

Welch Allyn®
Web Upload™
USER 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.*

©2020 Welch Allyn This document contains confidential information that belongs to Welch Allyn, Inc No part of this document may be transmitted, reproduced, used, or disclosed outside of the receiving organization without the express written consent of Welch Allyn, Inc Welch Allyn is a registered trademark of Welch Allyn, Inc Ambulo, H3+, H12+, Hypertension Diagnostics Suite, and VERITAS are trademarks of Welch Allyn, Inc Microsoft and Windows are trademarks or registered trademarks of Microsoft Corporation. Software V4.1.0

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

For information about any Welch Allyn product, contact your local Welch Allyn representative:
www.welchallyn.com/about/company/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



9515-147-70-ENG Rev H
Revision date 2020-04



Welch Allyn, Inc.
4341 State Street Road
Skaneateles Falls, NY 13153 USA

www.welchallyn.com

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.

Copyright and Trademark Notices

This document contains information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated to another language without prior written consent of Welch Allyn, Inc

Other Important Information

The information in this document is subject to change without notice.

Welch Allyn, Inc makes no warranty of any kind with regards to this material including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. Welch Allyn, Inc assumes no responsibility for any errors or omissions that may appear in this document. Welch Allyn, Inc makes no commitment to update or to keep current the information contained in this document.

Notice to EU Users and/or Patients

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.

2. WARRANTY INFORMATION

Your Welch Allyn Warranty

WELCH ALLYN, INC (hereafter referred to as “Welch Allyn”) warrants that components within Welch Allyn products (hereafter referred to as “Product/s”) will be free from defects in workmanship and materials for the number of years specified on documentation accompanying the product, or previously agreed to by the purchaser and Welch Allyn, or if not otherwise noted, for a period of twelve (12) months from the date of shipment.

Consumable, disposable or single use products such as, but not limited to, PAPER or ELECTRODES are warranted to be free from defects in workmanship and materials for a period of 90 days from the date of shipment or the date of first use, whichever is sooner.

Reusable product such as, but not limited to, BATTERIES, BLOOD PRESSURE CUFFS, BLOOD PRESSURE HOSES, TRANSDUCER CABLES, Y-CABLES, PATIENT CABLES, LEAD WIRES, MAGNETIC STORAGE MEDIUMS, CARRY CASES or MOUNTS, are warranted to be free from defects in workmanship and materials for a period of 90 days. This warranty does not apply to damage to the Product/s caused by any or all of the following circumstances or conditions:

- 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 WELCH ALLYN TO HAVE BEEN DEFECTIVE. This remedy shall be conditioned upon receipt of notice by Welch Allyn of any alleged defects promptly after discovery thereof within the warranty period. Welch Allyn’s obligations under the foregoing warranty will further be conditioned upon the assumption by the purchaser of the Product/s (i) of all carrier charges with respect to any Product/s returned to Welch Allyn’s principal place or any other place as specifically designated by Welch Allyn or an authorized distributor or representative of Welch Allyn, and (ii) all risk of loss in transit. It is expressly agreed that the liability of Welch Allyn is limited and that Welch Allyn does not function as an insurer. A purchaser of a Product/s, by its acceptance and purchase thereof, acknowledges and agrees that Welch Allyn is not liable for loss, harm, or damage due directly or indirectly to an occurrence or consequence therefrom relating to the Product/s. If Welch Allyn should be found liable to anyone under any theory (except the expressed warranty set forth herein) for loss, harm, or damage, the liability of Welch Allyn shall be limited to the lesser of the actual loss, harm, or damage, or the original purchase price of the Product/s when sold.

EXCEPT AS SET FORTH HEREIN WITH RESPECT TO REIMBURSEMENT OF LABOR CHARGES, A PURCHASER'S SOLE EXCLUSIVE REMEDY AGAINST WELCH ALLYN FOR CLAIMS RELATING TO THE PRODUCT/S FOR ANY AND ALL LOSSES AND DAMAGES RESULTING FROM ANY CAUSE SHALL BE THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCT/S TO THE EXTENT THAT THE DEFECT IS NOTICED AND WELCH ALLYN IS NOTIFIED WITHIN THE WARRANTY PERIOD. IN NO EVENT, INCLUDING THE CLAIM FOR NEGLIGENCE, SHALL WELCH ALLYN BE LIABLE FOR INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES, OR FOR ANY OTHER LOSS, DAMAGE, OR EXPENSE OF ANY KIND, INCLUDING LOSS OF PROFITS, WHETHER UNDER TORT, NEGLIGENCE OR STRICT LIABILITY THEORIES OF LAW, OR OTHERWISE. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

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)

- Reference Ambulo™ 2400, HSCRIBE™, H3+™, H12+™, and WAM PC user manuals for all warnings.
- Device is a computer-based software application intended for use on a computer separate from the HSCRIBE, Hypertension Diagnostics Suite, and ELI PC Service systems. Holter recordings from H12+ and H3+ digital recorders, BP recordings from Ambulo 2400 monitors, and ECG recordings from WAM PCs are transferred using Welch Allyn Web Upload and then analyzed by HSCRIBE, Hypertension Diagnostics Suite, and ELI PC Service.
- Welch Allyn Web Upload Client software is designed to operate on a Microsoft® Windows 10 operating system. Additionally, Microsoft .NET Framework version 4.6.1 must be installed together with Internet Explorer version 11 or later.
- Before attempting to use the device for clinical applications, the user must read and understand the contents of the user manual and any accompanying documents. Contact Welch Allyn service for additional training options.
- This manual gives important information about the use and safety of this software application. Deviating from operating procedures, misuse or misapplication of the software application, or ignoring specifications and recommendations could result in increased risk of harm to users or patients and bystanders.
- To prevent misdiagnosis of the patient's condition, follow preparation instructions in the appropriate device manual so the device's real-time clock is set prior to capturing the recording.



Caution(s)

- Reference HSCRIBE Holter Analysis user manual for cautions relating to the Holter analysis system.
- Reference H12+ or H3+ digital recorder user manuals for all cautions relating to the recorder.
- Reference Ambulo 2400 Ambulatory Blood Pressure Monitor user manual for all cautions relating to the blood pressure recorder.
- Reference WAM PC user manual for cautions relating to the WAM PC device.

Note(s)

- Patient demographics are stored in a file on the client computer. Users must use the same computer where the recording was originally prepared to transfer the recording. Using a different computer may result in loss of the prepared demographics.

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.



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



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.



Model Identifier



Reorder Number

TABLE OF CONTENTS

1. NOTICES	1
MANUFACTURER’S RESPONSIBILITY	1
RESPONSIBILITY OF THE CUSTOMER	1
EQUIPMENT IDENTIFICATION	1
COPYRIGHT AND TRADEMARK NOTICES	1
OTHER IMPORTANT INFORMATION	1
NOTICE TO EU USERS AND/OR PATIENTS	1
DISPOSAL	1
2. WARRANTY INFORMATION	2
YOUR WELCH ALLYN WARRANTY	2
3. USER SAFETY INFORMATION	4
4. EQUIPMENT SYMBOLS AND MARKINGS	5
SYMBOL DELINEATION	5
5. WELCH ALLYN WEB UPLOAD CLIENT	7
PURPOSE	7
AUDIENCE	7
INDICATIONS FOR USE	7
WELCH ALLYN WEB UPLOAD CLIENT OVERVIEW	7
REQUIRED EQUIPMENT	8
WELCH ALLYN WEB UPLOAD CLIENT INSTALLATION	9
SETTINGS	11
ADVANCED SETTINGS	12
LAUNCHING THE WELCH ALLYN WEB UPLOAD CLIENT	13
TRANSFER RECORDING	15
PREPARE RECORDER MEDIA	16
H3+ RECORDER PREPARATION	17
AMBULO 2400 PREPARATION	18
RECORDINGS	19
TOOLBAR MENU	20
WAM PC WORKFLOW	21

5. WELCH ALLYN WEB UPLOAD CLIENT

Purpose

This user manual explains how to install, setup, and begin using the Welch Allyn Web Upload Client application. Use this manual as a learning tool as well as a reference.

NOTE: This manual may contain screen shots. Any screen shots are provided for reference only. Consult the actual screen in the host language for specific wording.

Audience

This manual is written and intended for clinical professionals who are expected to have a working knowledge of medical procedures and terminology as required for monitoring cardiac patients. In addition, it is assumed that users are familiar with Microsoft Windows and have a basic understanding of computer operations.

Indications for Use

This application is indicated for use in a clinical setting where recorded Holter ECG, resting ECG, and ambulatory blood pressure (ABP) data will be transmitted from a remote site over the Internet/Intranet to a central web server. The data is then imported and analyzed by the HSCRIBE Holter analysis, ELI PC Service, or Hypertensive Diagnostics Suite systems for review by trained medical personnel.

Welch Allyn Web Upload Client Overview

The Welch Allyn Web Upload Client collects ECG data from H3+ digital Holter recorders, H12+ compact flash (CF) memory cards, and WAM PC recorders, and BP data from Ambulo 2400 ambulatory blood pressure recorders. It communicates with a web server over the Internet/Intranet to transfer the data for eventual analysis. The Welch Allyn Web Upload Client also prepares the Holter, WAM PC, and ABP recorders for new tests.

The Welch Allyn Web Upload Client is usually made available on a web server hosted by the organization responsible for analyzing the test data. It must be installed on a Windows computer by an administrative user. The installer prompts for a local storage location, automatically creates directories, and grants non-administrative users permission to use it. After installation, the Welch Allyn Web Upload Client runs as a standalone application that will automatically update whenever a new version becomes available on the web server.

In addition to the web-based installation method mentioned above, the Welch Allyn Web Upload Client can also be installed using a standalone silent installer. The silent installer is intended for large scale deployment environments. The silent installer does not prompt the user for storage directory. The storage directory and other configuration information is read from a **WebUploadInstallConfig.xml** file that is included with the Silent Client Installer files. The user tasked with deployment should customize the **WebUploadInstallConfig.xml** file with desired configuration settings, create any desktop shortcuts and grants non-administrative users, permission to the storage directory. Unlike the web-based installation, the Welch Allyn Web Upload Client does not automatically update when a new version becomes available on the web server.

H3+ recorder, WAM PC, and Ambulo 2400 connections, as well as H12+ CF memory card insertions, are automatically detected when Welch Allyn Web Upload Client is running. When a connection or CF card is detected, the Upload Client will take the user through the necessary steps for transferring the recording to the local computer. The user will enter or verify the patient demographics and other information about the recording. Demographic fields may be populated automatically or through a user selection when XML orders are available. Many of the fields will be filled from drop-down lists that are provided by the web server, or customized on the local computer. The lists for Medications, Indications, Referring Physicians, Hookup Technicians, and Diary Annotations can be configured locally using menu options provided by the Welch Allyn Web Upload Client. Diary events created by pressing a Holter recorder's event button are preserved, and the user can label or delete those events as well as add new ones.

The Welch Allyn Web Upload Client manages the set of recordings that have already been collected from the local Holter, WAM PC, and ABP devices. Using the Recordings tab, the user can see the list of recordings and their status. The user can upload individual recordings to the web server, or batch upload all recordings not yet transferred. Web server uploads can also be configured to automatically start after a new recording is transferred from the device. If an upload is interrupted for any reason, the recording's status will show that it was partially uploaded.

The Welch Allyn Web Upload Client includes troubleshooting tools to verify the web server connection, and view, print, or copy log files that contain a history of actions. The logs can be copied to the clipboard and sent to support personnel.

Required Equipment

- Computer(s) to run Welch Allyn Web Upload Client
 - OS: Windows 10
 - RAM: 1 GB memory (minimum)
 - Video: 1024 x 768 resolution (minimum)
 - Microsoft .NET Framework version 4.6.1
- Supported Web browsers
 - Internet Explorer 11
 - Microsoft Edge
- H3+ recorder USB interface cable from Welch Allyn
- Welch Allyn approved CF Card Reader for H12+ recording download
- Mini USB cable for Ambulo 2400 recorder
- USB Transceiver Key (UTK) for WAM PC

Welch Allyn Web Upload Client Installation

Method 1: Using the web-based installation method:

The WelchAllyn Web Upload Client is initially installed by a Windows user with local administrator privileges.

Use a web browser to navigate to the address where the client installer is made available on the web server. This address will be provided by the organization responsible for maintaining the web server and receiving the uploaded recordings.

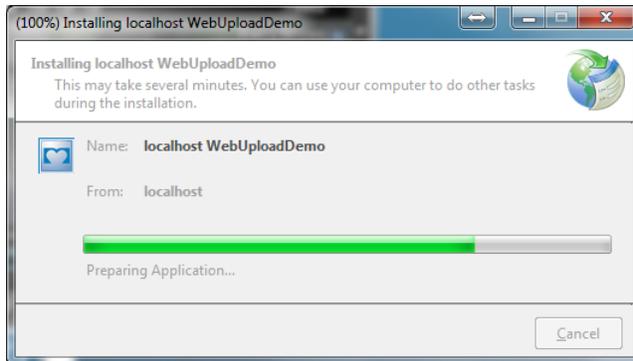
Click the Install button:



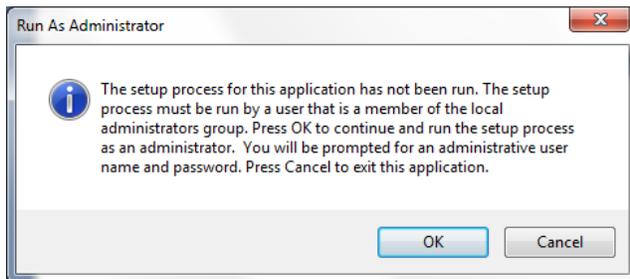
Click the Install button when presented with the Application Install - Security Warning:



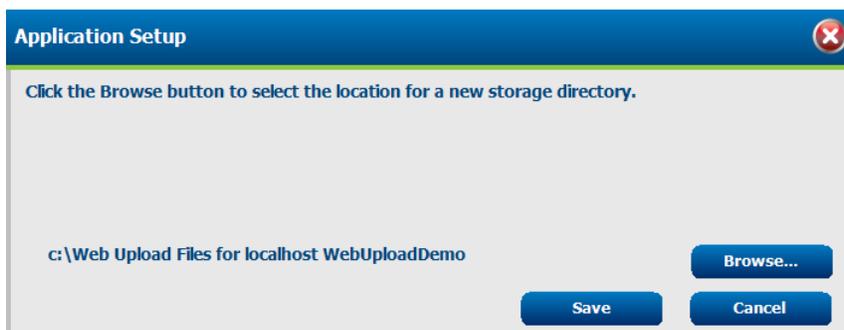
A progress dialog will display as the Client is downloaded from the server:



The installer will recognize that the Welch Allyn Web Upload Client has not been configured on the local computer before. Click OK to continue with the initial configuration:



The installer will prompt for a storage folder. This folder will be used to store the recordings before they are uploaded to the server and deleted permanently from the local computer. Make sure to select a folder with plenty of disk space to accommodate the anticipated number of recordings. It is recommended that the folder have enough space for a week's worth of recordings. Keep the recommended folder name and location, or click Browse to select a different location. Then click Save.



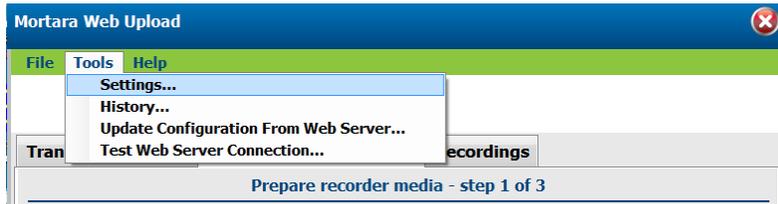
Method 2: Using the silent client installer method:

The WelchAllyn Web Upload Client can be installed using silent client installer by running the setup.exe in the *Silent Client Install x86* folder of the Setup media.

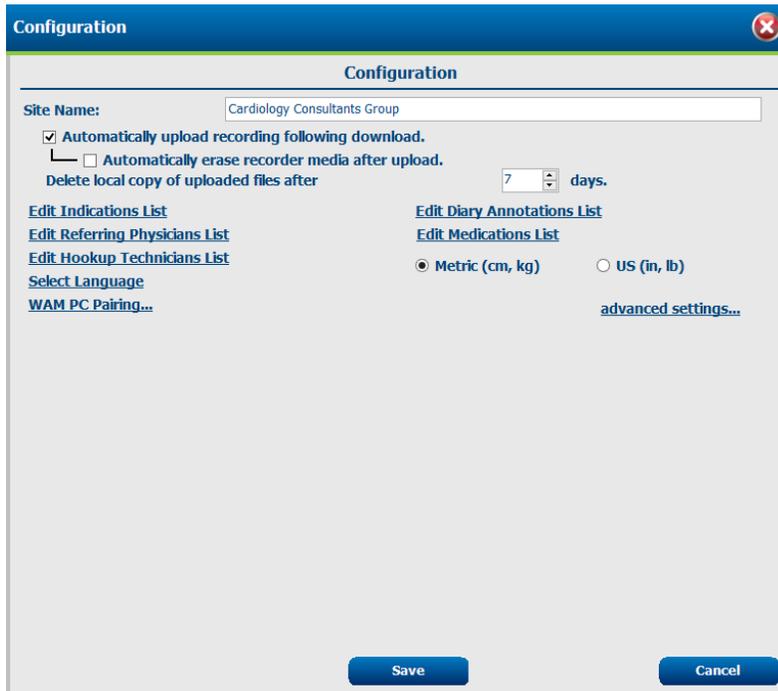
Since the silent installer does not prompt the user for storage folder location, the client configuration settings in the file: *WebUploadInstallConfig.xml* should be modified before installation with the storage directory and orders directory location.

Settings

After configuring the storage folder, the Client application will launch for the first time. Select Settings... under the Tools menu to continue configuration:



The Configuration window will display. The host organization responsible for analyzing the recordings may provide specific instructions about your Site Name and if you can create values for Indications, Referring Physicians, Hookup Technicians, Diary Annotations, and Medication lists.



Check **Automatically upload recording following download** to **automatically initiate an upload of the recording to the server after the recording has been transferred from the device.**

Check **Automatically erase recorder media after upload** to **erase the media after the recording has been successfully uploaded to the web server.**

Select up to 100 days to retain a copy of the uploaded recordings in the local storage directory. Recordings that have not been uploaded will automatically be deleted once the number of days after the upload is reached.

Use the radio buttons to select measurement units in Metric or US format.

If you are allowed to use local values for any of the lists, click on the Edit ___ List link and Add, Move, and Remove values. You can also move items up or down to organize the list items.

Select Language lists translations that are currently available from the web service provider.

Click WAM PC Pairing... to pair the USB Transceiver Key (UTK) and WAM PC.

Advanced Settings

Advanced settings are hidden because they are rarely changed, and typically only when instructed by the host organization. A different storage folder can be selected and the web server's URL can be reconfigured. If displayed, select hide when they are not needed.

Storage directory: c:\Web Upload Files for ecgupload.cloud webupload\ [Change](#)

Orders directory: c:\Web Upload Files for ecgupload.cloud webupload\Orders\ [Change](#)

Upload Web Service URL SSL

Automatic Manual

Use login credentials (Intranet use only)

Use compression for data uploads.

[Recent History](#) [Run as administrator](#)

[Save](#) [Cancel](#)

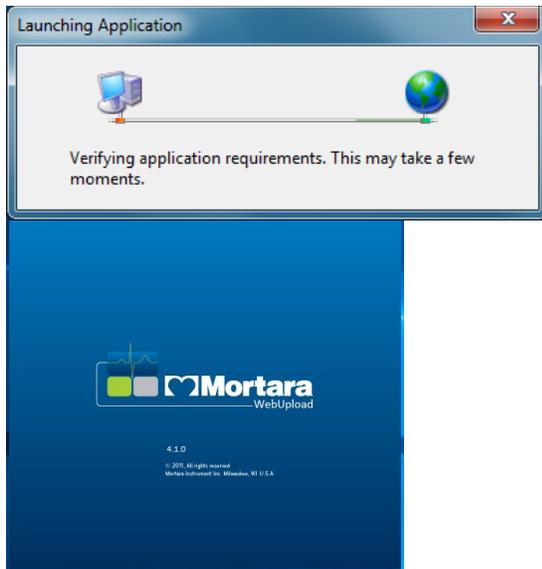
NOTE: In case the WebUpload client was installed using the silent installer method, the currently configured storage and orders directory are displayed but changing the directory is not allowed.

Recent History can be used for troubleshooting purposes. This dialog shows all Client activities.

Launching the Welch Allyn Web Upload Client

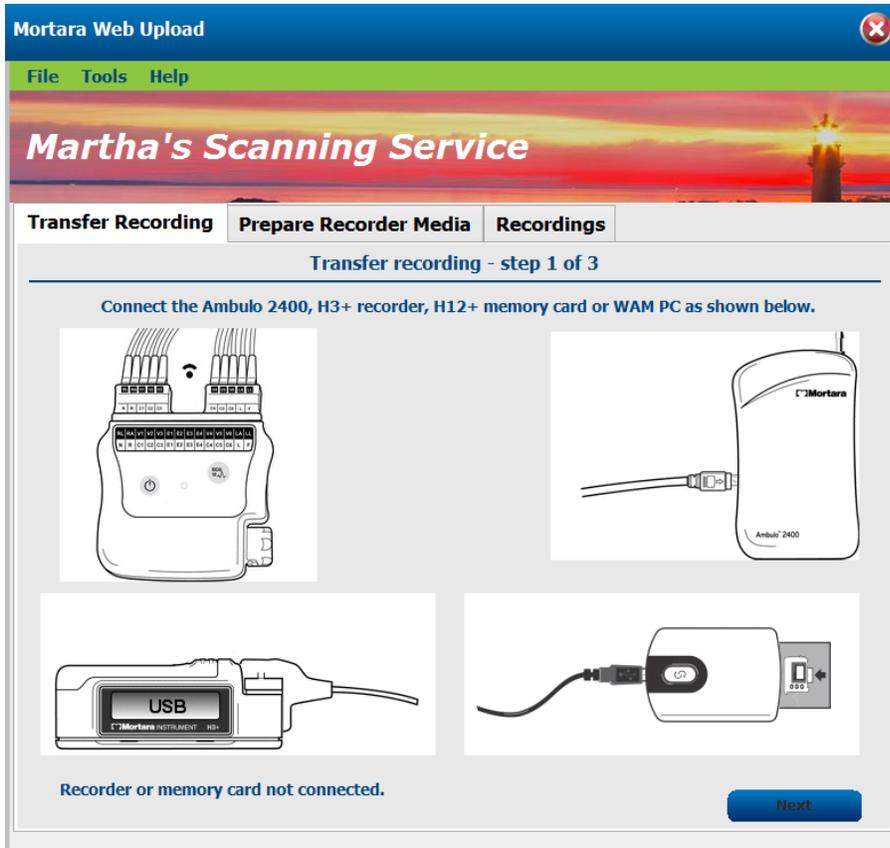
From the Windows **Start** menu find the Web Upload Client in the **Welch Allyn Inc.** folder. The client is named with the web server's address and the web upload name, e.g. "www.scanningcenter.com Web Upload".

The Launching Application dialog will open and verify the application requirements; it will automatically close when finished. If an updated version is available from the web server, it will initiate the update process. A splash screen will appear showing the software version and then close.



NOTE: In case the WebUpload client was installed using the silent installer method, the start menu shortcut is not created. A desktop or start menu shortcut (pointing to "C:\Program Files (x86)\Mortara\Mortara Web Upload\WebUploadApplication.exe" can be created for easy access to launch the WebUpload client in future.

The Welch Allyn Web Upload Client animated window will display:



Transfer Recording

Select the **Transfer Recording** tab to transfer data from an H3+ recorder, H12+ CF card, WAM PC, or an Ambulo 2400 recorder. The connected device will automatically be detected. Note: only one device should be connected at a time.

Remove the battery from the H3+ before connecting the USB cable.

Conversely, ensure the Ambulo 2400 is powered with 2 AA batteries before connecting the USB cable.

For a WAM PC, press the Power button to turn it on. If the WebUpload screen doesn't change to indicate that it detected the WAM PC connection, see *WAM PC Setup* to pair the WAM PC to the UTK.

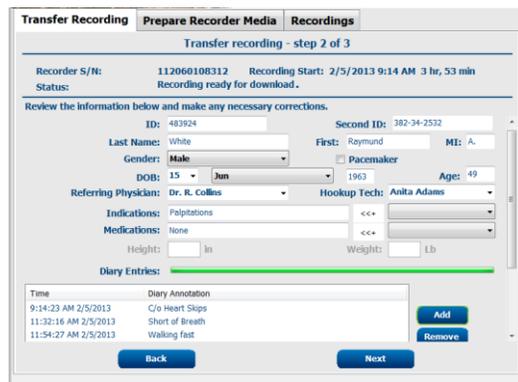
Click on **Next** to move to step 2 of 3.

The top portion of the screen displays information about the recorder and recording. Enter patient demographics using free text and the drop-down lists. Indications and Medications drop-down lists allow for multiple entry selections.

Holter diary entry times marked by the recorder event button are captured as the recording is collected and will appear in the listing when present. Use the scroll bar to view the Diary Event list with **Add**, **Remove**, and **Edit** selections. Use the Edit Diary Entry window to change the date and time and/or add symptoms using the drop-down list or free text. Click **OK** to save the changes and close the window.

Click **Next** to move to step 3 of 3.

The transfer is completed and verified in step 3. The transfer can be cancelled by selecting **Stop**. Select **Next** to return to Step 1 and begin the next transfer. If you do not have another recording to transfer, select another tab or click on the **X** to exit.



NOTE: A user must use the same computer where the recording was originally prepared to transfer the recording. Using a different computer may result in loss of the prepared demographics. This allows a full set of demographics to be entered during the preparation stage that may not be written to the recorder.

Prepare Recorder Media

Click on the **Prepare Recorder Media** tab to prepare an H3+ recorder, H12+ CF card, a WAM PC, or an Ambulo 2400. The Welch Allyn Web Upload Client will automatically detect the type of media connected. Note: connect only one media type at a time.

H12+ CF Memory Card Preparation

Insert the CF memory card and when detected, the card reader graphic will display.

Click **Next** to move to step 2 of 3.

The top portion of the screen displays information about the recorder and recording. When the recording has already been downloaded but not erased, click **Next** and a prompt to confirm erasure of the recording will appear. Click **Yes**. A “wait while erasing” dialog will open and automatically close when finished.

NOTE: The Erase button is present only when the recording has NOT been previously downloaded. You are prompted to click Next to download the recording before preparing it. Erase can be selected if desired.

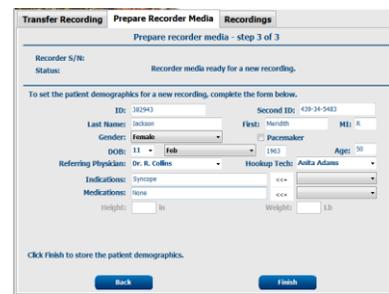
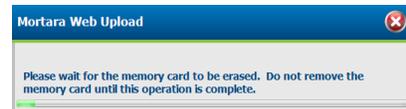
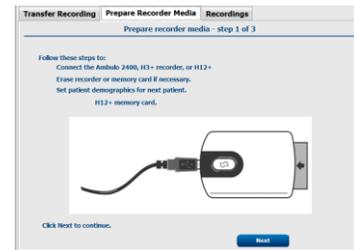
The CF memory card is now ready for a new recording. Click **Next** to move to step 3 of 3.

Enter patient demographics and other information using free text and the drop-down lists. Indications and Medications drop-down lists allow multiple entry selections.

When XML orders exist, a **Populate** button appears allowing automatic entry of demographics. Fields are populated automatically when only one order exists. When there are multiple orders, a list will open allowing user-selection. A **Clear** button is also present with this feature allowing the fields to be made blank after they have been populated when the order is not desired.

Click **Finish** when done.

You will be prompted to wait while the information is written to the CF memory card. Do not remove the card from the card



reader. A message will confirm that device configuration is complete. Disconnect and click **OK**.

Insert the CF memory card into the H12+ recorder; confirm the identification number on the H12+ recorder.



H3+ Recorder Preparation

NOTE: Remove the battery from the H3+ recorder **BEFORE** attaching it to the USB download cable.

The H3+ connected recorder graphic will display when the device is detected. Click **Next** to move to step 2 of 3.

The top portion of the screen displays information about the recorder and recording. When the recording has already been downloaded but not erased, click **Next** and a prompt to confirm erasure of the recording will appear. Click **Yes**. A “wait while erasing” dialog will open and automatically close when finished. Do not disconnect the H3+ from the download cable until this dialog box closes.

NOTE: The Erase button is present only when the recording has **NOT** been previously downloaded. Click **Next** to download the recording before preparing it. Erase can be selected if desired.

The H3+ recorder is ready for a new recording. Click **Next** to move to step 3 of 3.

To write the patient identification number to the recorder, enter it now.

When XML orders exist, a **Populate** button appears allowing automatic entry of demographics. Fields are populated automatically when only one order exists. When there are multiple orders, a list will open allowing user-selection. A **Clear** button is also present with this feature allowing the fields to be made blank after they have been populated when the order is not desired. Click **Finish** when done.

Click **Set Clock** to open the Set Recorder Time window. The time and date displayed are the computer’s regional settings. If incorrect, change the settings and click **OK** to save and exit. **Cancel** to exit without saving any change.

NOTE: Proper date and time must be confirmed or set prior to each use to prevent misdiagnosis of patient condition.

You will be prompted to wait while the information is written to the recorder. Do not remove the recorder or the interface cable. A message will appear notifying you that the device configuration is complete. Disconnect and click **OK**. Confirm the identification number on the H3+ recorder.

Ambulo 2400 Preparation

NOTE: Install 2 AA batteries **BEFORE** attaching the ABP recorder to the USB download cable.

The Ambulo 2400 connected recorder graphic will display when the device is detected. Click **Next** to move to step 2 of 3.

The top portion of the screen displays information about the recorder and recording. When the recording has already been downloaded but not erased, click **Next** and a prompt to confirm erasure of the recording will appear. Click **Yes**. A “wait while erasing” dialog will open and automatically close when finished. Do not disconnect the Ambulo 2400 from the download cable until this dialog box closes.

NOTE: The Erase button is present only when the recording has **NOT** been previously downloaded. Click **Next** to download the recording before preparing it. Erase can be selected if desired.

The Ambulo 2400 recorder is ready for a new recording. Click **Next** to move to step 3 of 3.

NOTE: Proper date and time must be confirmed or set prior to each use to prevent misdiagnosis of patient condition.

Enter patient demographics and other information using free text and the drop-down lists. Indications and Medications drop-down lists allow multiple entry selections.

When XML orders exist, a **Populate** button appears allowing automatic entry of demographics. Fields are populated automatically when only one order exists. When there are multiple orders, a list will open allowing user-selection. A **Clear** button is also present with this feature allowing the fields to be made blank after they have been populated when the order is not desired.

Click **Finish** when done.

You will be prompted to wait while the information is written to the Ambulo 2400. Do not remove the Ambulo 2400 or the interface cable. A message will appear notifying you that the device configuration is complete. Disconnect and click **OK**. Confirm the information on the Ambulo 2400.

Recordings

Click the **Recordings** tab to review and upload recordings temporarily stored on the local computer. If the Settings page checkbox is not set to automatically upload recordings to the web server, you can upload the recordings manually. Recordings will remain in local storage and will not automatically delete until after they are uploaded.

The following recordings have been downloaded and saved on this computer. Click 'Batch Upload' to upload all recordings that have not been uploaded or select an individual recording and click 'Upload'.

ID	Last Name	Downloaded	Uploaded	Files	Size
783829	Smith	2/28/2013 3:59 PM		12	34,279,944
483924	White	2/28/2013 3:08 PM	2/28/2013 4:50 PM	3	7,750,150

Buttons: Upload, Batch Upload, Delete Recording

Progress: Upload 0%, Verify Upload 0%

Stop

Recordings in the list are identified by ID, Last Name, Download date and time, Uploaded date and time, number of files, and size of all files. The list can be sorted in ascending or descending order by clicking on the column header.

If an upload was interrupted during the transfer, a status of *Partially Uploaded* will show. The remainder of the recording should be uploaded again to complete the transfer.

If not previously uploaded, upload a single recording or batch upload all recordings by clicking on the respective buttons. During upload, the percent uploaded and required time for upload (HH:MM:SS) are shown. Transfer time is dependent on recording size (KB) and the network connection speed.

Upload can be stopped at any time; it will resume where it left off the next time it is selected for upload.

Uploaded dates and times are displayed after completion.

A message in the lower left corner of the display appears when the upload is complete.

Recordings will remain in the list according to the number of days defined in the Settings window before deletion.

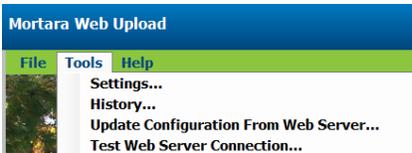
Recordings can be manually removed by selecting the recording and clicking on **Delete Recording**.

Toolbar Menu



File → Exit

Use to close the Welch Allyn Web Upload Client. This behaves the same as clicking the **X** symbol in the upper right-hand corner.



Tools → Settings...

Use this Configuration dialog to change your Site Name, automatic upload and deletion rules, local list items, local units of measure, language, perform WAM PC pairing and advanced settings. The web server administrator should assist you with any changes under Advanced Settings. Click **Save** to keep the changes, or **Cancel** to discard.

Tools → History...

Displays all transfer and upload events prior to and including the day in the date selection box. Filter the list by using the Type and Category drop-down lists. For more information about an item, select the item and click on **Details**. Save any of this information by selecting **Copy to clipboard**. Paste and send to the web server administrator for troubleshooting issues. Click **X** to exit.

Tools → Update Configuration from Web Server...

Retrieves the current settings from the web server.

Tools → Test Web Server Connection...

Tests the connection to the web server. A dialog box with the results will display. Click **OK** to finish the test.



Help → About

Displays Application and Web Service software version, current time and date, web service URL, and enabled features and settings. Save this information by selecting **Copy to clipboard**. Paste and send to an administrator for troubleshooting issues. Select **Close** to exit.

WAM PC Workflow

The WAM PC is a resting ECG acquisition module with memory. It does not need to be connected to a full-featured electrocardiograph while it records ECG waveforms from a patient. It is simply attached to a patient and used to acquire 60 seconds of raw ECG waveforms into its memory. Once it has a 60 second recording, it is placed near a computer with a USB Transceiver Key (UTK) and WebUpload client software. WebUpload is used to wirelessly copy the recording from the module. After the recording has been copied, the WAM PC's memory is erased to prepare it for the next ECG recording.

WAM PC Setup

A WAM PC device must be paired with a USB Transceiver Key (UTK) before WebUpload can communicate with it. Pairing is a one-time setup task:

1. Launch the **WebUpload** client software.
2. Select **Settings...** under the **Tools** menu.
3. Click the **WAM PC Pairing...** hyperlink.
4. Follow the onscreen instructions to pair the WAM PC and UTK.
5. Once paired, click the **X** (Close) icon, then click the **Cancel** button on the **Configuration** page.
6. Verify the WebUpload client automatically detects the WAM PC:
 - a. Start on the first page of WebUpload's Transfer Recording or Prepare Recorder Page.
 - b. **Power on** the WAM PC.
 - c. Verify that the WebUpload client detects the WAM PC after a few seconds by changing to the Step 1 screen with a picture of the WAM PC.
 - d. **Power off** the WAM PC.

Acquire WAM PC Recording

A WAM PC can only store one recording at a time. When the WAM PC has a recording in its memory, it must be prepared by WebUpload before it can acquire a new recording (see *Prepare WAM PC for Next Recording*).

NOTE: Refer to the WAM PC User Manual for complete information about using the device.

To verify that the WAM PC is ready to acquire a new recording:

1. **Power on** the WAM PC.
2. Observe the status **LED**:

LED	WAM PC Status
Solid Green 	A recording has already been stored in memory. It is not ready to acquire a new recording.
Flashing Orange 	WebUpload must first load patient demographics. It is not ready to acquire a new recording.
Solid Orange 	Ready to acquire a new recording, and all leads wires are connected to the patient.
Flashing Orange and Green 	Ready to acquire a new recording, but one or more lead wires is not properly connected to the patient.

3. If the LED is solid green or flashing orange, the WAM PC is not prepared to acquire a new recording. See *Prepare WAM PC for Next Recording*.
4. If the LED is solid orange or flashing between orange and green, the WAM PC is ready.

Follow the instructions found in the WAM PC User Manual to acquire a new recording from a patient. Then see *Copy WAM PC Recording*.

Copy WAM PC Recording

Once the WAM PC has a recording, it must be copied by the WebUpload client to the local computer. Then the WebUpload client will send the recording to the web server (see *Recordings*). To copy the recording from the WAM PC:

1. **Power on** the WAM PC if not already on.
2. Observe the status **LED**. If the LED is **solid green**, there is a recording that can be copied to the local computer.
3. Launch the **WebUpload** client software (and power on the WAM PC if needed).
4. Click on the **Transfer Recording** tab.
5. The WebUpload client will detect the WAM PC and show a page with a picture of the WAM PC. This page is titled, **Transfer recording – step 1 of 3**.

NOTE: If the WAM PC is not automatically detected, it may need to be paired with the UTK. See WAM PC Setup.
6. Click **Next**.
7. This page is titled, **Transfer recording – step 2 of 3**. Enter the patient's demographics:
 - a. If the demographics form is **blank**, look for a **Populate** button. If the Populate button is visible, there are demographics available for populating the form. Click the button to load the demographics. If demographics for more than one patient are available, a list will be presented so the correct patient can be chosen.
 - b. If the form is **blank** and there is no Populate button, enter the demographics.
 - c. If the demographics form is **partially populated**, demographics were loaded when the WAM PC was prepared. Enter any missing information.

NOTE: if the demographic values cannot be changed, the WebUpload service provider only allows demographics to be loaded through the Populate button.
8. Click **Next**.
9. This page is titled, **Transfer recording – step 3 of 3**. WebUpload will copy the recording from the WAM PC and store it on the local computer.
 - a. WebUpload displays a progress bar while copying, and the WAM PC gives an audible signal.
 - b. Click the **Stop** button to interrupt the copy if unsure about the demographics, or if the recording should not be saved after all.
 - c. Once the copy is complete and verified, the **Next** button will be available.
10. Click **Next** to complete the copy process.

At this point, the recording has been copied to the local computer. Next follow the instruction to prepare the WAM PC for a new recording (see *Prepare WAM PC for Next Recording*). Otherwise, power off the WAM PC. Also see *Recordings* for instructions to upload recordings to the web server.

Prepare for Next WAM PC Recording

If the WAM PC has a recording stored in its memory, the memory must be cleared before it can collect the next recording. Some WebUpload service providers will require demographics for the next patient to be loaded into the WAM PC before the next recording can be collected.

1. **Power on** the WAM PC if not already on.
2. Observe the status **LED**. If the LED is **solid orange** or flashing between **orange and green**, it is already prepared and there is nothing more to do before acquiring a new recording. Otherwise, continue the following steps.
3. Launch the **WebUpload** client software (and power on the WAM PC if needed).
4. Click on the **Prepare Recorder Media** tab.
5. The WebUpload client will detect the WAM PC and show a page with a picture of the WAM PC. This page is titled, **Prepare recorder media – step 1 of 3**.
NOTE: If the WAM PC is not automatically detected, it may need to be paired with the UTK. See WAM PC Setup.
6. Click **Next**.
7. This page is titled, **Prepare recorder media – step 2 of 3**. It indicates if the recording was previously copied (downloaded) and the WAM PC memory is ready to be erased. If the recording hasn't been copied off from the WAM PC yet, consider copying it first before erasing the memory.
8. Click **Next** to erase the recording from WAM PC memory.
9. Click **Yes** to confirm that the recording should be erased. WebUpload will show its progress and the WAM PC will give an audible confirmation.
10. This page is titled, **Prepare recorder media – step 3 of 3**.
 - a. Patient demographics may be loaded into the WAM PC if the next patient is known at this time. Click the **Populate** button if it is available. Otherwise enter the demographics manually. Click **Finish** to load the demographics into the WAM PC.
 - b. If the next patient is not known, leave the demographics blank.
11. **Power off** the WAM PC.

At this point, the WAM PC is ready to acquire the next recording.