Customer Service Bulletin

Product: Connex Spot Monitor, Connex Vital Signs Monitor and Connex Integrated Wall System

Subject: Masimo MX5 Upgrade Instructions

HW Version(s) Affected: MX-5

SW Version(s) Affected: Pre 7.14.6.2

Serial Numbers Affected: ALL

Lot or Date Code Affected: All

Classification: As Needed

Distribution: ☒ Customer Care ☒ Product Service ☒ Field Service

☐ ASPs ☐ Distributors ☐ Customers

Summary: This Customer Service Bulletin (CSB) details how to upgrade a Connex Spot Monitor (CSM) device manufactured before May 4, 2020, to add Masimo RRp. It also includes the Connex Vital Signs Monitor (CVSM)/Connex Integrated Wall System (CIWS) to add Masimo RRa requires software version 1.70.00 or later. To add Masimo SpHb software version 2.00.00 or later.

Upgrading will require the use of pre-programmed Masimo dongles to apply firmware and license updates to the Masimo MX-5 board or activation codes for CVSM/CIWS for use with the Welch Allyn Service Tool (WAST).
### CSM:

The Masimo RRp parameter requires devices to have specifications to meet the below table.

- CSM software version 1.51 or greater.
- Masimo SPO2 hardware (MX-5) with software version 7.14.6.2 or greater
- Masimo SPO2 hardware (MX-5) with Masimo RRp License activated
- CSM device UI license (7000-RRP) activated

Updated CSM RRp IFU, which can be downloaded from the Hillrom website.

Masimo RRa and SpHb are not available on the CSM.

### CVSM/CIWS:

The Masimo RRa and SpHb Parameters are available and require devices to have specifications meet the below table.

Masimo MX3 modules will need to be upgraded to the MX-5. Please contact Customer Service for pricing on upgrade kits.

- CVSM/CIWS software version 1.70.00 or later for RRa
- CVSM/CIWS software Version 2.00.00 or later for SpHb
- Masimo SPO2 hardware (MX-5) with software version 7.12.0.7 or greater
- Masimo SPO2 hardware (MX-5) with Masimo RRa or SpHb License activated
- CVSM/CIWS device UI license (104699 for RRa) or (104361 for SpHb activated).
- Updated CVSM RRa and SpHb IFU, which can be downloaded from the Hillrom website.

### How to Update the CSM to 1.51 SW

The 1.51.00 software has been auto deployed to the Welch Allyn Service Tool (WAST).

Instruction to do Software upgrades is covered in the Service Manual located on our website here:


How to Update the CVSM/CIWS to Required SW

The 1.70.00 (for RRa) and 2.00.00 (for SpHb) or later has been set to manual deployment to the Welch Allyn Service Tool (WAST).

Instruction to do Software upgrades is covered in the Service Manual located on our website here:


The software package for the Welch Allyn Service Tool (WAST) 1.9 along with the updated Installation Guide can be downloaded from our website https://www.welchallyn.com/en/service-support/service-center/service-tool.html. Under the Download link for the Service Tool Software & Service Tool Installation Guide

Upgrade the Masimo MX-5 firmware using the Dongle Upgrade Procedure:

1. Power the device on
2. Orient the Field Upgrade Tool/Dongle so the keyed red connector mates with the red connector on the device
3. Carefully and firmly insert the Field Upgrade Tool/Dongle into the device until you hear a click
4. If inserted correctly, the user will receive visual feedback by the yellow LED on the tool showing that the update is in progress. When the LED turns green and you hear an audible beep it is completed, and the device will display a message indicating that programming is complete. The upgrade will be quick about 1 minute. If the LED is red remove the dongle and repeat steps 1-3 above. If the programming error message is displayed, then do the following:
   a. Remove the Field Upgrade Tool/Dongle from the device and power cycle the device.
   b. Repeat step 1-4 above, If an Upgrading error is still displayed, please contact Hillrom Tech Support for assistance.
   c. If the Device is powered off and back on, while the programming error message is displayed, the device will display a message indicating that the software is invalid. If this occurs, repeat steps a and b.
5. Remove the tool/dongle from the device
6. Power the device OFF and ON to reset the device
7. Connect the CSM device to the Welch Allyn Service Tool (WAST) 1.9 and on the Device Information Tab, verify the Masimo Firmware version is 7.14.6.2 for CSM and 7.12.0.7 for CVSM/CIWS or greater.
Add the Masimo MX-5 License Parameter using the Dongle Procedure:

1. Power the device on
2. Orient the Field Upgrade Tool/Dongle so the keyed red connector mates with the red connector on the device
3. Carefully and firmly insert the Field Upgrade Tool/Dongle into the device until you hear a click
4. If inserted correctly, the user will receive visual feedback by the yellow LED on the tool showing that the update is in progress. When the LED turns green and you hear an audible beep it is completed, and the device will display a message indicating that programming is complete. The upgrade will be quick about 1-3 minutes. If the LED is red remove the dongle and repeat steps 1-3 above. If the programming error message is displayed, then do the following:
   a. Remove the Field Upgrade Tool/Dongle from the device and power cycle the device.
   b. Repeat step 1-4 above, If an Upgrading error is still displayed, please contact Hillrom Tech Support for assistance.
   c. If the Device is powered off and back on, while the programming error message is displayed, the device will display a message indicating that the software is invalid. If this occurs, repeat steps a and b.
5. Remove the tool/dongle from the device
6. Power the device OFF and ON to reset the device
Masimo MX-5 Dongle Return Process:
Masimo Dongles being returned from the field must be returned to the Service Center that provided them using the RMA call tag provided within 30 days or a non-return fee of $500.00 per dongle will be applied. Dongles must not be returned to Masimo.

Activate CSM RRp UI License:
Contact Hillrom tech support to initiate the final step of upgrading CSM device to have RRp. Customer must provide a list of device serial numbers and the Sales Order number that contained the purchase of the 7000-RRp licenses.
CSM UI License Creation for Masimo MX-5 RRP for a Sales Order

1. Go to Website:
   https://config.welchallyn.com/configurator/home.action
   Must be version 1.89 or greater
2. Log into the Welch Allyn Config Tool with your account credentials
3. Click on New Configuration
4. Select the product that you would like to configure select “Licensing”
5. Input your Sales Order number
6. Click on RRP Licensing (CSM)
7. Enter device serial number and click “License”
8. Enter any additional Serial number and repeat step 7 until you have all device serial numbers inputted.
9. Click on the List Configurations Tab
10. Under My Configurations click on Download
11. Save to USB Stick
12. Load to Device and select License File

CVSM/CIWS UI License Activation for Masimo MX-5 RRA/SPHB for a Service Order

1. Once you receive your authorization code from Customer Service and/or Upgrade kit launch the Welch Allyn Service Tool.

2. Login and click on Administration, then click on Install License.

3. Once the screen loads, select Medical Device License. Enter your Authorization Code from step 4, choose the Device you are going to
activate the license on and click the select button. Finally, click the Activate button to start the process of activating the license.

<table>
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<tr>
<th>Version</th>
<th>Sec, Pg, Para Changed</th>
<th>Change Made</th>
<th>Date Version Created</th>
<th>Version Created By (initials)</th>
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<td>N/A</td>
<td>Initial Release</td>
<td>2020-04-29</td>
<td>KMG</td>
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<td>Added Config Tool Instructions</td>
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<td>Added UI License Activation for CVSM</td>
<td>2020-08-16</td>
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<td>D</td>
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<td>Updated Masimo Software version to 7.14.6.2</td>
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