

iPan Beta Update 2009 *(iPan HS)*

IMPORTANT!

Your iPan HS must look like the picture below. If not, do not perform these instructions.



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PURPOSE

The following information will assist you with installing iPan Beta Update 2009, which includes upgrading iPan HS firmware, updating video processor settings, and selecting image enhancement options.

REQUIREMENTS

Before beginning this procedure, please verify the following:

- Your iPan, PanX, or PanX-C system is operating properly (meaning you are able to acquire images successfully)
- You have the iPan Update 2009 CD
- You have CDR DICOM 3.5 SP1 software or higher (or EagleSoft 14 or higher or Patterson Imaging 14 or higher) installed.

STEP A. UNINSTALL IPAN HS DRIVER

1. Exit CDR DICOM (or EagleSoft or Patterson Imaging).
2. Verify that the iPan HS USB Interface is **NOT** connected to laptop or desktop PC. If connected, disconnect the iPan HS USB Interface by unplugging the USB cable
3. Click Windows Start > Control Panel > Programs > Uninstall a Program.
4. Browse for the iPan HS Interface Driver and select it .
5. Click Remove.
6. Exit the Control Panel.

STEP B. INSTALL IPAN 2009 UPDATE

1. Exit CDR DICOM (or EagleSoft or Patterson Imaging).
2. Insert the iPan Update 2009 CD into your CD or DVD drive. If the setup wizard doesn't start automatically, browse to the iPan HS Interface Driver setup.exe file and double-click on it.
3. Click Next at the Welcome Screen.
4. Click Install at the Ready to Install Program Screen.
5. Click Finish at the end of the installation and close the installation start page.
6. Re-connect the the USB cable to the iPan HS USB Interface. The amber LED on the iPan HS USB Interface illuminates.
7. Also verify that the Sensor CAT-5 cable is connected to the iPan HS USB Interface.

STEP C. VERIFY FIRMWARE (PANO)

1. Click Windows Start > All Programs > CDR DICOM for Windows > iPan HS Upgrade Utility.
2. The **USB Interface Firmware** version will be displayed in RED.
 - Click the button under that number to install the latest firmware. The version number changes to GREEN when the upgrade is completed successfully.
3. The **Panoramic Sensor Module Firmware** will be displayed in RED.
 - Click the button under that number to install the latest firmware. The version number changes to GREEN when the upgrade is completed successfully.
4. The **Panoramic Sensor Module CPLD** will be displayed in RED.
 - Click the button under that number to install the latest firmware. The version number changes to GREEN when the upgrade is completed successfully.
5. All versions should be GREEN (*Figure 1*). If not, contact us for more information.

STEP D. VERIFY FIRMWARE (CEPH) (PANX-C ONLY)

1. Rotate the X-ray head towards the Ceph Imaging system.
2. Move the collimator slider to any Ceph icon selection.
3. Click Refresh at the iPan HS Upgrade Utility.
4. The **Ceph Sensor Module CPLD** will be displayed in RED.
 - Click the button under that number to install the latest firmware. The version number changes to GREEN when the upgrade is completed successfully.
5. All versions should be GREEN (*Figure 2*). If not, contact us for more information.

**SCREENSHOTS: FIRMWARE
VERSIONS AFTER
UPGRADE**

FIGURE 1. Firmware Versions after Upgrade (Panoramic)

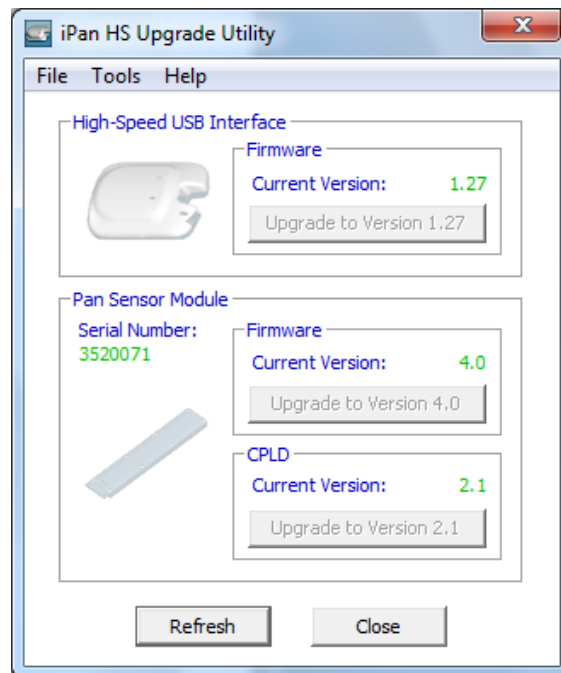
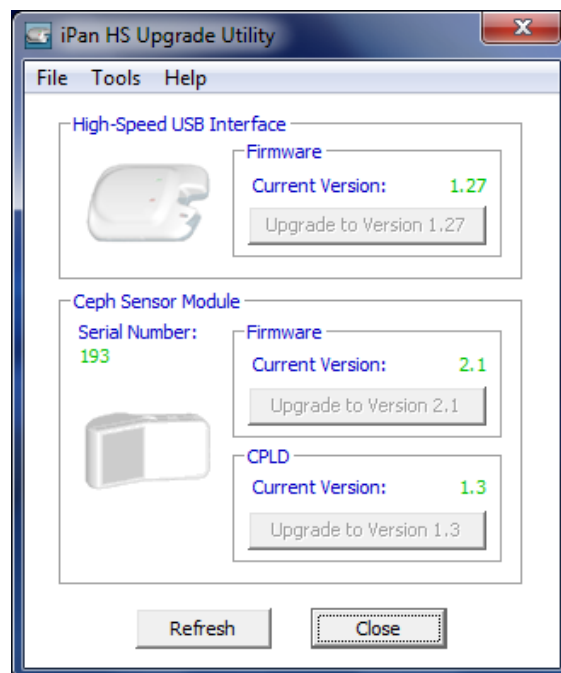


FIGURE 2. Firmware Versions after Upgrade (Ceph)



**STEP E. UPDATE VIDEO
PROCESSOR SETTINGS
(PANO)**

1. Verify that all cables to the iPan HS USB Interface, the imaging system, and the PC workstation or laptop, are connected.
2. For PanX-C customers, verify that the system is set for panoramic imaging.
3. Start the upgrade utility (Windows Start > All Programs > CDR DICOM for Windows > iPan HS Upgrade Utility).
4. Press and hold down the SHIFT key and click Tools > Video Processor Settings.
5. Click Default at the Pan Video Processor Settings dialog (*Figure 3*).
6. Click Close.
7. Click Yes at the message, "Are you finished setting the Video processor?"
8. **Important!** Disconnect the USB cable from the iPan HS Interface and re-connect it.

**STEP F. UPDATE VIDEO
PROCESSOR SETTINGS
(CEPH)**

1. Verify that all cables to the iPan HS USB Interface, the imaging system, and the PC workstation or laptop, are connected.
2. For PanX-C customers, verify that the system is set for ceph imaging.
3. If you've just completed changing the panoramic settings, and the upgrade utility is open, click Refresh; otherwise, start the upgrade utility (Windows Start > All Programs > CDR DICOM for Windows > iPan HS Upgrade Utility).
4. Press and hold down the SHIFT key and click Tools > Video Processor Settings.
5. Perform the following actions to change the ceph video processor settings:
6. Click Default at the Ceph Video Processor Settings dialog (*Figure 4*).
7. Click Close.
8. Click Yes at the message, "Are you finished setting the Video processor?"
9. Click Close to exit the iPan HS Upgrade Utility.
10. **Important!** Disconnect the USB cable from the iPan HS Interface and re-connect it.

**SCREENSHOTS: VIDEO
PROCESSOR SETTINGS
AFTER UPDATE**

FIGURE 3. Panoramic Video Processor Settings

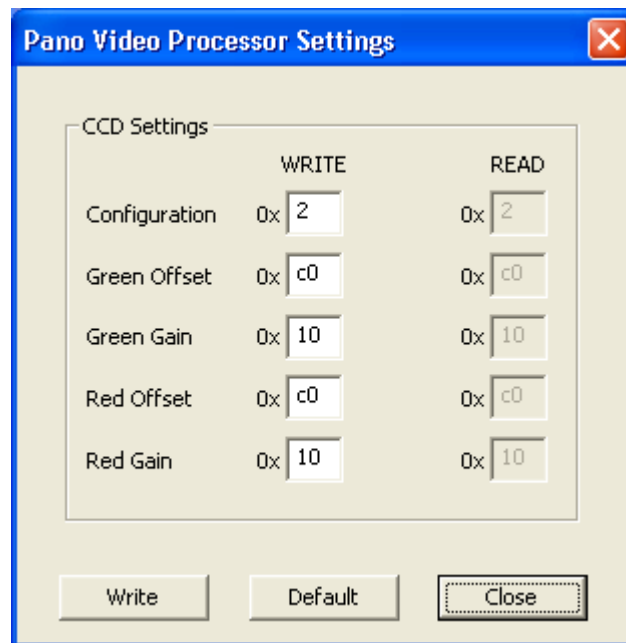
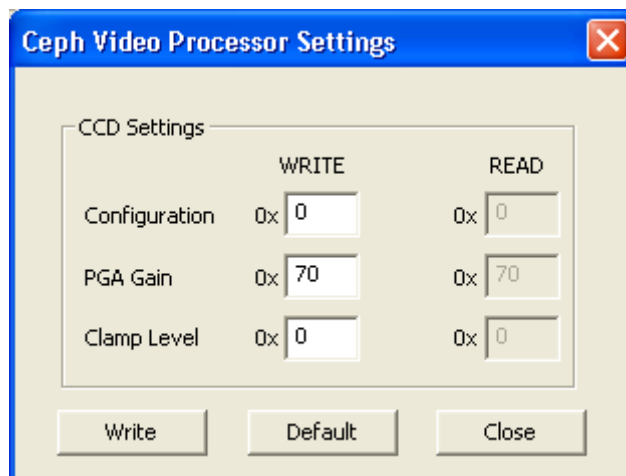


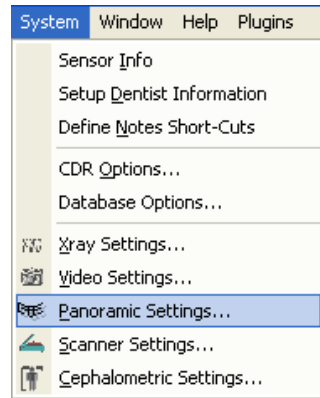
FIGURE 4. Ceph Video Processor Settings



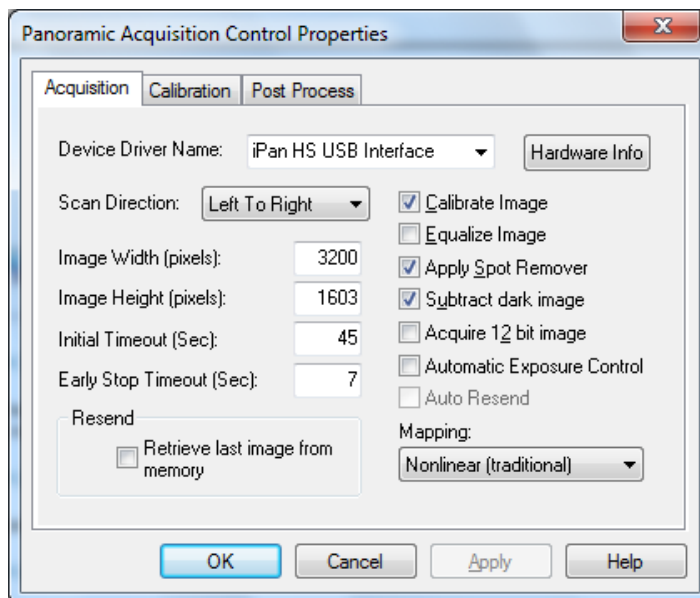
Step G. Select Image Enhancement Option (Pan)

STEP G. SELECT IMAGE ENHANCEMENT OPTION (PAN)

1. Start the CDR DICOM program and click System > Panoramic Settings.

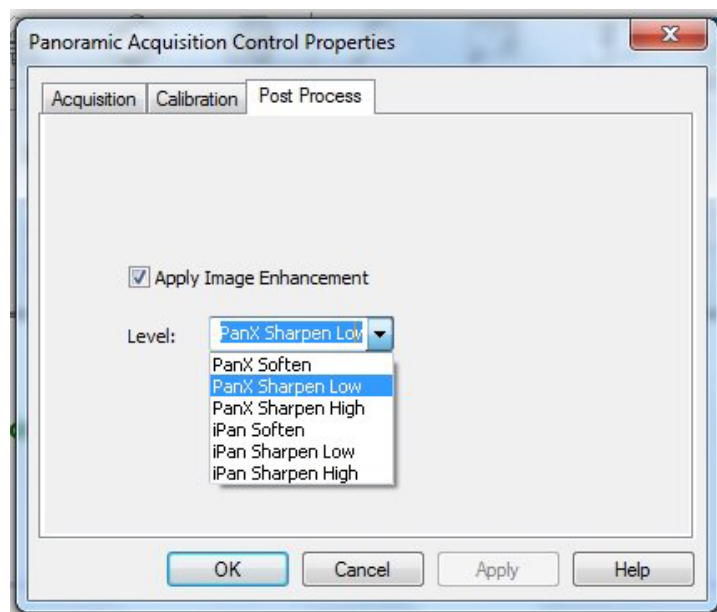


2. Make sure that the iPan HS USB Interface is selected. Also verify that Calibrate Image, Apply Spot Remover, and Subtract Dark Image options are checkmarked and that Nonlinear (traditional) mapping is selected.



Step G. Select Image Enhancement Option (Pan)

3. Click on the Post Process tab.
4. Make sure that the Apply Image Enhancement box is checked.
5. Select the desired enhancement level, as described below.
 - Soften - appropriate for reducing noise and undesirable image artifacts
 - Sharpen Low - appropriate when a moderate amount of image sharpening and contrasting is desired
 - Sharpen High - appropriate when a high amount of edge detail and contrast differentiation is desired
6. Click Apply.
7. Click OK to save your changes and close the dialog box.

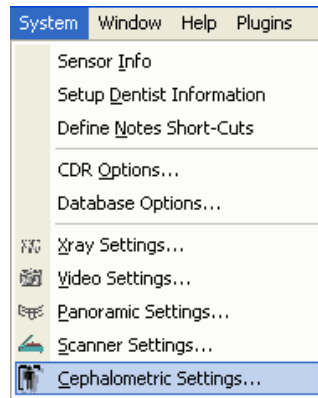


8. Start your imaging program, take one or more sample exposures, and verify image response. An acceptable image should be evenly dark, except where objects in the X-ray field of view (bite block or ear rings) have been exposed, and show no unusual digital patterns (sawtooth, etc.).

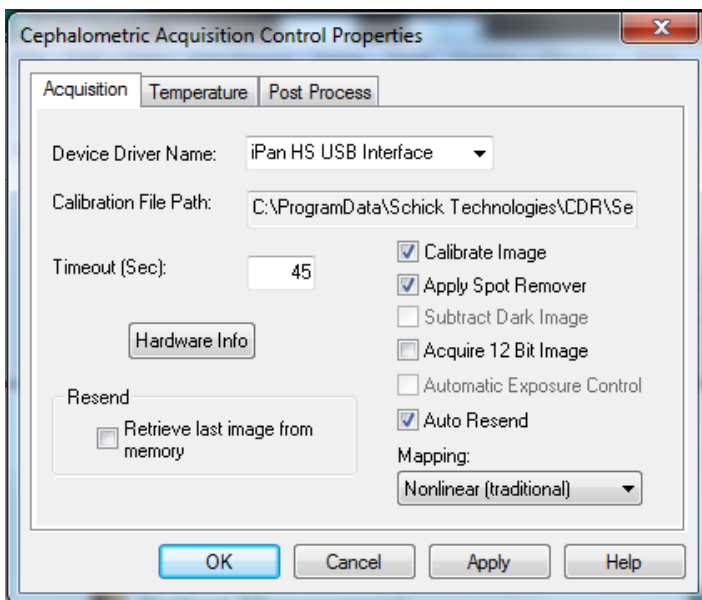
Step H. Select Image Enhancement Option (Ceph)

STEP H. SELECT IMAGE ENHANCEMENT OPTION (CEPH)

1. Start the CDR DICOM program and click System > Cephalometric Settings.

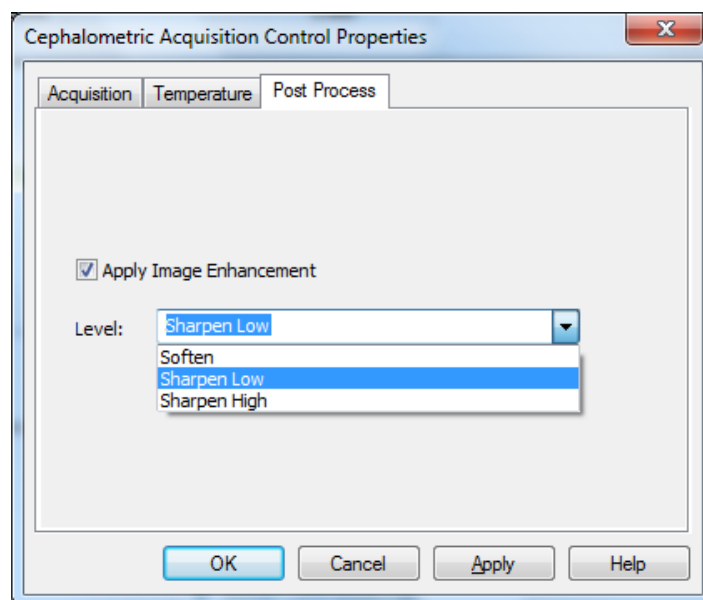


2. Make sure that the iPan HS USB Interface is selected. Also verify that Calibrate Image, Apply Spot Remover, and Auto Resend options are checkmarked and that Nonlinear (traditional) mapping is selected.



Step H. Select Image Enhancement Option (Ceph)

3. Click on the Post Process tab.
4. Make sure that the Apply Image Enhancement box is checked.
5. Select the desired enhancement level, as described below.
 - Soften - appropriate for reducing noise and undesirable image artifacts
 - Sharpen Low - appropriate when a moderate amount of image sharpening and contrasting is desired
 - Sharpen High - appropriate when a high amount of edge detail and contrast differentiation is desired
6. Click Apply.
7. Click OK to save your changes and close the dialog box

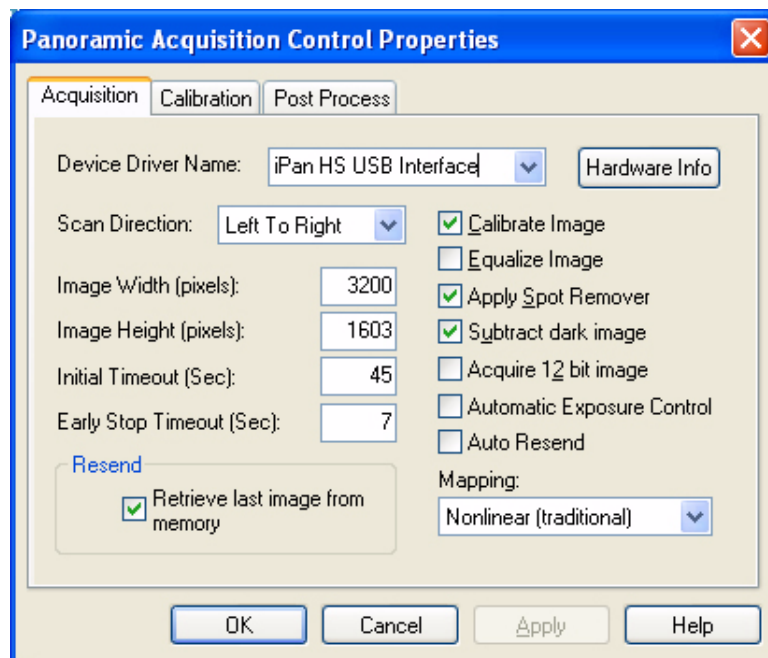


8. Start your imaging program, take one or more sample exposures, and verify image response. An acceptable image should be evenly dark, except where objects in the X-ray field of view (bite block or ear rings) have been exposed, and show no unusual digital patterns (sawtooth, etc.).

USING RESEND TO EVALUATE PANO IMAGE ENHANCEMENTS

Customers interested in evaluating different panoramic image enhancements on the same image, without taking additional exposures, can use the manual Resend option for this purpose.

1. Acquire an X-ray image using any post-processing filter.
2. Click System > Panoramic Settings in CDR Dicom.
3. Click the Acquisition tab.
4. Click the Resend - Retrieve last image from memory checkbox. (Do not check the Auto Resend box.)
5. Click the Post Process tab.
6. Select a different image enhancement from the menu.
7. Click OK.
8. Click an empty Panoramic viewbox in the CDR Exam window.
9. Click Yes to the message, "Do you want to resend the last acquired image?" This will retrieve and re-display the last acquired image, applying the new enhancement. The Resend checkbox is cleared automatically after this function is used.



USING RESEND TO EVALUATE CEPH IMAGE ENHANCEMENTS

Customers interested in evaluating different ceph image enhancements on the same image, without taking additional exposures, can use the manual Resend option for this purpose.

1. Acquire an X-ray image using any post-processing filter.
2. Click System > Cephalometric Settings in CDR Dicom.
3. Click the Acquisition tab.
4. Click the Resend - Retrieve last image from memory checkbox. (Do not check the Auto Resend box.)
5. Click the Post Process tab.
6. Select a different image enhancement from the menu.
7. Click OK.
8. Click an empty Ceph viewbox in the CDR Exam window.
9. Click Yes to the message, "Do you want to resend the last acquired image?" This will retrieve and re-display the last acquired image, applying the new enhancement. The Resend checkbox is cleared automatically after this function is used.

