

# Quantum™ HD

## Operating Software Update Procedure

### Read Thoroughly

Updating the Operating Software on a Quantum HD is easy and free. Use the following steps to download the update and upload it to your Quantum HD controller/s. Some enhancements may require additional hardware.

Use the following URL to be directed to the Quantum HD Controller page of the Frick Food and Beverage section of the Johnson Controls website.

[http://www.johnsoncontrols.com/content/us/en/products/building\\_efficiency/industrial\\_refrigeration/frick\\_equipment/refrigeration\\_equipment/refrigeration\\_controls/qauntum-hd-controls.html](http://www.johnsoncontrols.com/content/us/en/products/building_efficiency/industrial_refrigeration/frick_equipment/refrigeration_equipment/refrigeration_controls/qauntum-hd-controls.html)

Once on the Quantum HD Controller page click on the **Resources** tab shown below. As seen below, the update procedure, software release notes and the current version upgrade file/s are present.

Before you can upgrade to version to 10.14 or later you first be at version 10.13. If you are at any version other than 10.13 use the upgrade file to upgrade to version 10.13 as the initial step to upgrade to version 10.14 or later.

The 10.13 upgrade is a 2 step process as described below.

1. Download/save both the Installer and upgrade files for ver. 10.13 from the website. These files must be saved to the top level/root directory of the USB thumb drive. Do not save these files to a folder. (The names of the files cannot be changed in the process.) The installer upgrade is file *Quantum-HD.tar.gz*. The software upgrade is file *Quantum-HD2.tar.gz*
2. Insert the USB drive into the USB port on the Q5 board.
3. It is a good practice to save setpoints before doing a software upgrade. Refer to page 3
4. Go through the upgrade software "full System Install" process the 1st time. This first step of the "Full System Install" is upgrading the installer program. (This may take several minutes)
5. Once complete Press Exit to leave the software upgrade page, reboot and return to the Home page. After this first step the software version on the About screen will still be the previous version.
6. Login again and perform the "Full System Install" for the 2nd time. This is now upgrading the software version to ver. 10.13. This upgrade will take a long period of time (maybe 10 - 20 minutes).
7. Once complete, Exit the installer program. The software upgrade is complete. The Software Version on the About screen will read Ver. 10.13. Repeat this process for every machine you wish to upgrade to version 10.14 or later.
8. Once done upgrading all of the controllers to ver. 10.13 you are ready to proceed to upgrading to ver. 10.14 or later.
9. If you intend to use the same USB thumb Drive to do the ver. 10.14 upgrade you must first delete both of the installer file (Quantum-HD.Tar.Gz) and upgrade file (Quantum-HD2.tar.gz) for ver. 10.13 from that USB Thumb Drive. Then you can download/save the single 10.14 upgrade file to the USB thumb drive. An option would be to save the ver 10.14 or later upgrade file to a separate USB Thumb Drive. If using two drives be certain to keep them separate through this process.

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FEATURES AND BENEFITS    SPECIFICATIONS    **RESOURCES**

- Product Brochure (PDF)
- Specifications (PDF)

**Quantum HD On-Line Demo Instructions (PDF)**

- Quantum HD On-Line Demo

**Quantum HD Software Update**

- Quantum HD Software Upgrade Procedure (PDF)
- Quantum HD Software Release Notes (PDF)
- Quantum HD ver. 10.13 Installer Upgrade File
- Quantum HD ver. 10.13 Upgrade File
- Quantum HD ver. 10.14 Installer Upgrade File

**Training Videos**

- Quantum HD Software Maintenance

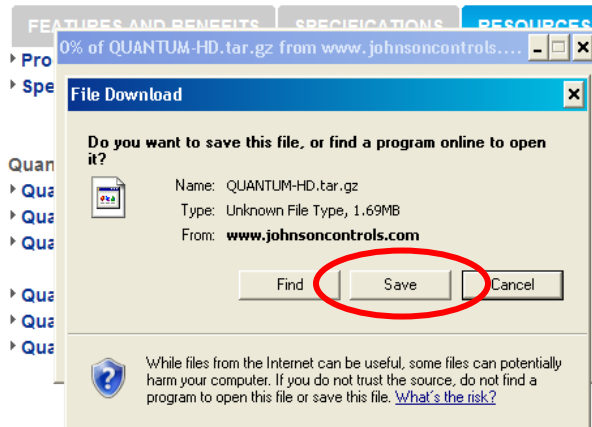
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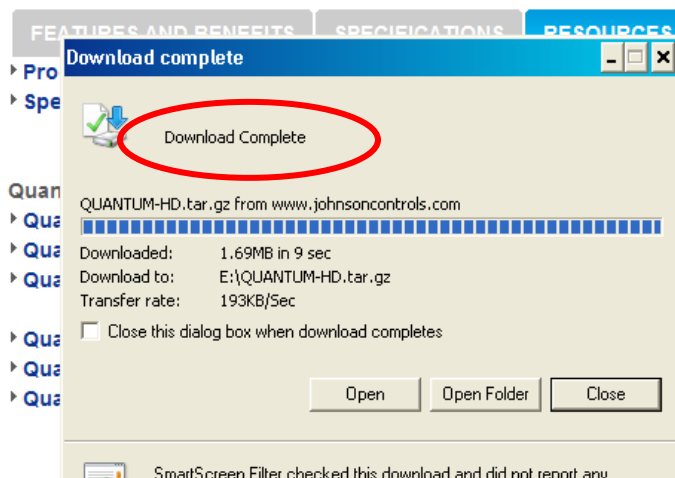
The upgrade procedure and software release notes are PDF files. Simply left click on these files to open.

The update file is a bit different. To save the update file to a USB device, left click on the file. A window will open up as seen below.



Select **Save** and save the update file to a Top Level root directory only. Saving to a subfolder will not allow the Quantum HD to recognize the file when the USB device is plugged in to the USB port of the Q5 processor board.

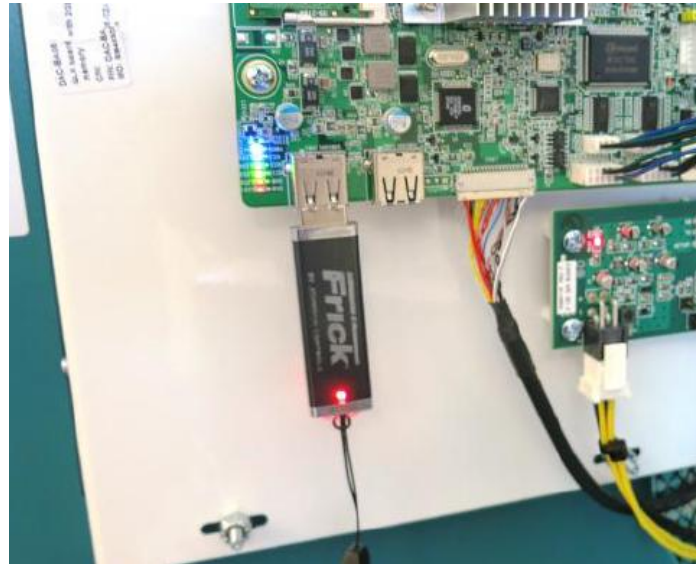
Once the download is complete, which will be indicated in the top left corner of the download window, close the download window and properly remove the USB device from the computer.



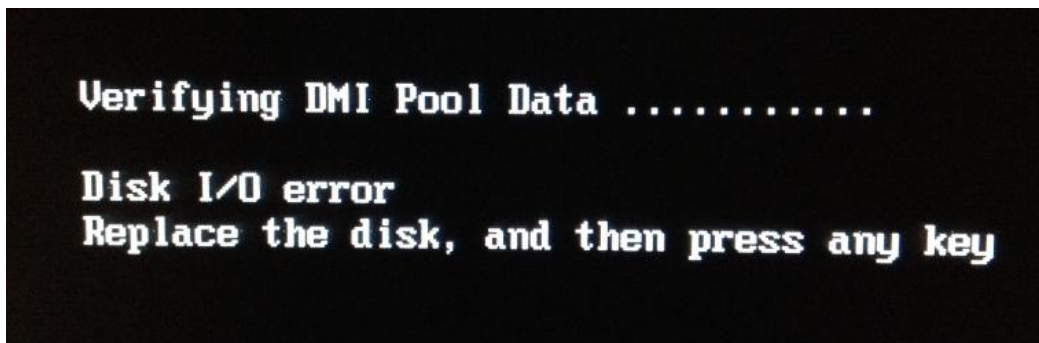
**Once you have downloaded the update to a USB thumb drive, it can be used to update an infinite number of Quantum HD Controllers.**

- **Updating the Quantum HD Operating Software**

**With the Quantum HD powered up, insert the USB device into one of the USB ports on the Q5 processor as shown below.**



**NOTE: Do not power up the Quantum HD controller with a USB drive device plugged in. Doing so could divert the booting process to the USB device. The result being that the boot would stop, displaying the following message.**



**If you experience this message when booting, power down, then check to see if a USB device is plugged into the processor board as shown above. If so, remove it and re-apply power.**

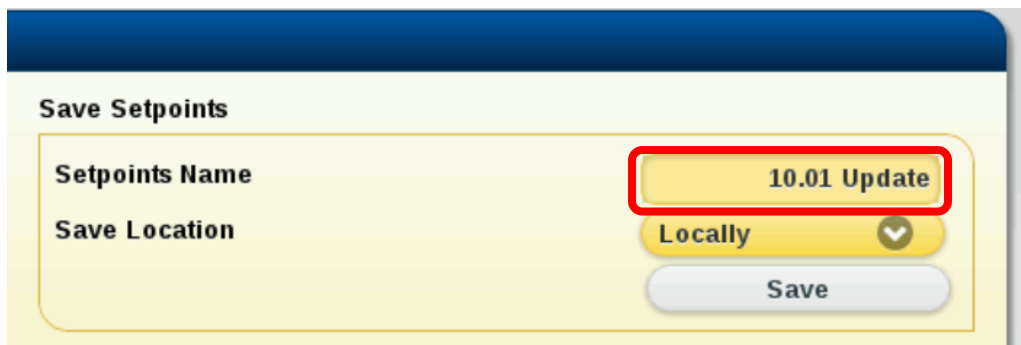
## Saving Setpoints and Upgrading Operating Software

Before doing the OS update you first need to save the setpoints of the controller being updated. The update will reset all settings to the default values. After the update is done the setpoints are restored from the saved file for that controller.

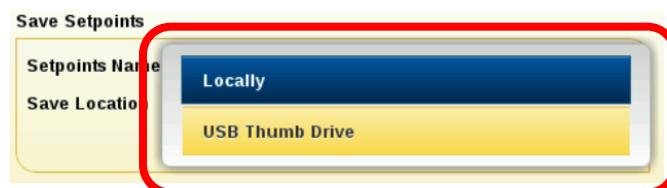
**Save Setpoints** –With the Quantum HD powered up and a USB device plugged into the processor, the user must be logged into the **Service** level. Press the **Menu** button and select **Service** then select the **Software** at the top of the screen as shown below.



- In order to save a setpoints file it must first be named as shown below. To do this touch the **Setpoints Name** button to activate the keypad. Enter the desired name and press **enter**.



- The setpoints can be saved either **Locally** (default) to the flashcard on the processor or to a **USB Thumb Drive** that is inserted in the USB port of the Quantum HD Q5 processor. Select the Save Location button to choose the location to which the setpoints will be saved.



- The same thumb drive that is being used for the program update can be used to save the setpoints of the controller prior to doing the update.
- It is recommended that all **Locally** saved setpoint files also be saved to a USB thumb drive and stored in a safe, secure location.
- Once all of this is done, press the **Save** button to save the setpoints to the selected location.

**Save Setpoints**

Setpoints Name: 10.01 Update

Save Location: Locally

Save

- If the setpoints are saved **Locally** the file name, date and time will be listed on the left side of the screen as shown below. Again, it is always recommended to back-up any locally saved setpoints to a USB Thumb Drive.

Oil Pump Maintenance Communications Diagnostics Software

**Software Service**

**Locally Saved Setpoints**

10.01 Update - 04/18/2012 16:44

- Once the setpoints are saved, the Operating Software can be updated. With the USB thumb drive with the OS Upgrade plugged into the USB port of the Q5 processor board, select the **Upgrade Software** button.

**Restore Setpoints**

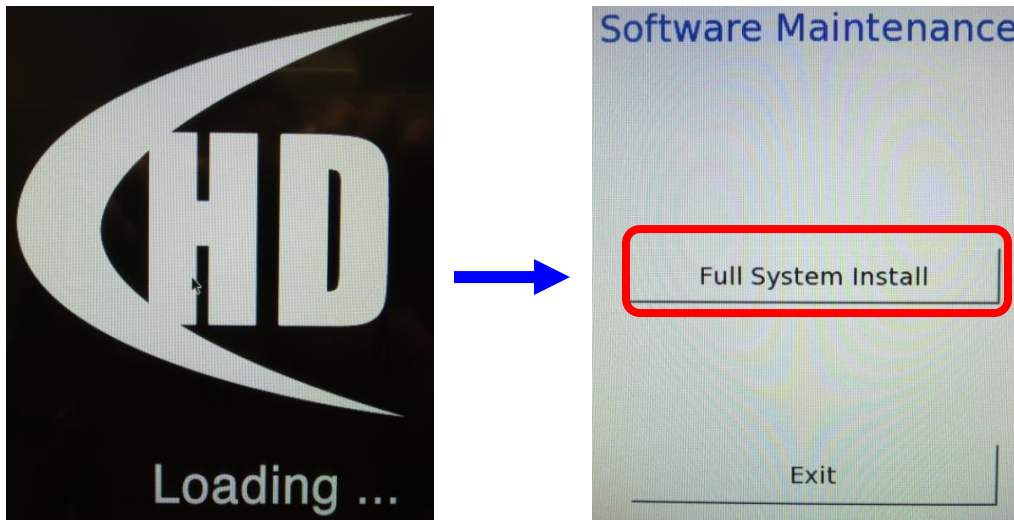
In order to restore setpoints this application has to be exited.

All of the control software will be shut down as well.

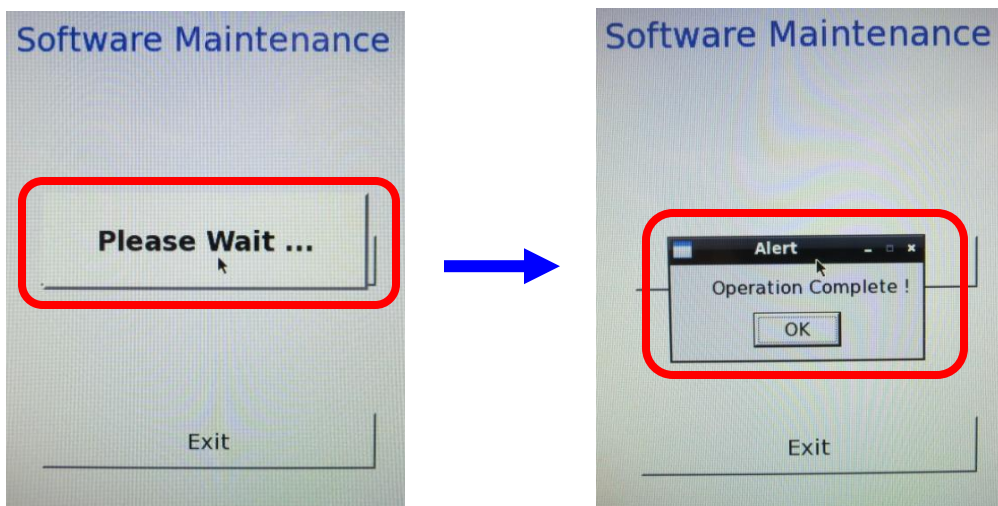
After this application closes the Restore application will start.

Restore Setpoints Upgrade Software

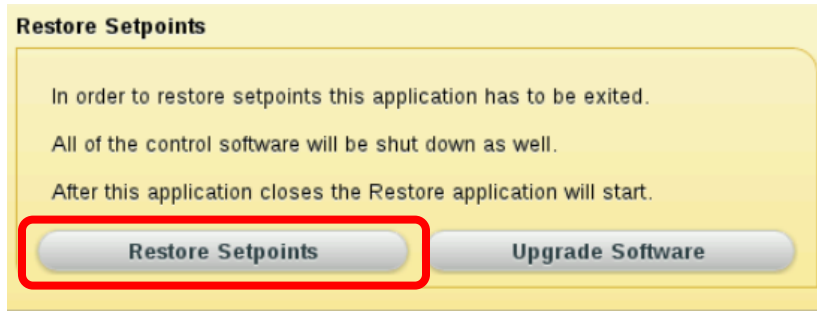
- After the **Upgrade Software** button is pushed the screen will display **HD Loading** and then the Install page appears as shown below



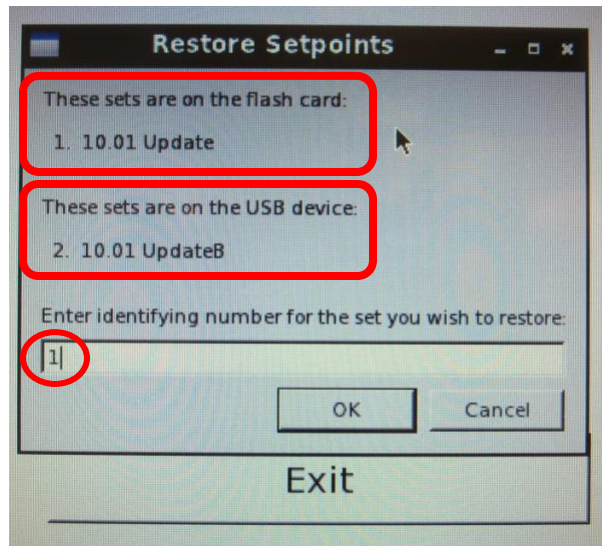
- To do the install touch the **Full System Install** button. To abort the upgrade, touch the **Exit** button.
- During the upgrade the **Please Wait** message will appear and then **Operation Complete**. Touch the **OK** button, then the **Exit** button.



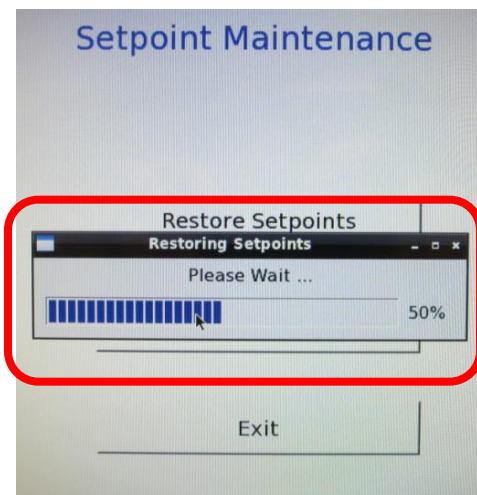
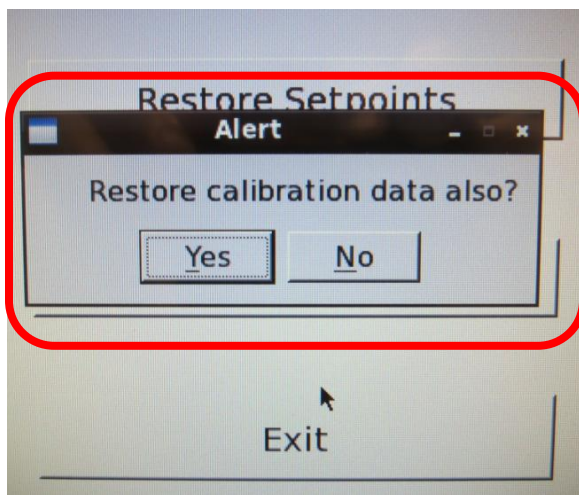
- Once the **Exit** button is touched you will be prompted "**Are You Sure**". Touch the button for the appropriate response. When exiting the **HD Loading** screen will appear briefly. After several seconds, the Quantum HD home screen will reload. It will be necessary to **Login** to the service level to restore the saved setpoints and calibration data.
- Once logged in, go to Menu, select **Service** then select the **Software** tab as before. Once on the software page select **Restore Setpoints**.



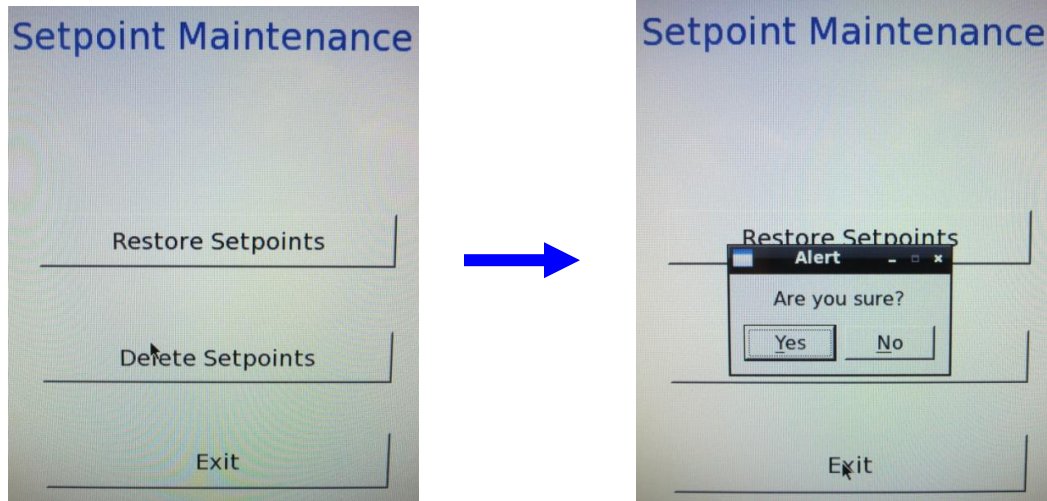
- Once restore setpoints is selected the available files that are on the flash card (locally saved) and/or on the USB device (Thumb Drive) will be displayed as seen below. Use the keypad to select the associated number for the setpoints and calibration data file you wish to restore and touch **OK**.



- You will be prompted to **Restore Calibration Data**. If the setpoints were saved from this compressor press **Yes**, if the setpoints file was saved from another compressor press **No**. Pressing **No** means that the Calibration Data will be defaulted, setting all offsets to zero (0). Calibration will need to be redone.



- Once the setpoints are restored the below screen will appear. Press **Exit** to finish this process. Press **Yes** that you wish to exit. The **HD Loading...** screen will appear briefly. In several seconds the Quantum HD home screen will reload. The Operating Software Upgrade and Setpoints Restore is now complete. You can verify this by going to the **About** screen and reading the **Software Version** posted there.



If you experience any issue with this process, contact Frick Service at 717-762-212. Digital screen shots (pics) can be very helpful in resolving issues with this process.