


<b>Document Description:</b> CP150 WIRELESS_DICOM OPTIONS RELEASE	<b>Document Number:</b> 20014365 <b>Version:</b> A
	
Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.	

## Technical Service Bulletin

**Product:** CP150 Electrocardiograph **Date:** 2017-01-15

**Subject:** Release of Wireless (WiFi) and DICOM options for the CP150 ECG

<b>HW Version(s) Affected:</b> All	<b>SW Version(s) Affected:</b> 2.10.06 and higher
------------------------------------	---

<b>Serial Numbers Affected:</b> All	<b>Lot or Date Code Affected:</b> N/A
-------------------------------------	---------------------------------------

**Classification:** Informational Only

**Distribution:**

<input checked="" type="checkbox"/> Customer Care	<input checked="" type="checkbox"/> Product Service	<input checked="" type="checkbox"/> Field Service
<input checked="" type="checkbox"/> ASPs	<input type="checkbox"/> Distributors	<input type="checkbox"/> Customers
<input checked="" type="checkbox"/> Company Confidential		

**THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION**

It can be distributed or made available to only those individuals, companies, and organizations which have current Welch Allyn Confidentiality Agreements, and have a need to know.

**Training Required:**  Yes  No

**Summary:**

Welch Allyn is pleased to announce the release of the CP150 ECG with the **Wireless** network connectivity and direct **DICOM** image transfer options.

This TSB communicates updates and/ or changes to the following materials, procedures and functions:

- Added CP150 material numbers
- Functionality
- User Interface
- Technical Support
- Product Service
- Service Kits
- Service Manual

**New Product Material Numbers:**

Model #	Description:

<b>Document Description:</b> CP150 WIRELESS_DICOM OPTIONS RELEASE	<b>Document Number:</b> 20014365 <b>Version:</b> A
	
Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.	

CP150W	CP150_WIFI		
CP150D	CP150_DICOM		
CP150AW	CP150_INT,WIFI		
CP150AD	CP150_INT,DICOM		
CP150WD	CP150_WIFI,DICOM		
CP150AWD	CP150_INT,WIFI,DICOM		
CP150AWDS	CP150_INT,WIFI,DICOM,SPIRO		
<b>A = Interpretation</b>	<b>W = Wireless</b>	<b>D = DICOM</b>	<b>S = Spirometry</b>
<b>DICOM Upgrade #</b>		<b>Description</b>	
106736		UPGD KIT, CP150, DICOM	

**Functionality** (Requires v2.10.06 or higher. Refer to **20014302A / TSB-CP150 V2.10.06 SOFTWARE RELEASE**):

- The CP150 software upgrade process can be found in the **CP150 Service Manual / v.2.10.XX / DIR 80021095. 20014302A / TSB-CP150 V2.10.06 SOFTWARE RELEASE**

**Wireless (WiFi):**


- The optional WiFi capability allows for enhanced workflow alternatives. To identify WiFi enabled devices at a glance, WiFi enabled devices will have the following information (shown in the boxes on the label shown) detailed on the product label:



**Note:** There is currently no intention to upgrade non-WiFi devices to WiFi enabled devices. **DICOM (Digital Imaging and Communications in Medicine):**

- The optional DICOM capability enables direct communication with Picture Archiving and Communication Systems (PACS), and EMRs. Acquire worklist orders and share

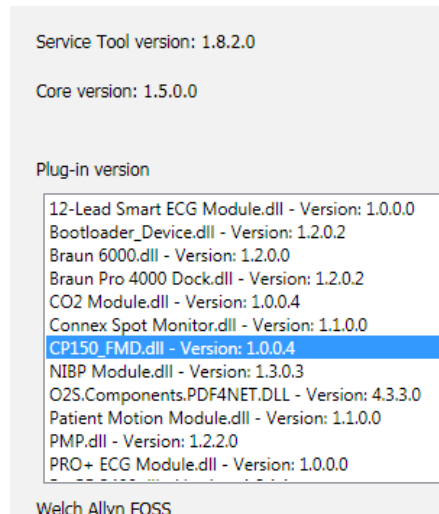
THIS INFORMATION IS THE PROPERTY OF WELCH ALLYN, INC. AND AS SUCH SHALL NOT BE REPRODUCED, COPIED, OR USED AS A BASIS FOR THE MANUFACTURE OR SALE OF EQUIPMENT OR DEVICES WITHOUT THE EXPRESS WRITTEN PERMISSION OF WELCH ALLYN, INC.

<b>Document Description:</b> CP150 WIRELESS_DICOM OPTIONS RELEASE	<b>Document Number:</b> 20014365 <b>Version:</b> A
	
Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.	

12-lead ECG waveforms with the recipient system to enhance workflow efficiency.

**Welch Allyn Service Tool:**

The latest version of the WAST CP150 plugin is **50012047 A / SWF: WAST CP150 v.1.0.0.4**. Check that this version exists in the WAST Plug-in versions list prior to performing any procedures that involve the DICOM license upgrade, WIFI radio firmware upgrade, or WIFI radio provisioning.



**Service Manuals / DFUs:**

DFU’s and Service Manuals are available as reference depending on the firmware that is loaded onto the CP150. The appropriate DFU is included on the CD that ships with the device. Three firmware versions are currently available. They are:

- 1.00.XX (China only)
- 2.00.XX (adds Spirometry option capability)
- 2.10.XX (adds Wireless and DICOM option capability)

**Note:** Direct customers to the Welch Allyn web-site for the latest version of the appropriate DFU and/or Service Manual.

**User Interface:**

**Radio** (Note: Radio features are enabled through hardware detection. The radio tab will only be present if the CP150 has a functioning radio installed.)

Radio settings are found in the following location:



Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.

• **Settings / Advanced (code: 6345) / Network / Radio**

Configuration (1):

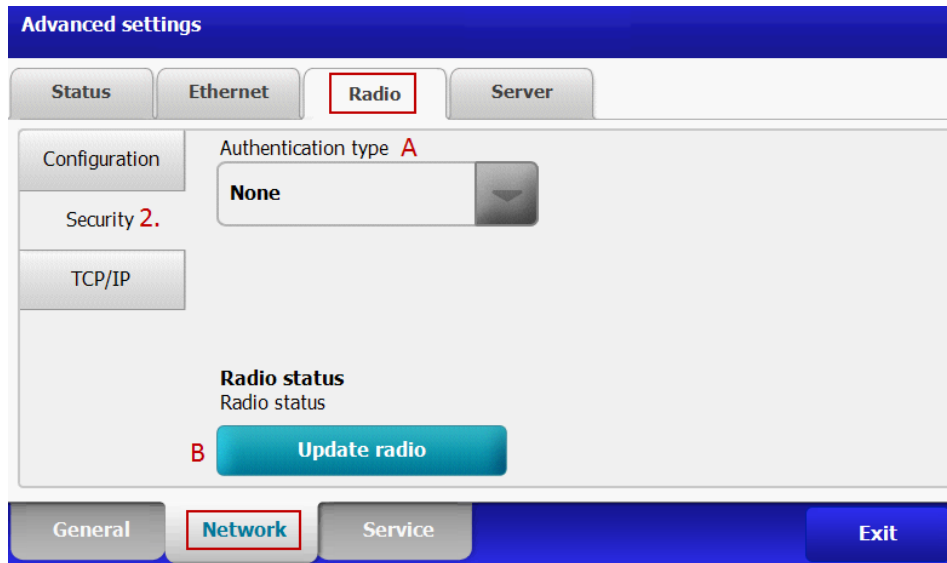
- A. **Enable Radio:** Enable the radio for device communication. When disabled, the radio is not available.
- B. **ESSID:** Identification name of an 802.11 wireless network. Enter the service set identifier (SSID – the name of the access point), maximum of 32 characters.
- C. **Radio Band:** Select the radio band: **a/b/g/n**, **a/b/g**, **a/n**, or **a**.
- D. **Update radio:** Activates all new radio settings not previously selected.  
Note: None of the changed radio settings take effect until the Update radio button is touched.

Security (2):

THIS INFORMATION IS THE PROPERTY OF WELCH ALLYN, INC. AND AS SUCH SHALL NOT BE REPRODUCED, COPIED, OR USED AS A BASIS FOR THE MANUFACTURE OR SALE OF EQUIPMENT OR DEVICES WITHOUT THE EXPRESS WRITTEN PERMISSION OF WELCH ALLYN, INC.



Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.



- A. **Authentication type:** Select the preferred encryption option. The default encryption option is **WPA2-Personal**.
  - a. After choosing the appropriate Authentication option, specify any additional settings that appear. Possible settings are:
    - WEP Keys
    - Passphrases
    - \*EAP types
    - \*Roaming options
    - \*Username & Password
    - \*Anonymous identity option
    - \*Enable server validation option
    - \*Update Certificate

\***Note:** Refer to the DFU for more details regarding these options and their functions.

- B. **Update radio:** Activates all new radio settings not previously selected.  
Note: None of the changed radio settings take effect until the Update radio button is touched.

TCP/IP (3):




Printed or electronic versions of this document not accessed directly from the designated Welch Alllyn Controlled Quality Information System are For Reference Only.

Advanced settings

- A. **DHCP:** Select DHCP to auto-connect through TCP/IP. When selected, all other fields on the TCP/IP tab become inactive. Deselect DHCP to manually enter setting values.
- B. **Network IP address:** Enter the IP address to manually set up the device for TCP/IP communications.
- C. **Gateway:** Enter the Gateway IP address that routes packets to other networks.
- D. **Subnet mask:** Enter the Subnet mask
- E. **DNS server 2:** Enter a second DNS server IP address.
- F. **DHCP:** Select DHCP to auto-connect through TCP/IP. Deselect DHCP to manually enter setting values.
- G. **Update radio:** Activates all new radio settings not previously selected.  
Note: None of the changed radio settings take effect until the Update radio button is touched.

**DICOM** (Note: DICOM features are enabled through a device license. The DICOM option will only be present if the CP150 has a DICOM license installed.)

The DICOM protocol allows CP150 to communicate directly with DICOM-enabled enterprise systems. The user will start the ECG workflow by downloading a work list and

<b>Document Description:</b> CP150 WIRELESS_DICOM OPTIONS RELEASE	<b>Document Number:</b> 20014365 <b>Version:</b> A
	
Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.	

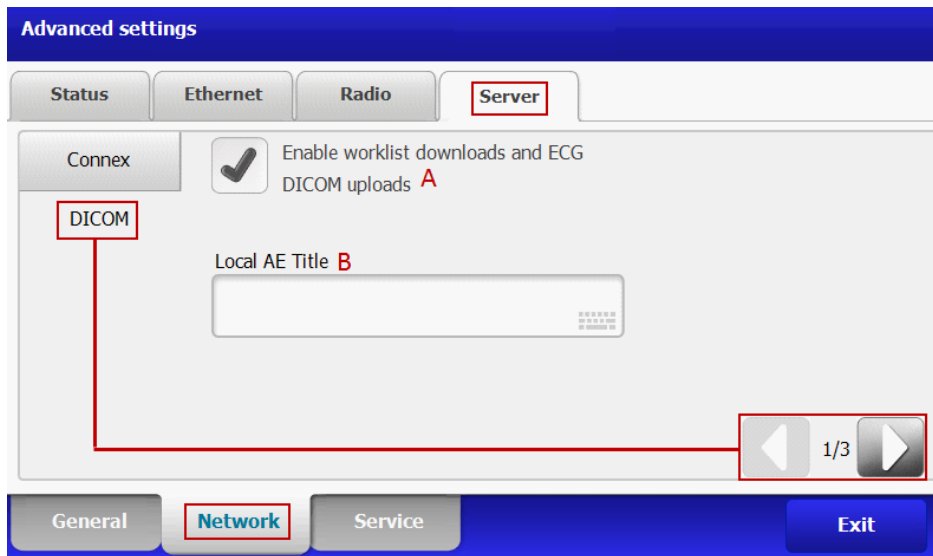
selecting a work list item (which includes patient demographics), then takes the ECG and sends the ECG result back to the system.

**DICOM Definitions and Concepts:**

- **Worklist Server** (customer maintained) – System that holds and provides the details of patients and scheduled examinations for access by associated apps, clients, and/or devices.
- **Image Server** (customer maintained) – Repository for the DICOM result data (X-Ray images, ECG waveforms etc).
- **AE Title** (or AET) - Abbreviation for Application Entity Title. An **AE Title** is used by an Application Entity (**AE**) to identify itself. **AE Titles** are typically managed by a system administrator.

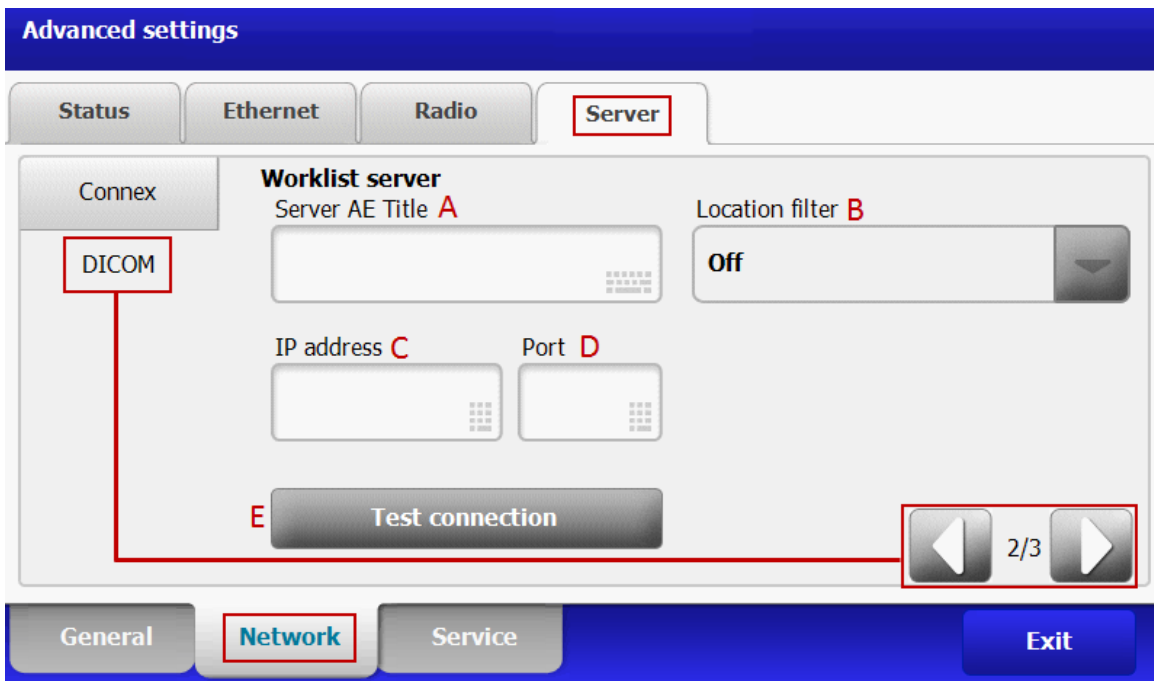
DICOM settings are found in the following location:

- **Settings / Advanced** (code: 6345) / **Network / Server / DICOM**  
Server / **DICOM** - page 1 of 3:



- A. **Enable worklist downloads and ECG DICOM uploads:** Enables DICOM functionality.
- B. **Local AE Title:** Enter the AE Title for the device. Maximum of 16 characters.

Server / **DICOM Worklist Server** info - page 2 of 3:



This page is used to specify the details for the server that will provide worklist details to CP150.

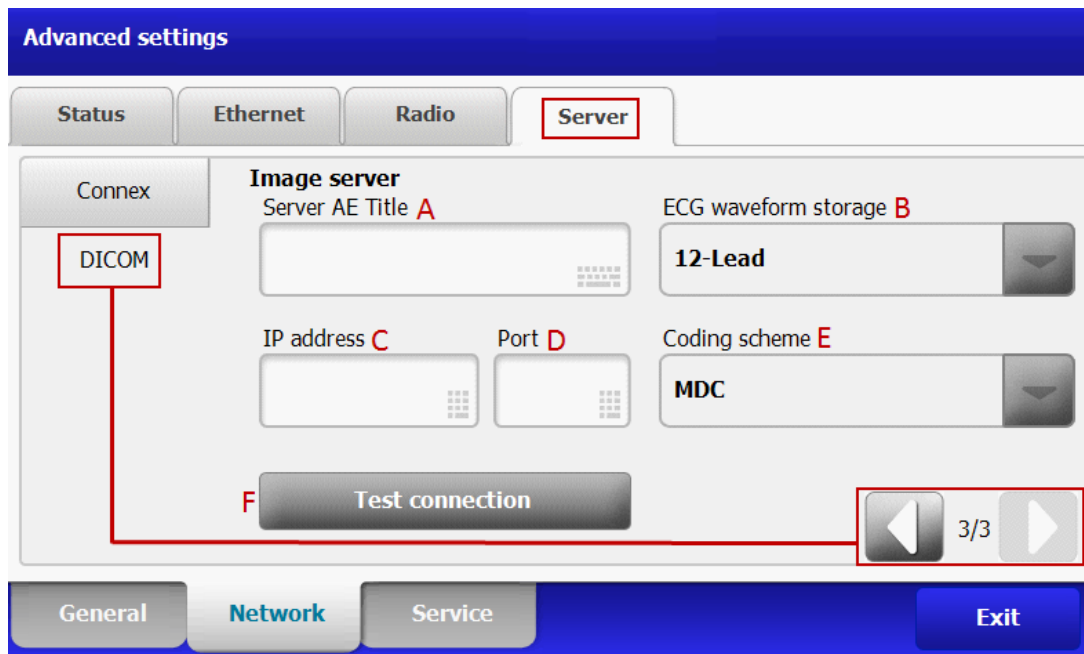
- A. **Server AE Title:** Enter the AE Title for the server. Maximum of 16 characters.
- B. **Location Filter:** Use the drop-down menu to specify the worklist location filtering behavior:
  - a. Off No location filtering
  - b. Local AE Title Retrieve orders scheduled for this device's AE Title
  - c. Device ID / Practice ID Retrieve orders where Institution Name = Practice ID and Current Patient Location = Device ID.
- C. **IP address:** Enter the Worklist Server's IP address.
- D. **Port:** Enter the Worklist Server's Port number. (The port number is set by the network administrator.)
- E. **Test connection:** Touching this button will test the connection with the Worklist Server.

Server / **DICOM Image Server** info - page 3 of 3:





Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.



This page is used to specify the details for the server that will receive the DICOM ECG results from CP150.

- A. **Server AE Title:** Enter the AE Title for the server. Maximum of 16 characters.
- B. **ECG waveform storage,** Choose storage format:
  - **12-Lead** (default and supported by the majority of systems, but does not support 20-sec pediatric ECG result files)
  - **General** (newer specification also allowing for 20-sec pediatric ECG results, but not universally supported)
- C. **IP address:** Enter the Worklist Server IP address.
- D. **Port:** Enter the Image Server Port number. (The port number is set by the network administrator.)
- E. **Coding Scheme:** Vocabulary used for describing DICOM ECG results. Choose from:
  - **SCPECG:** Standard Communications Protocol for computer assisted Electrocardiography; (default and supported by most systems)
  - **MDC:** Medical Device Communication; (newer specification, but not universally supported)
- F. **Test connection:** Touching this button will test the connection with the Image Server.

**Technical Support / Customer Care:**

THIS INFORMATION IS THE PROPERTY OF WELCH ALLYN, INC. AND AS SUCH SHALL NOT BE REPRODUCED, COPIED, OR USED AS A BASIS FOR THE MANUFACTURE OR SALE OF EQUIPMENT OR DEVICES WITHOUT THE EXPRESS WRITTEN PERMISSION OF WELCH ALLYN, INC.

<b>Document Description:</b> CP150 WIRELESS_DICOM OPTIONS RELEASE	<b>Document Number:</b> 20014365 <b>Version:</b> A
	
Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.	

The **v.2.10.06** firmware will allow previously manufactured units to be licensed with the DICOM upgrade option. Devices with **v.2.00.XX** can be updated, at no charge, to the new firmware upon customer request through **PartnerConnect** and the **Welch Allyn Service Tool**. Instructions for upgrading device software can be found in the **CP150 Service Manual / v.2.10.XX / DIR 80021095**. Following the upgrade to **v.2.10.06**, customers will need to be directed to the Welch Allyn web-site for download of the appropriate DFU.

**License Upgrade Part Numbers:**

	Material Number	Description
<b>NEW</b>	106736	UPGD KIT, CP150, DICOM
	105410	INTERPRETATION UPGRADE, CP150

The following License upgrade processes can be found in the **CP150 Service Manual / v.2.10.XX / DIR 80021095**:

- Activate the DICOM license through the Welch Allyn Service Tool
- (Optional) Upgrade your existing CP 150 device to DICOM through the Welch Allyn Service Tool administration menu

**Note:** Customers will order either or both licenses at the price(s) posted in SAP. There is no part number that combines the two licenses and there is no discount for ordering both at the same time.

**WAST:**


New WAST / CP150 functionality introduced with **Plug-In version 1.0.0.4**:

- Ability to update the CP150 to **v.2.10.XX**
- CP150 Radio Firmware Update (when needed)
- Ability to create/configure the Network Policy Certificate for the radio for use in certain secure wireless network environments

**Note:** Process details can be found in the Service section of the **CP150 Service Manual / v.2.10.XX / DIR 80021095**.

**Other Notes:**

- For compatibility details, refer to the Hardware/Software Compatibility section of **DIR 60071955 / SRN CP150 2.10.06**.
- After upgrading to 2.10.06 from a previous version, customers using the Remote Folder option will need to re-enter their Remote Folder settings.

<b>Document Description:</b> CP150 WIRELESS_DICOM OPTIONS RELEASE	<b>Document Number:</b> 20014365 <b>Version:</b> A
	
Printed or electronic versions of this document not accessed directly from the designated Welch Allyn Controlled Quality Information System are For Reference Only.	

**Product Service:**

**Service Kits:**

Previous Service Kit Material #	New Service Kit Material #
CP150-0001 / SERV KIT, HSG TOP ASSY	CP150-0034 / SRV KIT, CP150, HSG TOP ASSY W/D
CP150-0005 / SERV KIT, I/O PCA	CP150-0035 / SRV KIT, CP150, I/O PCA W/D
CP150-0015 / SERV KIT, BOTTOM ASSY	CP150-0036 / SRV KIT, CP150, BOTTOM ASSY W/D
CP150-0021 / SERV KIT, SWITCH POWER	CP150-0037 / SRV KIT, CP150, SWITCH POWER W/D
CP150-0022 / SERV KIT, POWER HARNESS KIT	CP150-0038 / SRV KIT, CP150, POWER HARNESS KIT W/D
N/A	CP150-0039 / SRV KIT, CP150, WIRELESS RADIO INT W/D

- Disposition is to use up previous Service Kit Materials on **any** non-WiFi enabled devices prior to switching over to the New Service Kit Material numbers.
- New Service Kits are compatible with devices manufactured prior to November 1, 2016.
- **WiFi enabled devices will be repaired using only the new service kits.**
- Devices returned to WA for repair with **v.2.00.05** or earlier installed will be updated to **v.2.00.06**. **Note:** This does not pertain to devices repaired in China.
- Devices with **v.2.00.06** or earlier installed will only be upgraded to **v.2.10.XX** when the customer desires to enable DICOM communication within the CP150. Although it is not expected that this request will be fulfilled in Product Service, if it does occur, devices that are updated to **v.2.10.06** will include the CD (Material: 411507) containing the updated DFU when returned to the customer.

**Note:** There is currently no intention to upgrade non-WiFi devices to WiFi enabled devices.

Version	Sec, Pg, Para Changed	Change Made	Date Version Created	Version Created By (initials)
A	N/A	Initial Release	2017-02-01	SMB

THIS INFORMATION IS THE PROPERTY OF WELCH ALLYN, INC. AND AS SUCH SHALL NOT BE REPRODUCED, COPIED, OR USED AS A BASIS FOR THE MANUFACTURE OR SALE OF EQUIPMENT OR DEVICES WITHOUT THE EXPRESS WRITTEN PERMISSION OF WELCH ALLYN, INC.