



**Technical Service Bulletin**

**CARDIOPULMONARY**

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**Bulletin Type: AS NEEDED**

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**Subject:** TSB-CP150 V1.00.03 SOFTWARE RELEASE

**Distribution Scope:** Welch Allyn Global Technical Support, Product , Field & Customer Service teams and WA ASP's

**Product(s) Referenced:**  
All CP150 Electrocardiographs in Singapore & China  
Rest of World: All CP150 Electrocardiographs that will not require Spirometry functionality  
CP150-0028 / SERV KIT, SOFTWARE UPDATE v1.00.03  
20013723 TSB-CP150 V2.00.02 SOFTWARE RELEASE

**SW Version:** V1.00.01

**Summary:**  
The Welch Allyn Diagnostic Cardiology Team is releasing an updated version (V1.00.03) of software for CP150 electrocardiographs sold in Singapore and China. This update is also applicable in the ROW for customers whose devices do not incorporate Spirometry functionality.  
This version is a general maintenance release that incorporates updates to version V1.00.01 to address issues gathered from customer reports in the field.  
The specific issues are mentioned below.

**Issue:**  
The following issues have been gathered based on field complaints and units returned from the field:

- Unresponsive touch screen
- Wrench code 01 during power up due to battery communication conflict
- Device shutdown during operation
- DIM LCD brightness value resulting in blank boot up screen.

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**Action:** Software issues addressed:

**1. Unresponsive touch screen:**

- **Cause:** Unresponsive touch screen is caused by the touch screen driver returning a calibration value that is out-of-range. When this happens, all new touches are discarded and the unit is determined to be unresponsive.
- **Solution:** The acceptable range value was changed from 16bit to 32bit in order to accept a wider value.

**2. Wrench code 01 due to battery communication conflict:**

- **Cause:** Wrench 01 occurs during power up because the communication between the bootloader and the Power controller via the I2C bus communication lines may intermittently fail.
- **Solution:** Added multiple retries for I2C bus communication for recovery.

**3. Device shutting down during operation:**

- **Cause:** The I2C error also occurs during main operation. When the error occurs, the battery capacity returns a negative value, and the system will proceed to shut down.
- **Solution:** Added multiple retries for I2C bus communication for recovery.

**4. DIM LCD brightness value resulting in blank boot up screen:**

- **Cause:** Due to the component differences, the DIM LCD brightness value that the bootloader used resulted in the LCD being blank.
- **Solution:** Increased the DIM value to a larger value.

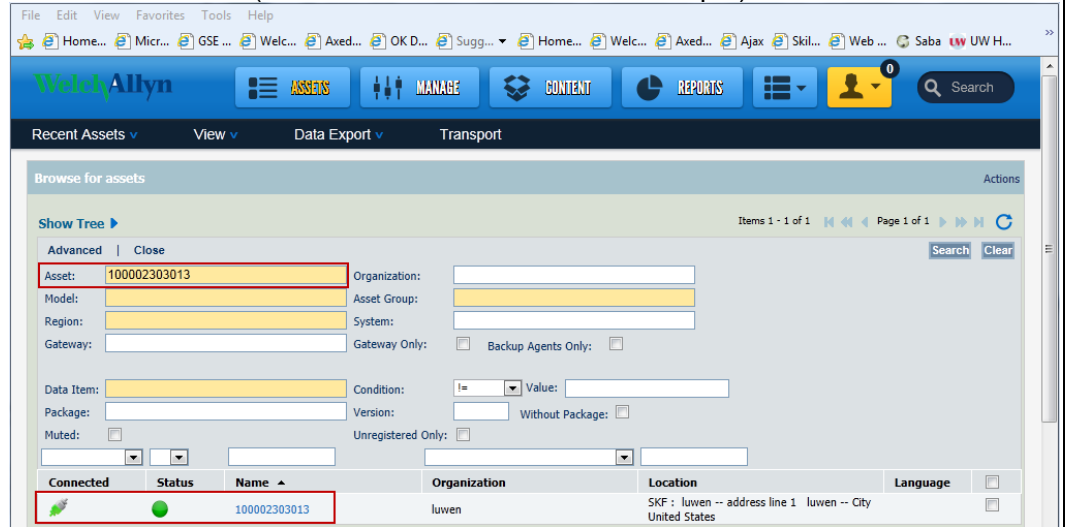
<b>Reference to Standards:</b>	<ul style="list-style-type: none"> <li>• 21 CFR Part 820, ISO 13485, MPD SOP-0002</li> </ul>
<b>Service Strategy:</b>	<p>The V1.00.03 software update is for the countries of China and Singapore, which do not yet have regulatory approval for the V2.00.02 software update, OR for any customer with devices that do not require spirometry functionality.</p> <p>Customers can update their CP150s to software V1.00.03 to resolve the above mentioned software issues. Take note that this software version does not support Spirometry functions or any other additional functions available in software version V2.00.02.</p>
<b>Required Materials:</b>	<p>CP150-0028 / SERV KIT, SOFTWARE UPDATE V1.00.03</p> <p>Customer Letter 722173 - For customers who we send a Service kit.</p>
<b>Update Procedure:</b>	<p>The software update can be via delivered via the Software Update Kit or PartnerConnect/Welch Allyn Service Tool.</p> <p><b>Software Update Kit:</b> Refer to Customer letter 722173 (Shipped with Software Update kit, P/N CP150-0028) for detailed software update instructions.</p> <p><b>Welch Allyn Service Tool:</b> The software update will also be available via the Welch Allyn Service Tool. You must download the software package as described below before performing the software update through Welch Allyn Service Tool under the Upgrade tab.</p>

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**Procedure to push the V1.00.03 software package to the PC connected to, or managing, the device.**

Download **CP150V1.00.03 Package** (manual push only)

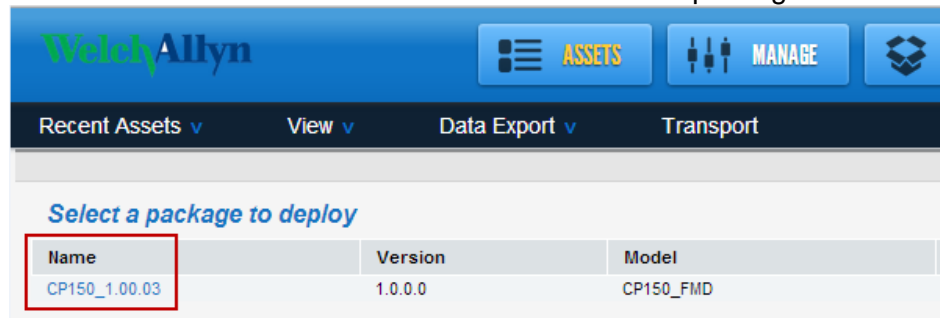
1. Log on to PartnerConnect: <https://welchallynsolutions.com>
2. Go to the Service tab.
3. In the asset field enter the serial number of the device to be updated and click “Search.” (Connected device shown in example)



4. Select the device by clicking on the device name in the list, to open the device dashboard screen.
5. Select “Upgrade this asset” on the right side of the dashboard.



6. Select “CP150V1.00.03” from the list of available packages.



7. Confirm the package appears in the recent actions pane (center screen).

The screenshot shows a dashboard for asset 100002303013. The 'Recent Actions' section is highlighted with a red box and contains the following entries:

- 6/30/14 12:27 PM: Delivered to Agent (Package Deployed [CP150\_1.00.03])
- 6/30/14 12:21 PM: Successful (Set Device Id [Id=193966])
- 6/30/14 11:59 AM: Successful (Set Device Id [Id=193966])

The initial status will be: "Waiting to deliver." After a minute the status will change to: "Started," and finally to: "Complete."

The package will be downloaded to:

**Windows XP:** C:\Program Files\Welch Allyn\RSDS\DefaultProject\CP150\_FMD \< device serial number >\Upgrade\CP150V1.00.03

**Windows 7:** C:\Program Files (x86)\Welch Allyn\RSDS\DefaultProject\CP150\_FMD \< device serial number >\Upgrade\CP150V1.00.03

**Quality Documents:**

**All service centers using SAP to record service transactions:** For each product serviced, record the service activity in SAP.

**All other service centers and Field Service:** For each product serviced, complete and file a service report and attach to the service DHR.

**Notes:**

1. Contact Welch Allyn regarding any questions or concerns from this or other issues.
2. Drawings, illustrations, and part numbers in this document are for reference purposes only and subject to change.

**End of Bulletin**

**Revision History**

Version	Description	Change #	Init	Release Date	Appr
A	Initial Release	D*	AO	D*	D*
<b>D* SEE SAP DIR FOR CHANGE NUMBER, APPROVER NAME AND DATE OF APPROVAL</b>					

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