Welch Allyn®

HScribe™ 6

HOLTER ANALYSIS SYSTEM
SERVICE MANUAL

Manufactured by Welch Allyn, Inc., Skaneateles Falls, NY U.S.A.

⚠ **CAUTION:** *Federal law restricts this device to sale by or on the order of a physician.*

For patent information, please visit www.welchallyn.com/patents

For information about any Welch Allyn product, visit: https://www.welchallyn.com/en/about-us/locations.html

Customer Service and Technical Support: https://www.welchallyn.com/en/other/contact-us.html

1.888.667.8272, mor_tech.support@hillrom.com

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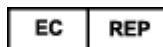**Revision Date: 2023-08**

**901143 HOLTER ANALYSIS SOFTWARE**

EC REP EU IMPORTER

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1. NOTICES

Manufacturer's Responsibility

Welch Allyn, Inc. is responsible for the effects on safety and performance only if:

- Assembly operations, extensions, readjustments, modifications, or repairs are carried out only by persons authorized by Welch Allyn, Inc.

- The device is used in accordance with the instructions for use.

Responsibility of the Customer

The user of this device is responsible for ensuring the implementation of a satisfactory maintenance schedule. Failure to do so may cause undue failure and possible health hazards.

Equipment Identification

Welch Allyn, Inc. equipment is identified by serial and part numbers on the side, back, or bottom of the device. Care should be taken so that these numbers are not defaced.

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Any serious incident that has occurred in relation to the device, should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

Disposal

This product and its accessories must be disposed of according to local laws and regulations. Do not dispose of this product as unsorted municipal waste. For more specific disposal information see www.welchallyn.com/weee.

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    a)   Freight damage;

    b)   Parts and/or accessories of the Product/s not obtained from or approved by Welch Allyn;

    c)   Misapplication, misuse, abuse, and/or failure to follow the Product/s instruction sheets and/or information guides;

    d)   Accident; a disaster affecting the Product/s;

    e)   Alterations and/or modifications to the Product/s not authorized by Welch Allyn;

    f)   Other events outside of Welch Allyn's reasonable control or not arising under normal operating conditions.

THE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT WITHOUT CHARGE FOR LABOR OR MATERIALS, OR ANY PRODUCT/S FOUND UPON EXAMINATION BY
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3. USER SAFETY INFORMATION

 WARNING: Means there is the possibility of personal injury to you or others.

 Caution: Means there is the possibility of damage to the device.

Note: Provides information to further assist in the use of the device.

 WARNING(S)

- This manual gives important information about the use and safety of this device. Deviating from operating procedures, misuse or misapplication of the device, or ignoring specifications and recommendations could result in increased risk of harm to users, patients and bystanders, or damage to the device.

- Device (Holter analysis system) captures and presents data reflecting a patient's physiological condition that when reviewed by a trained physician or clinician can be useful in determining a diagnosis; however, the data should not be used as a sole means for determining a patient's diagnosis.

- Users are expected to be licensed clinical professionals knowledgeable about medical procedures and patient care, and adequately trained in the use of this device. Before attempting to use this device for clinical applications, the operator must read and understand the contents of the user manual and other accompanying documents. Inadequate knowledge or training could result in increased risk of harm to users, patient and bystanders, or damage to the device. Contact Welch Allyn service for additional training options.

- To ensure that electrical safety is maintained during operation from AC (~) power, the device must be plugged into a hospital grade outlet.

- To maintain operator and patient safety, peripheral equipment and accessories used that can come in direct patient contact must be in compliance with IEC 60601-1 and associated safety standards.

- To maintain operator and patient safety, only use parts and accessories supplied with the device and available through Welch Allyn, Inc.

- A possible explosion hazard exists. Do not use the device in the presence of flammable anesthetics.

- Before attempting to use the device for clinical applications, the operator must read and understand the contents of the user manual and any documents accompanying the device. Contact Welch Allyn service for additional training options.

- Do not operate the device if it has been damaged. Have damaged equipment repaired by qualified personnel. Contact Welch Allyn service for assistance.

⚠️ **Caution(s)**

1. Do not use the device as a method for loading or operating commercially available software. Doing so might affect the performance of the device.

2. Do not pull or stretch patient cables as this could result in mechanical and/or electrical failures. Patient cables should be stored after forming them into a loose loop.

3. Microsoft Windows compatibility, updates and anti-virus policy: The HScribe software has been fully tested with Windows 7 Professional Service Pack 1, Windows 8.1, and Windows 10 Professional operating systems. The Modality Manager software has also been tested with Windows Server 2008 R2 Service Pack 1 and Windows Server 2012 R2. Although it is unlikely that Windows updates and security patches affect HScribe functionality, Welch Allyn recommends turning automatic Windows update off, and periodically running it manually. A functional test should be executed after update, which includes acquiring a recording, editing and printing a report, as well as importing an order and exporting results, if activated Compatibility of HScribe with corporate anti-virus software packages has been evaluated. Welch Allyn recommends excluding the HScribe database folder (Normally C:\ProgramData\MiPgSqlData on a stand-alone system or the server) from the folders to be scanned. In addition, anti-virus patch updates and system scans should be scheduled for time periods when the system is not actively in use or performed manually.

4. All H3+ recorders and H12+ Compact Flash cards must remain unencrypted for software to work properly (e.g. technologies such as BitLocker should not be used). Furthermore, software users must have read and write permissions for the appropriate H3+ recorders and CF card readers, whether connected to their local machine or over the network.

5. No other non-recommended PC application software should run while the HScribe application is being used.

6. It is recommended that all Holter workstations be periodically updated with Microsoft critical and security updates to protect from malware attacks and to fix critical Microsoft software issues.

7. To prevent delivery of malware into the system Welch Allyn recommends that institution operating procedures are written to prevent malware to be transmitted into the system from removable media.

8. Exams that are saved to the local or server database on the hard drive will cause the device to fill over a period of time. These exams must be removed from the database by deleting or archiving prior to causing the device to cease to operate. Periodic checks of the device's capacity are recommended; a safe minimum capacity is 10 GB. See Exam Search for ways to select exams for deletion or archiving.

9. The HScribe application will display a warning prompting the user to delete exams when the database reaches a threshold at 11 GB of available space. Each 24-hour Holter exam is approximately 300 MB in size and only 30 more exams can be imported. When the available storage is at 2 GB, no new Holter exams can be imported.

10. To avoid risk of unintentionally booting into a USB device, ensure that the Boot Order in BIOS is set with the SATA hard drive listed first in the boot order. Refer to computer manufacturer's instruction for entering BIOS on startup and configuring Boot Order.

11. When using H12+ Compact Flash (CF) cards in the USB card reader, ensure that the CF card is removed before powering the system on. If this is not done, the PC may attempt to boot from the CF card and report an error.

Note(s)

1. Local Administrator permissions are required for software installation, application configuration, and software activation. Local User privileges are required for application users. Roaming and temporary accounts are not supported.

2. 8-hour timeout expiration is automatically controlled by the system. Each operation that occurs (e.g. Exam Search, Patient Search, editing exams, importing an exam, etc.) will reset the timeout start time. When there is no interaction with the system for the timeout duration, the user is prompted to enter login information.

3. When the server is unavailable in a distributed configuration, the client workstation will notify the user with a prompt to proceed in Offline Mode or cancel. Scheduled orders are not available. An exam can be conducted with manually entered demographics and will be stored locally. When the server comes available, the user is prompted with a list of unsent exams and a selection to send exams to the modality manager database.

4. Poor patient preparation prior to electrode attachment may affect the Holter recording and could interfere with the operation of the device.

5. Patient movements may generate excessive noise that may affect the quality of the Holter ECG traces and the proper analysis performed by the device.

6. ECG waveform displays square waves during periods of lead fail. Waveform returns when correction is made.

7. An ambulatory 12-lead ECG obtained with torso-located limb electrodes is not equivalent to a conventional diagnostic ECG.

8. Always ensure that the Recorder Duration is set appropriately when preparing H3+ digital Holter recorders.

9. H3+ Holter recordings with pacemaker detection enabled will include a spike marker at 500 µV amplitude where pacing has been detected by the Holter analysis system.

10. Pacemaker pulses are not displayed per Part 2 of IEC 60601-2-47 Edition 2.0 Sub Cl 201.12.4.4.109. Not all pacemaker pulses will show a visible mark greater than 2mm in the presence of a 20 mm, 10Hz sine wave.

4. EQUIPMENT SYMBOLS AND MARKINGS

Symbol Delineation

WARNING The warning statements in this manual identify conditions or practices that could lead to illness, injury, or death. In addition, when used on a patient applied part, this symbol indicates defibrillation protection is in the cables. Warning symbols will appear with a grey background in a black and white document.

CAUTION The caution statements in this manual identify conditions or practices that could result in damage to the equipment or other property, or loss of data.

Follow instructions/directions for use (DFU) – mandatory action. A copy of the DFU is available on this website. A printed copy of the DFU can be ordered from Welch Allyn for delivery within 7 calendar days.

USB connection

USB connection to PC

Do not dispose as unsorted municipal waste. Requires separate handling for waste disposal according to local requirements

Indicates compliance to applicable European Union directives

Medical Device

Model Identifier

Reorder Number

NOTE: Refer to the manual(s) accompanying the device that pertain to the computer hardware for additional definitions of symbols that may be present.

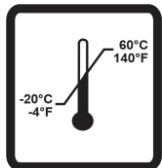# 5. Package Symbol Delineation

This side up

Fragile

Keep Dry

Keep Away from Heat

Acceptable Temperature Range

6. INTRODUCTION

Manual Purpose

This manual is intended to provide the user with information about service related activities associated with the HScribe™ Holter analysis system and the following functions:

- Device Specifications
- Troubleshooting
- Conformance Testing
- System Utilities
- System Backup and Restoration

Audience

This manual is written for service technicians who are expected to have a working knowledge of electrical and mechanical repair techniques, computer skills, and terminology as required for servicing medical devices.

Indications for Use

The HScribe system is indicated for use in a clinical setting, by qualified medical professionals only, for patients requiring ambulatory (Holter) monitoring of 24-48 hours. Such monitoring is most frequently used for the purpose of prospective and retrospective cardiac data and arrhythmia analysis. The analysis software package includes, among others, detection and reporting features appropriate to the indications below:

- Evaluation of adult patients with symptoms related to rhythm disturbances or symptoms suggesting arrhythmia

- Evaluation of adult patients for ST segment changes

- Evaluation of adult patients with pacemakers

- Reporting of time domain heart rate variability

- Evaluation of infant patients limited to QRS detection only

System Description

HScribe is a high-speed, PC-based Holter scanner. Used in conjunction with Welch Allyn's H3+™ and H12+™ digital Holter recorders, the HScribe provides full-disclosure data for arrhythmia analysis, and incorporates Welch Allyn's exclusive VERITAS™ ECG algorithms for superior beat detection and ST segment analysis on all recorded leads to acquired recorded ECG data. ECG data from an H3+ or a compact flash (CF) memory card is downloaded for analysis to the HScribe. After acquisition the recorder or CF memory card is erased and prepared for the next recording session using the HScribe application software.

HScribe supports bidirectional interfaces through HL7 and DICOM. A custom HL7 interface allows demographics and orders to be received from the institution information system with electronic results in PDF/XML format exported to an electronic medical records system. Modality Worklists can be retrieved and final results in DICOM format can be sent to and stored at a PACS with DICOM connectivity.

The HScribe system is available as a single workstation system with a centralized exam database that can support networked HScribe Review and HScribe Download workstations; or in a distributed configuration where the database resides on server hardware supporting a number of networked HScribe workstations.

The HScribe review station offers review, editing and reporting capabilities equivalent to the HScribe with the exclusion of the data acquisition feature. Holter ECG recordings are acquired at the HScribe or a networked download station. The HScribe review station can be set up as a Citrix® Application Server for remote access from client computers with Citrix XenApp™ installed.

The HScribe download station supports either recorder or CF memory card data acquisition and erasure, entry of patient information, automatic scanning, and archive to external or network drive. It does not review Holter ECG data. Recordings must be reviewed and edited at any networked HScribe or review station where the final report is also generated.

The Surveyor™ Central system (software versions 3.00 and later) receives 12-lead ECG data from a Welch Allyn digital transmitter. Full-disclosure patient monitoring data can be imported into the HScribe for Holter analysis through the use of the HScribe Surveyor Import application.

H3+ and H12+ Holter recordings can be acquired from a web server when they have been uploaded from a remote location with the Welch Allyn Web Upload option.

Report formats include scan criteria, tabular and narrative report summaries, rhythm profiles, trends of all arrhythmias, QT/QTc and ST segment values, template pages, automatic and operator-selected strips with one, two, three, or twelve-lead ECG, and full disclosure for selected channels. HScribe supports a paperless workflow with user verification and an option for authorized electronic signature.

Multiple recordings with analyses are stored in the HScribe database. Users with the appropriate permissions can import a new recording and review existing analyses.

Long-term storage of full-disclosure patient recordings is accomplished by the archive feature. Archived Holter recordings can be restored to the HScribe database for further analysis, review, report export, and printing.

For security purposes, user access to HScribe is defined by the system administrator allowing the ability to modify patient demographics, report conclusions, diary events and perform Holter ECG data editing. HScribe access is controlled by each user's role (e.g. IT administrator, Clinical Administrator, Physician Reviewer, Holter analyst, etc.) and associated permissions. The HScribe database may also be configured for Windows Encrypted File System (EFS) for protection of patient data security.

An audit trail allowing administrative personnel to query details for user actions and operations is maintained by HScribe.

The HScribe system layouts and contents are customizable for both display and final reporting. Contact Welch Allyn Technical Support for more information.

Interacting with Windows Environment

HScribe is based on a Microsoft® Windows® operating system and runs on an industry-standard platform. Conforming to Windows' intuitive "graphical user interface," the HScribe uses the mouse to point, click, and drag what is displayed on the monitor. Keyboard entries, called shortcut keys, can also be used in conjunction with the mouse.

Miscellaneous System Information

- HScribe is capable of supporting the following video resolutions: 1920 x 1080 and 1920 x 1200.
- HScribe is capable of supporting HP LaserJet printers with 600 dpi and PCL5 capabilities.

NOTE: No user-serviceable parts are inside. Any modification to any part of device is to be performed by qualified service personnel only.

HScribe System Architecture
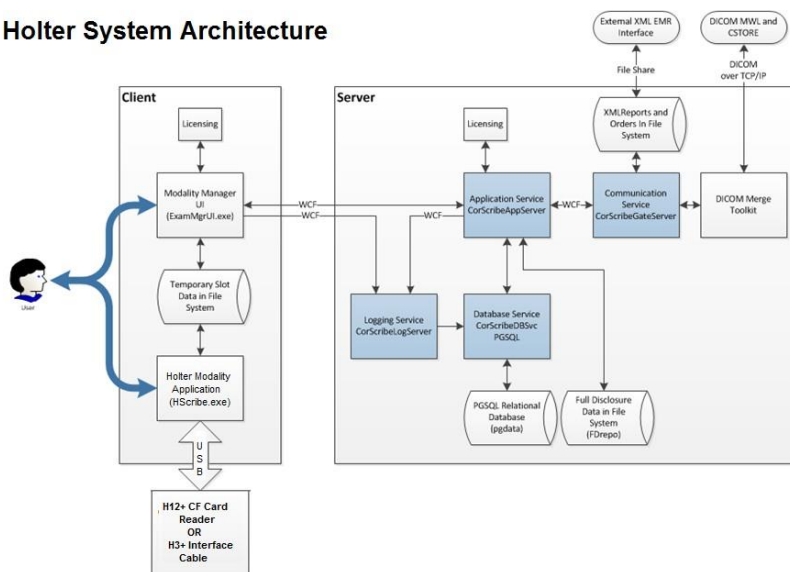
NOTE: Holter recorders are applied to the patient in another location. The H3+ Holter recorder is disconnected from the patient cable and attached to the H3+ USB interface cable for data import and recorder preparation. The H12+ recorder compact flash (CF) card is removed from the recorder and then inserted into the CF Card reader at the system for data import and preparation for the next recording.
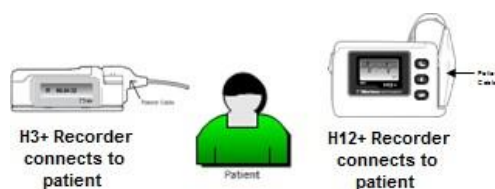
HScribe Login and Main Display

Log in to Windows with an appropriate Local User account.

Note: Roaming or Temporary user accounts are not supported.

If Single Sign On has been configured, log into Windows using a domain account that has been granted permission to use HScribe.

Launch HScribe with a double-click on the HScribe icon.

The HScribe application requires user credentials on startup when the program has not been set up with a single sign on. The default factory Username and Password is admin. The password is case sensitive.

The HScribe Username and Password are entered then the OK button is selected to open the application main menu. Some of the icons may be grayed or absent depending on the user permissions and system configuration.

Upon successful login, the application will present a screen similar to the one shown at the right. The user name and software version is shown in the bottom left corner. Click on any of the icons representing workflow to perform a specific task.

Hovering over an icon will display a textual message showing its function. Icons that are not permitted for the logged in user are grayed and unavailable.

HScribe Icon Descriptions

Icon and Hover Text	Description
HScribe	HScribe desktop shortcut icon to launch the Holter modality application.
MWL/Patients	Opens a window with two selectable tabs. A MWL (Modality Work List) tab allows exam scheduling (when no orders interface exists) and schedule review. A Patients tab allows addition of new patient information and editing of existing patient information.
Prepare Recorder/Card	Use for H3+ recorder or compact flash (CF) card erasure and preparation for the next exam.
Import Recordings	Opens a window presenting connected devices allowing association of patient demographic data, acquisition of recordings, and recorder/card erasure.
Exam Search	Opens a window allowing users to search for Holter exams or patients in the database using filters.
User Preferences	Opens a window for configuring the user preferences for the Worklist default filters, List Customization, and changing the password.
System Configuration	Opens a window for administrative users to configure the system settings such as creating/modifying users, changing the HScribe default modality settings and defining archive directories, and other tasks.
Exit	Closes the HScribe application and returns the user to the desktop.
	Allows users to Minimize or Exit the application and return to the desktop.

User Roles and Permissions

HScribe supports a workflow-oriented setup for defining user roles and controlling user access to the various operations. Role assignments are comprised of a set of permissions for each user type (e.g. IT administrator, clinical administrator, Holter Hookup Tech, and so on).

Each user can be assigned a single role or a combination of roles. Some roles include permissions assigned to other roles where applicable. After installation, a single user is created, with the role of "IT Administrator". Before using HScribe, this user must log in and create other required user assignments.

Roles	Permission Assignment
IT Administrator	Manage user permissions; manage personnel lists; export settings; archive settings; workflow configuration; storage system configuration; unlock exams; view audit trail reports; export service logs; create and modify groups.
Clinical Administrator	Manage database exams (delete, archive, and restore); copy exams offline to share with Welch Allyn personnel or other sites; view audit trail reports; modify modality settings (profiles, protocols, and other Holter specific settings); reconcile; export service logs.
Schedule Procedure	Create new patient orders; associate an order with an existing patient; modify demographics of an existing patient; export service logs.

Scheduling and order entry is only available when HScribe is not linked to an external scheduling system. |
Patient Hookup (Prepare/Import)	Ability to import new recordings using the Import Recordings icon. Includes the ability to create a new patient; associate an order with an existing patient; export service logs.
Edit Holter Diary	Create and modify diary events; export service logs. Must be assigned in conjunction with another role (e.g. Review Report).
View Exams/Reports	Review exams and final reports only. Includes the ability to search exams, view and print reports; export service logs.
Prepare Report	Review and edit exams to move them from an acquired state to the edited state. Includes ability to search exams and view and print reports; export service logs.
Review and Edit Report	Review and edit exams to move them to the reviewed state. Includes ability to search exams and view and print reports; modify and create conclusions; export service logs.
Edit Conclusions	Create and modify conclusions. Includes ability to review exams and final reports only; search exams and view and print reports; export service logs.
Sign Report	Ability to move exams to a signed state. Includes ability to review exams and final reports; search exams and view and print reports; export service logs. May require user authentication.
Export Report	Ability to export a PDF and XML file when features are enabled. Must be assigned in conjunction with another role (e.g. Review, View, or Conclusions).

Feature Activation

An activation code is required to operate full HScribe software functions such as acquisition, network access, storage, archiving, and export. Without activation, the system will function for a period of fourteen days only. Contact Welch Allyn Technical Support personnel for information.

Specifications

Feature	Workstation Minimum Specifications*
Processor	Performance equivalent to an Intel Core i3
Graphics	1280 x 1024 (1920 x 1080 recommended)
RAM	4 GB
Operating System	Microsoft® Windows® 7 Professional 32-bit or 64-bit; Microsoft Windows 8.1 Professional 64 bit; Microsoft Windows 10 Pro 64 bit
Storage Capacity	160 GB
Archive	Network or external USB drive
Input Devices	USB Standard keyboard and 2-button scroll mouse
DVD Drive	CD-ROM
Network	100 Mbps connection or better
Printing Device	HP M604n Laser printer (tested) HP PCL5-compatible printer series (recommended)
USB Ports	2 free USB 2.0 ports

* Specifications subject to change without notice.

Feature	Server Minimum Specifications*
Processor	Performance equivalent to an Intel Xeon class; Quad-core with hyperthreading
Graphics	1024 x 768
RAM	4 GB
Operating System	Microsoft Windows 2008 or 2012 server R2, 64-bit
System Disk	100 GB for OS and product installation (RAID recommended for data redundancy)
Data Disks	550 GB hard drive space available HD controller with 128 MB read/write cache (RAID recommended for data redundancy)
Archive	Network or external USB drive
Software Installation	CD-ROM
Network	100 Mbps connection or better
Input Devices	Standard keyboard and mouse

* Specifications subject to change without notice.

Requirements for HScribe Review Station as a Citrix XenApp

	Requirements*
Client Machines that will run Citrix XenApp	Windows 7 Professional 64-bit or Windows 10 Pro Operating System
	Citrix Receiver
	Internet Browser – any that is supported by Citrix
	- Internet Explorer 11 and 10 (HTTP connections only) - Safari 7 - Google Chrome 43 and 42 - Mozilla Firefox 38 and 37
Citrix Domain Controller Server	Citrix XenDesktop Enterprise Edition 7.9
	Any operating system supported by Citrix
Citrix App Servers	Windows 7 Professional (64-bit) or Windows 10 Pro
	Citrix Virtual Delivery Agent 7.9
	HScribe software version 6.2.0

Requirements subject to change without notice.

Parts and Accessories

For more information on parts/accessories or to place an order, contact Welch Allyn.

Part Number*	Description
25019-006-60	USB Download Cable for H3+ recordings
9903-013	USB Flash Card Reader for H12+ recordings
H3PLUS-XXX-XXXXX	H3+ Digital Holter Recorder (various configurations)
H12PLUS-XXX-XXXXX	H12+ Digital Holter Recorder (various configurations)
036872-001	External Hard Drive for Archive storage
9900-014	24” Widescreen LCD Display
9907-016	HP LaserJet Network Windows Printer (110V)
6400-012	Cable USB Type A to B Full Speed (for Windows printer connection)
88188-001-50	Welch Allyn Web Upload Software Kit
11054-012-50	Surveyor Import Application for Surveyor Central data import

* Subject to change without notice.

7. SYSTEM AND USER CONFIGURATION

MWL/PATIENTS

The MWL/Patients icon allows you to schedule Holter exams and enter patient demographic information.

When the modality is linked to an external scheduling system, this information arrives from institution entered orders.

When the icon is selected, a split window appears with two selectable tabs (MWL and Patients) on the left and Patient or Order Information fields on the right, dependent on the selected tab.

A Search field and button are present below the tab selections.

MWL

Text that is entered in the search field will be used to search through the Modality Worklist (MWL) to display orders that start with matching text in the Last Name, First Name, or Patient ID. A blank search field will list all orders.

MWL columns include Scheduled Date/Time, Patient ID, Last Name, First Name, Date of Birth, and Group. The list can be sorted by selecting the column headers. A second selection on the same header will reverse the column order.

Edit Order

Selection of an entry in the list will display the Order Information as read-only. Select the Edit buttons to modify the order. Select the Save Order button to save changes or Cancel to cancel all changes.

NOTE: This function is not available when the DICOM feature is enabled. All orders will arrive from the institution information system.

New Order

A New Order button allows a Patient ID or name search of patient information in the database allowing addition of a new order in the MWL list. A blank search field will list all patients in the database.

The list can be sorted by selection of the column header

NOTE: This function is not available when the DICOM feature is enabled. All orders will arrive from the institution information system.
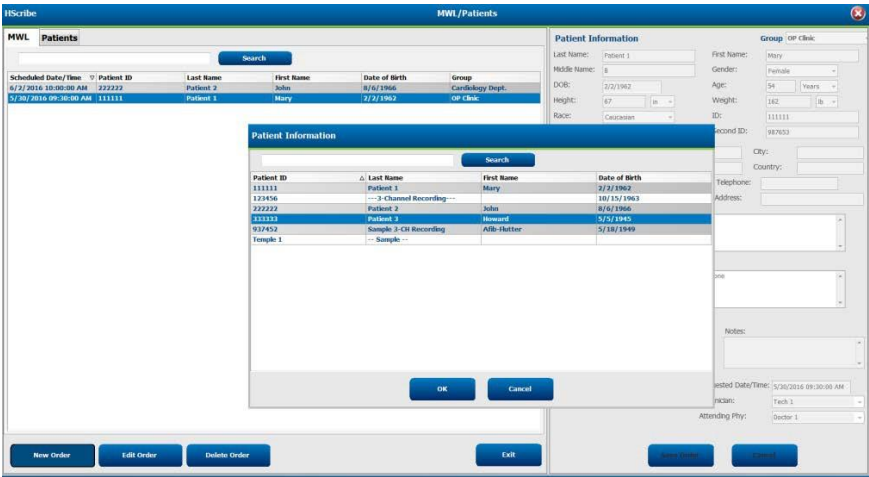
When the patient does not already exist in the database, Cancel the Patient Information search and select the Patients tab to enter a new patient. Instructions are on the following page.

The patient information populates the Order Information at the right of the display. Additional order information can be entered and the order saved. The Cancel button will close the order without saving.

When entering an order, use the Group drop-down list to assign the order to a specific group that has been configured in the system settings.

Select the calendar icon in the bottom right corner of the Order Information section to open a calendar for selection of the scheduled order date and time. Date and time may also be entered by typing in the Requested Date/Time field.
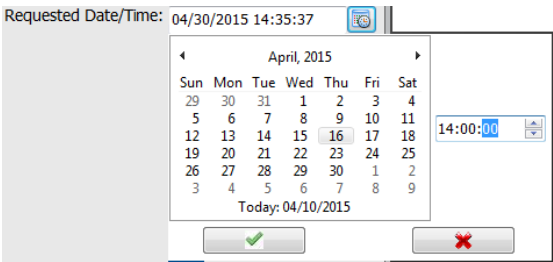
Delete an Existing Order

Select an existing patient order by highlighting the line and then select Delete Order.

A warning message prompting delete confirmation will appear. Select Yes to delete the order or No to cancel and return to the MWL listing.
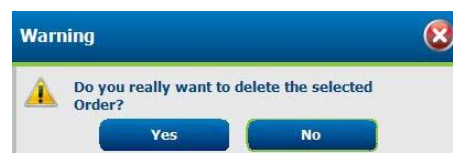
Exit MWL/Patients

Select the **Exit** button when finished to return to the main menu.

Patients

Text that is entered in the search field will be used to search through the patient demographics in the database to display any patients that start with matching text in the Last Name, First Name, or Patient ID.

Patients' columns include Patient ID, Last Name, First Name, and Date of Birth. The list can be sorted by selecting the column headers. A second selection on the same header will reverse the column order.
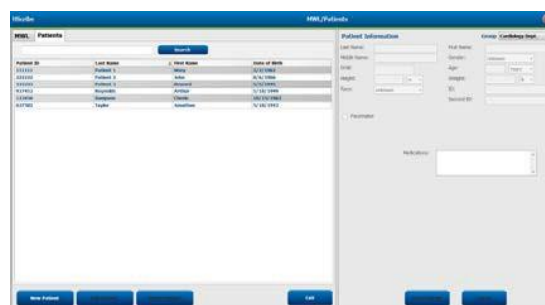
Edit Patient

A New Patient button clears any selected patient information allowing addition of a new patient in the list. The new patient information can be entered in the demographic fields and the Save Patient button selected to save it to the database. The Cancel button will close the patient information without saving.
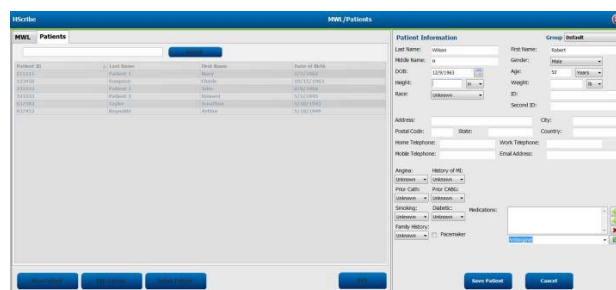
NOTE: Available demographic fields are dependent on the CFD Configuration (Long, Intermediate, or Short) selection in Modality Settings.

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Delete Patient

Select the Delete button to remove patient demographics from the database.

NOTE: The Delete button is disabled when the patient demographics are associated with an existing order or exam. All orders and exams for that patient must first be deleted before the patient demographics can be deleted.

A warning message prompting delete confirmation will appear. Select Yes to delete the patient demographics or No to cancel and return to the Patients listing.
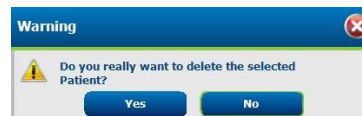
Event Labels

Event labels available for selection when identifying an ECG event in the recording can be added, removed, and moved up or down in the list. A maximum of three event labels selected from the Event Labels listing can be identified as default in this window.

QTc

The default formula choice for QTc Linear, Bazett, or Fridericia is chosen in this window with a radio button.

Three user-selectable choices for RR intervals to be used for QTc calculation are selectable by radio button. Choices are RRprior (previous RR interval in milliseconds), RR16 (sum of the previous 16 RR intervals), and RRc (weighted average of the past 256 RR intervals).

File Exchange

HScribe supports the ability to import orders from XML files and export PDF and XML results to an external system dependent on the system activated features. Import/Export directories for the selected group are defined in the File Exchange window. An E-Scribe Site Number is also defined in this window when applicable. Refer to the Scribe Data Exchange Administrator Manual (P/N: 9515-185-51-ENG) for external system integration details.

Standard Export

Systems configured with standard export options will always export XML V5 Holter Statistics and a PDF copy of the final report to the defined destination.

RX Export

Systems configured with RX export options will always export XML V5 RX Holter Statistics and can optionally export Holter ECG strips with waveform in Welch Allyn XML format, Holter ECG strips with waveform in FDA XML format, UNIPRO32 12-lead ECG strips and a PDF copy of the final report to the defined destination.

PDF File Name

The final report PDF file name will have the following structure:

H^<FileType>_EXMGR^<Group>_<PatID>^<LName>^<FName>^<MName_<TestDateTime>_

<ReportDateTime>.XML

DICOM Settings

HScribe supports the ability to exchange information with DICOM systems dependent on the system activated features. A DICOM Modality Worklist (MWL) will be received from the DICOM server. A DICOM encapsulated PDF will be exported to the defined destination. Refer to the Scribe Data Exchange Administrator Manual (P/N: 9515-185-51-ENG) for DICOM connectivity configuration details.

Web Upload/Surveyor Folders (WU/Serv)

HScribe supports the ability to import Web Upload server recordings and Surveyor Central system monitoring data dependent on the system activated features. The Web upload and Surveyor import paths are defined within this selection.

The Windows user running HScribe must have read/write access to the directories. Select the Path field and select Browse to navigate to the appropriate directory, or enter the path manually. Click Add to include the path for the selected group.

Web upload and Surveyor data paths can be removed by highlighting the path and selecting Delete.

Web upload and Surveyor paths can be authenticated using Validate. When the path is not valid a red exclamation mark is displayed next to the path field.

Unlock Exams

HScribe internally tracks transitioning exams preventing the same exam to be processed by two or more users. When a second user attempts to access an exam in use, a message displays with notification that the exam is not currently available.

As a measure for recovering locked exams, administrative users can unlock an exam that resides on the same workstation by selecting Unlock Exams. Highlight the listed exam(s) and click on Unlock.

Manage Archive Storage

The HScribe administrative user will manage storage system disks through selection of Storage System.

Add Archive Location

Select New Archive button to begin definition of a path to the archive directory destination.

Any external disk (e.g. NAS, USB, etc.) accessible from the HScribe central database is a candidate for becoming an archive volume.

The archive path should be defined as a UNC path such as \\ServerName\ShareName\Directory\

A Username, Password and Domain may be entered as needed to add the new storage disk to the Archive drive listing.

The Refresh Drive List button is available to update the list of available drives.

Select Save Changes button to create the archive location or Discard Changes button to exit this window without saving changes.

An archive path may also be deleted by highlighting the desired label and selecting the Delete Archive button. When selected, a prompt asking if you are sure you want to delete the selected archive is presented. Select Yes or No.
Archived exams will remain at the destination until they are manually deleted.

Restore Archived Exams

Administrative users can restore exams from the archive location to the HScribe database through selection of the Archive Recovery tab. Once selected, a window will open allowing a search of the Archive Name or the Archive Label.

To search by Archive Name, a letter or number combination may be entered to show exams that contain the characters. To search by Archive Label, the first letter of the label can be entered with the Start With description, or the entire Archive Label can be entered with the Equal To description. Select the Search button when ready. The Clear button can be selected to clear all search fields. Column headers can be selected to sort listed exams by that item.

To restore exams, highlight the desired exam(s) in the list and click on Recover.

Multiple exams can be restored by highlighting them followed by a single Recover button click.
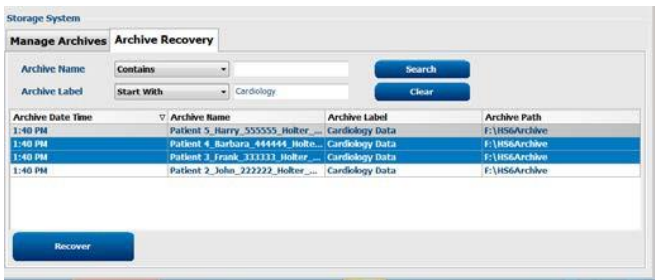
Audit Trail Logs

The HScribe administrative user will select Audit Trail to view the audit trail history. A selection of filter criteria is available to sort the listing by date, user, workstation, operation, or target (e.g. User, Patient, Exam, Conclusion, Locked Exams, User and System Settings). One or more filter criteria can be used to find audit trails.

Selection of results will display differences by comparing the XML statistics data before and after changes. A legend with colored highlighting will point to added, removed, changed, and moved information.

All configuration information, user information, patient demographic information, exam demographic information, textual conclusions, archive operations, and exam download requests are tracked by the audit trail with a date and time.
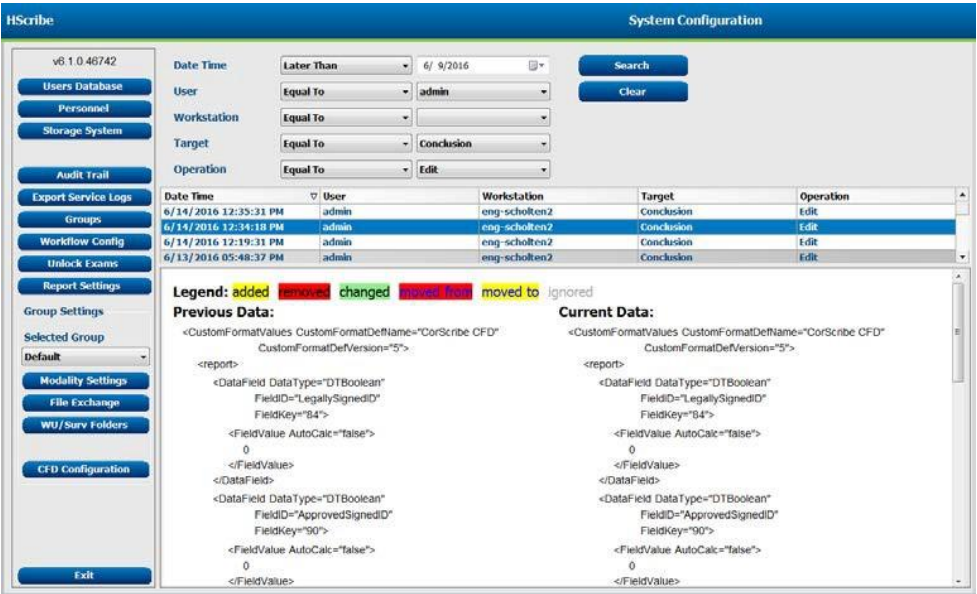
Service Logs

All HScribe users have access to Export Service Logs. Selection of the button creates a Win-7 zipped file that can be sent to the desktop containing a copy of the system logged events.

The file named EMSysLog.xml.gz can be e-mailed to a Welch Allyn service representative for troubleshooting purposes.

Configure Workflow

The HScribe exam states are designed to follow typical user workflow. There are six possibilities with meanings defined below each state:

1. ORDERED
   The Holter exam is either scheduled by a user or an external scheduling system has sent an order.

2. IN PROGRESS
   The Holter recorder or CF card has been prepared and is in process of recording patient data.

3. ACQUIRED
   The recording device has completed data collection and the recording has been imported at the HScribe system and is ready for scanning.

4. EDITED
   The Holter recording has been analyzed with or without changes to the computer analysis and is ready for review by a physician. Conclusions may be entered at this state.

5. REVIEWED
   The Holter recording has been reviewed and confirmed to be accurate by an authorized user (e.g. physician, fellow, clinician, etc.). Conclusions may be entered at this state.

6. SIGNED
   The exam is reviewed and electronically signed by an authorized user. No further workflow processing is required. Conclusions may be entered at this state.

The user with appropriate permissions is prompted with a Final Exam Update dialog to confirm or Update the next logical state when exiting a Holter exam. A drop-down menu allows selection of a state in respect to the exam's current state. **Cancel** may be selected to discard any change to the state.

Workflow Config

Administrative users can configure the workflow to include all, or exclude some states through selection of **Workflow Config**.

Modality Status
- Select **All** under Modality Status to enable all five states.

- Select **No REVIEWED** under Modality Status to move the state from EDITED to SIGNED.

- Select **No EDITED/REVIEWED** under Modality Status to move the state from ACQUIRED to SIGNED.

Export Status
Checkboxes allow choices for Manual or Automatic export of the results when the state is updated to Acquired, Edited, Reviewed or Signed. Any combination may be selected.

Legal Signature
A Legal Signature can be enabled by selecting **Yes** or disabled by selecting **No**.

No Legal Signature

When updating the exam to the signed state, the signature area will show the approver's name with a label of **Approved by:** in the final report.

About the Legal Signature

The legal signature requires the user credentials prior to updating a Holter exam when changing to a signed state. When enabled, the user is prompted to authenticate with a user name and password when transitioning to the signed state. Authentication can be entered when a different user is currently logged in. When incorrect or no credentials are entered, the user will be notified with a message that the "Credentials supplied are not valid."

When the signing physician has been set up as an Attending Physician under Personnel, the printed name will appear in the HScribe final report on the signature line following the **Electronically Signed by:** field label with the date signed.

User Preferences

Select the User Preferences icon to open the window. Set selections define the default criteria for the Get Worklist in the Search feature when the particular user is logged into HScribe.

Set selections can be changed when the user selects the Advanced search selections.

The user can also change the password in this window when the system is not set up with a single sign-on.
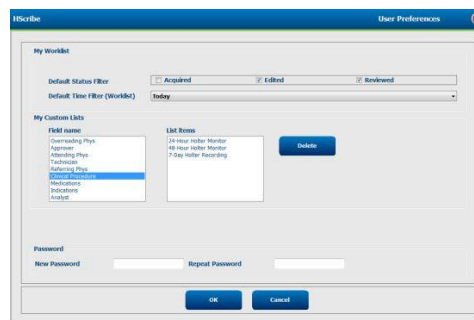
All users have access to the User Preferences settings but may not have the Search feature available. Those users will only enter this window to change their own password.

There are three possible choices for the Worklist Holter exam states that can be enabled or disabled by checkboxes. The choices are dependent on the workflow configuration modality status setting in that Edited or Review may not appear as selections.
1. Acquired
2. Edited
3. Reviewed

There are three choices for the default time filter for worklists.
1. All
2. Today
3. Last week

The user's custom lists can also be modified on this page. Some demographic data entry lists also accept free text which will be automatically added to the list for future use. "My Custom Lists" allows deletion of any list items the current user does not wish to use in the future.

The user can change his password on this page, only if "Single Sign On" is not used.

When finished, select **OK** to save changes or **Cancel** to exit the window without saving changes.

HScribe will present the default settings on any of the workstations that this user logs into.

Report Settings

Multiple HScribe final reports can be created and saved with user-defined names. These final report choices will be available in a drop-down list when finalizing exams.

Click on the Report Settings button. Click the Add button to create a new report type. Choose the report sections to include using the checkboxes.
Choose individual trends to include or exclude when the Trends section is enabled.

Enter the name of the report in the Print Setting Name field. The Use as Default check-box may also be selected.

Click on the Save Changes button when finished, or Discard Changes to cancel without saving.

Click the Delete button to remove a report type from the Print Setting drop down list when it is no longer needed.

Once created and saved, the Report Settings list will be available in the Finalize Exam Update dialog when exiting an exam and in the Final Report Print Preview display when the Preview button has been selected.

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Report Configuration Tool

HScribe final reports should be configured with the practice name prior to using the system. The default sections for final report inclusion are also customizable within this tool.

Click on the HScribe workstation Start menu. Choose All Programs, Welch Allyn Modality Manager followed by Report Configuration Tool to open a dialog window prompting a Group choice from a drop-down list. Each group that has been defined will have its own report configuration.

Click on the **Start Wizard** button to open the tool. The **Exit** button will close the tool.

Configuring the Final Report

Choose the HScribe report using the Choose a Report drop-down list, if necessary.
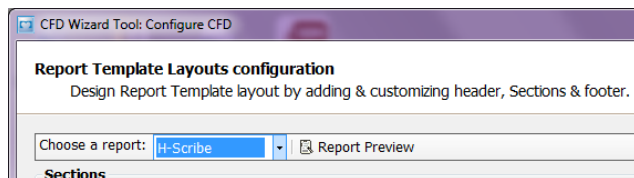
The Report Template Layout configuration will open for the selected Group.
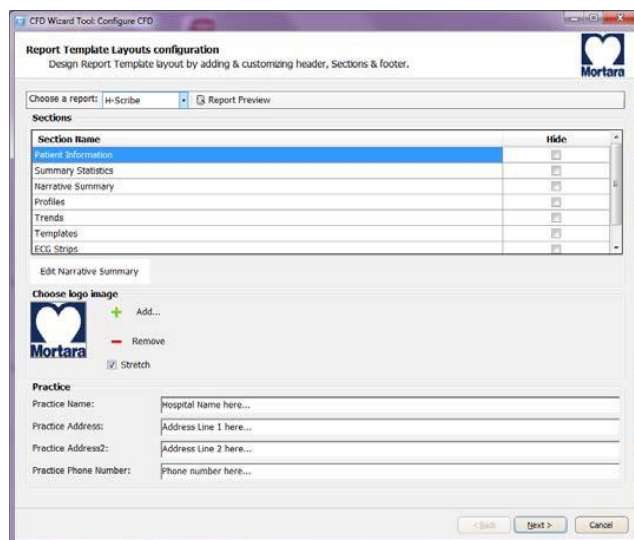
Configuring the Final Report

Once the tool is opened, the following can be performed:

1. Hide final report sections by checkbox selection in the Report Configuration Tool. When the box is checked, the section is disabled as a default; however, the section can be enabled for printing and export when previewing the final report for each individual patient.

2. Add or Remove a logo image for the HScribe final report header. The Stretch checkbox causes the logo to fit into the header area appropriately.

3. Enter institution contact information under the Practice section.

4. Customize the narrative summary by clicking on the Edit Narrative Summary button. Text that is not enclosed in brackets [xxx] can be customized as desired. Text and bracketed data can be removed as desired. Select Save when finished to save your changes and close the text file. Select Cancel to exit without saving your changes.
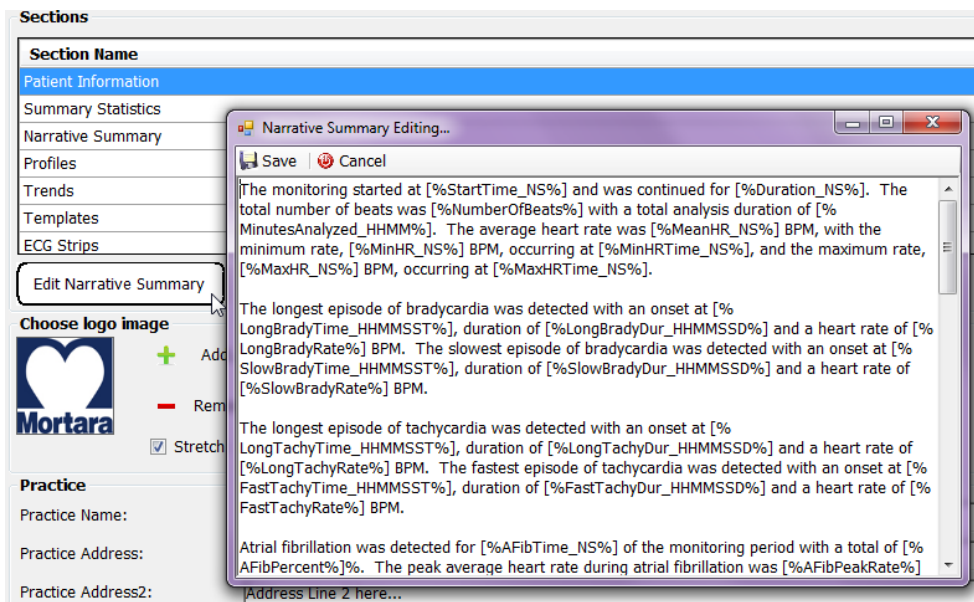
When finished, click on Next > and then Finish. <Back allows you to return to the previous screen; Cancel prompts you with an "Are You Sure" message. Select Yes to cancel the changes.

Once finished, the Group selection is still available for you to choose the next group to repeat the steps listed above. When done defining all groups, select the Exit button.

8. PREVENTIVE MAINTENANCE & CLEANING

Preventive Maintenance Schedule

MAINTENANCE TYPE	Period	Notes
Visual Inspection	Daily	Refer to inspection criteria listed in the Visual Inspection section.
Device Cleaning	As Needed	Refer to the device cleaning instructions below.

Visual Inspection

Inspect your equipment daily prior to operation. If you notice anything that requires repair, contact an authorized service person to make the repairs.

- Verify that all cords and connectors are securely seated.
- Check the case and chassis for any visible damage.
- Inspect cords and connectors for any visible damage.
- Inspect keys and controls for proper function and appearance.

Cleaning Instructions

Keyboard/Mouse Cleaning

Turn the keyboard upside down. Gently tap the back of the keyboard and press the keys to release any debris from in between the keys.

If you have a can of compressed air then use it to blow any debris from around and under the keys, if not then use the hose of a vacuum cleaner to remove it.

If the keys appear to need cleaning, use a cotton swab with isopropyl alcohol on it to clean the sides of the keys as needed.

After cleaning the sides of the keys take your lint free cloth and dampen it with isopropyl alcohol (don't put the liquid directly on the keyboard), give the surface of the keyboard a good wipe over using the cloth to trace the contours of the keys. Use the damp cloth to gently wipe the mouse to remove any hand oils or debris that may be present.

Care and Handling of the Optional Antimicrobial Keyboard and Mouse

The antimicrobial keyboard and mouse are Silver Seal™ protected and contain an antimicrobial agent that inhibits the growth of microbial bacteria, mold, mildew and fungi on the product's surface. A USB Seal Cap™ is included that allows the product to be 100% waterproof and dishwasher safe.

These products are dishwasher safe for easy cleaning and may be disinfected with bleach.

PC Cleaning

Remove and open the system PC from the transport cart. Using an ESD rated vacuum or compressed air, remove any accumulated dust and debris from the PC. Take particular care to cleaning around cooling fans and inside media access slots (refer to cooling fan inspection below). Clean the cart area that the PC and peripheral equipment reside in, to prevent dust and debris accumulation from occurring. Close the system and reinstall the PC into the transport cart once completed.

Inspection of PC cooling fans

Inspect CPU fan, and power supply fan. If they are running too slowly or are making any unusual noises during operation, they should be replaced. For improperly operating PC power supply fans, Welch Allyn recommends replacing the entire power supply unit.

Monitor Cleaning

WARNING: **To avoid risk of electric shock and damage to the monitor, do not disassemble the monitor cabinet. The unit is not user-serviceable. User maintenance is restricted to the following cleaning instructions.**

Unplug the monitor from the power outlet before cleaning.

- To clean your monitor screen, lightly dampen a soft, clean cloth with water or mild detergent. If possible, use a special screen cleaning tissue or solution suitable for the anti-static coating.

- To clean the monitor cabinet, use a cloth lightly dampened with mild detergent. Make sure that water cannot drip into the case of the monitor.

Wipe off stubborn stains from the cabinet or screen with a cloth lightly dampened in isopropyl alcohol. Do not use benzene, thinner, ammonia, or abrasive cleaners.

System Checks

Archive Management

With customer's assistance, create additional Archive folders on the root directory or on the network (if option installed). Refer to the HScribe User Manual (9515-213-50-ENG) for complete instructions. Archive all the patient exams from the root Archive to the newly created Archive locations.

Hard Drive Space

Check the capacity of the system hard drive to ensure there is sufficient space for system operation. If the system drive is nearing capacity (approaching 90%), this issue should be discussed with the facility to create additional space for proper operation. If the drive was near capacity and unnecessary files were removed, a defragmentation may be performed to ensure optimal performance of the drive.

> *NOTE*: The defragmentation process may take several hours and is only required in extreme cases.

PC Diagnostics

Disconnect all wires from the installed PC with the exception of mains power, monitor, keyboard and mouse. Run the PC diagnostics and address any failures during testing. Repair the PC using Welch Allyn authorized parts only.

Functional Testing

Patient Cable(s)
Perform visual inspection of patient cables and function test by hooking up to a simulator or staff. Verify the ECG signal is detected for each lead.

USB Download Cable
Confirm when cable is plugged into PC and H3+ recorder that the recorder displays "USB" and the PC displays "MORTARA_H3" in File Explorer under Removable Drives.

Data Export (if option installed)

Verify Hscribe is able to Export pdf's, xml. DICOM, etc to the network. Verify Hscribe is able to download a worklist from the network.

9. UNIT DISASSEMBLY

For Welch Allyn Supplied Hardware Only

Before You Begin

1. Put on your electrostatic discharge (ESD) wrist strap to avoid damaging any circuitry.
2. Remove all devices (such as diskettes and CD-ROMs) from the computer.
3. Power off the computer and any peripheral devices that are connected to it.
4. Disconnect the power cord from the electrical outlet and then from the computer. When the computer is plugged into an AC power source, there is always voltage applied to the system board. You must disconnect the power cord from the power source before opening the computer to prevent system board or component damage.
5. Disconnect all peripheral device cables from the computer.

Static Electricity

Static electricity can damage electrical components. Before removing or replacing a component, touch a grounded metal object to discharge static electricity. Also observe the following precautions to prevent damage to electric components and accessories:

- To avoid hand contact, transport products in static-safe containers such as tubes, bags, or boxes.
- Protect all electrostatic parts and assemblies with conductive or approved containers or packaging.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free stations.
- Place items on a grounded surface before removing them from their container.
- Always be properly grounded when touching a sensitive component or assembly.
- Avoid contact with pins, leads, or circuitry.
- Place reusable electrostatic-sensitive parts from assemblies in protective packaging or conductive foam.

Disassembly

WARNING: Be sure the AC power cord is disconnected prior to performing servicing.

- During disassembly, label each cable as you remove it, noting its position and routing. This will make the replacement of the cables much easier, and will ensure that the cables are rerouted properly to protect the cables.

- Keep all screws with the units removed. The screws used in the computer are of different thread sizes and lengths; using the wrong screw in a component could damage the unit.

Model: HP RP5810

Access Panel Removal

1. Review the safety considerations before performing the steps listed below by clicking on the following:

   ⚠️ **CAUTION:** Failure to comply with the *precautions* could result in damage to your product or loss of data.

2. Pull up and hold the access panel release latch.

3. Rotate the panel up and lift it away from the chassis.

To install the computer cover, reverse the removal procedure.

Front Bezel Removal

1. Prepare the computer for disassembly
2. Remove the access panel
3. Lift up the three tabs on the side of the bezel **(1)**, then rotate the bezel off the chassis **(2)**.
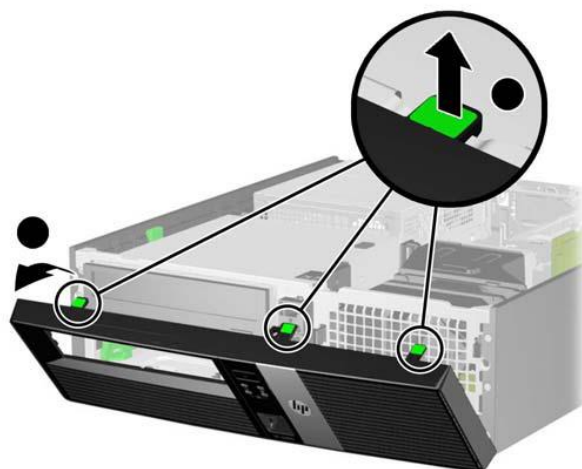
To install the new front bezel, reverse the removal procedure.

Front Bezel Security

The front bezel can be locked in place by installing a security screw provided by HP.

To install the security screw:

1. Prepare the computer for disassembly
2. Remove the access panel
3. Remove the front bezel
4. Remove one of the five silver 6-32 standard screws located on the front of the chassis behind the bezel.
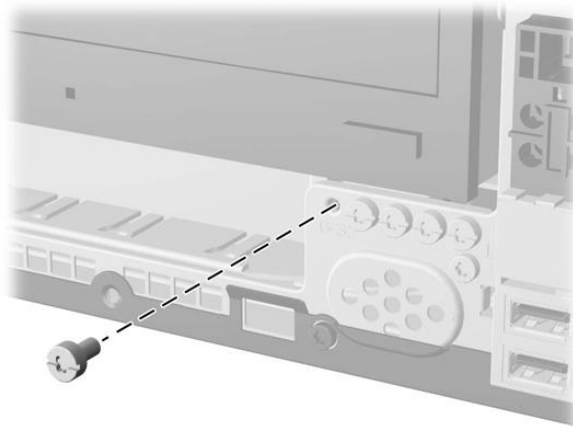
5. Replace the front bezel.
6. Install the security screw next to the middle front bezel release tab to secure the front bezel in place.

To remove the front bezel security screw, reverse the installation procedures.

Power Supply Replacement

⚠️ **WARNING:** Be sure the AC power cord is disconnected prior to performing servicing.

- Prepare the computer for disassembly
- Remove the access panel

1) Lift power supply back end as shown below right.
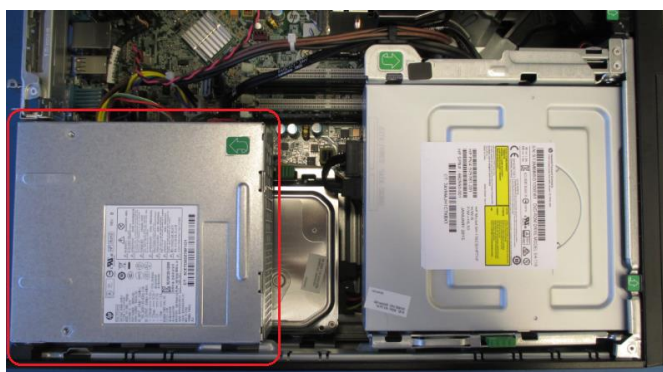
2) Remove 6 pin keyed power connector, P2, from PWRCMD connector as shown below.
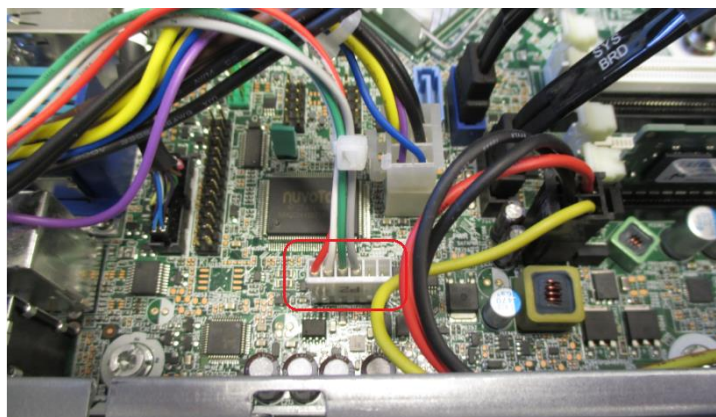
3) Remove the 6 pin lock tab power connector, P1, from the PWR connector.
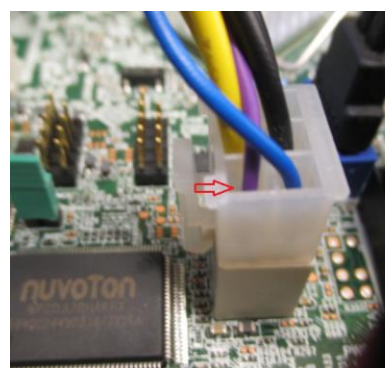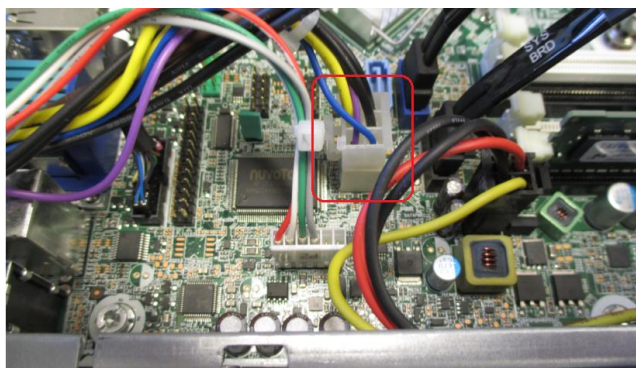
4) Remove the 4 pin lock tab connector, P3, from the PWRCPU connector and remove the wires from the cable holder on the fan duct connected to the CPU heat sink.
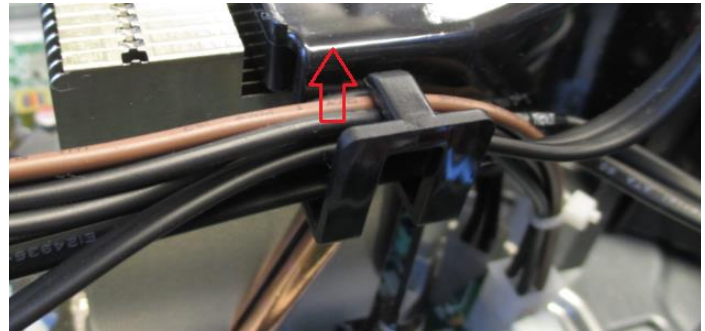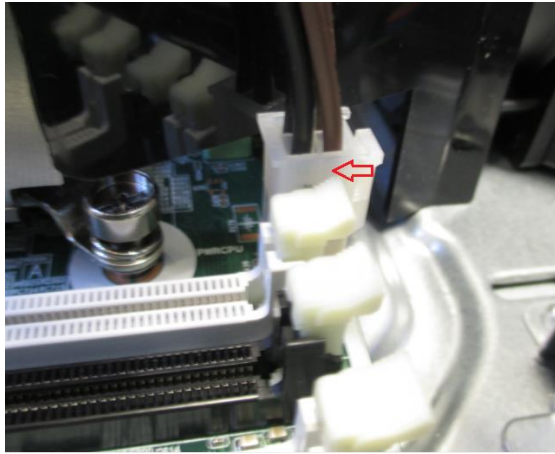
5) Slide the base of the power supply towards the inside of the computer.

6) Lift the power supply up out of the power supply guides.
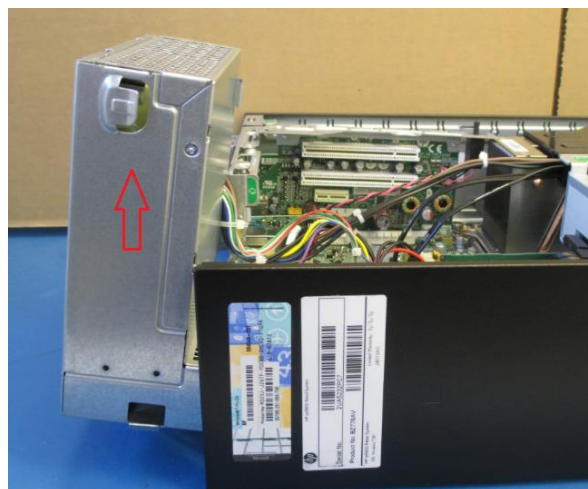
Hard Drive Replacement

To replace the hard drive:

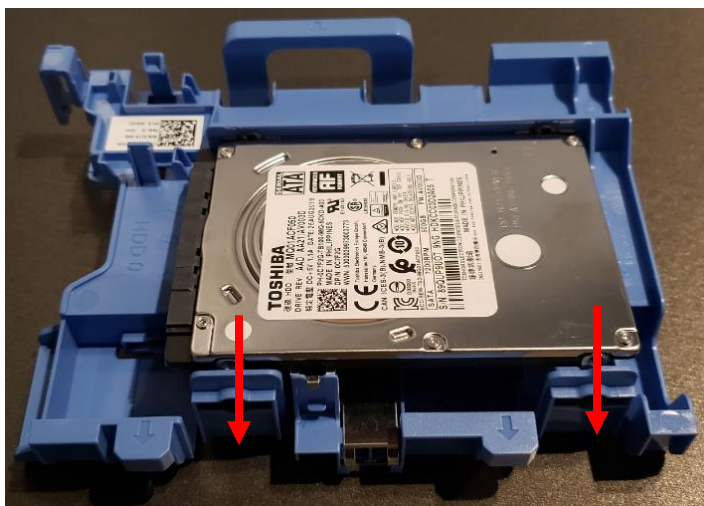- Prepare the computer for disassembly
- Remove the access panel

1) Lift both the power supply and DVD drive up.
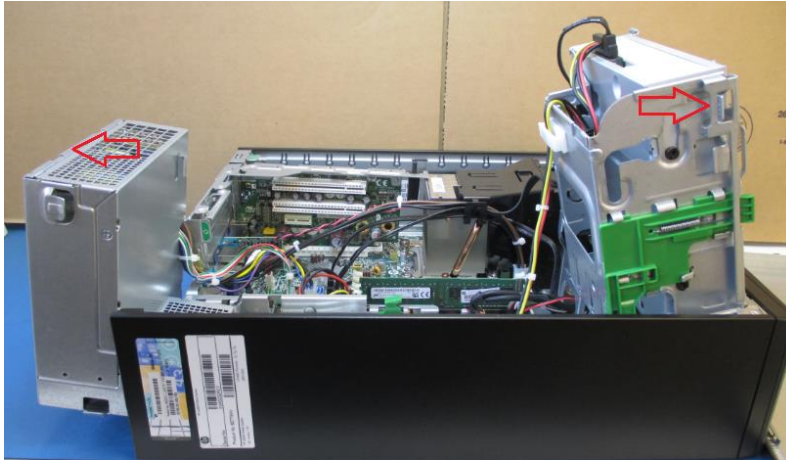
2) Remove both the SATA cable and power connector from the back of the hard drive.
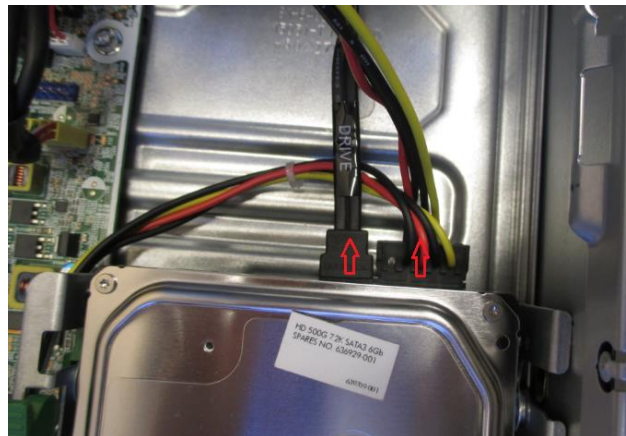
   3) Push down release tab on side of hard drive guides to release the tab lock on the hard drive.
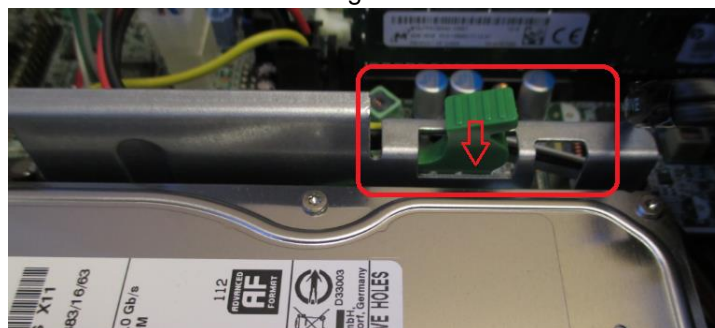
4) Slide the hard drive toward the inside of the computer and lift the hard drive out of the guides.
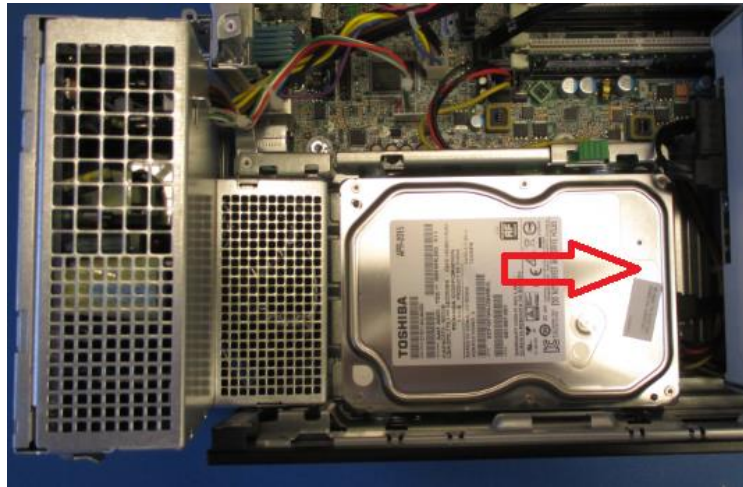
5) Remove the side screws from the old hard drive and put the screws onto the replacement hard drive.

6) Take note of the keyed connectors on the SATA cable and the power connector when installing the cables into the new hard drive.
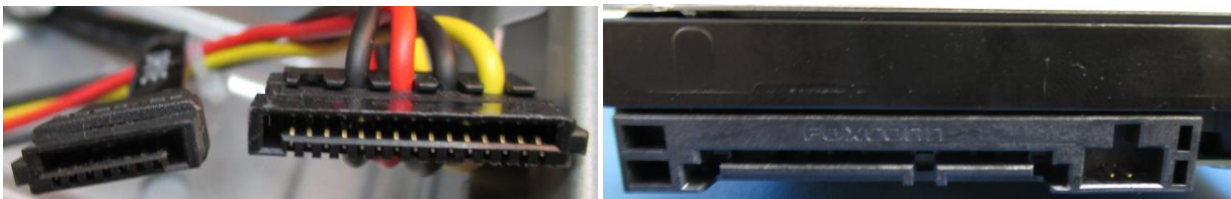
RAM Stick Replacement

To replace the RAM

- Prepare the computer for disassembly
- Remove the access panel

1) Push down side tabs on RAM slot.

2) Take note on notch on RAM stick when installing replacement RAM.
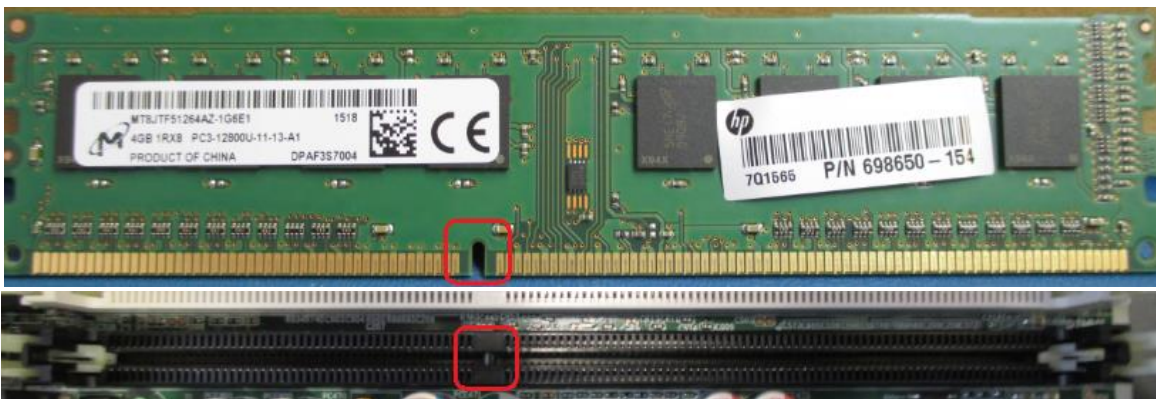
3) Install the replacement RAM into the notched RAM slot and push down on the sides of the RAM to lock into place.
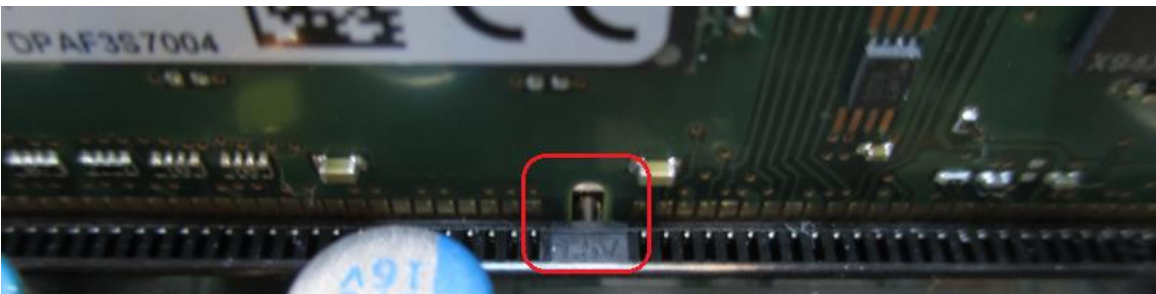
Model: DELL XE3

Prior to working on computer:

1. Turn off the computer.
2. Disconnect all network cables from the computer.
3. Disconnect the AC power cord from the computer.
4. Disconnect all connected devices from the computer (mouse, keyboard, etc.)

5. **Press and hold the power button for 5 seconds with the computer unplugged to ground (discharge) the system board.**

Access Panel Removal / Installation

1. Slide the release latch on the back side of the computer until it makes a click sound to unlock the side cover.
2. Slide and lift the side cover from the computer.

3. Reinstall in reverse order.

Hard Drive Replacement

To replace the hard drive:

- Prepare the computer for disassembly
- Remove the access panel

    1. Disconnect the data cable from the hard drive as shown.
    2. Disconnect the power cable from the hard drive as shown.
    3. Push the release tab and lift the hard drive assembly from the system.
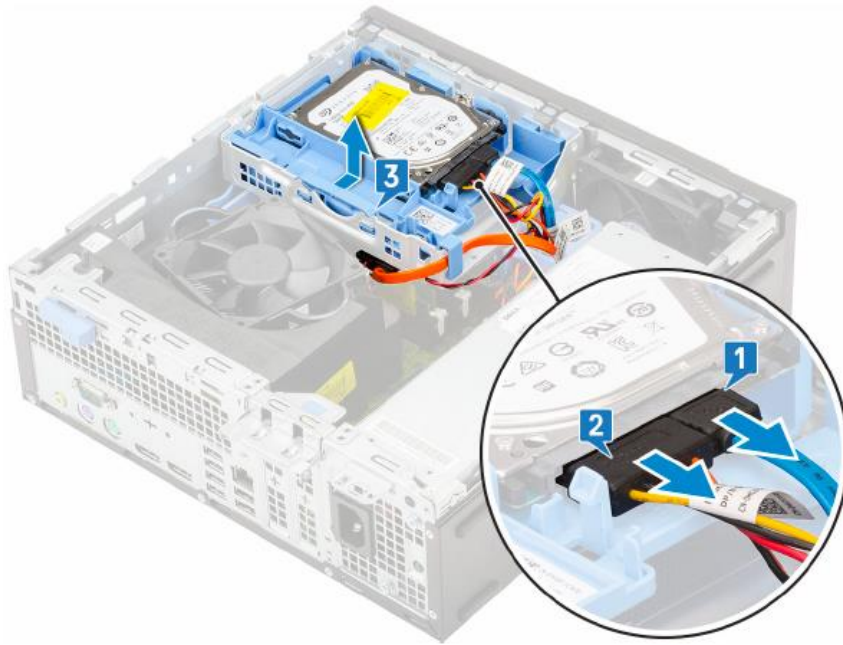
    4. To remove the drive from the drive assembly, gently pull the two plastic retaining tabs outward to allow the drive to be slid out of the drive assembly.

    5. Reinstall in reverse order.

Removing/Installing Front Bezel

To replace the Front Bezel:

- Prepare the computer for disassembly
- Remove the access panel
- Gently lift the 3 retaining tabs shown below and rotate the panel to release the retaining hooks from their slots.
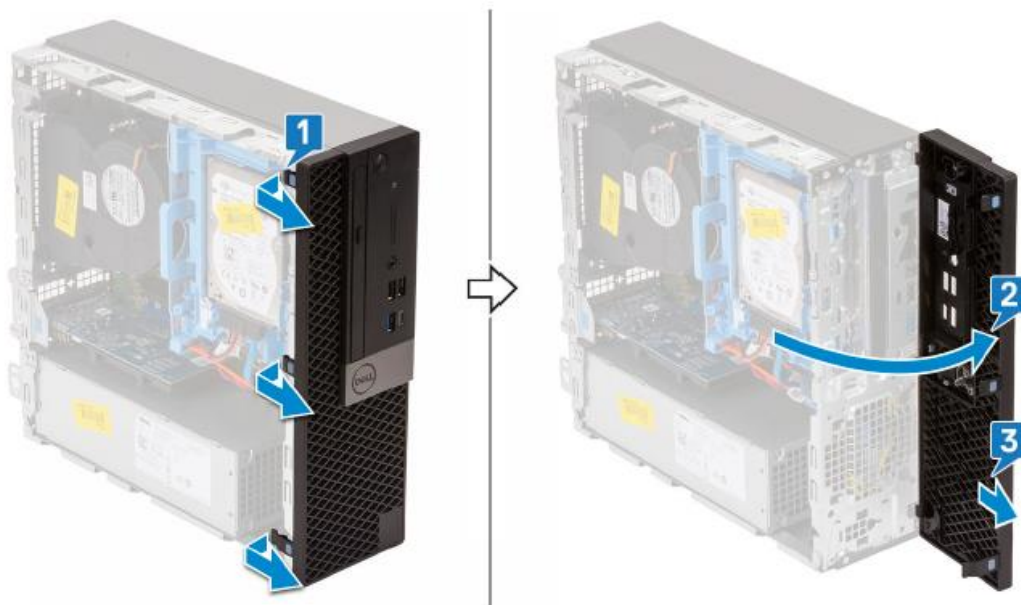
- Install in reverse order.

Removing/Installing the Hard Drive/DVD Chassis

To remove the hard drive chassis:

- Prepare the computer for disassembly
- Remove the access panel
- Remove the front bezel

1. Disconnect the hard drive data and power cables.
2. Slide the hard drive data and power cables out of the blue hard drive chassis latch (which doubles as a cable retainer), as shown below left.
3. Slide the DVD power and data cables out of the metal retention clip on the chassis assembly, as shown below left.
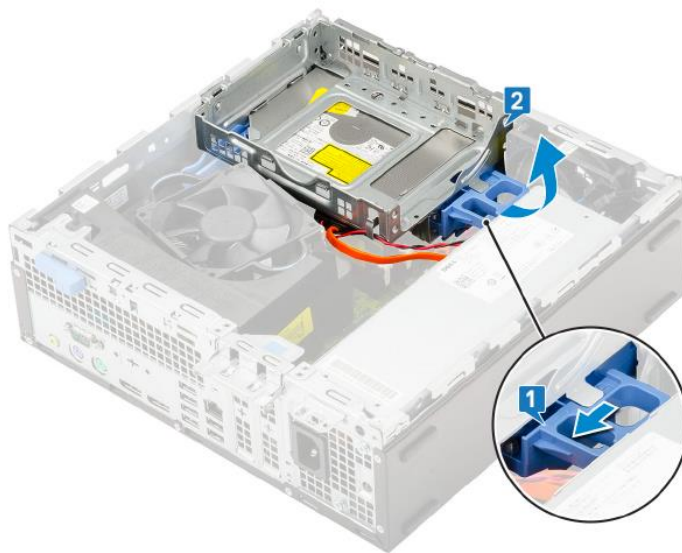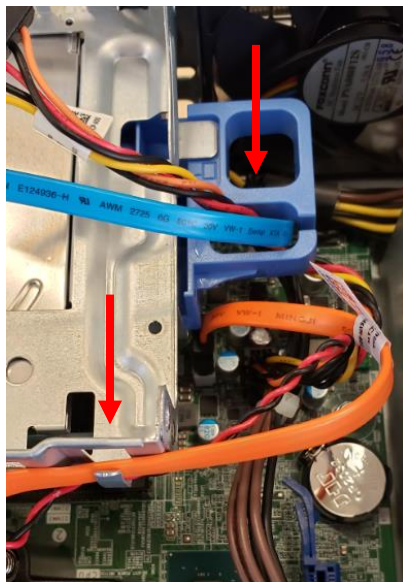
4. Once the cables are removed from the retainers, slide the chassis latch and lift the chassis assembly upwards, until it can be lifted off of the two hooks located on the side of the computer, as shown above right.
5. Remove the DVD data and power cables from the DVD drive, which is mounted to the bottom of the chassis assembly.

6. Reinstall in reverse order.

Removing/Installing the DVD-ROM Drive

- Remove the Hard Drive/DVD Chassis per instructions on previous page.

    1. Using the DVD drive retaining clip connected to the back side of the DVD drive, gently squeeze the retainer as shown below, then slide it forward to extract the DVD drive from the chassis assembly.
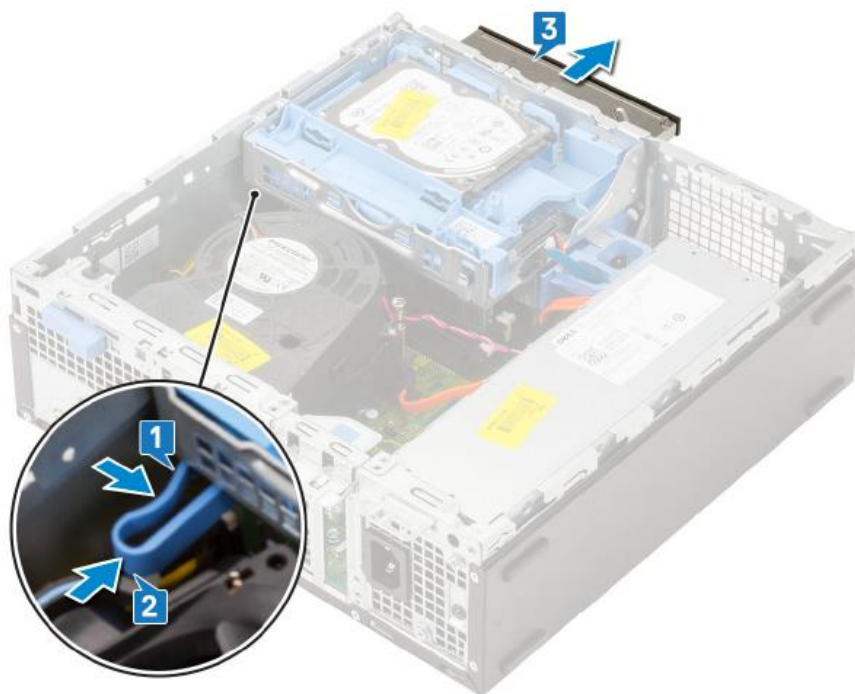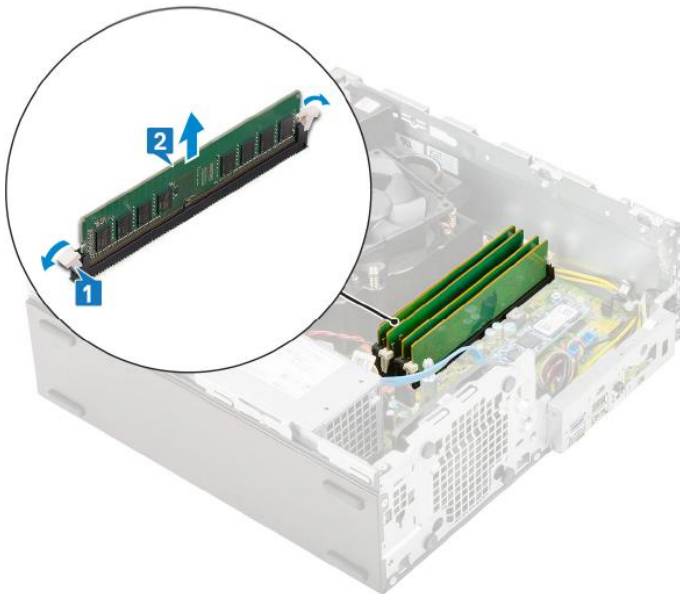

    2. Reinstall in reverse order.

RAM Replacement

To replace the RAM:

- Prepare the computer for disassembly
- Remove the access panel
- Remove the Hard Drive/DVDD Chassis as defined in previous section.

1. Press down and outwardly on the two RAM retention tabs simultaneously to lift the module from the connector.
2. Remove the RAM module.

3. Install new RAM module by aligning the notch in the module with the tab on the RAM module connector.
4. Insert the module into the connector and press the module downward until the retention tabs click into the locking position.

Power Supply Replacement

⚠️ **WARNING:** Be sure the AC power cord is disconnected prior to performing servicing.

- Prepare the computer for disassembly
- Remove the access panel
- Remove the front bezel
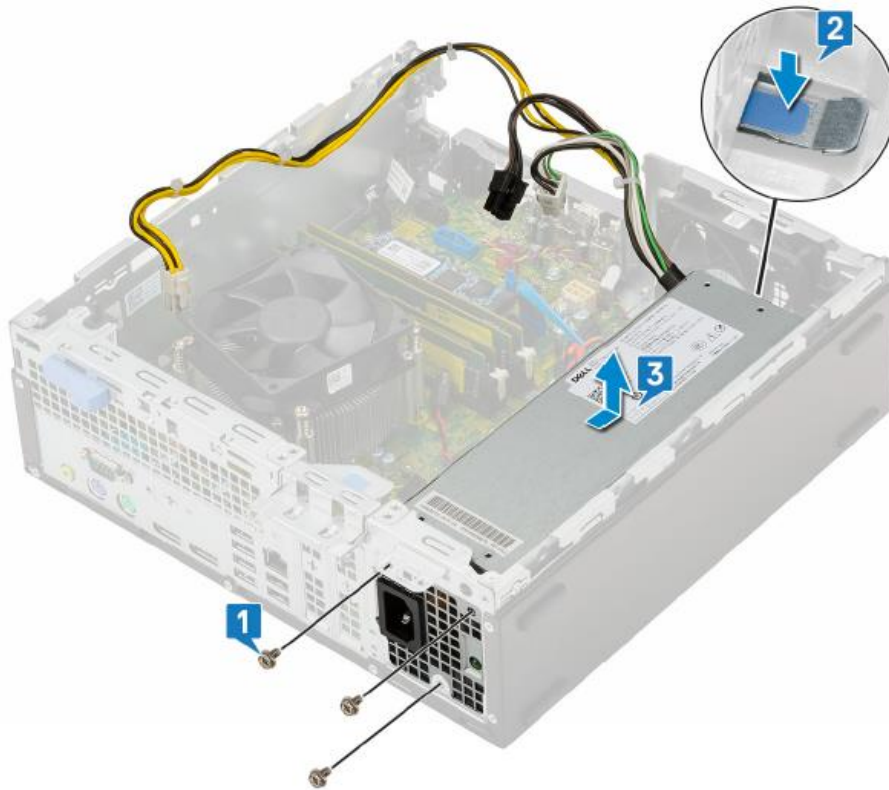- Remove the hard drive/DVD chassis

  1. Remove the heat sink duct by pulling outwardly on the 2 release tabs simultaneously
  2. Lift the plastic duct away from the heat sink assembly.
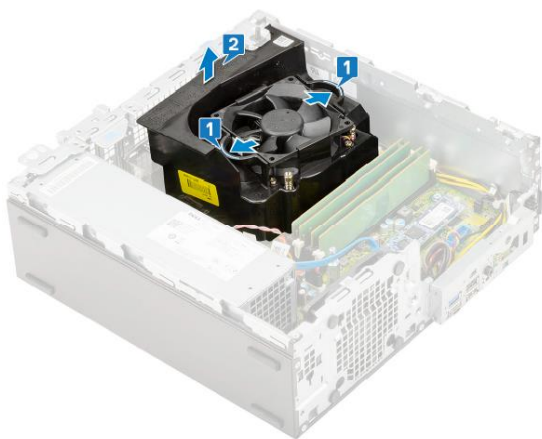
  3. Disconnect the CPU power cable from the motherboard (step 1 shown below).
  4. Un-route the power cables from the retention clips on the chassis (1 near CPU power cable, and steps 2,3 shown below).
  5. Disconnect the system power cable from the motherboard (step 4 shown below).
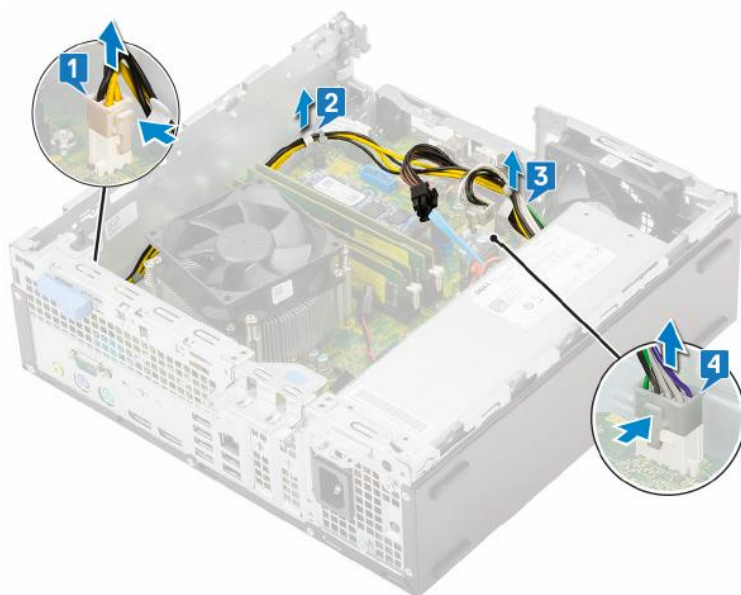
6. Remove the 3 screws that secure the power supply to the PC as shown below.
7. Press the light-blue release tab at the rear of the power supply near the chassis bottom.
8. Slide the power supply into the computer chassis slightly, then lift upward to remove.


9. Reinstall in reverse order.

Network Interface Card (NIC) Replacement

To replace the NIC:

- Prepare the computer for disassembly
- Remove the access panel

1. Remove the heat sink duct by pulling outwardly on the 2 release tabs simultaneously
2. Lift the plastic duct away from the heat sink assembly.
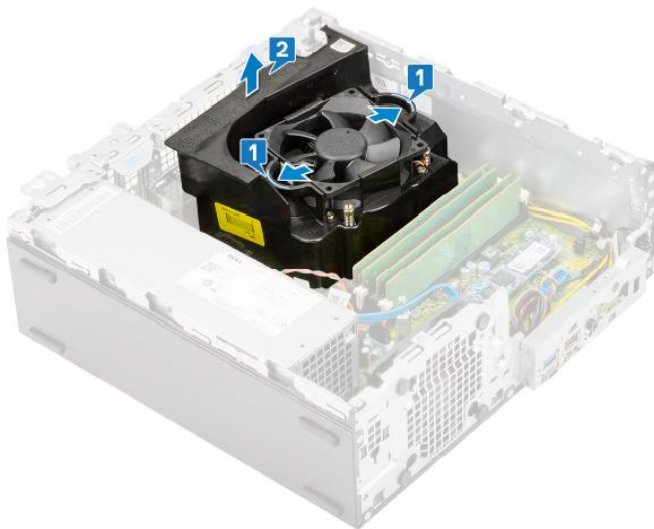
3. Lift upwardly on the light-blue labeled metal retention tab and swing it 180 degrees to allow for removal of expansion cards.
4. Lift the NIC straight up to disengage it from the motherboard connector.
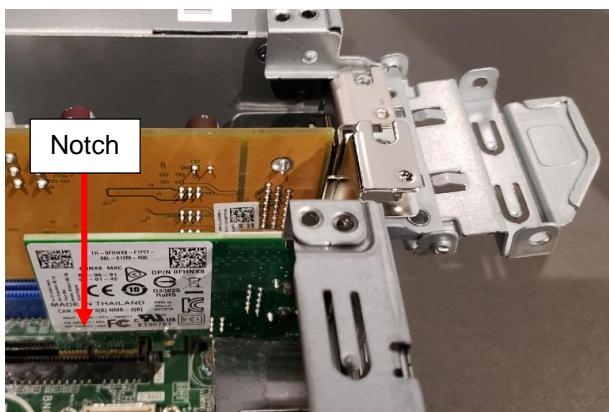
- To install a new NIC, align the notch in the NIC printed circuit board with the tab in the motherboard connector and press straight downward to insert.
- Close the metal retention tab until it snaps tightly into place.

Item Identification Table

| HScribe 6 - Item Identification Table ||
Welch Allyn Item #	Description
25019-006-60	CABLE ASSEMBLY USB H3+
6400-012	CABLE USB TYPE A-TO-B FULL SPD (Printer)
9900-014	MONITOR 24" LCD 1920X1080 HDMI + VGA
9903-013	DRIVE COMPACT FLASH EXTERNAL
9903-030	MOUSE 2-BUTTON w/SCROLL WHEEL USB
9906-043-01	CPU LONG LIFE W/WINDOWS 10 64BIT
9906-043-11	POWER SUPPLY 240W HP5810
9906-043-21	HARD DRIVE RP5810 500GB
9906-043-31	RAM DDR3 1600MHZ 4GB DIMM
9906-043-41	COM PORT EXPANSION CARD DUAL RP5810
749566	DELL CPU WINDOWS 10 64 BIT
749567	DELL CPU WINDOWS 10 64 BIT - ITALIAN
749568	DELL CPU WINDOWS 10 64 BIT - GERMAN
749569	DELL CPU WINDOWS 10 64 BIT - DUTCH
749570	DELL CPU WINDOWS 10 64 BIT - FRENCH
749571	DELL CPU WINDOWS 10 64 BIT - UK
749572	DELL CPU WINDOWS 10 64 BIT POWER SUPPLY
749573	DELL CPU WINDOWS 10 64 BIT HARD DRIVE
749574	DELL CPU WINDOWS 10 64 BIT RAM
749575	DELL CPU WINDOWS 10 64 BIT NIC
749579	DELL CPU WINDOWS 10 64 BIT KEYBOARD & MOUSE KIT
749580	DELL CPU WINDOWS 10 64 BIT KEYBOARD - IT
749581	DELL CPU WINDOWS 10 64 BIT KEYBOARD - DE
749582	DELL CPU WINDOWS 10 64 BIT KEYBOARD - NL
749583	DELL CPU WINDOWS 10 64 BIT KEYBOARD - FR
749584	DELL CPU WINDOWS 10 64 BIT KEYBOARD - UK

10. TROUBLESHOOTING

Computer Faults

Dual colored power LED on front of computer to indicate either normal or fault condition Diagnostic LED Explanation Table:

Number of 1-second red LED blinks followed by a 2-second pause, then repeats:
2 – processor thermal protection activated
3 – processor not installed
4 – power supply failure
5 – memory error
6 – video error
7 – PCA failure (ROM detected failure prior to video)
8 – invalid ROM, bootblock recovery mode
9 – system not fetching code
10 – system hang while loading an option ROM

Printer Information/Settings

Driver: HP Universal Printing PCL5 (V5.4)

Recommended Raster Graphics Printer Setting:

To change the printer settings, click on <start>, then <Devices and Printers>
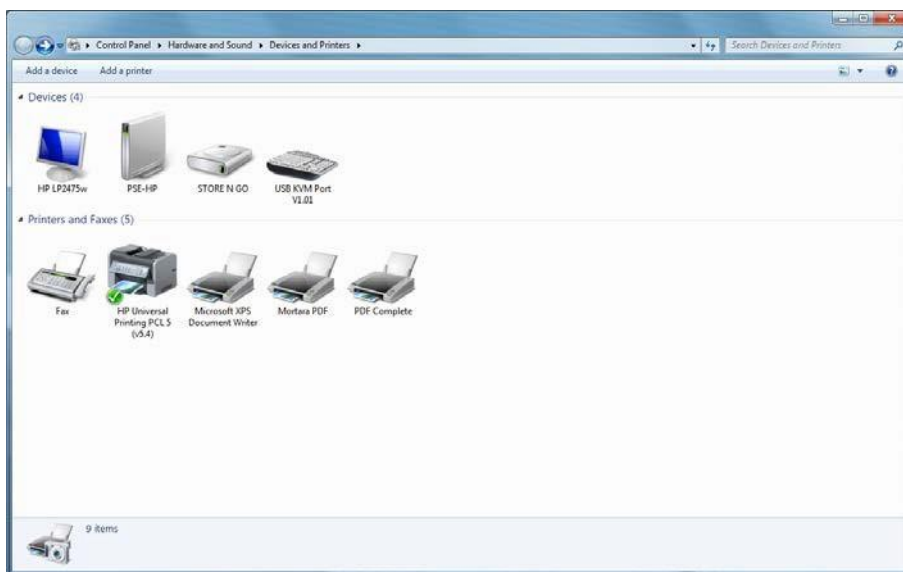
Right click on the appropriate printer. Select <Printer Properties>

Click the Preferences button.
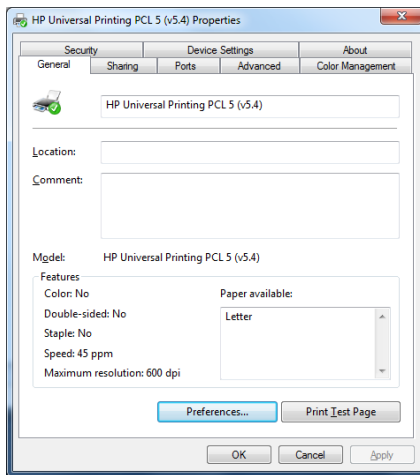
From the Advanced Tab, set Graphics Mode to: <u>Send Graphics as Raster</u>
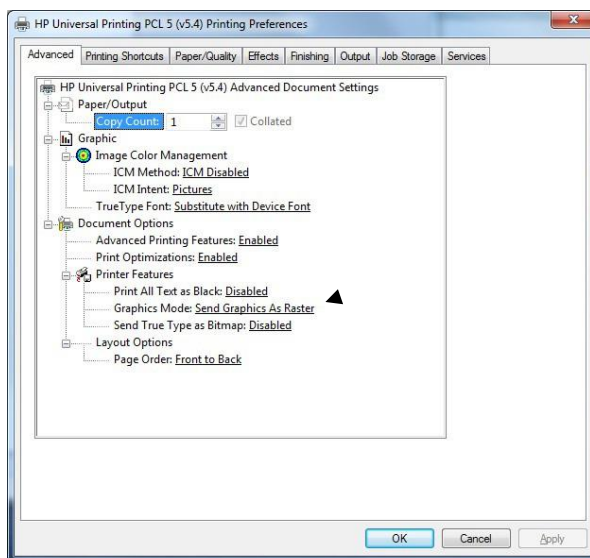
HScribe Application

Upon completion of installing software, Program Icons (grayed out) not able to access function.

You must click on the system configuration Icon and setup User preferences (To configure user preferences to setup permissions to these functions).

Reference operator's manual for more details.

Unable to detect flashcard media

Check to ensure flashcard has volume label of: **Welch Allyn_H12**

- From Windows explorer, right click on drive that has the CF card installed.

- Go to properties and check volume label

- Close Windows explorer.

Unable to detect H3+ recorder

- Ensure that the AAA battery is removed prior to USB download cable connection

- Is recorder listed in the Recording List in Hscribe?

- Is USB displayed on the H3+ display when connected to PC?
  - Check to ensure proper connection is made at the PC and at the recorder.
  - Check for damaged connector on cable and recorder.

- Is recorder listed in Windows explorer? It should be displayed as Welch Allyn_H3.

- Close Windows explorer. (Contact Technical support)

Windows "Scan and Fix" Message Appearing when CF card/Recorder connected
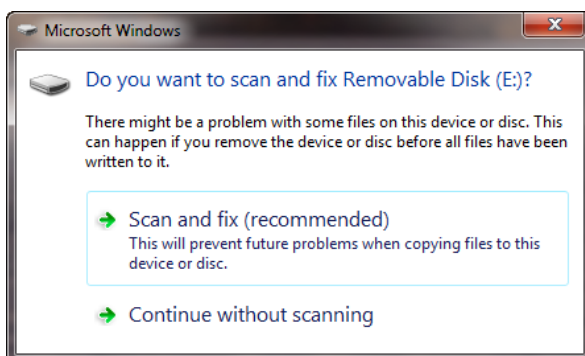

If the message above appears when inserting a CF card of H3+ recorder each time, and the system administrator would like to disable this message, the following steps can be performed.

Note – Disabling this feature will apply to all newly connected hardware devices and the decision to disable the feature should be considered in the context of the facility IT security policy.
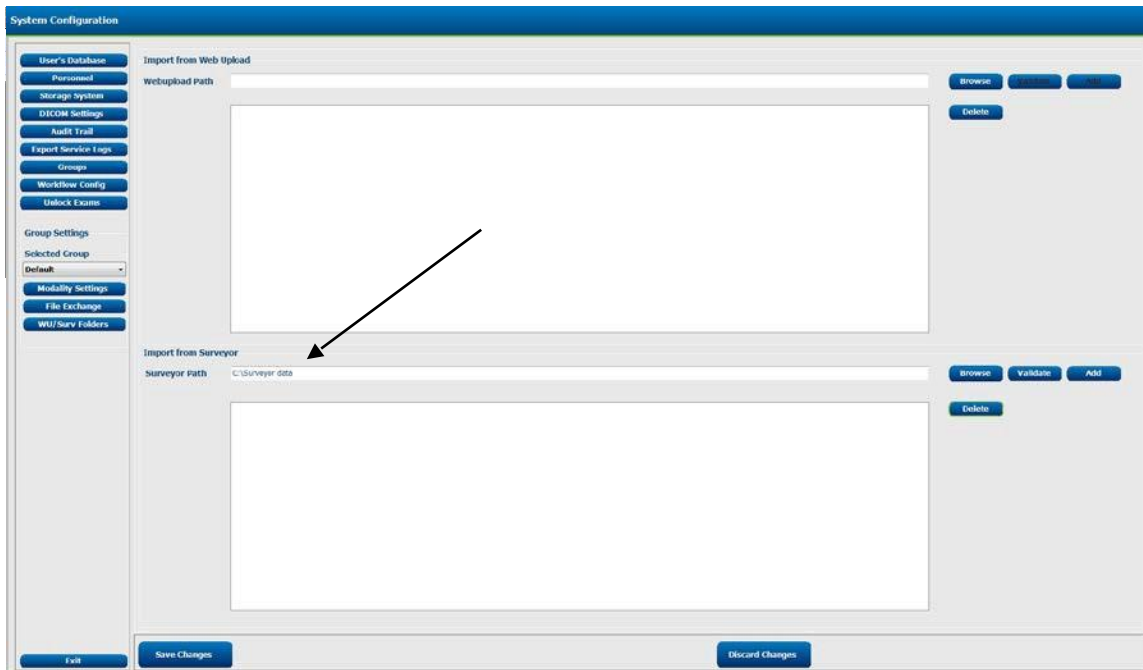
From the Services menu, select "Shell Hardware Detection". When the window below appears, change the "Startup Type" from Automatic to Disabled.
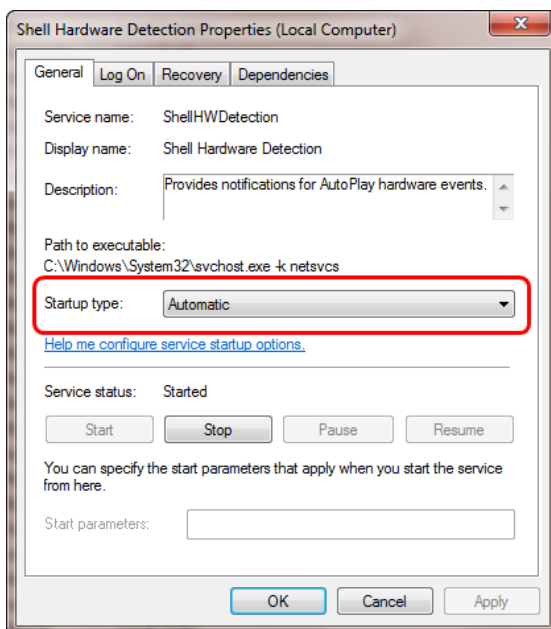
Unable to acquire Data from Surveyor Import

Click on system settings

Click on WU/Surv Folders and set the path to the location set in Surveyor Import. (E.g. C:\Surveyor data)

Verify data appears in recording list to import data

Unable to access MWL:

Open system configuration

Proceed to the MWL settings tab and ensure the information is correct.

Client Connection Errors

Unsecure Client connecting to Secure Server

Client set for SecurityEnabled=false, but serviceURI pointing to secure endpoint on Server:
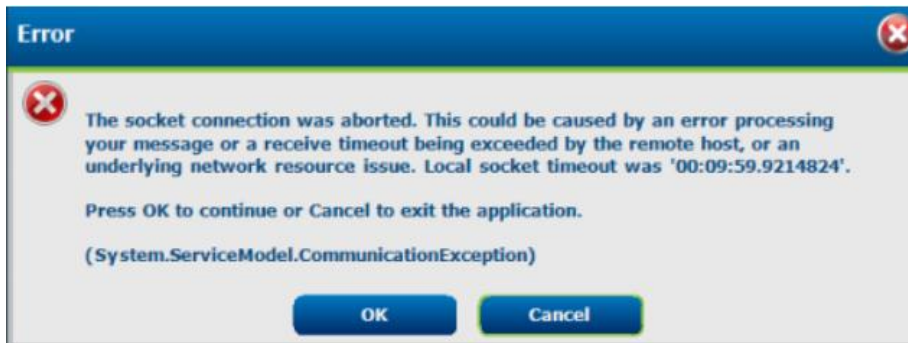
Secure Client connecting to Unsecure Server

Client set for SecurityEnabled=true, but ServiceURI pointing to non-secure endpoint on Server:
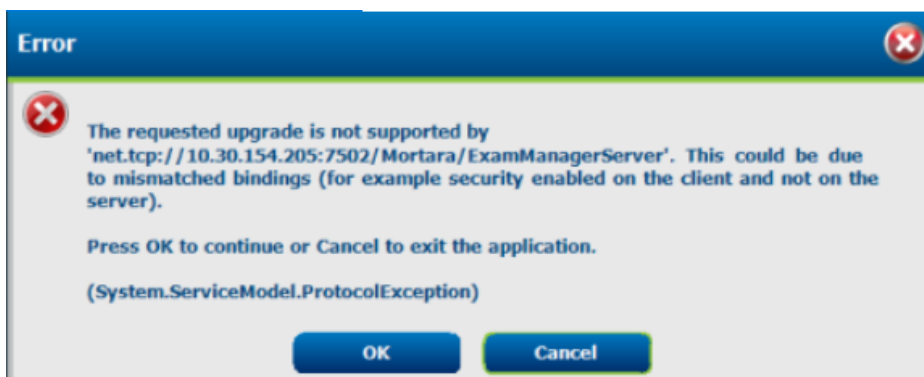
Secure connections configured on client and server that are not member of the same domain or Client and Server on the same domain, but logging in as a non-domain account

This error will show when the two machines are not members of the same domain, or the user account being used is not a domain account. In this case, you can revert the configuration to non-secure, which implies that SSO will not be supported for that scenario.
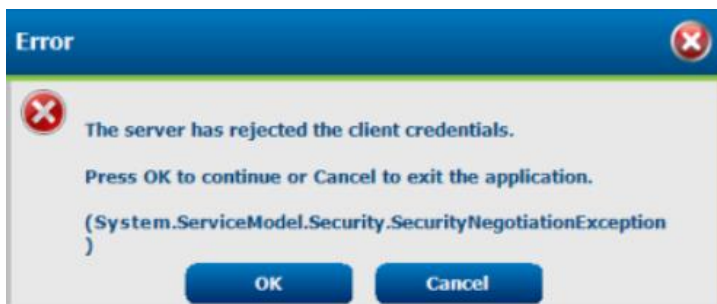
11. CONFORMANCE TESTING

Conformance Testing

Conformance testing is to be performed by Authorized Welch Allyn Service Representatives to verify the device is functioning correctly after repair operations have been performed. System must be configured prior to tests. Testing results can be documented on the test data record provided at the end of this section of the manual.

Required Equipment:

- H3+ recorder or H12+ CF card with previously recorded data
- Legacy recordings <Where applicable>

Launch HScribe application and Login

HScribe will require user credentials on startup. The default factory username and password is admin (password is case sensitive).

Schedule Order <Where applicable>
The Schedule/Orders icon is only available when the modality is not linked to an external scheduling system. Click on the icon to open a window allowing you to schedule Holter exams and view the existing schedule (Refer to operator's manual for details).

Import H3+ and/or H12+ Compact Flash Card Recordings

Import H3+ Recording

Insert the USB interface cable connector into the recorder's input connector. A tone sounds indicating that the HScribe has detected the recorder. The recorder LCD will show "USB" indicating a powered connection.
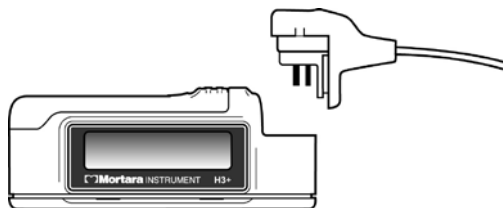
Click on Import recording ICON Select recording from the recording list.

Click on Acquire recorder/card

Upon completion the Profile page will appear

Import H12+ Compact Flash (CF) Card Recordings

Insert flashcard with data into the HScribe CF card reader.

- Click on Import recording ICON

- Select recording from the recording list

- Click on Acquire recorder/card. Upon completion the Profile page will appear

Review and Edit Recording

- Upon completion of the Holter data import and processing, or when a previously acquired recording is opened, the Profile screen is displayed.

- Press CTRL S to view Profile and ECG screen

- Verify the recorded data is present for the appropriate time period of the recording

- Select various strips and save to prepare a final report

Print final Report

- To open a preview of the final report, select **Print Report…** from the Exam pull-down menu or use the shortcut keys Ctrl + P. A preview is generated and the first report page is displayed.

- View each page of report for accuracy and print final report

Export Data <Where applicable>

- Click on exam search ICON

- **Export** to send the exam data to the defined destination

- Export is only available when the export feature is enabled

- Export button is only enabled when the exam status is <u>Signed</u>

- Verify exported files are in specified location as configured in File Exchange configuration

- Open and view PDF files

Import Legacy Recordings <Where applicable>

- Click on **Import Legacy** and browse to the directory where the legacy recordings are stored. Legacy recordings must be in folder named Usr on hard drive with names of PATxx for Legacy recordings .Once selected, all recordings at that location are shown in the Recording List

- Click on **New Patient** under the Search Patient tab.The Exam Data Entry window opens displaying the existing demographics attached to the recording

- Click **Confirm** after demographic information is complete and the Recording Information screen showing the recording and the recorder information is displayed

- Upon completion, Click on exit and the Profile page will be displayed

- Press CTRL S to view Profile and ECG screen

- Select various strips and save for final report. Print report

HScribe 6 Test Data Record

Software Serial #: _____

Software Version: _____

PASS / FAIL   HScribe application login

PASS / FAIL / NA   Schedule order

PASS / FAIL   Import data from Holter recorder

PASS / FAIL   Edit and review data

PASS / FAIL / NA   Print data

PASS / FAIL / NA   Export data

PASS / FAIL / NA   Import legacy recording

Performed by:_____Date:_____/_____/_____

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12. System Utilities

The following utilities are located at the path below to assist with system configuration and service functions as defined.

C:\Program Files (x86)\Welch Allyn Inc\ModalityMgr

Configurator.exe   (language, networking, login)

FetchAllConfig.exe   (gathers all system configuration data)

ActivationTool.exe   (software license information)

CFDWizard.exe   (display and report configurator)

Configurator.exe

The Modality Manager Configuration Utility is stored as a unique EXE file (Configurator.exe) that can be accessed after the installation process is completed if any changes are needed to the Modality Configuration settings.

Refer to the following information regarding the configuration settings:

Language: This setting is always available to select the desired language.

Server Address: The Server Address will read "localhost" if the local PC is hosting the Modality Manager database. If Modality Manager is not local, this box should contain the IP Address or Computer Name of the PC or server hosting Modality Manager.

Log Port: This setting is always available to select the port to be used for the event log service.

API Port: This setting is always available to select the port to be used for Modality Manager service.

Logon Mode: This setting can be set to either Local or Active Directory depending on the user preference. If Local is selected, the Modality Manager service will maintain its own local listing of user/password pairs for logging onto the system.

If Active Directory is selected, the Modality Manager service will access the list of users from the Windows domain.

FetchAllConfig.exe

Copies all of the system configuration settings into the file structure displayed below to allow this information to be sent to a Welch Allyn Service Center. The path can be entered by the user upon executing the utility.
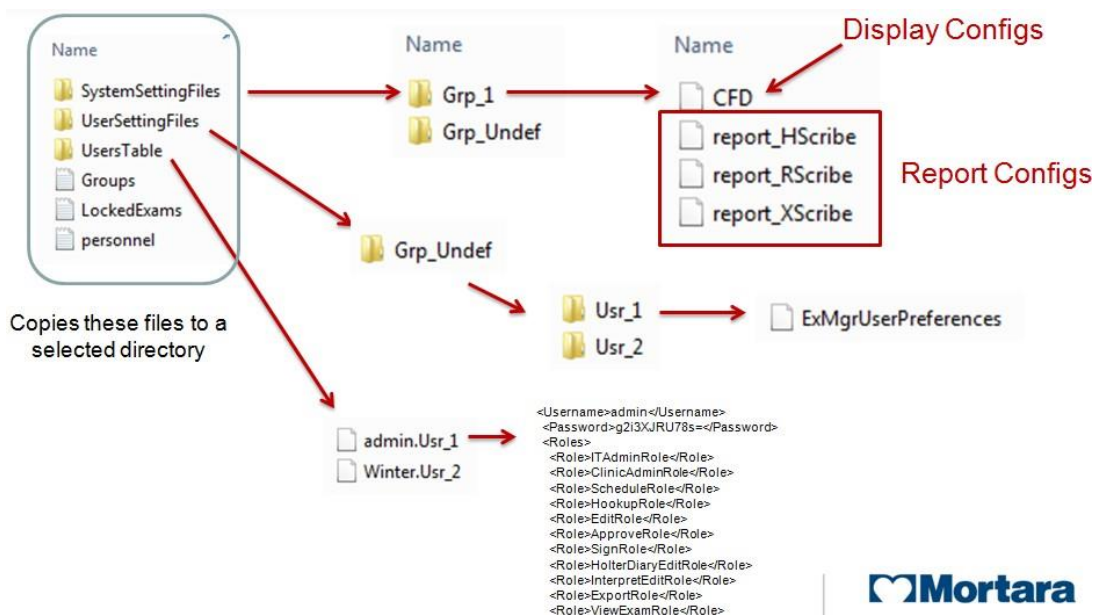
ActivationTool.exe

This utility will display the current software license status, serial number information, and all enabled options.

The serial number information is necessary when contacting a Welch Allyn Service Center for technical assistance.
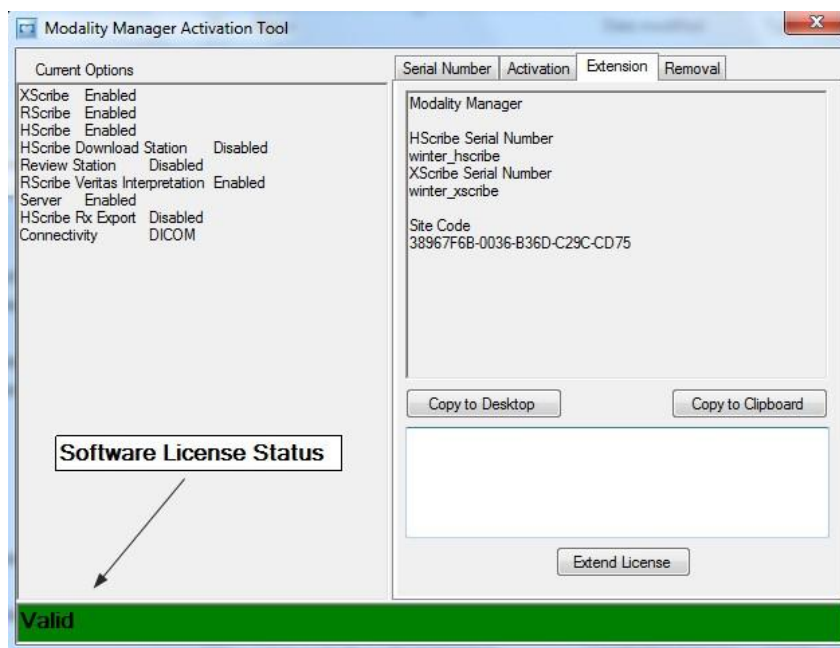
The Activation Utility is also used to perform a software Removal, which MUST be performed prior to uninstalling the Welch Allyn software. The software Removal process will generate a Removal Code, which will need to be sent to Welch Allyn to provide notification that the software license has been deactivated.

Once the software Removal has been reported to Welch Allyn, the software may be loaded on another computer and activated through the normal activation process.

CFDWizard.exe

The CFD (Custom Format and Display) Wizard can be used to change the following items:

- Logo
- Facility Name
- Facility Address
- Phone Number
- Hide Items
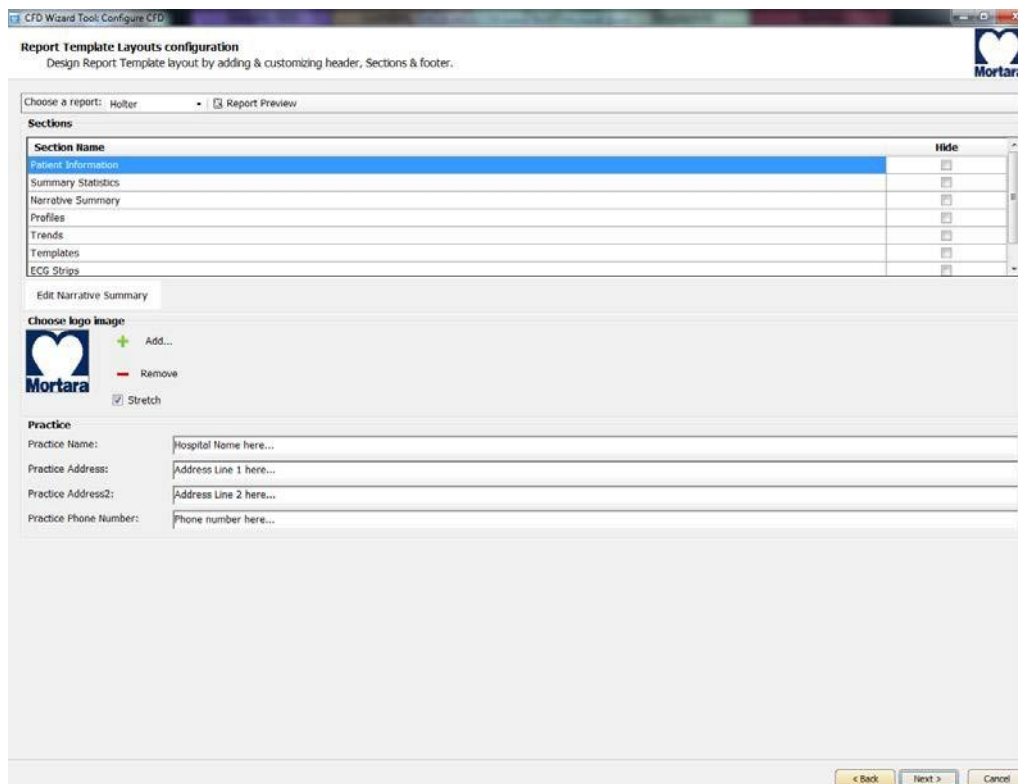
Customization of the Scribe 5 display appearance and reports are also available. Please contact your regional Welch Allyn Service Center for assistance with this level of customization.

13. System Backup and Restoration

System Backup

The Scribe 6 system installs a batch file that will back up all of the necessary data required to restore the system to operation in the case of a system failure. This file can be modified to direct the system to store the backup data to an alternate non-local location or designated storage system (recommended).

User <u>must</u> be logged into the operating system as a user with administrative permissions.

⚠ CAUTION: The backup and restore feature is intended to be used to restore operation of a single system. It is not intended to be used to migrate data to a different HScribe system, which may be on another software version, operating system, or database version.

The backup file is located at the following path:

C:\Program Files\Mortara Instrument Inc\Mortara PgSql\scripts>Backup.bat

- Double click on Backup.bat

- A Command Prompt window will open and the backup process will begin, once the Command Prompt window closes the backup is complete.

Executing the system backup copies the following information into a file called **CorScribeFullBackup.7z** located on the TEMP folder of the logged in user.

- SQL Database information
- Full Disclosure Data
- User Configuration Settings

This may be a hidden file based on the current system settings.

Backup Notes:

⚠ **Caution**
- It is recommended that the backup be performed while the system applications are not in use (not receiving any data).

- The Backup.bat routine can be added as a scheduled process through the Task Scheduler.

- If a local backup (factory default) is used It is recommended that after a backup has been performed that the file created from the backup be removed from the system and placed in a safe (non-local) location.

- The process is the same for a stand-alone system and a distributed system; when performing the backup on a distributed system the process must be performed on the PC or server that is running Modality Manager.

- The backup process can be customized by modifying the DefaultBackupSettings.bat file and renaming the modified file to CustomBackupSettings.bat.

    - Information regarding modifications to the backup file are located within the Backup.bat file itself.
    - Please contact Welch Allyn Technical Support Group if you require assistance with modifying the backup file.
    - Welch Allyn technical support can assist with the modification of the backup file, however Welch Allyn will not retain a copy of the file.

- On a distributed system the backup zip file may be parked in a sub folder:

    C:\Users\<User>\AppData\Local\Temp\1

    This may be a hidden file based on the current system settings.

System Restoration (restores to point of last performed backup)

The following process should be followed to restore a Scribe 6 system.

1. Prepare/Repair PC
2. Load OS (if applicable)
3. Install Product Software
4. Place file **CorScribeFullBackup.7z** in the correct restore location
5. Run Restore batch file

User <u>must</u> be logged into the operating system as a user with administrative permissions.

- Place the backup file into the appropriate folder:
    C:\Users\<Administrator Name>\AppData\Local\Temp

    On a distributed system the file may be located is a sub folder:
    C:\Users\<user>\AppData\Local\Temp\1

    This may be a hidden file based on the current system settings.

- Navigate to the following path to locate the Restore.bat file

    C:\Program Files\Mortara Instrument Inc\Mortara PgSql\scripts>Restore.bat

- Double click on the Restore.bat file

- A Command Prompt window will open and the Restore process will begin.

- The Restore program will ask whether or not CreateDB.BAT will need to be run before the restore is executed. If the system database does not need to be recreated, answer NO to this question. If the system database has been damaged, or is being recreated, answer YES to this question.

- Once the Command Prompt window closes the backup utility has completed restoring the following content:

    - *SQL Database information*
    - *Full Disclosure Data*
    - *User Configuration Settings*

Verify that the appropriate data has been restored (system settings or system settings and exam data) and that the exams can be accessed.

Notes:

⚠️ **Caution**

- *It is recommended that the restore be performed while the system applications are not in use (not receiving any data).*

- *The process is the same for a stand-alone system and a distributed system; when performing a Restore operation on a distributed system the process must be performed on the PC or server that is running Modality Manager.*

14. System Upgrades and Data Migration

HScribe Software Upgrades:

Software application upgrade paths available for a particular system need to be verified for feasibility by authorized service personnel. Contact the technical support to determine if a software upgrade is available for a given system, and if there may be any upgrade restrictions associated with PC hardware, operating system or database compatibility.

Authorized service personnel should reference Upgrade and Compatibility procedure MIS-18-213-03 for specific information regarding system upgrades.

Data Migration:

Data migration refers to the process of transferring exam data from one HScribe system to another HScribe system that cannot be performed via the backup and restore process, due to changes in operating system or database storage differences. Data migration should only be performed by authorized service personnel.

Authorized service personnel should reference the Data Migration procedure 20016027 for specific instructions regarding the migration of system data to a separate HScribe system.