ScanX®

Digital Imaging System

Dynamic Rendering User's Guide

Purpose.

This document provides information on the Dynamic Rendering that can be applied as images are acquired with your ScanX. It includes instructions how to install and enable or disable Dynamic Rendering, as well as, how to configure your Image Management System to best take advantage of the improvements offered by Dynamic Rendering.

Introduction to Dynamic Rendering.

Dynamic Rendering is an image processing technique that works with the ScanX and your Image Management System to improve the quality of the images as they are acquired in order to reduce or eliminate the need for any post-acquisition processing.

Installing Dynamic Rendering.

The latest version of the ScanX interface library includes support for Dynamic Rendering. Installing this feature is as easy as updating the ScanX interface library.

Enabling Dynamic Rendering.

By default, when the ScanX interface library is updated, Dynamic Rendering is enabled for all Image Management Systems except CaptureLink.

The update process also installs a utility to help you enable or disable Dynamic Rendering. It can be found by pressing the Windows 'Start' button, selecting 'Programs', then 'ScanX Utilities', and then 'Configure Dynamic Rendering'. The utility allows you to enable or disable Dynamic Rendering for both Intra-Oral and Extra-Oral scan modes.

System Requirements

While Dynamic Rendering will work with any computer that meets the minimum requirements to run the Scan✗, it has been optimized for the advanced processing capabilities of the Intel Pentium 4. Dynamic Rendering can also require a substantial amount of memory (RAM) which operating systems prior to Windows 2000 do not support.

A computer using Dynamic Rendering for intra-oral and low resolution extra-oral images should meet or exceed the following:

CPU:	Pentium 4
RAM:	256MB
Operating System:	Windows 2000 or Windows XP

When using Dynamic Rendering with standard resolution extra-oral images, the computer should meet or exceed the following:

CPU:	Pentium 4
RAM:	512MB
Operating System:	Windows 2000 or Windows XP

When using Dynamic Rendering with high resolution extra-oral images, the computer should meet or exceed the following:

CPU:	Pentium 4
RAM:	1GB
Operating System:	Windows 2000 or Windows XP

If, after scanning a plate through your Scan✗, there is a long delay before the image appears in your Image Management System, you may have an inadequate amount of RAM, despite meeting the minimum requirements listed above. A flashing hard disk light during this delay is indicative of such a memory problem. Closing other applications may help, but increasing the amount of RAM can dramatically improve performance.

Configuration Instructions

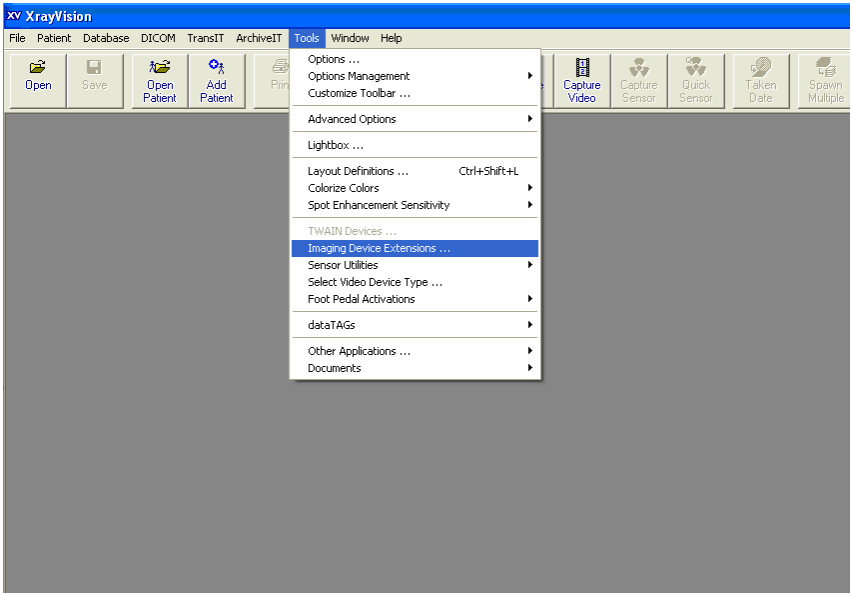
In order to make full use of Dynamic Rendering, post-processing of images by your Image Management System may need to be adjusted. In particular, following these instructions will allow the presentation of Scan*X* images without any additional enhancements by your Image Management System.

In all cases, some additional fine-tuning of the brightness or contrast settings may be required to match individual viewing preferences.

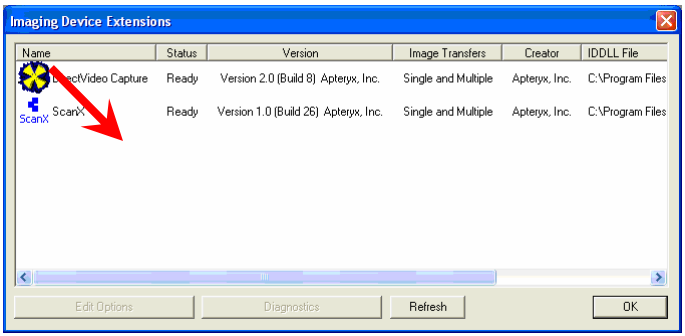
Image Management Systems currently compatible with Dynamic Rendering include the following:

Apteryx Imaging

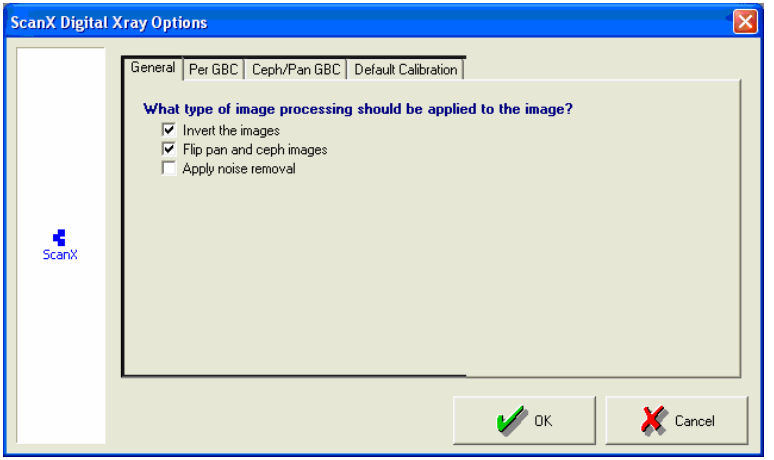
From the 'Tools' menu, select 'Imaging Device Extensions....'



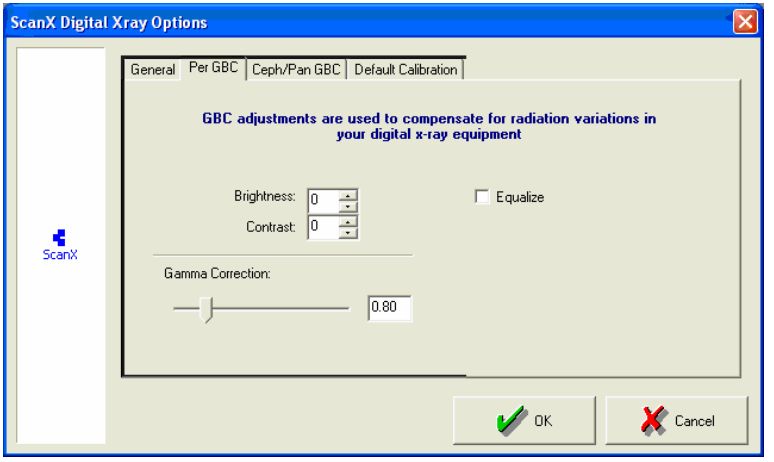
In the newly opened ‘Imaging Device Extensions’ window, select the ‘ScanX’ entry and press the 'Edit Options' button.



In the newly opened ‘ScanX Digital Xray Options’ window, clear the ‘Apply noise removal’ check box.



Select the 'Per GBC' tab. Set the ‘Brightness’ and ‘Contrast’ controls to zero and clear the 'Equalize' check-box.



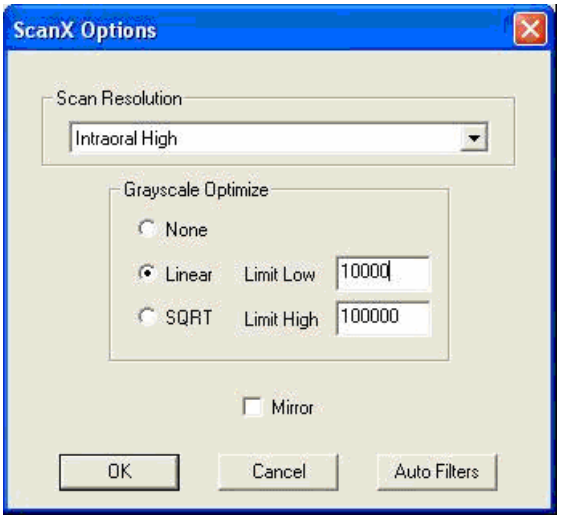
Repeat these changes for extra-oral images by selecting the 'Ceph/Pan GBC' tab, setting ‘Brightness’ and ‘Contrast’ to zero, and clearing the 'Equalize' check-box.

When the changes have been made for the ‘General’, ‘Per GBC’, and ‘Ceph/Pan GBC’ tabs, press the 'OK' button.

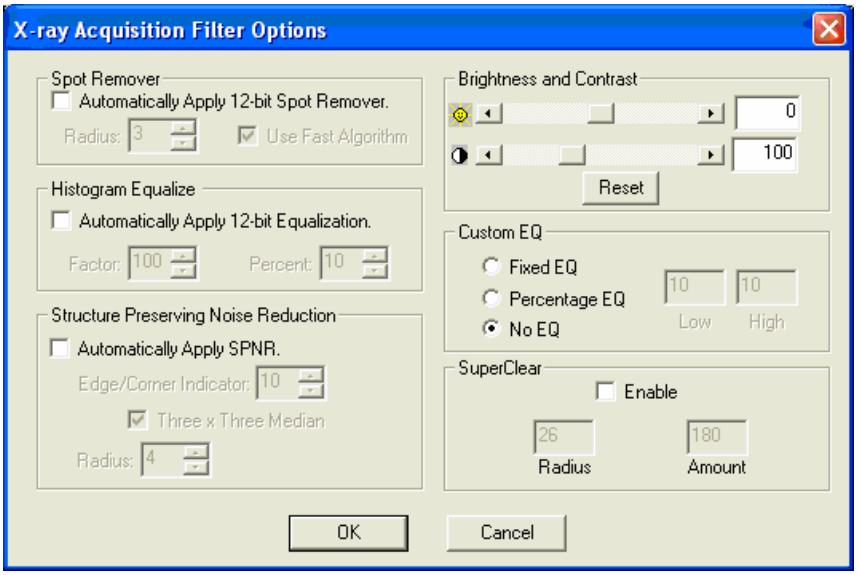
Dentrix

From the ‘Utilities’ menu, select ‘Preferences’, then ‘X-Ray’, ‘Air Techniques, Inc. – ScanX’, and ‘Options’.

In the newly opened ‘ScanX Options’ window and for all scan modes, set ‘Grayscale Optimize’ to ‘Linear’, ‘Limit Low’ to 10,000, ‘Limit High’ to 100,000, and then press the 'Auto Filters' button.



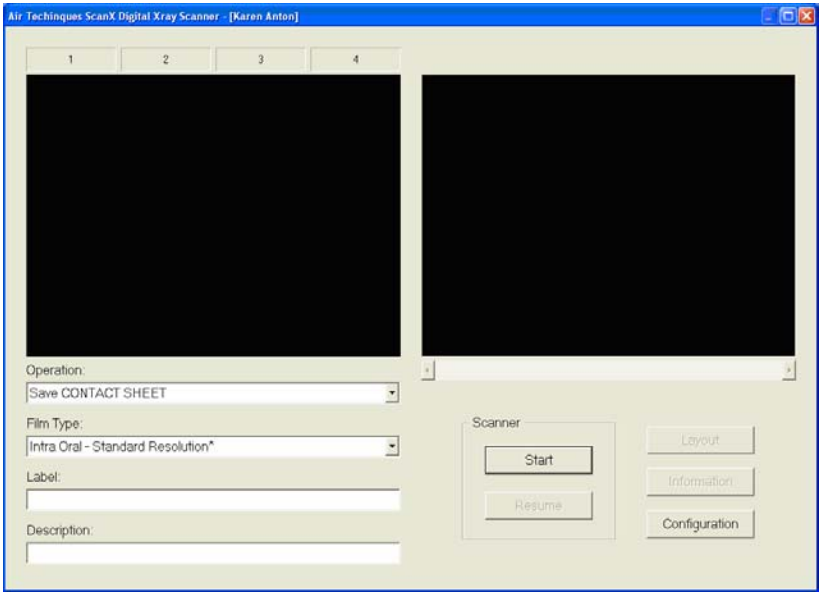
In the newly opened ‘X-Ray Acquisition Filter Options’ window, disable all filters, as shown below, and press the ‘OK’ button to return to the ‘ScanX Options’ window.



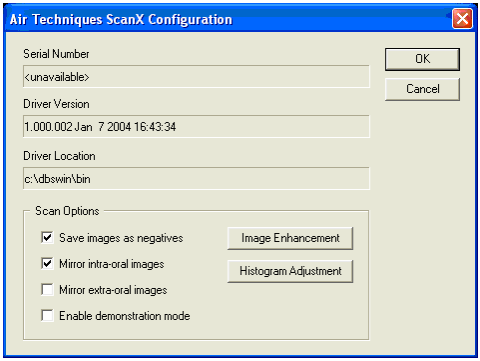
When the ‘Grayscale Optimize’ and ‘Auto Filters’ have been set for each of the ‘Scan Resolution’ entries, press the ‘OK’ button.

Image FX

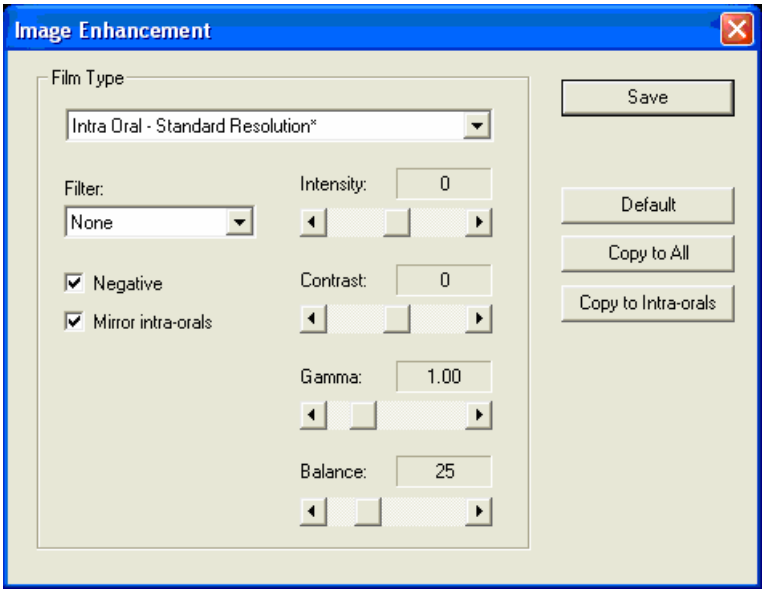
In the main ‘Air Techniques ScanX Digital Xray Scanner’ window, press the ‘Configuration’ button.



In the newly opened ‘Air Techniques ScanX Configuration’ window, press the ‘Image Enhancement’ button.



In the newly opened ‘Image Enhancement’ window and for each ‘Film Type’, make sure that ‘Filter’ is set to ‘None’.

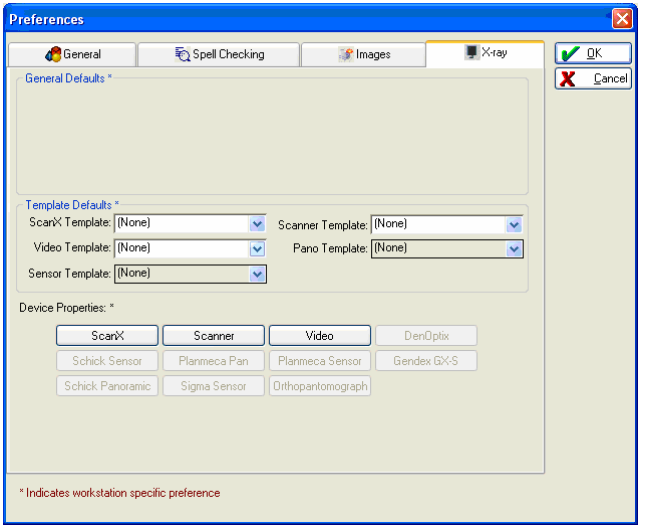


When the ‘Filter’ has been set for each of the ‘Film Type’ entries, press the ‘Save’ button.

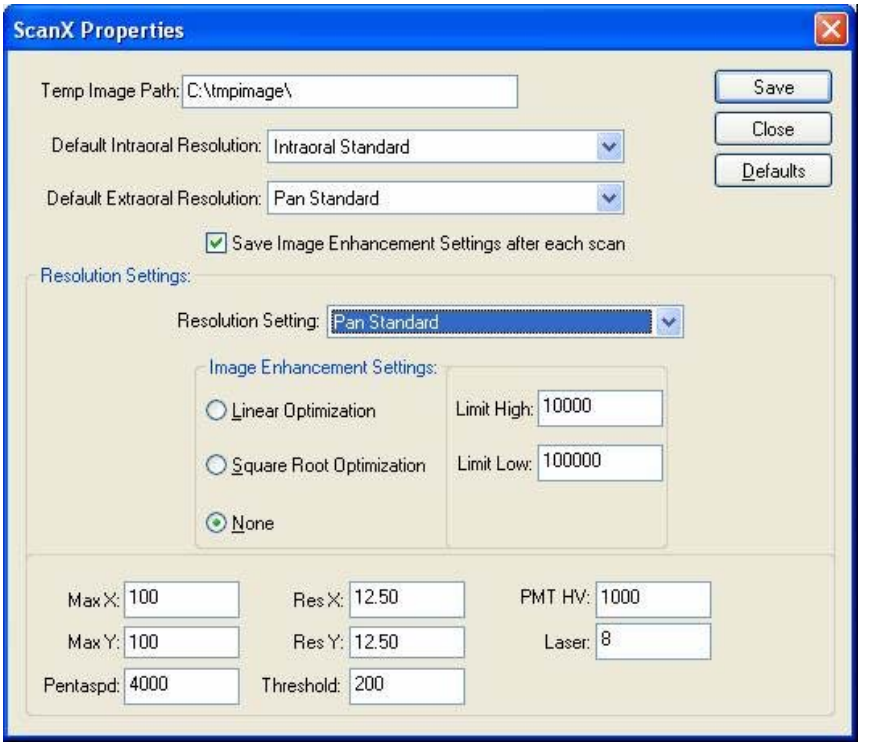
Patterson Imaging and EagleSoft

From the ‘File’ menu, select ‘General Preferences’.

In the newly opened ‘Preferences’ window, select the ‘X-Ray’ tab, and then press the ‘ScanX’ button.



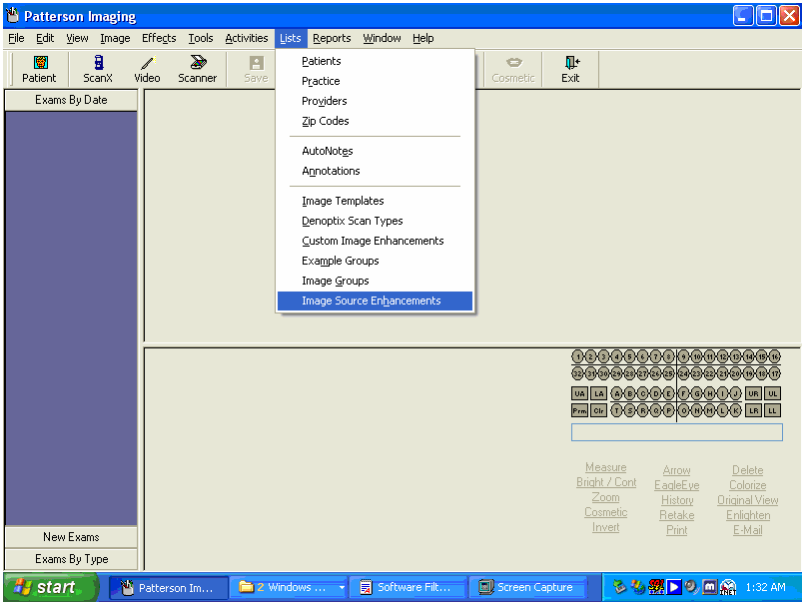
In the newly opened ‘ScanX Properties’ window and for each ‘Resolution Setting’, set the ‘Image Enhancement Settings’ to 'None'.



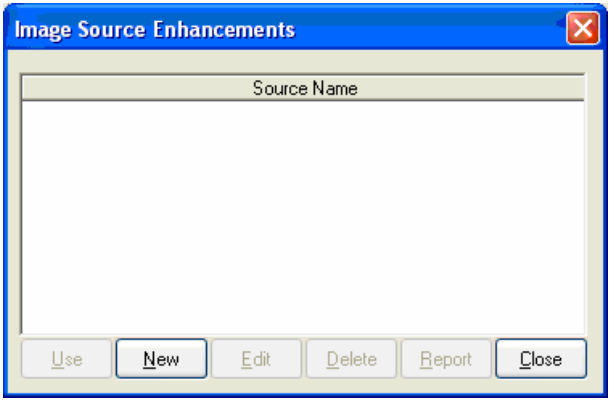
When the ‘Image Enhancement Settings’ has been set for each of the ‘Resolution Setting’ entries, press the ‘Save’ button.

Finally, ensure that there are not any Image Source Enhancements loaded for the ScanX as described below.

From the ‘Lists’ menu, select ‘Image Source Enhancements’



In the newly opened ‘Image Source Enhancements’ window, select each ‘Source Name’ entry in turn and press the ‘Delete’ button.



When the ‘Source Name’ list is empty, press the ‘Close’ button.

TigerView: Classic and Professional

IMPORTANT: **MAKE ALL REGISTRY CHANGES WHILE THE TIGERVIEW APPLICATION IS NOT RUNNING!**

NOTE: TigerView Classic cannot accept raw 16 bit files so Adaptive Image Processing will remain on.

TigerView Classic – Dental only

Turn the sharpening filters **OFF** for TigerView Classic by performing the following procedure:

1. Open the registry editor by going to “Start” and “Run”. Type in regedit.
2. Go to HKEY_LOCAL_MACHINE\SOFTWARE\Televere Systems\ScanX Module\1\IP Settings
3. Change the AS value from a 1 to a 0.

TigerView Professional – Dental, as well as Podiatry/Medical

NOTE: The AS value must be changed for intraoral BWX’s. and **both** the \Dental\Extra **and** \Dental\Intra keys.

Turn **OFF ALL** TigerView processing for TigerView Professional by performing the following procedure:

1. In the Acquire tab with ScanX as selected device, click the “Settings” button.
2. **UNCHECK** any of the options below that appear. (different versions of the software might have slightly different options.)
   - Film Mask
   - Auto Flip
   - Adaptive Image Proc.
   - Median Filter
   - Despeckle
   - Invert
   - Noise Reduction
3. Open the registry editor by going to “Start” and “Run”. Type in regedit.(TV must be closed)
4. Go to HKEY_LOCAL_MACHINE\SOFTWARE\Televere Systems\TigerView\6\Xray\ScanX…
   - Under the ScanX key you will find keys for each modality (Chiro, Dental, Podiatry, Veterinary). Open whichever key is applicable to the office site.
   - You will find a key called “Standard”, “Intra”, or “Extra” under which you will see the AS value.
   - Change the AS value to 0 to turn off sharpening filters.

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