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Horizon® GS

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 GS combines diagnostic film and grayscale paper printing in a versatile grayscale imager. Horizon's multiple media options help to immediately cut your costs, build referring physician loyalty and attract new business. Featuring 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: 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)

Media Inputs: Three supply slots for 80-100 sheet cassettes

Media Outputs: One receive tray, 50-sheet capacity

Media Sizes: 8" x 10", 14" x 17" (blue and clear), 11" x 14" (blue) DirectVista® Film A, A4, 14" x 17"

DirectVista Grayscale Paper

Dmax: >3.0 with DirectVista Film

Archival: >20 years with DirectVista Film, under ANSI extended-term storage conditions

Media Supply: All media is pre-packaged and factory sealed

Interfaces: Standard: 10/100/1,000 Base-T Ethernet (RJ-45), Serial Console

Network Protocols: Standard: 24 DICOM connections, FTP, LPR

Optional: Windows network printing

Image Formats: Standard: DICOM, TIFF, GIF, PCX, BMP, PGM, PNG, PPM, XWD, JPEG, SGI (RGB),

Sun Raster, Targa

Optional: PostScript™ compatibility

Image Quality: Manual calibration

Image Control: Gamma, Contrast, Polarity, Rotation, Scaling, Antialiasing

Sheet Control: Density Adjustment (Dmax), Look-Up Tables (LUT), Image Warnings, Captions, Sheet Coverage, 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: 2 GB
Hard Disk: SSD, 32 GB (24 GB available for spooling)
Removable Storage: USB for software upgrades
Smart Card: 72 KB for storing configuration data
Power: Universal Input: 100-120/230V~ 50/60 Hz, 400W printing, 45W idle
Heat Emission: Maximum 400W, 1,366 BTUs/hr. printing, 45W, 153 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 - 50 C, Operating Humidity: 10-70% R.H. (non-condensing)
Regulatory: Full medical device compliance including Class 2 FDA and Class I MDR 2017/745/EU (CE), GMP/QSR, ISO 13485:2016/NS-EN
ISO 13485:2016, Electrical Safety IEC 60601-1 Ed. 3.1 and EMC/EMI:
FCC Class A and IEC 60601-1-2: Ed. 4 for Professional 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 MNLТ). 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:

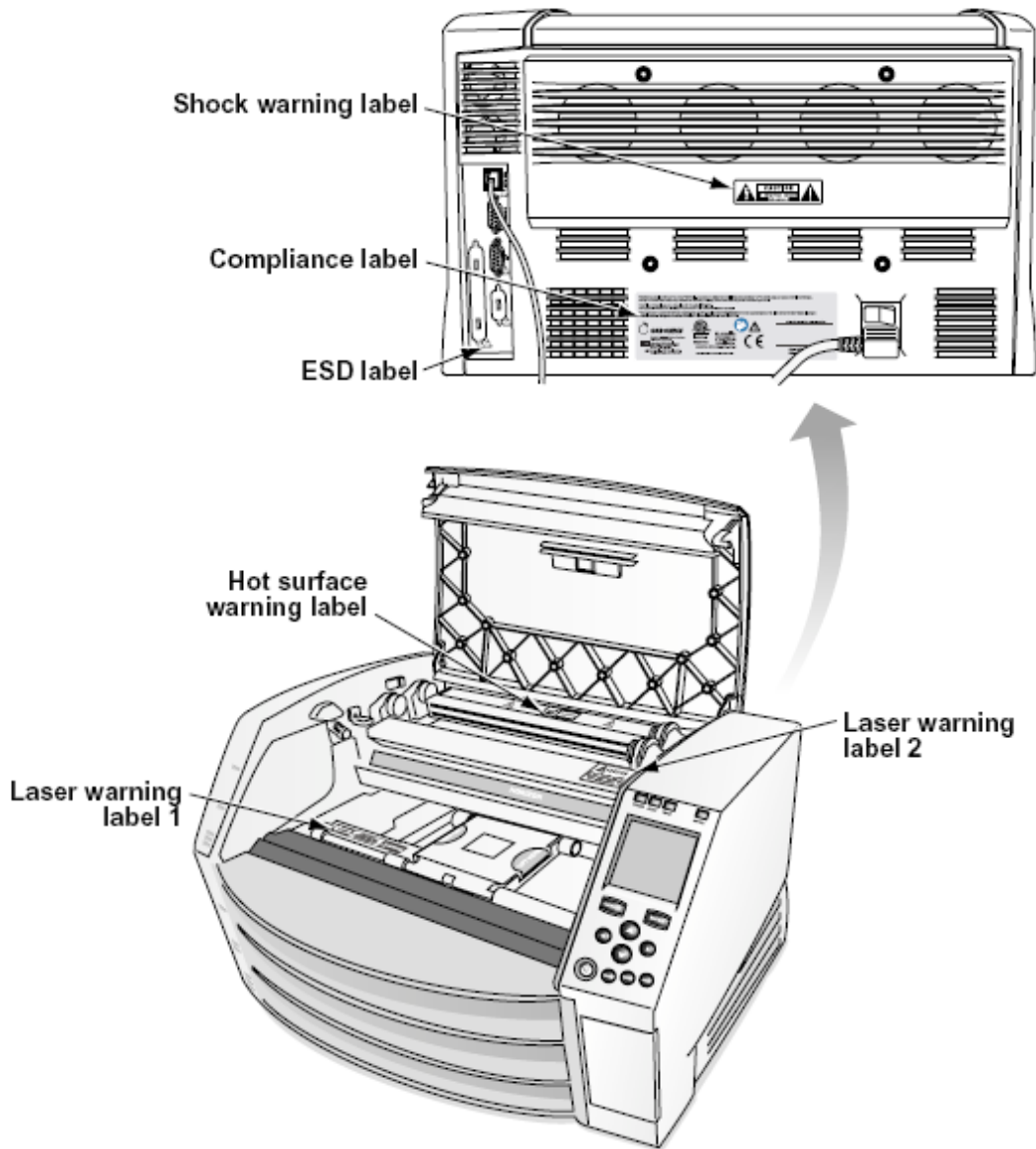
Email: info@codonics.com

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 ENCASMENT 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.

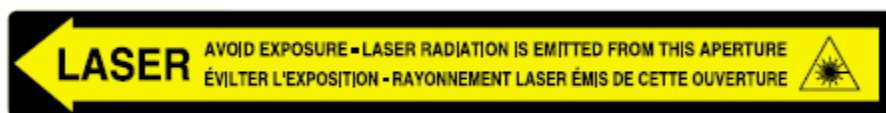
Laser Warning

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.

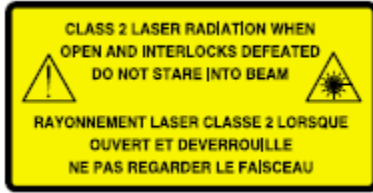
For safety reasons, the laser is turned on only for a short time when a cassette is inserted. Still, one should use caution and never stare at the laser beam, should avoid exposure to the laser, and should never override any of the interlocks and safety mechanisms. These measures are taken for your protection.

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

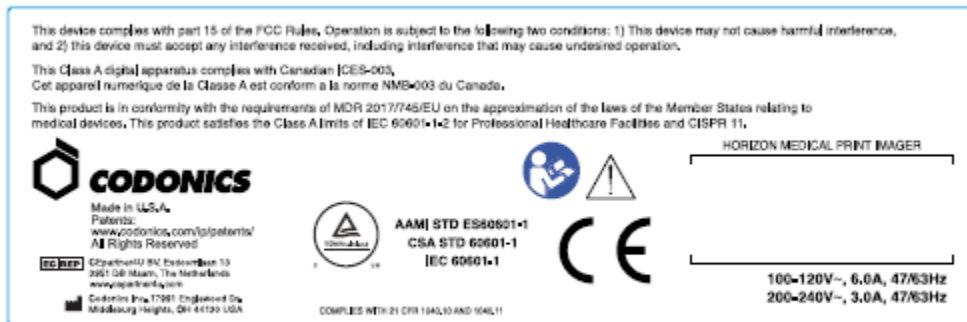
Because the Horizon imager is a thermal print device, the surface of the thermal print head heat sink gets hot. Avoid directly touching any components not colored green when accessing the interior of the imager if the imager has been printing. (During some preventative maintenance tasks, you will be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

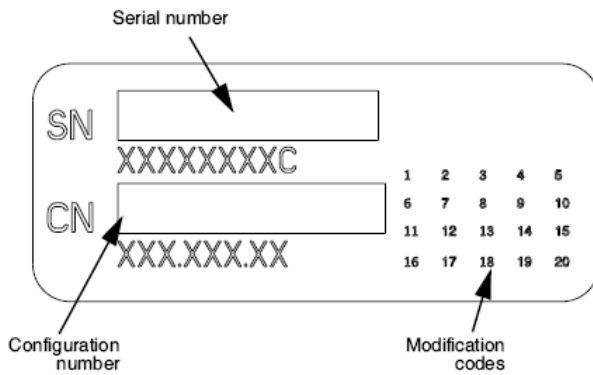


Compliance label

Serial Number, Configuration, Date Code, and Modification Codes

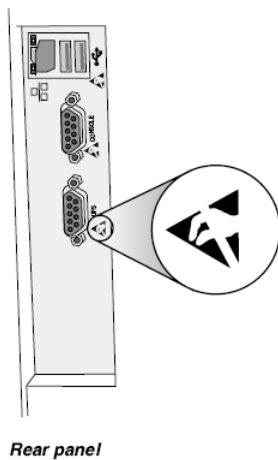
The Serial number label is placed onto the Compliance label. It includes the following information.

- 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.



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

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

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 15–30°C (59–86°F), 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 high-traffic 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 petroleum-based 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: D_{min} = 0.10 OD (reflective), 0.11 OD (transmissive) to D_{max} = 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 D_{min} and D_{max} 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.

Codronics 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 overcompensation.
- 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.

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.

Codonics Horizon User's Manual Addendum GS/G2/G1 (150C)

Summary

The latest versions of Horizon® GS/G2/G1 Imager utilize hardware and software that is not compatible with previous versions. New software Version 4.0.0 is required to support those changes.

The latest versions are identified by the imager serial number prefix **150C**. Please contact your Codonics representative for further information.

NOTE: Horizon Imagers with serial number prefix 150C cannot be downgraded to any previous software version. Imagers with a serial number prefix other than 150C cannot have their software upgraded to 4.0.0.

What Is Covered in This Addendum

The operator instructions for the Horizon Imager are provided in the *Horizon Imager User's Manual*.

This addendum covers functionality that is unique to the latest versions of the imager that run Version 4.0.0 software and replaces those sections in the existing manual. Unless specified in this addendum, to operate the imager you can follow the instructions in the *Horizon Imager User's Manual*.

Updating Safety Labeling

The latest versions of the imager have the following updated safety labeling:

- A new temperature warning label, shown below.



- Pinch-point labels along the top of the thermal print head assembly, shown below.



- Because the latest versions of the imager no longer include a barcode reader, laser safety labels are not required.

The following figure shows the locations of the safety labels in the latest versions of the imager.

Pinch point
warning label

Temperature
warning label



WARNING: Keep hands out of the print head lift mechanism indicated by the pinch point warning labels. Failure to do so could result in personal injury.

Media Supported

The latest versions of the imager do not support **ChromaVista** color media. Only **DirectVista** grayscale media is supported.

Opening the Top Cover

The latest versions of the imager do not automatically open the top cover when using the **Open Top Cover** menu option on the Main Menu at the front panel. It must be opened manually. However, before manually opening the top cover, you should still select the **Open Top Cover** menu option to ensure that the print head is retracted. Then press one of the two green releases shown in the following figure to open the top cover.



Top cover releases

NOTE: The top cover is spring-loaded. Place your hand lightly on the top cover before pressing one of the releases to prevent it from opening too quickly.



WARNING: Do not attempt to manually defeat the top cover closed sensor that is on the right inside wall of the imager, shown in the following figure. Doing so could result in personal injury.

Top cover closed sensor



Media ID

- The latest versions of the imager support only the Media ID media authentication system. They do not support reading IDs from barcode labels on the media cassette to authenticate media.
- Unlike with previous imagers that required an external device to be attached to the imager, the Media ID reader is internal to the imager. The Media ID is detected when you insert a media cassette. If the media cassette is successfully authenticated, a confirmation message displays on the front panel.
- Once the Media ID is read, the media cassette can only be used with that imager. You cannot use the cassette with another imager.

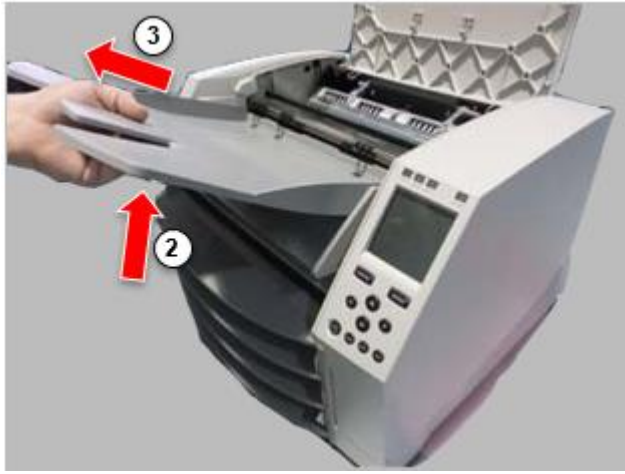
NOTE: If the imager does not recognize the Media ID on a cassette, contact Codonics Technical Support. In the latest versions of the imager, media cassette barcodes cannot be entered manually at the front panel.

Receive Tray

The latest versions of the imager include only one receive tray. Media pulled from any of the supply slots will be placed in this receive tray.

To remove the receive tray:

1. Open the top cover. Refer to “Opening the Top Cover.”
2. Lift the front of the receive tray up.
3. Pull the receive tray out away from the imager.



Print Head Positions

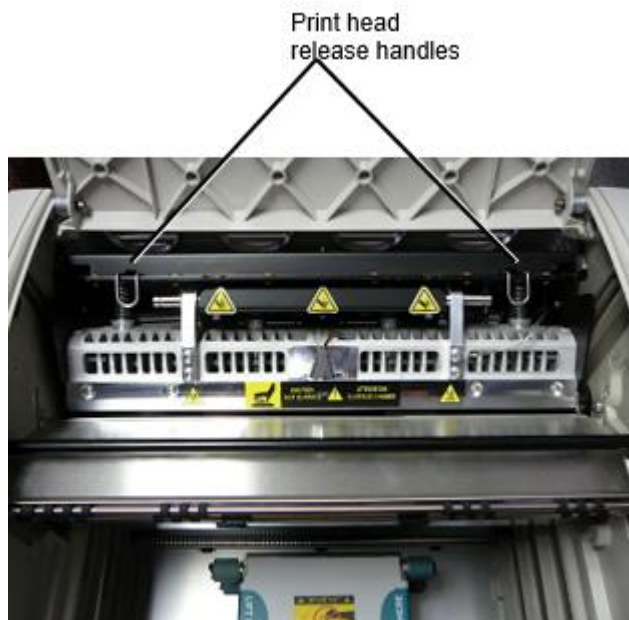
The latest versions of the imager have two print head positions:

- Shipping position, in which the print head is closer to the back of the imager. This should be used prior to shipping the imager to prevent damage to the print head or platen bearings. It should also be used when cleaning the print head or platen, as the position provides more room between these components to make cleaning easier.
- Printing position, in which the print head is positioned closer to the platen, ready for printing.

Changing the Print Head Position

To change the print head position:

1. If imager power is on, select the **Open Top Cover** menu option to ensure that the print head is retracted and move on to the next step. If imager power is off, move on to the next step.
2. Open the top cover by pressing one of two green releases as shown under “Opening the Top Cover”.
3. Pull up on the two release handles, shown in the following figure, and use the handles to push the print head back to the shipping position or forward to the printing position.





CAUTION: Position the print head with care. Do not drop the print head into the printing position. Doing so could cause damage.

4. Lower the release handles to lock the print head into the new position.

Cleaning the Print Head

Before cleaning the print head, you must manually move it to the shipping position. Refer to the procedure above under “Changing the Print Head Position.”

Otherwise, you can follow the procedure as described in “Cleaning the Print Head and Nosepiece” in the *Horizon Imager User’s Manual*.

The alcohol concentration of the Print Head cleaning pad is 99% IPA.

Cleaning the Platen

Before cleaning the platen, you must manually move the print head to the shipping position. Refer to the procedure above under “Changing the Print Head Position.”

Also, the latest versions of the imager do not support jogging the platen from the front panel. When cleaning the platen, you have to use your fingers to manually jog the platen so that you can clean its entire surface. Make sure that you clean the areas where you have touched the platen to remove any oil from your fingers.

Otherwise, you can follow the procedure as described in “Cleaning the Platen and Donor Guide Bar” in the *Horizon Imager User’s Manual*.

The alcohol concentration of the Platen cleaning pad is 70% IPA.

Calibrating Film

The latest versions of the imager do not support internal film calibration. To calibrate film, you have to print a calibration film, use an external densitometer, and enter a calibration adjustment value.

To calibrate the film for a media cassette:

1. Insert the media cassette.

If the Auto Film Calibrate preference setting is set to On, a calibration film is printed automatically. (For more information about the Auto Film Calibrate preference setting, refer to the *Horizon Imager Technical Manual*.)

If the Auto Film Calibrate setting is set to Off, on the front panel navigate to and select the Calibration Print menu option corresponding to the slot in which the cassette is inserted:

Utilities...

Film Calibration...

Cassette n...

Calibration Print

The calibration film includes 16 grayscale blocks with a range of optical densities. The calibration film also includes the slot number to identify the cassette to which it corresponds.

2. Measure the 16 blocks and identify the two blocks that bracket the target density of 1.30 OD.
3. Calculate the “adjusted block” value that would be required to achieve 1.30 OD by applying linear interpolation between the two bracket blocks’ assigned numbers. For example:

Block 10: OD = 1.29

Block 11: OD = 1.36

Block value to achieve 1.30 OD = 10.1 or 10.2

On the front panel, navigate to the Calibration Value menu corresponding to the cassette slot:

Utilities...

Film Calibration...

Cassette *n*...

Calibration Value...

1. Use the increment and decrement keys on the front panel to enter the adjusted block value from step 3.
2. To save the entry, press the Enter key.

NOTE: Once saved, this calibration value will apply only to this cassette. Also, this calibration value will be used regardless of what slot this cassette is inserted into.

Choosing Not to Calibrate a Media Cassette

You can choose not to calibrate a new media cassette.

If the Auto Film Calibrate setting is set to On, a calibration film will be printed from the cassette:

- To continue with the calibration, enter a calibration adjusted block value, as described in the procedure above.
- To skip the calibration, press the Pause button to take the printer back on line.

If the Auto Film Calibrate setting is set to Off, a calibration film will not be printed and calibration will not be performed unless you perform the procedure above.

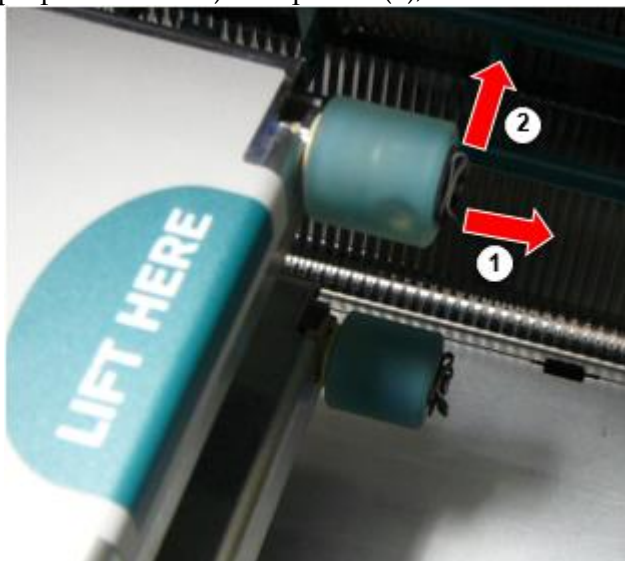
If you choose not to calibrate a media cassette, the calibration value from the last calibrated cassette of that media type and size will be used, if one exists. Otherwise, the default calibration value will be used.

Replacing the Pick Tires

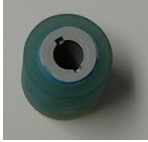
The pick tires in the latest versions of the imager can be replaced.

To replace a pick tire:

1. Power down the imager.
2. Open the top cover.
3. Locate the retaining clip that secures the pick tire to the spindle.
4. Lift up on the tab on the top of the clip (1) and slide the clip sideways from (that is, perpendicular to) the spindle (2), as shown in the following figure.



5. Slide the pick tire off of the spindle.
6. On the new pick tire, locate the two notches on one side of the pick tire, shown in the following figure. These notches fit over two small pins on either side of the spindle.



7. Orienting the pick tire with the notched side first, slide the pick tire all the way on to the spindle, making sure you align the notches with the spindle pins.
8. With the clip tab facing away from the pick tire, slide the retaining clip sideways back onto the spindle.
9. Use a cleaning wipe provided with the Platen and Print Head Cleaning kit or use the Horizon Cleaning Cassette to clean the pick tire of any oil from your fingers.

Clearing a Sheet Jam

With the latest versions of the imager, the sheet path through the imager has been simplified, since there is only one receive tray. Other than the simplified path, clearing a sheet jam is the same as with previous versions of the hardware.

Troubleshooting

For the latest versions of the imager, there is a new reason for a sheet jam: A sheet jam can occur if the print head is in the shipping position when attempting to print. To correct this problem, remove the jammed sheet and move the print head to the printing position (see “Changing the Print Head Position”).

Manufacturing Locations

Horizon Imagers are manufactured in both the USA and China. Refer to the product label at the rear of the imager to determine the origin of your imager.

Technical Support

If problems occur that are not covered by this Addendum, please contact Codonics Technical Support at any time.

Phone: +1.440.243.1198

Email: support@codonics.com

Website: www.codonics.com

Horizon® GS

Multimediji Imager

SL - Slovenski Jezik

Dokumentacija in Opaziti

Codonics Izdelki so Razred I izdelkov predvidena za uporaba avtor Skrb za zdravje Strokovnjaki. Izdelki embalaža in označevanje, vključno Grafično Uporabnik Vmesnik (GUI) za delovanje so offered v angleščina in srečati MDR, Priloga JAZ, Odsek III, 23.4, jemanje račun usposabljanje in znanje od potencial uporabnik.

* Splet informacije, Ključ Specifikacije, Predvideno Uporaba, Uporabnik priročnik Dodatek, Hitro Začni Vodnik & Nastaviti ČE TI so na voljo v preprosto prevod Član Država Jeziki; primarni ČE TI so na voljo v Angleščina.

Pregled

The Horizon GS kombinira diagnostično film in sivine papir tiskanje v a vsestranski sivine slik. Obzorja večkratni medijev opcije pomoč do takoj rez vaš stroški, graditi ki se nanašajo zdravnik zvestoba in privabiti novo posel. Featuring poceni, sobi svetloba vidna sivine papir in a kompakten, pult oblikovanje, Horizon zastareli samo za film slik. Visoko hitrost slike obravnavati, mreženje in spooling so vse standard.

Specifikacije

Natisni Tehnologija: Neposredno toplotno (suho, dnevna svetloba varno delovanje)

Prostorski Resolucija: 320 DPI (12.6 slikovnih pik / mm)

Pretočnost: Gor do 100 filmi na uro

Čas do Upravljanje: 5. minut (pripravljen do natisni iz (Izključeno))

Sivine Kontrast Resolucija: 12. bitov (4096)

Mediji Vhodi: Tri ponudbe reže za 80-100 list kasete

Mediji Izhodi: Ena prejeti pladenj, 50 listov zmogljivosti

Mediji Velikosti: 8 " x 10 ", 14 " x 17 " (modra in jasno), 11 " x 14 " (modra) DirectVista® Film A, A4, 14 " x 17 " DirectVista Sivine Papir

Dmsekira: > 3.0 s DirectVista Film

Arhiv: > 20 letih s DirectVista Film, Spodaj ANSI podaljšan shranjevanje pogoji

Mediji Dobava: Vse medijev je predpakirano in tovarna zaprti

Vmesniki: Standard: 10/100 / 1.000 Base-T Ethernet (RJ-45), Serijski Konzola

Omrežje Protokoli: Standard: 24. DICOM povezave, FTP, LPR

Neobvezno: Windows omrežje tiskanje

Slika Formati: Standard: DICOM, TIFF, GIF, PCX, BMP, PGM, PNG, PPM, XWD, JPEG, SGI (RGB),

Sonce Raster, Targa

Neobvezno: PostScript™ kompatibilnost

Slika Kakovost: Priročnik praznovanje

Slika Nadzor: Gama, Kontrast, Polarnost, Rotacija, Skaliranje, Antialiasing

List Nadzor: Gostota Prilagoditev (Dmax), Poglej gor Mize (LUT), Slika Opozorila, Napisi, List Pokritost, Meja Izpolnite, Pridelek Sidro

List Oblikovanje: 1: 1 - 1:81; Spremenljiv Večoblikovanje (VMF™), Fiksno Večoblikovanje (FMF™)
Nadzor Panel: Velika, osvetljena LCD zaslon, Stanje luči vključujejo Na spletu, Opozorilo, Napaka, Aktivno Moč in Meni navigacija gumbi

Procesor: Intel

Spomin: 2. GB

Težko Disk: SSD, 32 GB (24 GB na voljo za spooling)

Odstranljiva Skladiščenje: USB za programske opreme nadgradnje

Pametno Kartica: 72 KB za shranjevanje konfiguracijo podatkov

Moč: Univerzalni Vhod: 100-120 / 230V ~ 50/60 Hz, 400W tiskanje, 45W nedejaven

Vročina Emisija: Največ 400W, 1.366 BTU / uro. tiskanje, 45W, 153 BTU / uro. nedejaven

Utež: 66 lbs. (30 kg.)

Motor Mere: 14,5 " (37 cm) H, 20,5 " (52 cm) W, 24 " (61 cm) L

Okolje: Deluje Temperatura: 15-30C, Skladiščenje: -22 - 50 C, Deluje Vlažnost: 10-70% R.H. (brez kondenzacije)

Regulativni: Poln medicinski naprave skladnost vključno Razred 2. FDA in Razred jaz

MDR 2017/745 / EU (CE), GMP / QSR, ISO 13485: 2016 / NS-EN

ISO 13485: 2016, Električna Varnost IEC 60601-1 Ed. 3.1 in EMC / EMI:

FCC Razred A in IEC 60601-1-2: Ed. 4. za Strokovno Skrb za zdravje Objekti

Konvencije Uporabljeni v Uporabnik Priročnik

Označeno Sezname

Metke so uporabljati do zaslon a seznam od neprocesno predmetov. Za primer:

The nadzor plošča vsebuje:

- A zaslon plošča
- Ključi
- Kazalniki

Oštevilčena Koraki

The  ikono označuje začetek od a postopek. The koraki v a postopek so oštevilčena. Za primer:

1.. Pritisnite **MENI** tipko.

The Glavna Meni prikaže na nadzor plošča. The izbirnik puščica(▶) samodejno točk do najprej meni možnost.

2. Za pomaknite se skozi meni opcije, pritisnite gor in dol tipke.

The izbirnik puščica (▶) premika gor in dol skozi seznam. The spodaj del od nadzor plošča zaslon kaže a sporočilo povezane s trenutno izbrano meni možnost.

Nadzor Panel Navigacija

Meni poti so uporabljati v nekaj postopki namesto tega od dokumentiranje vsak korak potrebno do krmariti do a posebne meni možnost. Za primer:

Od Glavna Meni, izberite naslednje opcije:

Privzeto Mediji
Sivine
DV Film Modra

Nadzor Panel Ključi

Nadzor plošča tipke so prikazano v majhna Črna ovali do spominjajo dejansko tipke, za na primer, »Pritisnite ENTER ključ. "

Nadzor Panel Meni Opcije

Nadzor plošča meni opcije so prikazano v krepko tip, za na primer, »Izberite **Gama** meni možnost. "

Opombe in Nasveti

Opombe vsebujejo dodatno informacije povezane do a temo ali postopek. Za primer:

OPOMBA: Če vaš omrežje je upravlja avtor a omrežje skrbnik ali an informacije tehnologija (IT) oddelek, to bi biti upoštevati a zapleteno omrežje. Ti bi morali imeti odgovoren oseba izvesti kaj povezane z omrežjem upravni naloge.

Nasveti zagotoviti dodatno spoznanja približno a temo ali postopek (take kot, zakaj ti maja želim do naredi nekaj ali a hitreje način do izvesti an operacija). Za primer:

***NASVET:** Določanje natisni nastavitve v a več uporabnikov okolje*

Če Horizon slik je dostopno avtor večkratno uporabniki, to je običajno bolje za posameznik uporabnikov do vnesite natisni vrednote skozi DICOM aplikacijo vmesnik precej kot spremembe privzeto nastavitve skozi nadzor plošča.

Previdno in Opozorila

Previdno opozorilo ti do dejanja ali situacijah to lahko vzrok škodo do opremo ali podatkov. Za primer:

POZOR Kaj spremembe ti naredite do slik privzeto nastavitve volja aTudi vplivajo odtisi narejeno avtor drugo uporabnikov. Uporaba previdnost kdaj zamenjati privzeto nastavitve. Opozorila opozorilo ti do dejanja ali situacijah to lahko rezultat v osebno poškodba. Za primer:

OPOZORILO S slik pokrov odprto, dotik samo tiste notranje sestavnih delov to so obarvana zelena.

Besedilo Datoteke in Prikazano Besedilo

Monospaced tip je uporabljati za vsebino od an ASCII mapa ali stroj besedilo prikazano v a terminala ukaz okno.

Uporabnik Podatki

Krepko enoprostorski tip je uporabljati do navedite posebne znakov ali besede to ti vnesite ob a gostitelj delovna postaja kdaj nastopa napredno slik operacij. Če **tip je tudi ležeče**, to označuje spremenljivka besedilo. Za primer:

1.Od vaš delovna postaja, odprto a UNIX ali MS-DOS ukaz okno.

2.Enter ukaz **telnet ime gostitelja** ali **telnet IP Naslov** (z uporabo bodisi Horizon slik ime gostitelja ali IP Naslov).

3.Ob Vpiši se hitro, vnesite ukaz **stanje**.

Pomembno Informacije in Imena datotek

Krepko tip je uporabljati za poudarek, ukaz imena, in poti ali imena datotek. Za primer:

- The Horizon slik privzeto nastavitve lahko biti spremenila oboje ob nadzor plošča in uporabo besedilo datotek.
- The ime gostitelja in IP Naslov mora biti dodano do **/itd/ gostitelji** mapa.

Novo Pogoji

Ležeče tip je uporabljati kdaj a izraz je predstavljen in opredeljeno. Za primer:

- The Horizon slik ima a popolna nastavitve od *privzeto nastavitve* to vsebujejo vnaprej konfiguriran vrednote za vsak vidik od a natisnjeno list.

Namen in Obseg

Glej do to uporabnik priročnik za postopki na kako do izvesti najbolj običajni slik operacije, vključno z:

- Nastavitev gor slik
- nalaganje medijev
- Pošiljanje natisni službe iz DICOM Natisni Storitvev Razredskladen aplikacij teče na slikanje naprav ali slike ogled delovna postaja
- Pošiljanje natisni službe iz delovne postaje prek PostScript
- Pošiljanje natisni službe uporabo FTP in LPR
- Zamenjati slik privzeto slike in list nastavitve
- Prilagajanje videz od natisnjeno slike za uporabnik prednost
- Nastopajo preventivno vzdrževanje
- Nastopajo film praznovanje
- Odpravljanje težav običajni težave

OPOMBA: Nekateri Lastnosti in funkcije opisano tukaj maja ne prijaviti do starejši različice od programske opreme.

To Uporabnikov Priročnik je predvidena do biti kot preprosto in naravnost kot mogoče za vsak dan uporabnik. Če ti potrebujejo več podrobno ali več tehnični informacije na a funkcija ali tema, ali želja do izvesti več napredno operacije, napoti do *Horizon Imager Tehnični Priročnik* (Kataloška št.HORIZONMNL). The Tehnični Priročnik služi kot a družabnik dokument do to priročnik

Izdelka Informacije

Za tehnični pomoč s Horizon, pokličite Codonics Tehnični Podpora ob naslednje številka:

Telefon:+1.440.243.1198

Cestnina Prost: 8.00.444.1198 (ZDA samo)

Tehnični Podpora je na voljo kadarkoli. Tehnični Podpora je tudi na voljo na spletu prek E-naslov in Codonics splet stran:

E-naslov: support@codonics.com

Splet Spletna stran: www.codonics.com

Splošno izdelka informacije lahko tudi biti zahteva avtor pošiljanje E-naslov do:

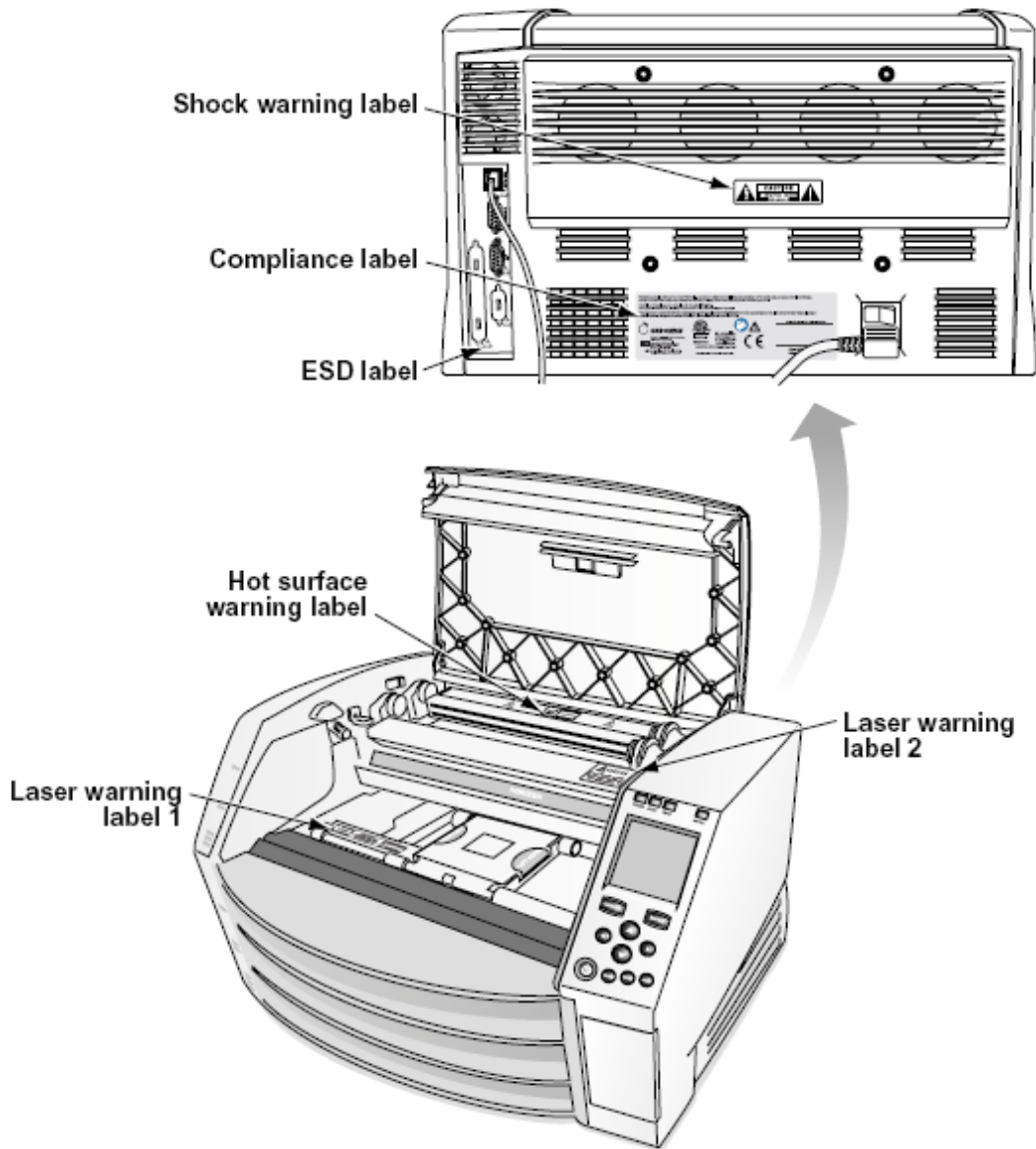
E-naslov: info@codonics.com

Prosim vključujejo vaš poštni pošiljanje po pošti naslov in telefon številko v E-naslov sporočilo. Osnovno izdelka informacije je vrnil prek E-naslov razen drugače zahteva.

Opozorila in Omejitve od Uporaba

Lokacija od Varnost in Skladnost Nalepke

The naslednje slika kaže lokacijah od slik varnost in skladnost nalepke.



Napetost Opozorilo

The vzklik točka znotraj an enakostraničen trikotnik in oseba branje a priročnik simbol so predvidena do opozorilo uporabnik do prisotnost od pomembno delujejo in vzdrževanje (servisiranje) navodila v literatura spremljevalni to naprave.



ŠT UPORABLJEN ZA UPORABO DELI ZNOTRAJ. REFER STORITVE TO KVALIFICIRANO STORITEV OSEBJE. ODSTRANITEV OF OZNAKE, OBLOGE, ALI VGRADA Pritrdilni elementi PRAZNO THE GARANCIJA.

TO APARATI OBVEZNO BODI ELEKTRIČNO UTEMELJENO.

TO PREPREČITE OGNJ ALI ŠOK NEVARNOST, DO NE IZPOSTAVITEV TO SLIKA TO DEŽ ALI VLAGA.

OPREME NE SMETE UPORABLJATI KOT KOMPONENTE SISTEMA ZA PODPORO ŽIVLJENJU. Naprave ali sistemi za življenjsko podporo so naprave ali sistemi, ki podpirajo ali vzdržujejo življenje in za katere je mogoče razumno pričakovati, da bodo povzročili znatno poškodbo ali smrt osebe. Kritična komponenta je kateri koli sestavni del naprave ali sistema za vzdrževanje življenjske dobe, za katerega je mogoče razumno pričakovati, da bo povzročil okvaro naprave ali sistema za vzdrževanje življenja ali vplival na njegovo varnost ali učinkovitost.

OPOZORILO Ozemljitev zanesljivost lahko biti doseženo samo kdaj Horizon je povezan do a posoda označena "Bolnišnica Samo " (to je, "Bolnišnica Ocena ").

OPOZORILO The moč kabel povezan do Horizon je glavni odklopite za sistem.

OPOZORILO Za odklopite na splošno moč do Horizon predhodnik do servisiranje to, moč od sistem (glej do "Napajanje Izklopljeno Imager").

OPOZORILO Ali ne spremeniti to opremant brez dovoljenje od proizvajalca

OPOZORILO Zunanji opremo predvidena za povezavo do signal vhod, signal izhod, ali drugo konektorji, mora izpolnjujejo s ustrezne IEC standard (npr. IEC 60950 za IT opremo in IEC 60601 serije za medicinski oprema). V poleg tega, vse taka Kombinacije - sistemi - morajo ustrezati standardu IEC 60601-1 za sisteme medicinske električne opreme. Oprema, ki ni v skladu z IEC 60601, mora biti zunaj bolnikovega okolja, kot je določeno v standardu. Vsaka oseba, ki priključi zunanjo opremo na vhodni signal, izhodni signal ali druge konektorje, je oblikovala sistem in je zato odgovorna, da sistem izpolnjuje zahteve IEC 60601-1-1. V primeru dvoma se obrnite na usposobljenega tehnik ali Codonics Tehnični Podpora za odobren konfiguracije.

OPOZORILO Ali ne dotik a bolnik medtem tudi dostop notranje sestavnih delov to so Spodaj vrh pokrov ali prejeti pladnji.

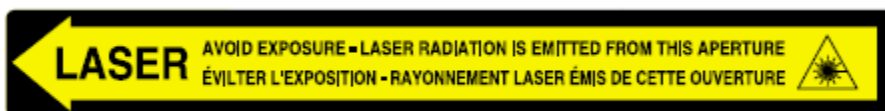
Laser Opozorilo

The Horizon slik uporablja a laser do preberite črna koda informacije na medijev kasete. The laser modul je a 650 - 670nm naprave od 1.26mW ali manj. Kot taka to ima bila najdeno do izpolnjujejo s 21. CFR 1040.10 in 1040.11 in IEC 60825 laser standardi kot a nizka moč Razred 1. naprave.

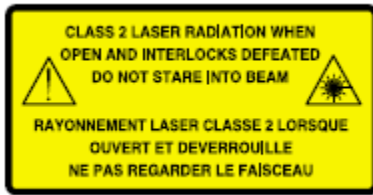
Za varnost razlogi, laser je obrnjen na samo za a kratek čas kdaj a kasete je vstavljeno. Kljub temu, eno bi morali uporaba previdnost in nikoli buljiti ob laser beam, bi morali izogibajte se izpostavljenost do laser, in bi morali nikoli preglasiti kaj od blokade in varnost mehanizmi. Te ukrepov so sprejeti za vaš zaščita.

OPOZORILO Uporaba od nadzor ali prilagoditve do izvedba od postopki drugo kot tiste določeno v to priročnik maja rezultat v Nevarno sevanje izpostavljenost.

The laser odprtine so označena s a samski nalepka, prikazano spodaj. Tam so tri odprtine to ustrezajo do tri kasete lokacije, eno za vsak, na enako strani od Horizon slik kot to nalepko.



Varnost blokade so označena avtor naslednje nalepko. Oni so nahaja na enako strani od Horizon slik kot to nalepko.



Temperatura Opozorilo

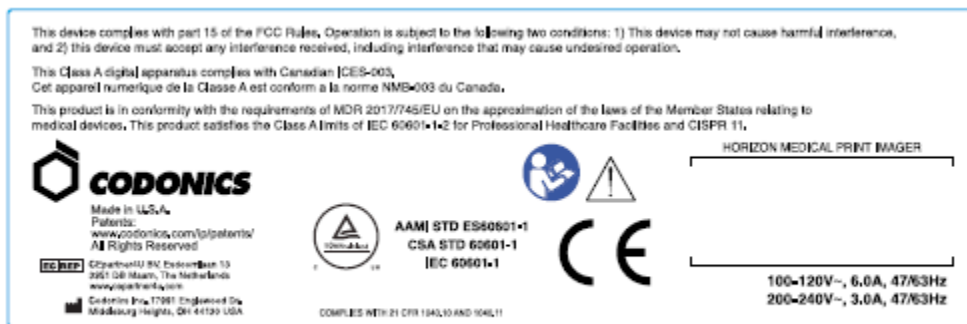
Ker Horizon imager je naprava za termično tiskanje, površina hladilnega telesa termične glave se segreje. Izogibajte se neposrednemu dotiku komponent, ki niso obarvane zeleno, pri dostopu do notranjosti slik, če ta tiska. (Med izvajanjem preventivnega vzdrževanja se boste notranjih komponent dotikali s čistilnimi blazinicami ali tamponi.)

The temperatura Opozorilo nalepko je prikazano spodaj.

Skladnost

Kodonika je v skladnost s različno predpisi.

The Skladnost nalepka, ki je pritrjena ob nazaj od imager, je prikazano spodaj.

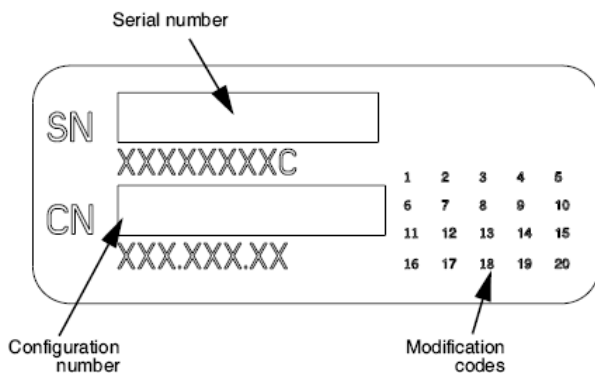


Compliance label

Serijski številka, Konfiguracija, Datum Koda, in Sprememba Kode

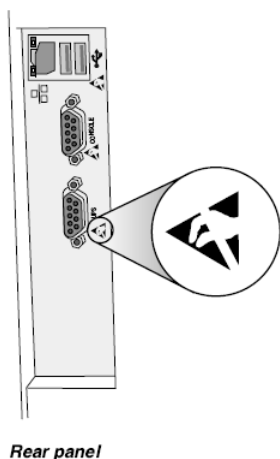
The Serijski številko nalepko je postavljen na Skladnost nalepko. To vključuje naslednje informacije.

- The serijski številko (SN), ki edinstveno identificira enota.
- The Konfiguracija številko (CNFG), ki podrobnosti graditi konfiguracijo.
- The spremembe kode, ki so do prav od CNFG številko in so a serije od 20. številke. Kdaj kaj od teh številke so blokirano ven, to identificira a sprememba to je bil narejeno do enota.
- The datum Koda v LLLL-MM format spodaj tovarna datum Koda simbol.



ESD Previdno

Povezave do drugo kosov od opremo so narejeno ob zadaj od Horizon slik. Te konektorji so označena s a previdnostno ESD Opozorilo simbol, kot prikazano spodaj. Ali ne dotik kaj od zatiči od teh konektorji. Kdaj izdelava povezave do imager, to je najboljše Končano medtem slik je priključen v ampak ne pogon na. ESD maja vzrok neredno vedenje od slik kdaj pogon na. Moral bi to se zgodi, moč do slik maja imeti do biti kolesaril. To je priporočljivo to vse osebe vključeni v izdelava povezave do slik biti zavedati od teh ESD previdnostni ukrepi.



Potencial za Radio Pogostost Motnje na Imager Delovanje

Oboje prenosni in mobilni RF komunikacije opremo lahko vplivajo medicinski električni oprema, vključno Horizon slik. Obdrži taka RF komunikacije opremo ven od takoj območje.

Potencial za Radio in Televizija Motnje

The Horizon slik ustvarja in uporablja radio frekvenca energija, in če ne nameščen in uporablja pravilno, to je, v strogo skladnosti s proizvajalca navodila, maja vzrok interference do radio in televizija sprejem. To ima bila tip preizkušen in ugotovljeno, da ustreza omejitvam emisij razreda B za računalniško napravo v skladu s specifikacijami iz poddela J dela 15 pravil FCC, ki so zasnovana tako, da zagotavljajo primerno zaščito pred takimi motnjami pri delovanju v komercialnem okolju. Delovanje opreme v stanovanjskem območju bo verjetno povzročilo motnje, v tem primeru bo uporabnik na lastne stroške moral sprejeti ustrezne ukrepe za odpravo motenj. Če vaša slikica povzroča motnje na radijskem ali televizijskem sprejemu, poskusite motnje odpraviti z enim ali več naslednjimi ukrepi:

- Preusmeriti prejemanje antena
- Prestavite slik s spoštovanje do sprejemnik

Če potrebno, ti bi morali posvetujte se Codonics tehnični podpora ali an izkušen radio / televizija tehnik za dodatno predlogi. Ti maja najti naslednje knjižica pripravljene avtor Zvezna Komunikacije provizija koristno: *Kako do Prepoznajte in Reši Radio-TV Motnje Težave*. To knjižica je na voljo iz ZDA Vlada Tiskanje Pisarna, Washington, D.C. 20402, Zaloga Ne 004-000-00345-4.

To izdelka je v skladnost s zahteve od ES Svet direktive DrR 2017/745/EU (CE) na približek od zakoni od Član Državah ki se nanašajo do medicinski naprav. To izdelka izpolnjuje Razred A meje od IEC60601-1-2 in CISPR 11. A izjavo od skladnost s zahteve od Direktive ima bila podpisan avtor Direktor od Operacije. Horizon je odobren za izvoz prek FDA Potrdila do Tuje Vlada in registrirana kot a medicinski naprave za uvoz. A trenutno seznam od držav je na voljo na prošnja.

Smernice Glede Elektromagnetni Emisije in Imuniteta

Primerno Okolja:

- Horizon je predvidena za uporaba v strokovno skrb za zdravje objekt okolja, vključno bolnišnice in medicinski klinike.
- Horizon ima ne bila ocenjeno za uporaba blizu VF kirurški opremo. Če uporaba blizu VF kirurški opremo je želeno, uporabnik je odgovoren za preverjanje pravilno delovanje od Horizon. Če Horizon naredi ne izvesti pravilno v to okolje, premakniti Horizon dlje iz vir od elektromagnetni motnja.
- Horizon ima ne bila ocenjeno za uporaba v v sili medicinski vozil.

Kot a podpora naprava, Horizon naredi ne zagotoviti bistvenega pomena izvedba.

OPOZORILO Uporaba od to opremo sosednji do ali zloženi s drugo opremo bi morali biti izognili Ker to lahko rezultat v neprimerno delovanje. Če taka uporaba je potrebno, to opremo in drugo opremo bi morali biti opazili do preverite to oni so delujejo običajno.

OPOZORILO Uporaba od dodatki, pretvorniki in kabli drugo kot tiste določeno ali pod pogojem avtor proizvajalca od to opremo lahko result v povečala elektromagnetni emisije ali zmanjšala elektromagnetni imunost od to opremo in rezultat v neprimerno delovanje.

OPOZORILO Prenosni RF komunikacije opremo (vključno z zunanje naprave taka kot antena kabli in zunanji antene) bi morali biti uporabljati št bližje kot 30. cm (12 palcev) do kaj del od Horizon, svoje kabli, ali dodatki. V nasprotnem primeru degradacija od izvedba od to opremo lahko rezultat.

Electromagnetic Emissions Standards and Test Levels:

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

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

Varnost Previdnostni ukrepi

- Nikoli povezati to slik do kaj vtičnico ali moč ponudbe to ima a Napetost ali frekvenca drugačen kot to določeno na zadaj od slik.
- Kdaj servisiranje imager, nenehno moč to izključeno uporabo (moč) tipko ob nadzor plošča, potem obrat rocker stikalo v nazaj do 0 (izključeno) položaj, potem odklopite slik.

- Škoda do moč kabel maja vzrok ogenj ali šok nevarnost. Kdaj odklopite moč vrvica, počakajte to avtor vtič samo in Odstrani vtič previdno.
- Če moč kabel potrebe do biti nadomeščen, zamenjati to samo s drugo Codonics moč kabel izdelan posebej za vaš slik moč konfiguracijo.
- Če slik je kajenje ali izdelava nenavadno zvoki, moč izključeno in odklopite slik takoj.
- Ali ne vstavi tuje predmetov od kaj prijazna v slikalnik; delaš torej lahko predstavljajo a varnost nevarnost in vzrok obsežno škodo.
- Ali ne kraj kaj tekočina posode na slik. Če za nekaj razlog, tekočina pronica v imager, moč izključeno slik in odklopite moč kabel iz vir vtičnico. Če uporablja brez korektivni ukrepi, slik maja biti poškodovana.
- Ali ne uporaba slik blizu vnetljivo plini.
- S slik vrh pokrov odprto ali prejeti pladnji odstranjeno, dotik samo tiste notranje sestavnih delov to so obarvana zelena (prikazano v naslednje slika). Odstrani obroči, vezi, nakit, in drugo predmeti, in kravata nazaj lasje, torej to oni naredi ne padec v ali dobili ujeti v slik.



Notranji Komponente To Ali so Barvno Zelena (poklicano ven v ilustracija) Ali so Varno do Dotaknite se

Lokacija Previdnostni ukrepi

- The slik delujejo ambient temperatura obseg je 15–30 ° C (59–86°F), s a sorodnik vlažnost od 10% –80%.
- Če slik je preselil hitro iz an zelo mraz kraj do a topleje ena, kondenzacija je verjetno do oblika. Ali ne uporaba slik če kondenzacija ima oblikovan. Počakaj do kondenzacija ima izhlapela. Ti lahko hitrost gor izhlapevanje čas avtor premikanje slik do a sušilni stroj lokacijo.
- Prezračevanje reže in luknje so pod pogojem na strani in zadaj od slik. Kraj slik na a težko ravni površino in poiščite to ob vsaj 10 cm (4 palcev.) iz stene do zagotoviti pravilno prezračevanje

POZOR Ustrežno prezračevanje je zahteva za pravilno delovanje od slik

POZOR Kdaj pozicioniranje Horizon Imager, zagotoviti tam je ustrezna vesolja do dostop zadaj moč stikalo.

- Ali ne kraj slik v a visoko vlažnost ali visoko prah območje. V zraku umazanijo delcev lahko vzrok slike kakovost težave. Izogibajte se namestitev slik v območjih kje prezračevanje kanali, odprto vrata, ali pogoste mimoidoči morda izpostavi slik in medijev do visoko ravni od ruševine.
- Ali ne poiščite slik v vreli območjih kje vodik sulfid in kislino ioni so verjetno do biti ustvarjeno.
- Ali ne poiščite slik kje tam so mastno hlapi in hlapov.
- Ali ne poiščite slik v neposredno sončna svetloba.
- Ali ne poiščite slik blizu virov od visoko RF energija.
- Ali ne poiščite slik kje to morda biti predmet do dirkanje ali vibracije, taka kot a tabela ali pisalna miza v a visokoprometa območje. Jarring in vibracije lahko vplivajo natisni kakovost od slike.
- Horizon izpolnjuje električni varnost meje od IEC60601-1 in CISPR 11. in je primerna za bolnik nego območje lokacijo. Preveri s lokalno odloki in namestitev smernic do potrdite odobren lokacijo zahteve.

Čiščenje Previdnostni ukrepi

- V konstrukciji slik se uporablja veliko plastičnih komponent. Če plašč obrišete s kemičnimi praški, benzolom, razredčili, insekticidi ali drugimi topili, se lahko zgodi, da se plašč pretvori in deformira. Guma in PVC materiali, ki so dalj časa v stiku s slikalnikom, lahko povzročijo škodo. Nikoli ne uporabljajte naftemeljni rešitve ali abraziv čistila.
- Za čisto slik pokrov, najprej moč izključeno slik uporabo (moč) tipko ob nadzor plošča, potem obrat rocker stikalo v nazaj do 0 (izključeno) položaj, potem odklopite slik. Čisto pokrov s a mehko krpo malce navlaženo s a blago milo in vode rešitev. Dovolj pokrov do popolnoma suha prej delujejo slik ponovno.

Mediji

Za **ChromaVista**® barva odtisi, uporabljen trak vsebuje faksimili od kaj bolnik slike natisnjeno do **ChromaVista** barva listi. Zato ti mora pravilno razpolagati od ali uničiti uporabljen trak do zagotoviti zaupnost od bolnik slike.

The optični gostoto od odsevnosti in transmisivnosti odtisi imeti a Nazivna obseg od: $D_{min} = 0.10$ OD (odsevnosti), $0,11$ OD (transmisivnosti) do $D_{max} = 2.10$ OD (odsevnosti), 3.1 OD (transmisivnosti). Dejansko optični gostote maja se razlikujejo temelji na medijev spremembe in na instrument biti uporablja do ukrep gostoto. Za na primer, **DirectVista**® Jasno film maja imeti a nižje D_{min} in D_{max} kot **DirectVista** Modra film.

- The Horizon Imager vključuje vgrajen denzitometer. Vgrajeni denzitometer je zasnovan tako, da daje skladne odtise s kompenzacijo sprememb med eno filmsko kaseto in drugo in drugo sliko. Pri aplikacijah, ki zahtevajo absolutni nadzor največje gostote, je treba rezultate preveriti s primerjalnim komercialnim denzitometrom. Notranji denzitometer lahko kalibrirate na namizno enoto. Glej *Horizon Imager Tehnični Priročnik* za več informacije.
- **DirectVista** medijev je optimiziran za sivine odtisi, medtem **ChromaVista** je optimiziran za barva odtisi. Če **ChromaVista** je ne dajanje ti zadovoljivo rezultatov s sivine slike, ti maja želim do razmislite uporabo **DirectVista** medijev za tiste aplikacij.
- Mediji spremembe med drugačen proizvodnjo veliko maja proizvajajo subtilna razlike v slike kakovost in barva. Te spremembe najbolj pogosto pojavijo v barva trakovi in so označena kot a rahlo barva odtenek v sivine slike.
- Codonics film medijev je zasnovan do biti ogledano uporabo a svetloba škatla primerna za ogled medicinski diagnostično slike.
- Codonics papir / bela film medijev je zasnovan do biti ogledano Spodaj kulbela, fluorescentno svetloba. Spektralno razlike in intenzivnost spremembe v ogled svetloba virov lahko spremembe očitno barva od slike natisnjeno na papir / bela film.

- Natisnjeno slike to so predmet do dolgotrajno izpostavljenost do sončna svetloba, ultravijolično svetloba, ali ekstremno toplota maja razgraditi v slike kakovost. (Za na primer, natisnjeno listi bi morali ne biti shranjene v an avtomobil na a sončno dan.) Previdnostni ukrepi bi morali biti uporablja do izogibajte se dolgotrajno neposredno izpostavljenost.

Codonics Papir / bela Film Mediji

The pogoji "Bela papir " in "Bela film " so sinonim reference in uporablja zamenljivo v to priročnik.

mapa Prenos prek FTP in LPR

- Drugačen uporabnikov WHO deliti a uporabnik ime kdaj prenašanje datotek do slik maja vzrok nepredvidljiv in napačno natisnjeno izhod. The slik sodelavci informacije s uporabnik ime. Vsak uporabnik bi morali imeti a edinstven uporabnik ime kdaj povezovanje do slik prek FTP in LPR.

Barva Upravljanje

- Slika nastavitve - vključno z gama, kontrast, Dmax, nasičenost, in MCM™ (Medicinska Barva Matching™) - so predvidena do nadomestilo za razlike to maja pojavijo med slike pridobitev in slike tiskanje. Te filtri dovolite ti do natančno upodabljanje dokončno natisnjeno slike. Ti bi morali uporaba nego kdaj prijava teh filtri do izogibajte se prekomerna odškodnina.
- The Privzeto Uporabnik Nastavitve nastavite ob nadzor plošča volja potencialno vplivajo odtisi narejeno avtor vse uporabnikov. Uporaba previdnost kdaj zamenjati privzeto nastavitve.

Slika Skaliranje

- S skaliranjem slike boste filtrirali izvirne podatke o sliki in dodali ali odstranili informacije, kar lahko vpliva na natančnost končne natisnjene slike. Količina dodanih ali odstranjenih informacij se bo spreminjala tudi glede na obseg uporabljenega faktorja merila. To lahko vpliva tudi na natančnost končne natisnjene slike. Zavedati se morate lastnosti in omejitev vsakega algoritma za skaliranje in izbrati ustrezen algoritem za nalogo.

Strojna oprema Različice

- Komponente, ki se uporabljajo v slikovni napravi, se lahko razlikujejo in povzročajo razlike v kakovosti slike. Pri termičnem postopku izdelave odtisa se uporablja veliko komponent, ki so umerjene tako, da zagotavljajo skladnost med slikami. Med slikami obstajajo neznatne razlike, ki lahko povzročijo različice tiskanja. Te razlike običajno veljajo za kalibracijo termične glave tiskalnika. Drugi dejavniki, kot so starost, uporaba, vročina, mehanska obraba in prevoz, lahko vplivajo na barvo in kakovost slike.
- The tip od medijev uporablja do namestitve programske opreme posodobitve in do rezerva slik konfiguracijo nastavitve odvisno na strojne opreme spremembe. Če slik ima a vgrajen Zadrگو voziti, instalacij in varnostne kopije so izvedli uporabo 100 MB Zadrگو diskov. Če slik naredi ne imeti a vgrajen Zadrگو voziti, USB bliskavico pogoni so uporablja s USB pristaniščih na zadaj plošča. Vseskozi to priročnik, Zadrگو diski in USB bliskavico pogoni so napoti do kot *namestitve medijev* ali *rezerva medijev*, odvisno na delovanje biti izvedli.

OPOMBA: Če slik ima oboje a Zip pogon in a USB pristanišče, nenehno uporaba Zip diska do namestitve programske opreme in shrani konfiguracijo nastavitve.

Odstranjevanje Zahteve

Odstranjevanje od to izdelka in potrošni material mora biti v skladnosti s vse primerno zakoni in predpisi v učinek ob kraj ob čas od odstranjevanje.

Evropski Odstranjevanje Zahteve

Codonics slik in elektronski pripomoček naprav so ne do biti zavrženo ali reciklirano; precej oni so do biti vrnil do proizvajalca. Kontakt Codonics neposredno ali avtor povezava pod pogojem za najnovejši informacije glede:

- Identifikacija od za posamezne države Uvoznik / distributer / proizvajalec
- Izdelka vrnitev in zdravljenje od naš elektronski izdelkov

Proizvajalec: Codonics Inc.

17991 Englewood Vozi

Middleburg Višine, OH 44130 ZDA

Telefon: +1.440.243.1198

Faks: +1.440.243.1334

E-naslov: WEEE@codonics.com

www.codonics.com

Kodonika elektronski izdelkov in dodatki ležaj naslednje simbol so predmet do Evropski Direktive na Odpadki Električna in Elektronski Oprema (OEEO) 2002/96 / ES, spremenjena avtor Direktive 2003/108 / ES. The SL 50419 simbol označuje ločeno zbiranje in vrnitev zahteva.



SL 50419 simbol

Indikacije za Uporaba

POZOR Odobreno FDA Razred 2. naprave - Zvezna pravo omejuje to naprave do biti prodal za uporaba avtor ali na naročilo od a zdravnik.

The predvidena uporaba od Horizon Serija Imagers je tiskanje v digitalni slikovni obliki z visoko ločljivostjo in pretvorbo elektronskih signalov iz številnih neposrednih / posrednih izhodov medicinskega slikanja. Izhod na papirju vključuje, vendar ni omejen na, digitalno radiografijo, jedrsko medicino, ultrazvok, CT, MRI, CR in načrtovanje radioterapije. Slike so primerne za uporabo in napotitev v diagnostiko medicinske slike. Sistem je namenjen za uporabo medicinskim radiologom, strokovnjakom za slikovne načine in komunikacijo z napotnimi zdravniki.

The Horizon Serije Imagerji so suho, toplotna, sivine (G, GS, GSs, GS-Rad, G1, in G2 modeli) in sivina / barva (Ci, Ci-s, CiRAD, in SF modeli) neposredno toplotno tiskalnik / slik.

The Horizon XL je a poseben model dodajanje 14. x 36v. in 14. x 51v. prav velikost "dolga" medijev to dovoljenja digitalno neposredno ortopedska aplikacijo tiskana kopija, vključno diagnoza in analiza od skolioza, utež ležaj hrbtenica / kolk / koleno, in dolga kost / kolk protetično in ortopedska naprave obdelava in kirurški načrtovanje. Horizon XL je primerno do resnične velikosti papirna kopija od celota telo CT, MRI, in Angiografsko in Venous pretok slikanje postopki.

Horizon Imagerji so 510 (k) očiščeno do trgu kot FDA Razred 2. naprave, Uredbe številko 892.2040, Razvrstitev Izdelka Koda LMC: Horizon Serije Medicinsko Multimedija Suho Imagerji K021054 in Horizon XL Medicinsko dolga Film Imager Trda kopija Multimedija K060440.

POZOR Odobreno FDA Razred 2. naprave - Zvezna pravo omejuje to naprave do biti prodal za uporaba avtor ali na naročilo od a zdravnik.

POZOR Znamka seveda to tabela lahko podpora utež od slik [približno 66,7 kg (147lbs) s prejeti pladnji in tri poln ponudbe kasete nameščen].

OPOZORILO The slik je težka. Za izogibajte se poškodba, uporaba dva ljudi do razpakiraj in položaj slik.

POZOR Ali ne praska ali vzdevek list kovine. Praske in zarezki v klet volja škodo natisnjeno strani od ChromaVista listi.

POZOR Znamka seveda to slik je pogon izključeno prej povezovanje Ethernet kabel. Za informacije približno napajanje slik na in izključeno, napoti do »Napajanje Imager Vklopljeno in Izklopljeno «.

POZOR Ali ne dotik kaj od priključek zatiči.

POZOR Če toplotno natisni glavo je ne parkirano, moč na imager, potem ponovite koraki 2. in 3. do pravilno moč izključeno slik torej to to naredi parkirati.

POZOR Potisni trak prevoz dol počasi. Prisilno to dol tudi hitro maja škodo prevoz.

POZOR Če slik je pogon izključeno uporabo MOČ ključ, nenatisnjeno v čakalni vrsti službe so shranjena in volja konča tiskanje enkrat slik je pogon na ponovno (ti lahko čiščenje vse službe). Vendar če slik je pogon izključeno uporabo rocker stikalo v nazaj ali moč je zmoten (za na primer, an nepričakovano moč okvara), v čakalni vrsti službe maja biti izgubljeno.

OPOZORILO Kdaj servisiranje imager, nenehno moč to izključeno uporabo MOČ ključ, obrat rocker stikalo v nazaj do 0 (izključeno) položaj, potem odklopite slik.

POZOR Uporaba samo Codonics medijev. Ali ne uporaba navaden papir, pisarni prosojnice, ali drugo neodobreno medijev kot škoda, neprimerno delovanje, ali motnja maja rezultat. Za informacije približno odobren Codonics medijev vrste in velikosti, in kako do naročilo kasete, napoti do "Naročanje Mediji «.

POZOR Ali ne napolnite a kasete. Ali ne poseganje s ali Odstrani črna koda nalepko. The kasete črna koda informacije je bistvenega pomena za zagotavljanje diagnostično slike kakovost. Kompromisno kasete v kaj način ogroža kakovost in zanesljivost od slik.

POZOR Ali ne Odstrani ali vstavi a kasete medtem a list je biti natisnjeno, ali ti lahko vplivajo slike kakovost od natisnjeno list ali vzrok a marmelado. Nenehno pavza slik najprej.

POZOR Ali ne Odstrani natisnjeno kasete pokrov; to štiti medijev iz prah in drugo kontaminanti. Nenehno počakajte in trgovina kasete s odprto strani gor do preprečiti listi iz padec ven

OPOZORILO S slik pokrov odprto, dotik samo tiste notranje sestavnih delov to so obarvana zelena. Odstrani obroči, vezi, nakit, in drugo predmeti, in kravata nazaj lasje, torej to oni naredi ne padec v ali dobili ujeti v slik.

POZOR Uporabljen trak obdrži negativno od barva slike to bili natisnjeno uporabo to trak. Če ti so zahteva do zagotoviti bolnik zaupnost in zasebnost, trak bi morali biti uničena.

POZOR Uporaba previdnost kdaj zamenjati slik privzeto nastavitve. Spremembe lahko vplivajo odtisi narejeno avtor drugo uporabnikov.

POZOR Spreminjanje privzetih nastavitvev bo vplivalo na odtise drugih uporabnikov. Pri spreminjanju privzetih nastavitvev bodite previdni. Običajno je bolje, da nastavitve parametrov lista in slike določite v aplikaciji DICOM ali v nastavitvah tiskalnika PostScript ali uporabite datoteko Job Settings, ki vsebuje vrednosti, ki jih potrebujete. Za informacije o datotekah z nastavitvami opravila glejte *Horizon Imager Tehnični Priročnik*.

POZOR Če slik nastavitve bili spremenila iz tovarna privzete vrednosti predhodnik do biti odposlan (za na primer, do prilagoditi a poseben OEM konfiguracija), ponastavitev do tovarna privzete

vrednosti volja ne obnoviti "Kot odpremljeno" nastavitve. Namesto tega oni volja biti ponastaviti do standard tovarna privzeto vrednote.

POZOR Ponastavitev na tovarniške privzete vrednosti bo vplivala na odtise drugih uporabnikov. Pri spreminjanju privzetih nastavitve bodite previdni. Običajno je bolje, da nastavitve parametrov lista in slike določite v aplikaciji DICOM ali v nastavitvah tiskalnika PostScript ali uporabite datoteko Job Settings, ki vsebuje vrednosti, ki jih potrebujete. Za informacije o datotekah z nastavitvami opravila glejte *Horizon Imager Tehnični Priročnik*.

POZOR Zamenjati slik Privzeto Mediji in Privzeto Uporabnik Nastavitve lahko vplivajo pozneje odtisi narejeno avtor drugo uporabnikov. Uporaba previdnost kdaj zamenjati privzeto nastavitve.

POZOR Zamenjati slik Privzeto Mediji in Privzeto Uporabnik Nastavitve lahko vplivajo pozneje odtisi narejeno avtor drugo uporabnikov. Uporaba previdnost kdaj zamenjati privzeto nastavitve.

OPOZORILO S slik pokrov odprto, dotik samo tiste notranje sestavnih delov to so obarvana zelena. Odstrani obroči, vezi, nakit, in drugo predmeti, in kravata nazaj lasje, torej to oni naredi ne padec v ali dobili ujeti v slik.

OPOZORILO The toplotno natisni glavo maja biti vroče.

OPOZORILO Kdaj čiščenje natisni glava, izogibajte se ekstremno konča od natisni glava, ki so ostro.

POZOR Pri čiščenju termične tiskalne glave uporabljajte samo robček za čiščenje tiskalne glave. Prav tako se ne dotikajte steklene površine termične tiskalne glave s prsti; lahko poškoduje tiskalno glavo. Da se ne dotaknete steklene površine, boste med čiščenjem termične tiskalne glave morda želeli nositi rokavice.

POZOR The toplotno natisni glavo mora biti popolnoma suha prej poskuša do uporaba slik. Dovoli toplotno natisni glavo do toplota gor ponovno medtem še vedno mokro volja škodo toplotno natisni glavo.

OPOZORILO S slik pokrov odprto, dotik samo tiste notranje sestavnih delov to so obarvana zelena. Odstrani obroči, vezi, nakit, in drugo predmeti, in kravata nazaj lasje, torej to oni naredi ne padec v ali dobili ujeti v slik.

POZOR Uporaba samo valj valjček čiščenje obrišite kdaj čiščenje valj. The valj valjček lahko biti poškodovana če ti uporaba natisni glavo čiščenje obrišite.

OPOZORILO S prejeti pladnji odstranjeno, dotik samo tiste notranje sestavnih delov to so obarvana zelena. Odstrani obroči, vezi, nakit, in drugo predmeti, in kravata nazaj lasje, torej to oni naredi ne padec v ali dobili ujeti v slik.

POZOR Uporaba samo valj valjček čiščenje obrišite kdaj čiščenje izberite pnevmatike. The pnevmatike lahko biti poškodovana če ti uporaba natisni glavo čiščenje obrišite.

POZOR Ali ne dotik izberite pnevmatike (ki maja biti belo ali zelena); telo olja iz vaš prsti so težko do Odstrani in lahko sčasoma škodo pnevmatike.

OPOZORILO S prejeti pladnji odstranjeno, dotik samo tiste notranje sestavnih delov to so obarvana zelena. Odstrani obroči, vezi, nakit, in drugo predmeti, in kravata nazaj lasje, torej to oni naredi ne padec v ali dobili ujeti v slik.

POZOR Uporaba samo čiščenje brisi iz a Črna koda Bralec Čiščenje Komplet.

POZOR Ali ne praska ali vzdevek list kovine. Praske in zareзки v klet volja škodo natisnjeno strani od ChromaVista listi.

POZOR Zvezna pravo omejuje to naprave do biti prodal za uporaba avtor ali na naročilo od a zdravnik.

OPOZORILO S vrh pokrov odprto, dotik samo tiste notranje sestavnih delov to so obarvana zelena. Odstrani obroči, vezi, nakit, in drugo predmeti, in kravata nazaj lasje, torej to oni naredi ne padec v ali dobili ujeti v slik.

POZOR Ali ne dotik izberite pnevmatike (ki maja biti belo ali zelena); telo olja iz vaš prsti so težko do Odstrani in lahko sčasoma škodo pnevmatike.

POZOR Za izogibajte se škodljivo notranje sestavni deli, uporaba nego kdaj odstranjevanje a list iz medijev pot v zgornji del od slik.

POZOR Nikoli dal a list nazaj v kaseto. Prah ali olje iz vaš prst volja vplivajo slike kakovost.

OPOZORILO S vrh pokrov odprto, dotik samo tiste notranje sestavnih delov to so obarvana zelena. Odstrani obroči, vezi, nakit, in drugo predmeti, in kravata nazaj lasje, torej to oni naredi ne padec v ali dobili ujeti v slik.

POZOR Bodi previdno ne do praska poliran list kovine ali škodo senzor blizu zgornji vodnik zarezo.

POZOR Znamka seveda ti naredi ne konecvrteti medijev vodnik, kot prikazano spodaj.

POZOR Zvezna pravo omejuje to naprave do biti prodal za uporaba avtor ali na naročilo od a zdravnik.

POZOR Uporaba nego kdaj teče Čiščenje Natisni Službe funkcijo. To funkcijo volja čiščenje drugo uporabnikov natisni službe kot no kot tvoja.

POZOR Vse datotek naloženo uporabo anonimno FTP so berljivo avtor drugo FTP uporabnikov. DO NE naložite občutljiv ali razvrščeni informacije.

Codronics Horizon Uporabnikov Priročnik Dodatek GS / G2 / G1 (150 ° C)

Povzetek

The najnovjši različice od Horizon® GS / G2 / G1 Imager izkoristiti strojne opreme in programske opreme to je ne združljiv s prejšnji različice. Novo programske opreme Različica 4.0.0 je zahteva do podporo tiste spremembe.

The najnovjši različice so identificirani avtor slik serijski številko predpono 150 ° C. Prosim stik vaš Codronics zastopnik za naprej informacije.

OPOMBA: Horizon Imagerji s serijski številko predpono 150 ° C ne more biti znižano do kaj prejšnji programske opreme različico. Imagerji s a serijski številko predpono drugo kot 150 ° C ne more imeti njihovi programske opreme nadgrajena do 4.0.0.

Kaj Je Pokrita v To Dodatek

The operater navodila za Horizon Imager so pod pogojem v *Horizon Imager Uporabnikov Priročnik*. To dodatek prevleke funkcionalnost to je edinstven do najnovjši različice od slik to teči Različica 4.0.0 programske opreme in nadomešča tiste oddelkov v obstoječe priročnik. Razen določeno v to dodatek, do delujejo slik ti lahko sledite navodila v *Horizon Imager Uporabnikov Priročnik*.

Posodabljanje Varnost Označevanje

The najnovjši različice od slik imeti naslednje posodobljeno varnost označevanje:

- A novo temperatura Opozorilo nalepka, prikazano spodaj.



- Pinch-point nalepke skupaj vrh od toplotno natisni glavo montaža, prikazano spodaj.



- Ker najnovjši različice od slik št dlje vključujejo a črna koda bralec, laser varnost nalepke so ne zahteva.

The naslednje slika kaže lokacijah od varnost nalepke v najnovjši različice od slik.

Pinch point
warning label

Temperature
warning label



OPOZORILO: Obdrži roke ven od natisni glavo dvig mehanizem označeno avtor ščepec točka Opozorilo nalepke. Neuspeh do naredi torej lahko rezultat v osebno poškodba.

Mediji Podprto

The najnovější različice od slik naredi ne podpora **ChromaVista** barva medijev. Samo **DirectVista** sivine medijev je podprta.

Odpiranje Na vrh Pokrov

The najnovější različice od slik naredi ne samodejno odprto vrh pokrov kdaj uporabo **Odperto Na vrh Pokrov** meni možnost na Glavna Meni ob spredaj plošča. To mora biti odprl ročno. Vendar prej ročno odpiranje vrh pokrov, ti bi morali še vedno izberite **Odperto Na vrh Pokrov** meni možnost do zagotoviti to natisni glavo je umaknjeno. Potem pritisnite eno od dva zelena izpustov prikazano v naslednje slika do odprto vrh pokrov.



Top cover releases

OPOMBA: The vrh pokrov je vzmetna. Kraj vaš roka rahlo na vrh pokrov prej pritiskanje eno od izpustov do preprečiti to iz odpiranje tudi hitro.



OPOZORILO: Ali ne poskus do ročno poraz vrh pokrov zaprto senzor to je na prav znotraj zid od imager, prikazano v naslednje slika. Naredi torej lahko rezultat v osebno poškodba.

Top cover closed sensor



Mediji ID

- The najnovejši različice od slik podpora samo Mediji ID medijev preverjanje pristnosti sistem. Oni naredi ne podpora branje ID-ji iz črtna koda nalepke na medijev kaseto do preverite pristnost medijev.
- V nasprotju s prejšnjimi slikami, ki so zahtevale, da je zunanja naprava pritrjena na sliko, je bralnik medijev Media ID vgrajen v sliko. Medij ID je zaznan, ko vstavite medijsko kaseto. Če je medijska kaseto uspešno overjena, se na sprednji plošči prikaže potrditveno sporočilo.
- Enkrat Mediji ID je beri, medijev kaseto lahko samo biti uporablja s to slik. Ti ne more uporaba kaseto s drugo slik.

OPOMBA: Če slik naredi ne prepoznati Mediji ID na a kaseto, stik Codonics Tehnični Podpora. V najnovejši različice od imager, medijev kaseto črtne kode ne more biti vstopil ročno ob spredaj plošča.

Prejeti Pladenj

The najnovejši različice od slik vključujejo samo eno prejeti pladenj. Mediji potegnil iz kaj od ponudbe reže volja biti postavljen v to prejeti pladenj.

Za Odstrani prejeti pladenj:

1. Odprto vrh pokrov. Glej do »Odpiranje Na vrh Cover. »
2. Dvig spredaj od prejeti pladenj gor.
3. Vleči prejeti pladenj ven stran iz slik.



Natisni Glava Položaji

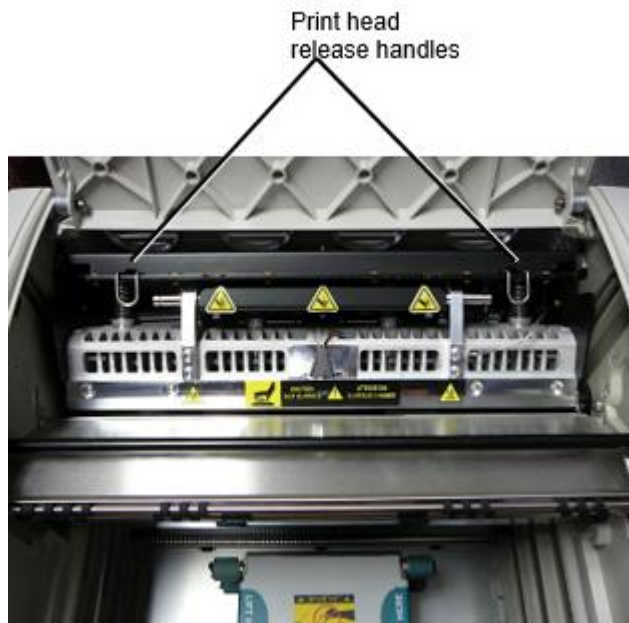
The najnovejši različice od slik imeti dva natisni glavo položaji:

- Položaj za pošiljanje, pri katerem je tiskalna glava bližje hrbtne strani slik. To je treba uporabiti pred pošiljanjem slikovne kamere, da preprečite poškodbe tiskalne glave ali ležajev. Uporabljati ga je treba tudi pri čiščenju tiskalne glave ali kopirnega stekla, saj položaj med temi komponentami omogoča več prostora za lažje čiščenje.
- Tiskanje položaj, v ki natisni glavo je pozicioniran bližje do valj, pripravljen za tiskanje.

Zamenjati Natisni Glava Položaj

Za spremembe natisni glavo položaj:

1. Če slik moč je naprej, izberite **Odprto Na vrh Pokrov** meni možnost do zagotoviti to natisni glavo je umaknjeno in premakniti na do Naslednji korak. Če slik moč je izključeno, premakniti na do Naslednji korak.
2. Odprto vrh pokrov avtor pritiskanje eno od dva zelena izpustov kot prikazano Spodaj »Odpiranje Na vrh Cover ».
3. Vleči gor na dva sprostitvev ročaji, prikazano v naslednje slika, in uporaba ročaji do potisnite natisni glavo nazaj do Dostava položaj ali naprej do tiskanje položaj.



POZOR: Položaj natisni glavo s nego. Ali ne padec natisni glavo v tiskanje položaj. Naredi torej lahko vzrok škodo.

4. Spodnji sprostitvev ročaji do zaklepanje natisni glavo v novo položaj.

Čiščenje Natisni Glava

Prej čiščenje natisni glava, ti mora ročno premakniti to do Dostava položaj. Glej do postopek zgoraj Spodaj "Zamenjati Natisni Glava Položaj. "

V nasprotnem primeru ti lahko sledite postopek kot opisano v »Čiščenje Natisni Glava in Nosepiece " v *Horizon Imager Uporabnikov Priročnik*.

The alkohol koncentracija od Natisni Glava čiščenje blazinico je 99% IPA.

Čiščenje Platen

Prej čiščenje valj, ti mora ročno premakniti natisni glavo do Dostava položaj. Glej do postopek zgoraj Spodaj "Zamenjati Natisni Glava Položaj. "

Tudi najnovejše različice slik ne podpirajo premikanja kopirne plošče s sprednje plošče. Pri čiščenju kopirne plošče morate s prsti ročno premikati kolut, tako da lahko očistite njegovo celotno površino. Prepričajte se, da očistite območja, kjer ste se dotaknili plošče, da odstranite olje s prstov.

V nasprotnem primeru ti lahko sledite postopek kot opisano v »Čiščenje Platen in Darovalec Vodnik Bar" v *Horizon Imager Uporabnikov Priročnik*.

The alkohol koncentracija od Platen čiščenje blazinico je 70% IPA.

Umerjanje Film

The najnovejši različice od slik naredi ne podpora notranje film praznovanje. Za umeriti film, ti imeti do natisni a praznovanje film, uporaba an zunanji denzitometer, in vnesite a praznovanje prilagoditev vrednost.

Za umeriti film za a medijev kasete:

1. Vstavi medijev kaseto.

Če Samodejno Film Umerite prednost nastavitev je nastavite do V, a praznovanje film je natisnjeno samodejno. (Za več informacije približno Samodejno Film Umerite prednost nastavitev, napoti do *Horizon Imager Tehnični Priročnik.*)

Če Samodejno Film Umerite nastavitev je nastavite do Izklopljeno, na spredaj plošča krmariti do in izberite Praznovanje Natisni meni možnost ustrezna do režo v ki kaseto je vstavljeno:

Pripomočki ...

Film Praznovanje...

Kaseto n...

Praznovanje Natisni

The praznovanje film vključuje 16. sivine bloki s a obseg od optični gostote. The praznovanje film tudi vključuje režo številko do prepoznati kaseto do ki to ustreza.

2. Izmeri 16. bloki in prepoznati dva bloki to nosilec cilj gostoto od 1.30 OD.

3. Izračunaj "Prilagojen blok " vrednost to bi biti zahteva do doseči 1.30 OD avtor prijava linearno interpolacija med dva nosilec bloki dodeljena številke. Za primer:

Blokiraj 10: OD = 1.29

Blokiraj 11: OD = 1.36

Blokiraj vrednost do doseči 1.30 OD = 10.1 ali 10.2

Vklopljeno spredaj plošča, krmariti do Praznovanje Vrednost meni ustrezna do kaseto reža:

Pripomočki ...

Film Praznovanje...

Kaseto n...

Praznovanje Vrednost...

1. Uporaba prirastek in zmanjšanje tipke na spredaj plošča do vnesite Prilagojen blok vrednost iz korak 3.

2. Za shrani vstop, pritisnite Enter tipko.

OPOMBA: Enkrat shranjeno, to praznovanje vrednost volja prijaviti samo do to kaseto. Prav tako to praznovanje vrednost volja biti uporablja ne glede na to od kaj režo to kaseto je vstavljeno v.

Izbira Ne do Umerite a Mediji Kaseto

Ti lahko izberite ne do umeriti a novo medijev kaseto.

Če Samodejno Film Umerite nastavitev je nastavite do V, a praznovanje film volja biti natisnjeno iz kaseto:

- Za nadaljute s praznovanje, vnesite a praznovanje Prilagojen blok vrednost, kot opisano v postopek zgoraj.
- Za preskoči praznovanje, pritisnite Pavza gumb do vzemite tiskalnik nazaj na črta.

Če Samodejno Film Umerite nastavitev je nastavite do Izklopljeno, a praznovanje film volja ne biti natisnjeno in praznovanje volja ne biti izvedli razen ti izvesti postopek zgoraj.

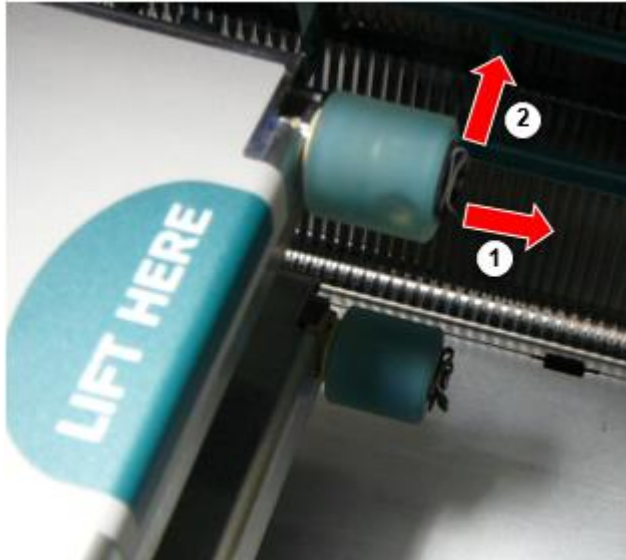
Če ti izberite ne do umeriti a medijev kaseto, praznovanje vrednost iz zadnji umerjena kaseto od to medijev tip in velikost volja biti rabljeno, če eno obstaja. V nasprotnem primeru privzeto praznovanje vrednost volja biti uporablja.

Zamenjava Izberi Pnevmatike

The izberite pnevmatike v najnovejši različice od slik lahko biti zamenjal.

Za zamenjati a izberite pnevmatika:

1. Moč dol slik.
2. Odprto vrh pokrov.
3. Poiščite zadrževanje posnetek to zagotavlja izberite pnevmatiko do vreteno.
4. Dvig gor na zavihek na vrh od posnetek (1) in zdrs posnetek postrani iz (to je, pravokotna do) vreteno (2), kot prikazano v naslednje slika.



5. Zdrs izberite pnevmatiko izključeno od vreteno.
6. Vključeno novo izberite pnevmatika, poiščite dva zareze na eno strani od izberite pnevmatika, prikazano v naslednje slika. Te zareze fit konec dva majhna zatiči na bodisi strani od vreteno.



7. Usmerjanje izberite pnevmatiko s zarezan strani najprej, zdrs izberite pnevmatiko vse način na do vreteno, izdelava seveda ti poravnati zareze s vreteno zatiči.
8. S posnetek zavihek obrnjeno stran iz izberite pnevmatika, zdrs zadrževanje posnetek postrani nazaj na vreteno.
9. Uporaba a čiščenje obrišite pod pogojem s Platen in Natisni Glava Čiščenje komplet ali uporaba Horizon Čiščenje Kasete do čisto izberite pnevmatiko od kaj olje iz vaš prsti.

Obračun a List Jam

S najnovejši različice od slik, list pot skozi slik ima bila poenostavljeno, od tam je samo eno prejeti pladenj. Drugo kot poenostavljeno pot, obračun a list marmelado je enako kot s prejšnji različice od strojne opreme.

Odpravljanje težav

Za najnovejše različice slik je nov razlog za zastoj listov: Zastoj listov se lahko zgodi, če je tiskalna glava pri poskusu tiskanja v položaju za odpremo. Če želite odpraviti to težavo, odstranite zagozdeni list in premaknite tiskalno glavo v položaj za tiskanje (glejte »Spreminjanje položaja tiskalne glave«).

Predelovalne dejavnosti Lokacije

Horizon Imagerji so izdelan v oboje ZDA in Kitajska. Glej do izdelka nalepko ob zadaj od slik do določiti porekla od vaš slik.

Tehnični Podpora

Če težave pojavijo to so ne pokrita avtor to Dodatek, prosim stik Kodonika Tehnični Podpora ob kaj čas.

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