

# Welch Allyn Vital Signs Monitor 300 Series

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## Upgrade Installation Guide

Vital Signs Monitor 300 Series Service Utility Tool Version 2.0.0

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USA	1 800 289 2501 1 503 530 7404	Australia	61 2 9638 3000 800 074 793
Canada	1 800 561 8797	China	86 21 6327 9631
European Call Center	353 46 9067790	France	33 1 6009 3366
Germany	49 7477 9271 86	Japan	81 3 3219 0071
Latin America	1 305 669 9003	Netherlands	31 157 505 000
Singapore	65 6419 8100	South Africa	27 11 777 7555
United Kingdom	44 1332 363812		

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## 1

# Overview

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This guide is written for people with a working knowledge of personal computers. Individuals installing this upgrade must be familiar with the Windows 2000 or XP operating system and with selecting communication ports on computers, locating files, and copying files to folders.

This upgrade is intended for use outside the Welch Allyn factory and service-center environment. It is intended for use with all 300 Series Vital Signs Monitors containing any combination of the following component software versions:

Component	SW Version			
Monitor Boot	1.00.00	1.10.00		
Monitor Main	1.00.00	1.01.00	1.10.00	
NIBP Module	3.00.01	3.00.10	3.10.00	3.20.00
SpO2 Module (Nellcor)	1.8.1.0	1.9.0.1		
Temperature Module	1.1	1.2		

For monitors containing any combination of the above-listed software versions, this utility also enables the monitor to accept a SureTemp version 1.2 temperature board. To update the SureTemp board on monitors containing any software version not listed above, contact Welch Allyn Technical Support.

This utility includes the following upgrades, which are for the Vital Signs Monitor 300 Series **only**:

- NIBP module software version 3.20.00
- Main board software version 1.10.00

- Note**
1. This upgrade procedure might return monitor user settings to the factory defaults. Refer to *Vital Signs Monitor 300 Series Directions for Use* (810-1632-XX) for information about factory default values.
  2. Monitors with serial numbers JA020000 and greater were shipped with the new software installed.
  3. This utility is not required when replacing SureTemp boards with the same version number. Monitors with serial numbers JA020320 and greater were shipped with SureTemp version 1.2.

## Items Included in This Upgrade Kit

Your upgrade kit contains the following items:

- This Software Upgrade Installation Guide
- Vital Signs Monitor 300 Series Software Upgrade Tool CD-ROM (810-2156-00)
- Vital Signs Monitor 300 Series serial cable (008-0842-00)

## System Requirements

PC with the following:

- Windows XP or Windows 2000 operating system
- CD-ROM drive
- at least 5 MB available hard-disk space
- Available printer
- Available RS-232 serial communications port, 9-pin, D-style

If no RS-232 port is available, but a USB port is available, you must have a USB-to-DB9 adaptor (not supplied).

- For Windows XP operating systems, the following adapters are supported:

KEYSPAN USB serial adapter USA-19HS

IOGEAR USB-to-serial adapter GUC232A

- For Windows 2000 operating systems, the following adapter is supported:

KEYSPAN USB serial adapter USA-19HS

## Warranty Service

All repairs on products under warranty must be performed or approved by Welch Allyn. Refer all warranty service to Welch Allyn Factory Service or another authorized Welch Allyn Service Center.



**Caution** Unauthorized repairs, including SureTemp board replacement, will void the product warranty.

## Non-Warranty Service

Welch Allyn Factory Service and authorized Service Centers support non-warranty repairs. Contact any Welch Allyn regional service center for pricing and service options.

Welch Allyn offers modular repair parts for sale to support non-warranty service. This service must be performed only by qualified customer biomedical/clinical engineers using the VSM service manual (810-1651-XX).

**Note** Upgrading the NIBP software, using the procedure described in this document, does not void the warranty.

# 2 Upgrade Procedure

## Procedure Summary

It takes approximately 20 minutes to complete the software upgrade and less than a minute to update the monitor to accept a new temperature board. The upgrade procedure includes these steps:

1. Read this entire document before installing the update software.
2. Install the Upgrade Tool on each of the computers you will use to upgrade monitors.
3. Use the supplied serial cable to connect an upgrade computer to a monitor.
4. Start the Upgrade Tool.
5. Enter your customer information, responding to prompts to install the upgrade.
6. After upgrading all monitors, print one upgrade record for each monitor, to keep for your records.

## Install the Upgrade Tool on the PC

1. Disconnect any devices connected to the computer serial or USB port you will use.
2. Exit all other running Windows programs.
3. If you have used this computer to install previous versions of Welch Allyn software upgrades, remove the previous upgrade tools before you begin this upgrade. (See [“Uninstall the Upgrade Tool from the Computer”](#) on page 12.)
4. Insert the Software Upgrade CD-ROM in the CD-ROM disk drive.



If this installation wizard does not appear on the computer screen, go to [Step 5](#).

If you see this installation wizard on your screen, click **Next**, respond to the prompts displayed in the installation wizard, and click **Finish**.

5. If the installation wizard program did *not* begin, open the Windows **Start** menu and click **Run**.



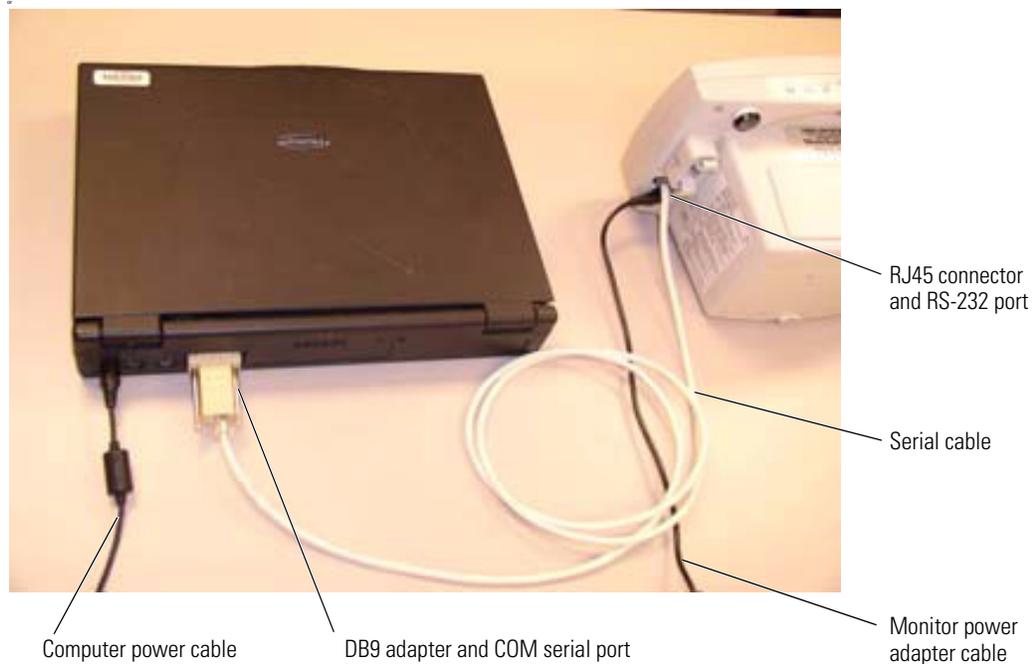
In the **Open** field, type **D:\Setup.exe** (where D: is the CD-ROM drive) and click **OK**. Click **Next**, respond to the prompts displayed, and click **Finish**.

6. To repeat the installation process for another computer, repeat from [Step 1](#) in “[Install the Upgrade Tool on the PC](#)” on page 3.

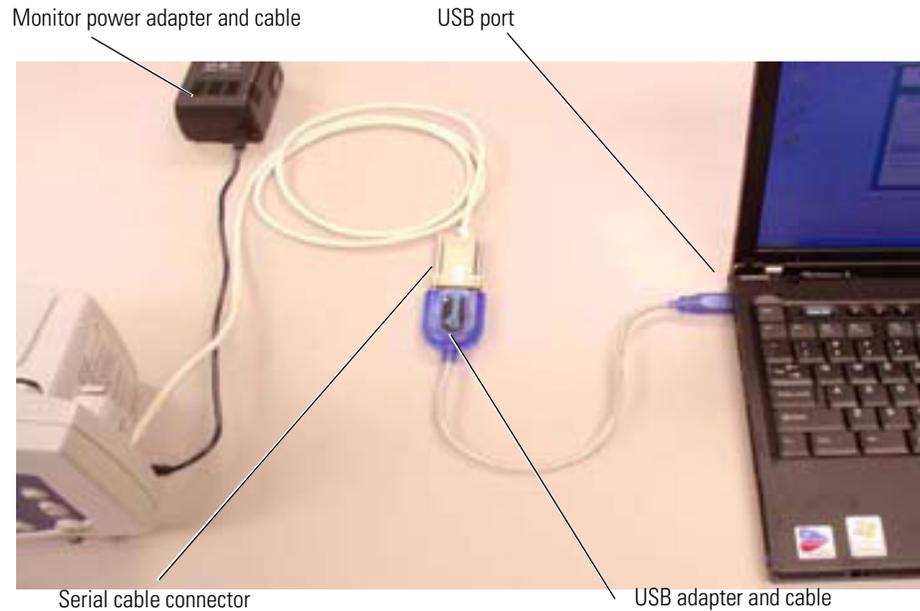
## Connect the Monitor to the Computer

1. If the computer has only USB ports, install the USB-to-DB9 adapter manufacturer’s driver software on the computer and proceed to [Step 2](#).

If the computer has a serial port, proceed to [Step 2](#).



2. Plug the small connector on the serial cable (008-0842-00) into the RS-232 port on the rear of the monitor.
3. If the computer has an available serial port, connect the large DB9 adapter on the serial cable to the serial port.



If the computer has a USB port, connect the USB adapter cable into the USB port, and then connect the USB adapter into the serial cable connector.

4. Connect the monitor power adapter cable into the monitor and connect the power cable into an AC power source.

The monitor beeps and a green  illuminates on the front of the monitor.

5. If you are using a laptop computer, plug the computer into AC power.

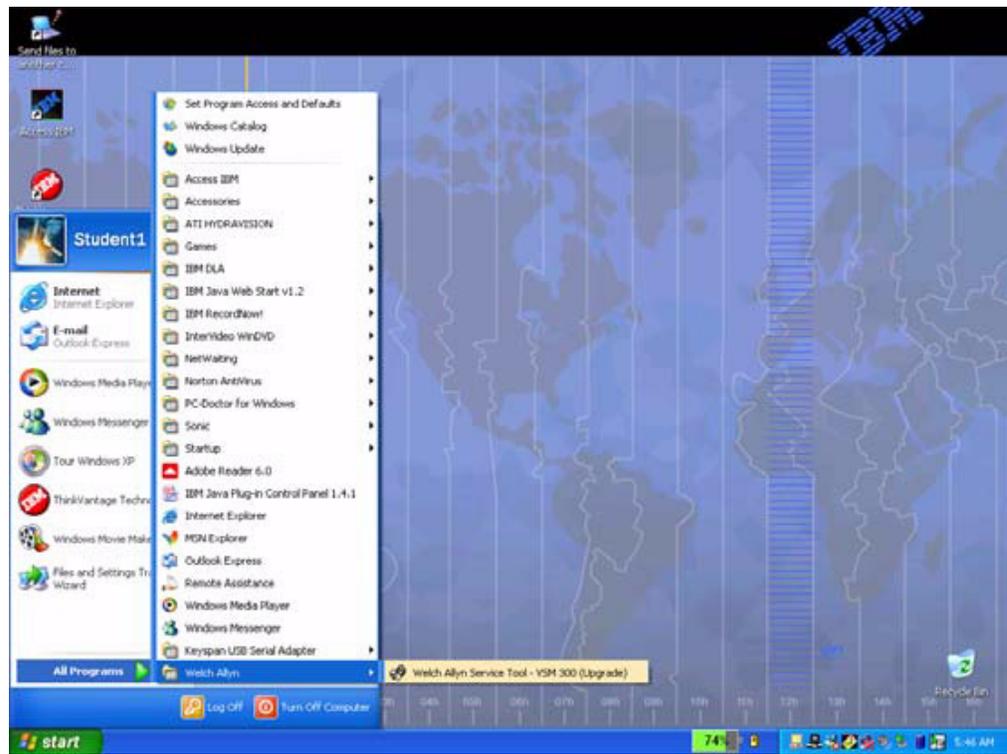
## Upgrade the Monitor

### Start the Upgrade Process



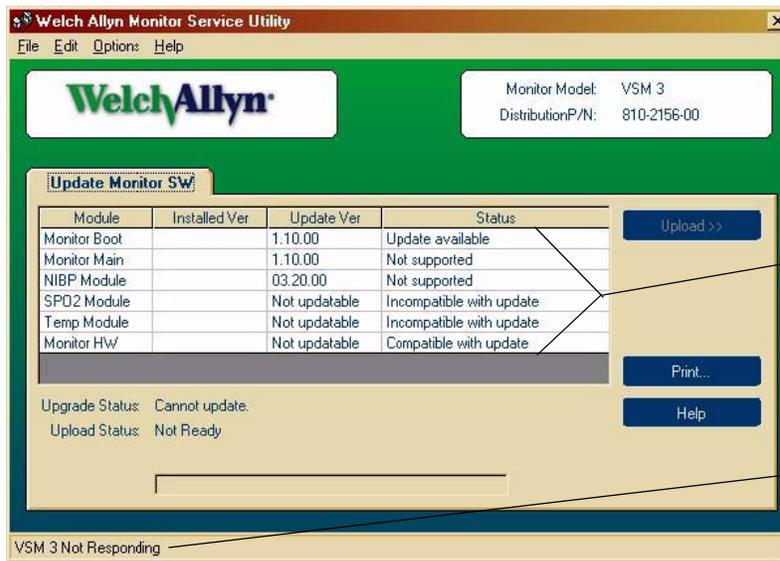
**Caution** During the upgrade process, do not touch any monitor keys or unplug any monitor or computer cables. Doing so can render the monitor inoperable.

**Caution** If the upgrade tool is unresponsive, attempt to restart the upgrade process. If recovery is not possible, please contact Welch Allyn Technical Service (see [page ii](#)).



1. In the lower left corner of the Windows desktop, click **START** -> **All Programs** -> **Welch Allyn** -> **Welch Allyn Service Tool - VSM 300 Upgrade**.

**Note** The appearance of the Start menu can vary.



Disregard these status notes until the message in the lower left corner says "VSM Available."

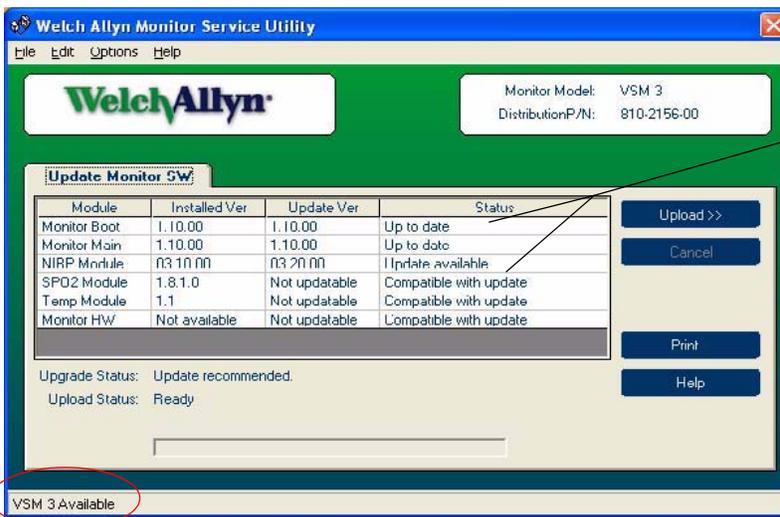
This message changes to 'VSM Available' after you confirm the port in Step 2.

## Select the Serial Port

1. In the Welch Allyn Monitor Service Utility window, select **Options**, and then **Settings**.



2. Click the pull-down arrow, click the computer serial port being used, and click **OK**.

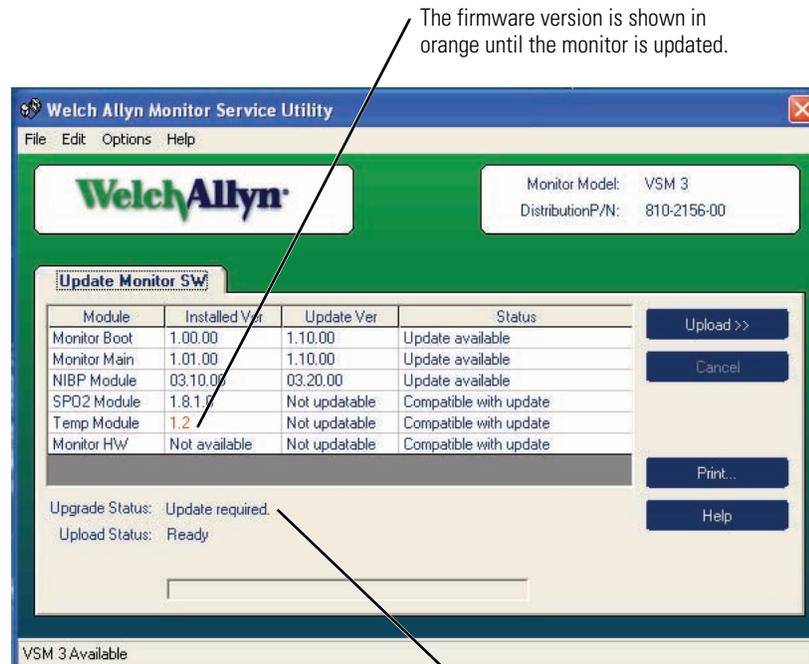


If the Upgrade Status for these items reads "**Update Not Supported**," please call Welch Allyn Technical Support (see page ii).

3. Verify that the status panel reads "VSM3 Available" in the lower left corner of the Welch Allyn Monitor Service window and that the monitor powers on.

If these conditions are not true, then verify that the monitor and the computer power cords and the serial cable are plugged in and that the COM port is set correctly.

## Updating the Monitor and Uploading the Software



Upgrade status is "Update required" if a new module has been installed. An upgrade is recommended if new software is available or if the update is not successful.

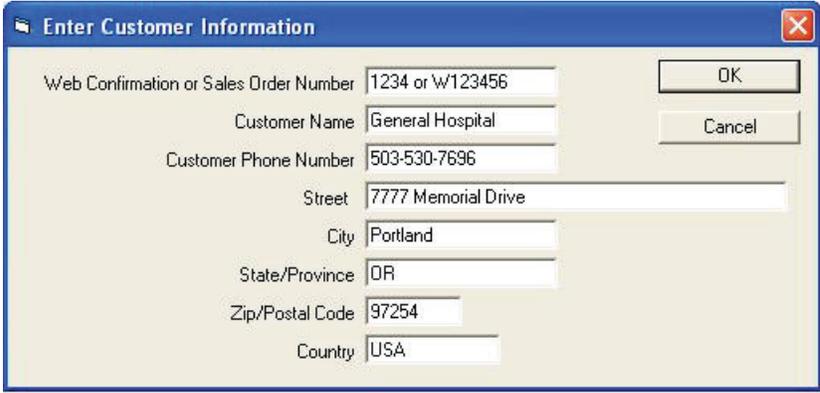
When communication between the Service Utility and the monitor has been established, the utility checks the current software versions for the monitor and all modules and displays them in the "Installed Ver" column. The utility checks the installed module versions for compatibility with currently installed software and with the software provided for the update.

The status column for the Boot, Main, and NIBP modules displays either "Up to date" or "Update available," depending on the installed version and the update version currently available. If the version installed on the monitor is newer than what the utility offers, then the status displays "Not supported".

After installing a new version of the temperature module in the monitor, you must run the utility to determine whether it is compatible with the current monitor software. The "Installed Ver" for the new temperature module displays in orange until the monitor has been updated to accept it. If the new module is not compatible with the current monitor configuration, Upgrade Status displays "Cannot update," and the Upload button is grayed out.

### To update or upgrade the monitor

1. Click **Upload**.



Enter Customer Information

Web Confirmation or Sales Order Number 1234 or W123456 OK

Customer Name General Hospital Cancel

Customer Phone Number 503-530-7696

Street 7777 Memorial Drive

City Portland

State/Province OR

Zip/Postal Code 97254

Country USA

2. The Enter Customer Information window appears each time a monitor is updated. If the web confirmation number or the sales order number is unavailable, enter **None**. If information has changed since the last Welch Allyn upgrade, edit fields as needed.

When all information is current, click **OK**.

**Note** All fields must be filled before you can continue.

3. If a new temperature module has been added to the monitor, the following dialog appears:



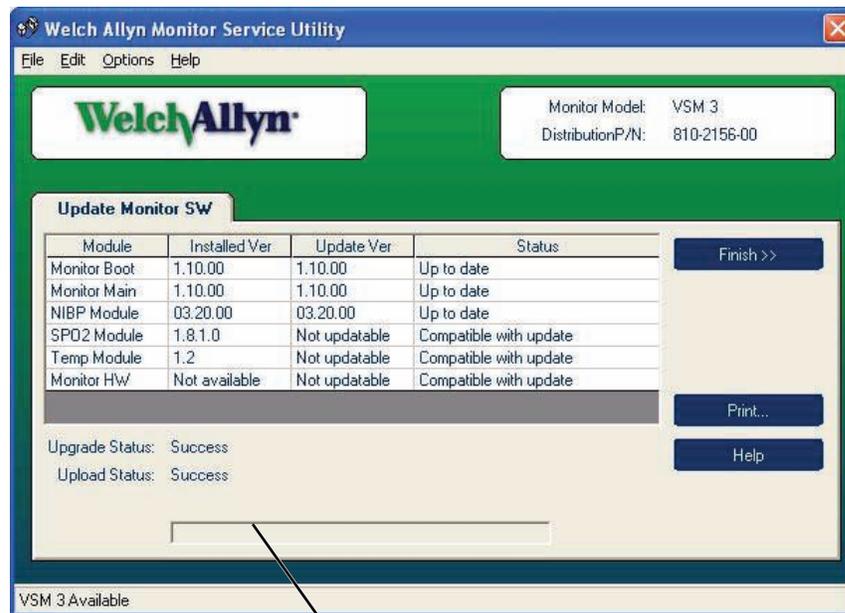
Perform software update

Current monitor software is compatible with all currently installed modules.  
Choose Yes to update the instrument with new software (recommended).  
Choose No to skip the software update and reset the instrument to accept the modules.

Yes No Cancel

- Click **Yes** to accept the new temperature module and upgrade the software.
  - Click **No** to accept the new temperature module without upgrading any software.
  - Click **Cancel** to return to the main window without making changes.
4. Upgrading the Main and NIBP software takes approximately 20 minutes. Updating the monitor to accept a new temperature module without installing any software takes less than a minute.

**Note** The tool controls the On/Off function of the monitor and upgrades the monitor as needed, depending on the installed hardware and software versions.



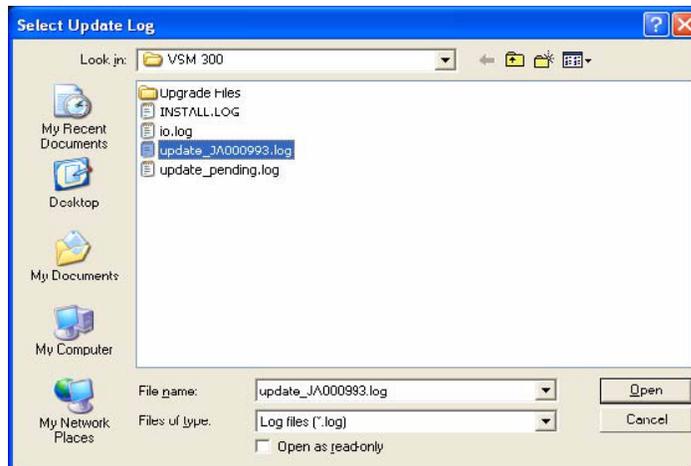
The progress bar displays only during a software upload.

- When "Upgrade status" displays "Success", click **Finish** before disconnecting the monitor.

## Print the Upgrade Record(s)

If you are not printing update records, skip this section.

- To print upgrade records one-by-one, in the Welch Allyn Monitor Service Utility window, select **Print**.



- Click the log file that you desire to print.  
Each log file name includes its corresponding monitor serial number.
- Click **Open**. A printer window appears.
- Click the options you prefer.

5. Click **Print**.

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WELCH ALLYN SERVICE TOOL UPGRADE RECORD

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CUSTOMER INFORMATION

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Web Confirmation or Sales Order Number	75342
Customer Name	General Hospital
Customer Phone Number	321 354-1234
Street	123 Erland Drive
City	Pastoral
State/Province	PA
Zip/Postal Code	65431
Country	USA

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MONITOR INFORMATION

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Model:	VSM 3
Serial Number:	JA000993
TLA Number:	007-0105-xx

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INITIAL STATE

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Module	Installed Ver	Update Ver	Status
Monitor Boot	1.10.00	1.10.00	Up to date
Monitor Main	1.10.00	1.10.00	Up to date
NIBP Module	03.10.00	03.20.00	Update available
SPO2 Module	1.8.1.0	Not updatable	Compatible with update
Temp Module	1.1	Not updatable	Compatible with update
Monitor HW	Not available	Not updatable	Compatible with update

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UPDATE LOG

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```

June 05 2005 13:35:03 gryPOEMGetCalData: PA00013292 0b22 311e 0059 8006 10ac
010d 02d1 0203 0168 028f 01d4 014a 0400 0b
June 05 2005 13:36:36 POEMBOOT:03.20.00 Success
June 05 2005 13:47:57 POEMMAIN:03.20.00 Success
June 05 2005 13:49:07 POEMSAFETY:03.20.00 Success
June 05 2005 13:49:07 cmdPOEMSetCalData PA00013292 0b22 311e 0059 8006 10ac
010d 02d1 0203 0168 028f 01d4 014a 0400 0b: OK
June 05 2005 13:49:07 cmdPOEMStoreEEPROM OK
June 05 2005 13:49:39 cmdSetVSM3ValidVersionPoem:03.20.00 Success
June 05 2005 13:49:39 cmdSetVSM3ValidVersionSpo2:1.8.1.0 Success
June 05 2005 13:49:39 cmdSetVSM3ValidVersionTemp:1.1 Success

```

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PERSON PERFORMING UPGRADE

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

## Uninstall the Upgrade Tool from the Computer

After you complete all monitor upgrades and all documentation, follow the instructions below to use the uninstall program to remove the Welch Allyn software upgrade tool and all monitor upgrade logs.

Follow this process for all computers you used to install the upgrades.

**Note** If the you want to retain the monitor upgrade logs for your records, please take the following steps to move the files to a custom folder on the computer.

Navigate to the monitor upgrade folder. The default path is **C:\Program Files\Welch Allyn\Service Tool\VSM 300 Upgrade**.

Copy or move all upgrade logs to a folder of your choice.

1. When you have upgraded all monitors and printed all records, click **File, Exit** to exit the upgrade program.
2. From the lower left corner of the Windows desktop, click **Start, Control Panel, Add or Remove Programs**.
3. Click the **Welch Allyn Service Tool**.
4. Click **Change/Remove**.
5. After the program is removed, reboot or turn off the computer.