinatur fuq a iebes livell wiċċ u lokalizza dan fi l-inqas 10 ċm (4 pulzieri) minn ħitan għal tiżgura xieraq ventilazzjoni

ATTENZJONI Adegwat ventilazzjoni huwa meħtieġ għal xieraq operazzjoni ta ' il immaġinatur

ATTENZJONI Meta pożizzjonament il Horizon Immaġni, tiżgura hemm huwa adegwat spazju għal aċċess il fuq wara qawwa swiċċ.

- Agħmel mhux post immaġinatur fi a għoli umdità jew għoli trab żona. Fl-ajru ħmieġ partiċelli jista ' kawża immaġni kwalità problemi. Evita tqegħid il immaġinatur fi żoni fejn ventilazzjoni katusi,

miftuħa bibien, jew frekwenti passers-by jista ' tesponi il immaġinatur u midja għal għoli livelli ta ' fdalijiet.
- Agħmel mhux lokalizza il immaġinatur fi hot-molol żoni fejn idroġenu sulfid u aċidużi joni huma probabbli għal tkun iġġenerat.
- Agħmel mhux lokalizza il immaġinatur fejn hemm huma żejtnija dħaħen u fwar.
- Agħmel mhux lokalizza il immaġinatur fi dirett dawl tax-xemx.
- Agħmel mhux lokalizza immaġinatur qrib sorsi ta ' għoli RF enerġija.
- Agħmel mhux lokalizza il immaġinatur fejn dan jista ' tkun suġġett għal jarring jew vibrazzjonijiet, tali kif a mejda jew skrivanija fi a għolitraffiku żona. Jarring u vibrazzjonijiet jista ' jaffettwaw il jistampa kwalità ta ' immaġini.
- Horizon jissodisfa il elettriku sigurtà limiti ta ' IEC60601-1 u CISPR 11 u huwa adattat għal pazjent kura żona lokazzjoni. Iċċekkja ma ' lokali ordinanzi u installazzjoni linji gwida għal ikkonferma approvat lokazzjoni rekwiżiti.

Tindif Prekawzjonijiet

- Ħafna komponenti tal-plastik jintużaw fil-kostruzzjoni tal-immaġinatur. Iċ-ċaqliq u d-deformazzjoni tal-kisja x'aktarx iseħħu jekk l-immaġinatur jintmesaħ b'biċċiet tat-tfarfir kimiċi, benżin, dilwenti, insettiċidi, jew solventi oħra. Materjali tal-gomma u tal-PVC li jitħallew f'kuntatt ma 'l-imager għal ħinijiet estiżi jikkawżaw ħsara. Qatt tuża petroleumibbażat soluzzjonijiet jew joborxu tindif.
- Lil nadif il immaġinatur tkopri, l-ewwel qawwa mitfi il immaġinatur bl-użu il (qawwa) ċavetta fi il kontroll bord, imbagħad dawwar il rocker swiċċ fi il lura għal il **0** (mitfi) pożizzjoni, imbagħad aqla ' il immaġinatur. Nadif il għata ma ' a artab drapp kemmxejn niedja ma ' a ħafif sapun u ilma soluzzjoni. Ħalli il għata għal kompletament niexef qabel joperaw il immaġinatur mill-ġdid.

Midja

Għal **ChromaVista**® kulur stampi, il ikkunsmati żigarella fih faksimili ta ' kwalunkwe pazjent immaġini stampati għal **ChromaVista** kulur folji. Għalhekk, int għandu sewwa jiddisponi ta ' jew jeqred ikkunsmati żigarella għal tiżgura il kunfidenzjalità ta ' pazjent immaġini.

Il ottiċi densità ta ' jirriflettu u trasmessiv stampi jkollhom a nominali firxa ta ': Dmin = 0.10 OD (li jirrifletti), 0.11 OD (trasmessiv) għal Dmax = 2.10 OD (li jirrifletti), 3.1 OD (trasmessiv). Attwali ottiċi densitajiet jista ' ivarjaw ibbażat fuq midja varjazzjonijiet u fuq il strument qed użat għal miżura densità. Għal eżempju, **DirectVista**® Ċara film jista ' jkollhom a inqas Dmin u Dmax minn **DirectVista** Blu film.

- Il Horizon imager jinkludi densitometru inkorporat. Id-densitometru inkorporat huwa ddisinjat biex jipproduċi stampi konsistenti billi jikkumpensa għall-varjazzjoni minn cassette tal-film għal ieħor u imager għal ieħor. Għal applikazzjonijiet li jeħtieġu kontroll assolut tad-densità massima, ir-riżultati għandhom jiġu kkontrollati ma 'bank-topkummerċjali densitometru. Il intern densitometru jista ' tkun ikkalibrat għal a desktop unità. Ara il *Horizon Immaġinatur Tekniku Manwal* għal aktar informazzjoni.
- **DirectVista** midja huwa ottimizzati għal skala tal-griż stampi, waqt **ChromaVista** huwa ottimizzati għal kulur stampi. Jekk **ChromaVista** huwa mhux tagħti int sodisfaċenti riżultati ma ' skala tal-griż stampi, int jista ' trid għal ikkunsidra bl-użu **DirectVista** midja għal dawk applikazzjonijiet.
- Midja varjazzjonijiet bejn differenti produzzjoni lottijiet jista ' jipproduċu sottili differenzi fi immaġni kwalità u kulur. Dawn varjazzjonijiet l-aktar spiss iseħħu fi kulur żigarelli u huma ikkaratterizzat kif a żgħira kulur lewn fi skala tal-griż immaġini.
- Codonics film midja huwa ddisinjat għal tkun meqjusa bl-użu a dawl kaxxa adattat għal wiri mediku dijanjostiku immaġini.
- Codonics karta / bajda film midja huwa ddisinjat għal tkun meqjusa taħt kessaħabjad, fluworexxenti dawl. Spettrali differenzi u intensità varjazzjonijiet fi il wiri dawl sorsi jista ' bidla il apparenti kulur ta ' immaġini stampati fuq karta / bajda film.

- Stampat immaġini dak huma suġġett għal fit-tul espożizzjoni għal dawl tax-xemx, ultravjola ħafif, jew estrem saħħan jista ' jiddegradaw fi immaġni kwalità. (Għal eżempju, stampati folji għandu mhux tkun maħżuna fi an karozza fuq a xemxi jum.) Prekawzjonijiet għandu tkun użat għal evita fit-tul dirett espożizzjoni.

Codonics Karta / Abjad Film Midja

Il termini "Abjad karta " u "Abjad film " huma sinonimu referenzi u użat minflok xulxin fi dan manwali.

Fajl Trasferiment permezz FTP u LPR

- Differenti utenti min jaqsmu a utent isem meta jittrasferixxi fajls għal il immaġinatur jista ' kawża imprevedibbli u żbaljat stampati produzzjoni. Il immaġinatur assoċjati informazzjoni ma ' il utent isem. Kull wieħed utent għandu jkollhom a uniku utent isem meta konnessjoni għal il immaġinatur permezz FTP u LPR.

Kulur Ġestjoni

- Immaġni settings-inkluż gamma, kuntrast, Dmax, saturazzjoni, u MCM ™ (Mediku Kulur Matching ™) - huma maħsuba għal tikkumpensa għal differenzi dak jista ' iseħħu bejn immaġni akkwist u immaġni stampar. Dawn filtri jippermettu int għal b'mod preċiż jagħmel il finali stampati immaġni. Int għandu użu kura meta applikazzjoni dawn filtri għal evita fuq kumpens.
- Il Nuqqas Utent Settings sett fi il kontroll panel se potenzjalment jaffettwaw stampi magħmula minn kollha utenti. Uża kawtela meta jinbidlu il default settings.

Immaġni Skalar

- L-iskala ta 'immaġni tiffiltra d-dejta oriġinali tal-immaġni u żżid jew tneħħi informazzjoni, li tista' taffettwa l-eżattezza tal-immaġni stampata finali. L-ammont ta 'informazzjoni miżjud jew imneħħi jvarja wkoll skond il-kobor tal-fattur ta' l-iskala applikat. Dan jista 'jaffettwa wkoll l-eżattezza tal-immaġni stampata finali. Għandek tkun konxju tal-proprjetajiet u l-limitazzjonijiet ta 'kull algoritmu ta' skalar u tagħżel l-algoritmu xieraq għall-kompitu.

Ħardwer Varjazzjonijiet

- Komponenti użat fi il immaġinatur jista ' ivarja, jikkawża differenzi fi immaġni kwalità. Il termali proċess ta ' jipproduċu a jistampa juża ħafna komponenti dak huma ikkalibrat għal jipprovdu konsistenza bejn immaġini. Hemm huma sottili differenzi bejn immaġini dak jista ' kawża jistampa varjazzjonijiet. Dawn differenzi ġeneralment japplikaw għal termali jistampa ras kalibrazzjoni. Oħrajn fatturi tali kif età, użu, sħana, mekkaniku jilbsu, u trasport bil-baħar jista ' jaffettwaw immaġni kulur u kwalità.
- Il tip ta ' midja użat għal installa softwer aġġornamenti u għal backup immaġinatur konfigurazzjoni settings jiddependi fuq ħardwer varjazzjonijiet. Jekk il immaġinatur għandu a inkorporat Zip issuq, installazzjonijiet u backups huma mwettqa bl-użu 100-MB Zip diski. Jekk il immaġinatur ma mhux jkollhom a inkorporat Zip issuq, USB flash drives huma użat ma ' il USB portijiet fuq il fuq wara panel. Matul dan manwali, Zip diski u USB flash drives huma imsemmi għal kif *installazzjoni midja* jew *backup midja*, jiddependi fuq il operazzjoni qed mwettqa.

NOTA: Jekk il immaġinatur għandu it-tnejn a Zip issuq u a USB port, dejjem użu il Zip disk għal installa softwer u ħlief konfigurazzjoni settings.

Rimi Rekwiżiti

Rimi ta ' dan prodott u konsumabbli għandu tkun fi konformità ma ' kollha applikabbli liġijiet u regolamenti fi effett fi il lokalità fi il ħin ta ' rimi.

Ewropew Rimi Rekwiżiti

Codonics immaġini u elettroniku aċċessorju apparat huma mhux għal tkun mormi jew riċiklat; anzi huma huma għal tkun lura għal il manifattur. Kuntatt Codonics direttament jew minn il rabta ipprovdut għal il l-aktar tard informazzjoni dwar:

- Identifikazzjoni ta ' il speċifiku għall-pajjiż Importatur / Distributur / Produttur
- Prodott ritorn u trattament ta ' tagħna elettroniku prodotti

Manifattur: Codonics Inc.
17991 Englewood Issuq
Middleburg Għoli, OH 44130 L-Istati Uniti
Telefon: +1.440.243.1198
Fax: +1.440.243.1334
E-mail: WEEE@codonics.com
www.codonics.com

Codonics elettroniku prodotti u aċċessorji li jkollhom il wara simbolu huma suġġett għal Ewropew Direttiva fuq Skart Elettriku u Elettroniċi Tagħmir (WEEE) 2002/96 / KE, emendat minn Direttiva 2003/108 / KE. Il MT 50419 simbolu tindika separat ġbir u ritorn meħtieġ.

MT 50419 simbolu

Indikazzjonijiet għal Uża

ATTENZJONI Approvat FDA Klassi 2 apparat - Federali liġi jirrestrinġi dan apparat għal tkun mibjugħa għal użu minn jew fuq il ordni ta ' a tabib.
Il maħsuba użu ta ' il Horizon Serje Imagers hija immaġini b'kopja iebsa b'riżoluzzjoni għolja ta 'materjal ta' sors ta 'immaġni diġitali u permezz tal-konverżjoni ta' sinjali elettroniċi minn varjetà wiesgħa ta 'outputs diretti / indiretti ta' modalità ta 'immaġni medika. L-output ta 'kopja stampata jinkludi, madankollu mhuwiex limitat għal, radjografija diġitali, mediċina nukleari, ultrasound, CT, MRI, CR, u ppjanar ta' Terapija bir-Radjazzjoni. L-immaġini huma adattati għall-użu u r-riferiment tad-dijanjosi tal-immaġni medika. Is-sistema hija maħsuba għall-użu minn radjoloġisti mediċi, speċjalisti tal-modalità tal-immaġini, u komunikazzjonijiet lil tobba li jirreferu.

Il Horizon Serje Immaġini huma niexef, termali, skala tal-griż (G, GS, GSs, GS-Rad, G1, u G2 mudelli) u skala tal-griż / kulur (Ci, Ci-s, CiRAD, u SF mudelli) dirett termali printer / immaġni.

Il Orizzont XL huwa a speċjali mudell żżid 14 x 36fi. u 14 x 51fi. vera daqs "Twil" midja dak permessi diġitali dirett ortopediku applikazzjoni kopja stampata, inkluż dijanjosi u analiżi ta ' skoljożi, piż li jkollhom sinsla / ġenbejn / irkoppa, u twil għadam / ġenbejn prostetiku u ortopediku apparat xogħol u kirurġiċi ippjanar. Orizzont XL huwa applikabbli għal daqs veru kopja stampata ta ' sħiħ ġisem CT, MRI, u Anġjografiku u Venuż fluss immaġini proċeduri.

Orizzont Immaġini huma 510 (k) ikklerjat għal suq kif FDA Klassi 2 apparat, Regolament numru 892.2040, Klassifikazzjoni Prodott Kodiċi LMC: Orizzont Serje Mediku Multimidja Nixxef Immaġini K021054 u Orizzont XL Mediku Twila Film Immaġinatur Kopja stampata Multimidja K060440.

ATTENZJONI Approvat FDA Klassi 2 apparat - Federali liġi jirrestriġi dan apparat għal tkun mibjugħa għal użu minn jew fuq il ordni ta ' a tabib.
ATTENZJONI Għamla żgur dak il mejda jista ' appoġġ il piż ta ' il immaġinatur [bejn wieħed u ieħor 66.7 kg (147lbs) ma ' jirċievu trejs u tlieta mimli provvista kasetts installat].
TWISSIJA Il immaġinatur huwa tqil. Lil evita korriment, użu żewġ nies għal aqla ' u pożizzjoni il immaġinatur.
ATTENZJONI Agħmel mhux grif jew laqam il folja metall. Grif u nicks fi il kantina se ħsara il stampati ġenb ta ' ChromaVista folji.
ATTENZJONI Għamla żgur dak il immaġinatur huwa imħaddem mitfi qabel konnessjoni il Ethernet kejbil. Għal informazzjoni madwar tħaddim il immaġinatur fuq u mitfi, irreferi għal "Qawwa il Immaġinatur Fuq u Mitfi ".
ATTENZJONI Agħmel mhux tmiss kwalunkwe ta ' il konnettur labar.
ATTENZJONI Jekk il termali jistampa ras huwa mhux ipparkjat, qawwa fuq il immaġni, imbagħad irrepeti passi 2 u 3 għal sewwa qawwa mitfi il immaġinatur hekk dak dan ma ipparkja.
ATTENZJONI Imbotta il żigarella ġarr isfel bil-mod. Forzar dan isfel ukoll malajr jista ' ħsara il ġarr.
ATTENZJONI Jekk il immaġinatur huwa imħaddem mitfi bl-użu il QAWWA ċavetta, impjiegi fil-kju mhux stampati jiġu ffrankati u jispiċċaw jistampaw ladarba l-imager jerġa 'jinxtegħel (tista' tnaddaf l-impjiegi kollha). Madankollu, jekk l-immaġinatur ikun mitfi bl-użu tal-iswiċċ rocker fuq wara jew l-enerġija tiġi interrotta (per eżempju, nuqqas ta 'enerġija mhux mistenni), l-impjiegi fil-kju jistgħu jintilfu.
TWISSIJA Meta manutenzjoni il immaġni, dejjem qawwa dan mitfi bl-użu il QAWWA ċavetta, dawwar il rocker swiċċ fi il lura għal il 0 (mitfi) pożizzjoni, imbagħad aqla ' il immaġinatur.
ATTENZJONI Uża biss Codonics midja. Agħmel mhux użu sempliċi karta, uffiċċju trasparenzi, jew oħra mhux approvat midja kif ħsara, mhux xieraq operazzjoni, jew malfunzjoni jista ' riżultat. Għal informazzjoni madwar il approvat Codonics midja tipi u daqsijiet, u kif għal ordni kasetts, irreferi għal "Ordni Midja ".
ATTENZJONI Agħmel mhux imla mill-ġdid a cassette. Agħmel mhux tbagħbis ma ' jew neħħi il barcode tikketta. Il cassette's barcode informazzjoni huwa essenzjali għal tiżgura dijanjostiku immaġni kwalità. Jagħmlu kompromess il cassette fi kwalunkwe mod jipperikola il kwalità u affidabilità ta ' il immaġinatur.
ATTENZJONI Agħmel mhux neħħi jew daħħal a cassette waqt a folja huwa qed stampat, jew int setgħet jaffettwaw il immaġni kwalità ta ' il stampati folja jew kawża a ġamm. Dejjem waqfa il immaġinatur l-ewwel.
ATTENZJONI Agħmel mhux neħħi il stampati cassette għata; dan jipproteġi il midja minn trab u oħra kontaminanti. Dejjem żomm u maħżen il cassette ma ' il miftuħa ġenb sa għal jipprevjenu il folji minn jaqgħu barra.
TWISSIJA Ma ' il immaġinatur għata miftuħ, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar. Neħħi ċrieki, rabtiet, dehbijiet, u oħra oġġetti, u tie lura xagħar, hekk dak huma agħmel mhux jaqgħu ġo jew ġib maqbuda fi il immaġinatur.
ATTENZJONI Użat żigarella iżomm il negattiv ta ' il kulur immaġini dak kienu stampati bl-użu dak żigarella. Jekk int huma meħtieġ għal tiżgura pazjent kunfidenzjalità u privatezza, il żigarella għandu tkun meqruda.
ATTENZJONI Uża kawtela meta jinbidlu il immaġinatur default settings. Bidliet setgħet jaffettwaw stampi magħmula minn oħra utenti.
ATTENZJONI It-tibdil tas-settings default se jaffettwa stampi magħmula minn utenti oħra. Uża kawtela meta tbiddel is-settings default. Tipikament, huwa aħjar li tispeċifika l-issettjar tal-parametri tal-folja u l-immaġni mill-applikazzjoni DICOM jew l-issettjar tal-istampatur PostScript, jew tuża fajl tal-Impjiegi tax-

Xogħol li fih il-valuri li għandek bżonn. Għal informazzjoni dwar il-fajls tal-Impjiegi tax-Xogħol, irreferi għall-*Horizon Immaġinatur Tekniku Manwal*.

ATTENZJONI Jekk il tal-imager settings kienu mibdula minn il fabbrika nuqqasijiet qabel għal qed mibgħuta (għal eżempju, għal takkomoda a speċjali OEM konfigurazzjoni), issettjar mill-ġdid għal il fabbrika nuqqasijiet se mhux jirrestawraw il "Kif mibgħut " settings. Minflok, huma se tkun irrisettja għal il standard fabbrika default valuri.

ATTENZJONI L-issettjar mill-ġdid tad-difetti tal-fabbrika jaffettwa l-istampi magħmula minn utenti oħra. Uża kawtela meta tbiddel is-settings default. Tipikament, huwa aħjar li tispeċifika l-issettjar tal-parametri tal-folja u l-immaġni mill-applikazzjoni DICOM jew l-issettjar tal-istampatur PostScript, jew tuża fajl tal-Impjiegi tax-Xogħol li fih il-valuri li għandek bżonn. Għal informazzjoni dwar il-fajls tal-Impjiegi tax-Xogħol, irreferi għall-*Horizon Immaġinatur Tekniku Manwal*.

ATTENZJONI Jinbidlu il tal-imager Nuqqas Midja u Nuqqas Utent Settings setgħet jaffettwaw sussegwenti stampi magħmula minn oħra utenti. Uża kawtela meta jinbidlu default settings.

ATTENZJONI Jinbidlu il tal-imager Nuqqas Midja u Nuqqas Utent Settings setgħet jaffettwaw sussegwenti stampi magħmula minn oħra utenti. Uża kawtela meta jinbidlu default settings.

TWISSIJA Ma ' il immaġinatur għata miftuħ, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar. Neħħi ċrieki, rabtiet, dehbijiet, u oħra oġġetti, u tie lura xagħar, hekk dak huma agħmel mhux jaqgħu ġo jew ġib maqbuda fi il immaġinatur.

TWISSIJA Il termali jistampa ras jista ' tkun jaħraq.

TWISSIJA Meta tindif il jistampa ras, evita il estrem tispiċċa ta ' il jistampa ras, liema huma qawwi.

ATTENZJONI Uża biss it-tindif tar-ras tal-istampar imsaħ meta tnaddaf ir-ras tal-istampar termali. Ukoll, tmissx il-wiċċ tal-ħġieġ tar-ras tal-istampar termali b'subgħajk; jista 'jagħmel ħsara lir-ras tal-istampar. Biex tevita li tmiss il-wiċċ tal-ħġieġ, tista 'tkun trid tilbes ingwanti meta tnaddaf ir-ras tal-istampar termali.

ATTENZJONI Il termali jistampa ras għandu tkun kompletament niexef qabel attentat għal użu il immaġinatur. Tippermetti il termali jistampa ras għal saħħan sa mill-ġdid waqt għadu imxarrab se ħsara il termali jistampa ras.

TWISSIJA Ma ' il immaġinatur għata miftuħ, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar. Neħħi ċrieki, rabtiet, dehbijiet, u oħra oġġetti, u tie lura xagħar, hekk dak huma agħmel mhux jaqgħu ġo jew ġib maqbuda fi il immaġinatur.

ATTENZJONI Uża biss il platen romblu tindif imsaħ meta tindif il platen. Il platen romblu setgħet tkun bil-ħsara jekk int użu il jistampa ras tindif imsaħ.

TWISSIJA Ma ' il jirċievu trejs imneħħija, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar. Neħħi ċrieki, rabtiet, dehbijiet, u oħra oġġetti, u tie lura xagħar, hekk dak huma agħmel mhux jaqgħu ġo jew ġib maqbuda fi il immaġinatur.

ATTENZJONI Uża biss il platen romblu tindif imsaħ meta tindif il pick tajers. Il tajers setgħet tkun bil-ħsara jekk int użu il jistampa ras tindif imsaħ.

ATTENZJONI Agħmel mhux tmiss il pick tajers (liema jista ' tkun abjad jew aħdar); ġisem żjut minn tiegħek swaba huma iebes għal neħħi u setgħet eventwalment ħsara il tajers.

TWISSIJA Ma ' il jirċievu trejs imneħħija, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar. Neħħi ċrieki, rabtiet, dehbijiet, u oħra oġġetti, u tie lura xagħar, hekk dak huma agħmel mhux jaqgħu ġo jew ġib maqbuda fi il immaġinatur.

ATTENZJONI Uża biss tindif tampuni minn a Barcode Qarrej Tindif Kit.

ATTENZJONI Agħmel mhux grif jew laqam il folja metall. Grif u nicks fi il kantina se ħsara il stampati ġenb ta ' ChromaVista folji.

ATTENZJONI Federali liġi jirrestriġi dan apparat għal tkun mibjugħa għal użu minn jew fuq il ordni ta ' a tabib.

TWISSIJA Ma ' il quċċata għata miftuħ, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar. Neħħi ċrieki, rabtiet, dehbijiet, u oħra oġġetti, u tie lura xagħar, hekk dak huma agħmel mhux jaqgħu ġo jew ġib maqbuda fi il immaġinatur.

ATTENZJONI Agħmel mhux tmiss il pick tajers (liema jista ' tkun abjad jew aħdar); ġisem żjut minn tiegħek swaba huma iebes għal neħħi u setgħet eventwalment ħsara il tajers.

ATTENZJONI Lil evita jagħmlu ħsara intern komponenti, użu kura meta tneħħija a folja minn il midja triq fi il ta 'fuq parti ta ' il immaġinatur.

ATTENZJONI Qatt poġġi a folja lura fi il cassette. Trab jew żejt minn tiegħek subgħajk se jaffettwaw il immaġni kwalità.

TWISSIJA Ma ' il quċċata għata miftuħ, tmiss biss dawk intern komponenti dak huma ikkulurit aħdar. Neħħi ċrieki, rabtiet, dehbijiet, u oħra oġġetti, u tie lura xagħar, hekk dak huma agħmel mhux jaqgħu ġo jew ġib maqbuda fi il immaġinatur.

ATTENZJONI Kun attent mhux għal grif il illustrat folja metall jew ħsara il senser qrib il ta 'fuq gwida talja.

ATTENZJONI Għamla żgur int agħmel mhux fuqdawwar il midja gwida, kif murija hawn taħt.

ATTENZJONI Federali liġi jirrestriġi dan apparat għal tkun mibjugħa għal użu minn jew fuq il ordni ta ' a tabib.

ATTENZJONI Uża kura meta ġiri il Tnaddaf Stampa Impjiegi funzjoni. Dan funzjoni se tnaddaf oħra utenti jistampa impjiegi kif tajjeb kif tiegħek.

ATTENZJONI Kollha fajls ttellgħet bl-użu anonimu FTP huma tinqara minn oħra FTP utenti. DO MHUX ittella ' sensittiv jew klassifikati informazzjoni.