

CAM▶X[®] Triton HD

**High Definition Intraoral Video Camera System
with optional**

**Fluorescence Occlusal Surface and
Approximal Caries Detection Aid Heads**

Part Numbers:
J2500, J2600, J2700 and J2900

Software Installation and Configuration Guide



General

The instructions provided are limited to the integration of the CamX Triton HD intraoral video camera with optional CamX Spectra and CamX Proxi caries detection heads. This device is all referred to as **CamX Triton** in this manual. All heads work with a common Triton handpiece using the TWAIN interface via various third party software.

This document does not provide detailed installation or operation instructions for the third party imaging management software. Therefore, the user must refer to the individual software manufacturer user documentation for all information specific to installing the application and its subsequent detailed operation.

Pre-Installation Check

Perform the following checks to verify that the computer system and associated monitor resolution meet or exceed the requirements needed to operate **CamX Triton**.

1. Refer to section 1 and make sure that the computer system being used has the requirements necessary to operate **CamX Triton**.
2. Check or set the monitor resolution using the procedure provided by section 2 for the Windows operating system in use.

Device Setup

Perform the following to setup and configure **CamX Triton** to operate as a TWAIN device. Install the VistaEasy software by selecting it from the DBSWIN setup program menu. This allows full device functional operation via the TWAIN interface and the third party imaging management application.

1. Refer to section 3 (procedure 3.1) for initial computer/device setup and install the VistaEasy application provided on the DBSWIN disk included with each device.

Note: VistaEasy must be installed before running the Driver Setup program from the start button. See section 3, VistaEasy installation.

2. Refer to section 3 (procedure 3.2) and run the Driver Setup (installed as part of VistaEasy) to setup all additional devices as necessary.
3. Refer to section 3 (procedure 3.3) and activate VistaEasy View (installed as part of VistaEasy). This program is required by various third party image applications to allow the acquisition of multiple images.
4. Refer to section 4 and perform the procedure for integration via the TWAIN interface with the authorized third party imaging management applications listed.

Disclaimers:

This document has been created and is provided by Air Techniques, Inc. and not the CamX Triton HD, CamX Spectra and CamX Proxi manufacturer, Duerr Dental. Duerr Dental makes no representation or warranty concerning the accuracy or completeness of the instructions, guides and other information contained herein. This document and the information contained herein should not be construed to be a part of the **CamX Triton** product.

The procedures provided in this document are limited to the specific revision or version of the third party imaging management software listed.

If problems occur due to changes of the application revision or version, then refer to the latest revision of this document located at www.airtechniques.com.

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	CamX Triton is USB video compliant and use the streaming video drivers that come with the Windows operating system. However, drivers provided on the DBSWIN disk included with each head must be installed to provide support for the TWAIN interface still image capture and for camera button freeze/save operation.	
	Important: The procedures provided in this document were successfully employed using the specific revision or version of the imaging management software as listed below. Refer to the latest version of this document located on our web site, www.airtechniques.com if revisions or versions change.	
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1. Minimum System Requirements

The minimum system requirements necessary to operate **CamX Triton** are listed below.

Hardware and software

The PC and its components (monitor, printer, etc.) must be set up according to IEC 60601-1 (EN60601-1) if they are operated within the vicinity of the patients (up to 1.5 m away from the patient examination area).

The safety requirements of the PC system may differ depending on the combination with other peripheral equipment (scanner, intraoral X-ray imaging system). Further information can be found in the user manuals or may be derived from regulations valid for the system installation location.

IMPORTANT: The following information merely states the requirements for the computer system. The function of Air Techniques hardware and software might still be impaired as a result of peculiarities of the customer's hardware and software landscape even if these system requirements are met. In these cases, Air Techniques assumes no liability for ensuring the trouble-free operation of the Air Techniques hardware/software. If additional systems are connected up to the PC, these system requirements may change. Take the system requirements of all connected systems into account.

Minimum Computer System Requirements

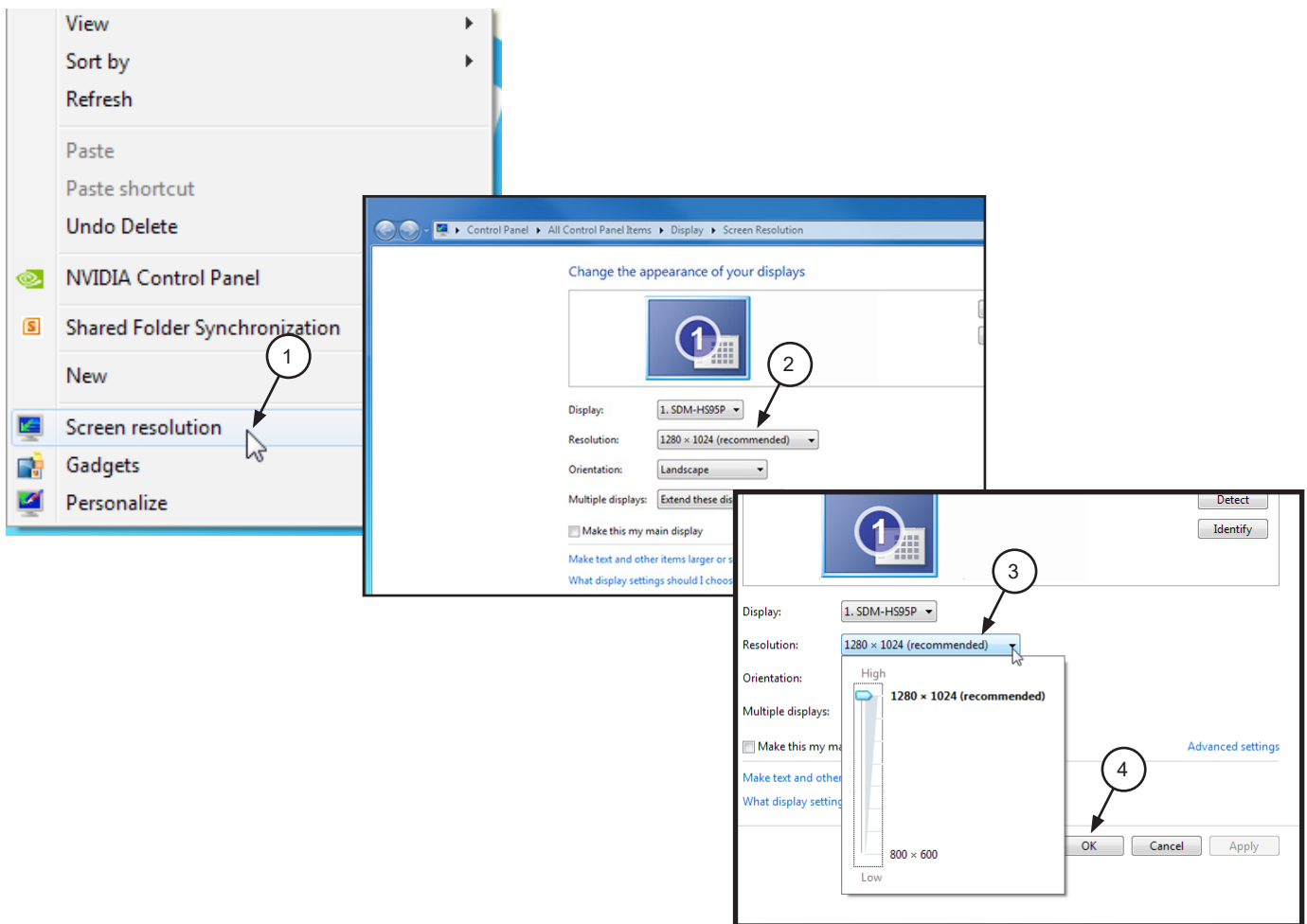
CPU:	≥ Intel Pentium IV compatible, 1.4 GHz
RAM:	≥ 4 GB
Operating system:	Microsoft Windows 7, 32-bit (from Home Premium) Microsoft Windows 7, 64-bit (from Home Premium) Microsoft Windows 8.1, 64-bit (not Windows RT) Microsoft Windows 10, 64-bit
Hard disk:	Workstation (without database) ≥50 GB Memory requirements of the database depend on the number of images taken at the office. (Approximately 1 MB per image.)
Drive:	DVD-ROM
Graphics board:	Resolution ≥ 1280 X 1024 Depth of color 32-bit, 16.7 million colors
Diagnostic monitor:	In accordance with DIN V 6868-157, room class 5 or 6 (according to requirement) We recommend the use of the following diagnostic monitors (fulfill DIN V 6868-157, room class 5 and 6): - EIZO RX340 - BARCO Nio Color 2MP HE (MDNC-2221 HE)

2. Monitor Resolution Settings:

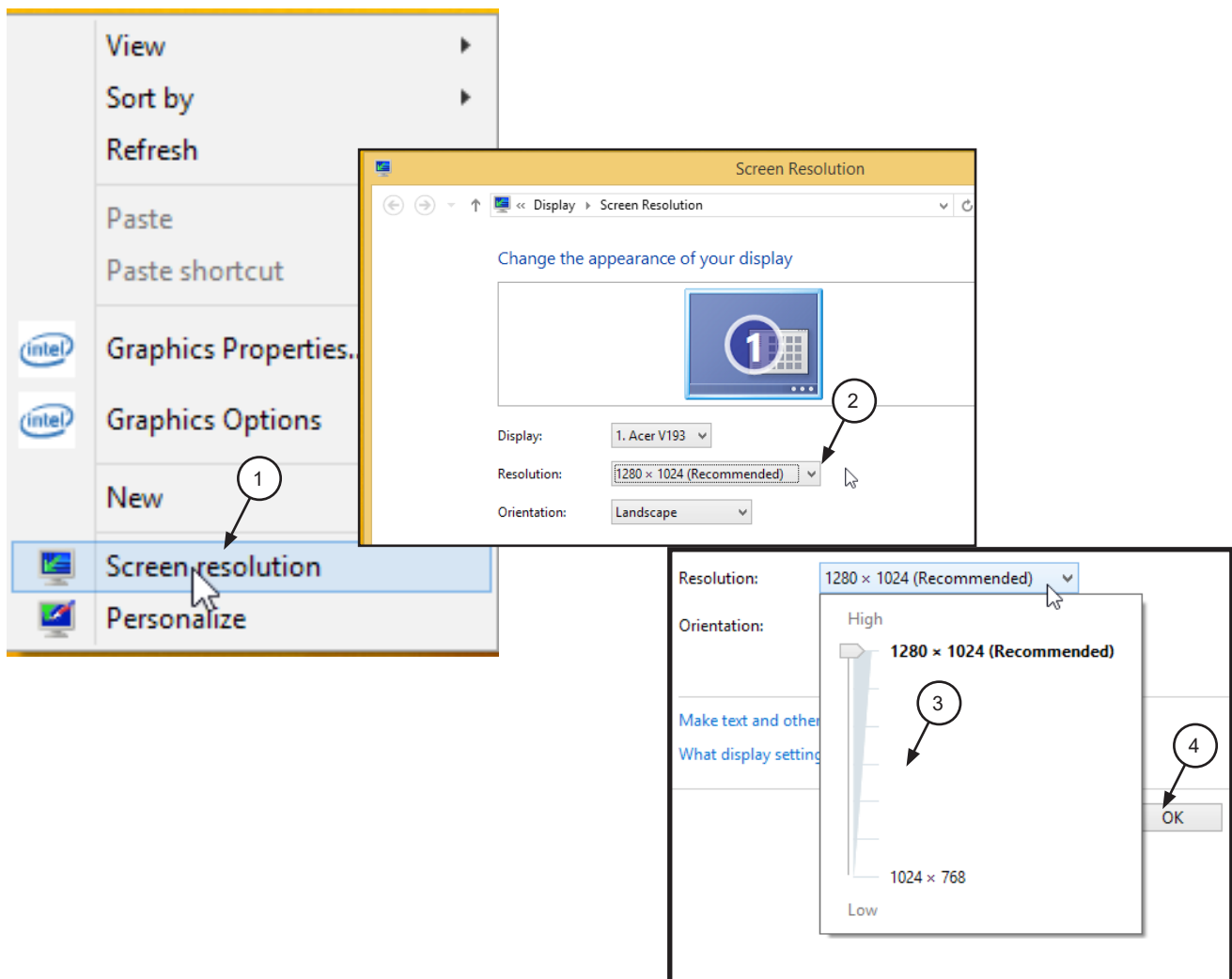
The following section provides guidelines to set the resolution of the monitor to work with Windows operating systems and intraoral video cameras manufactured by Air Techniques. This allows the monitor to display the highest quality image produced by the device. Make sure that the monitor is correctly set to display at least 1280 X 1024 in the corresponding Windows operating system by performing the procedure below for the specific operating system used. Refer to the Microsoft Windows documentation as necessary.

2.1. Perform the following to check or set the monitor resolution in computers using Windows 7.

1. Right click the desktop and click the **Screen resolution** option.
2. Select the **Resolution** drop down field from the **Screen Resolution** window.
3. Using the slider control, set to display at least 1280 X 1024. The maximum setting is recommended.
4. Click the **OK** tab to complete the selection.



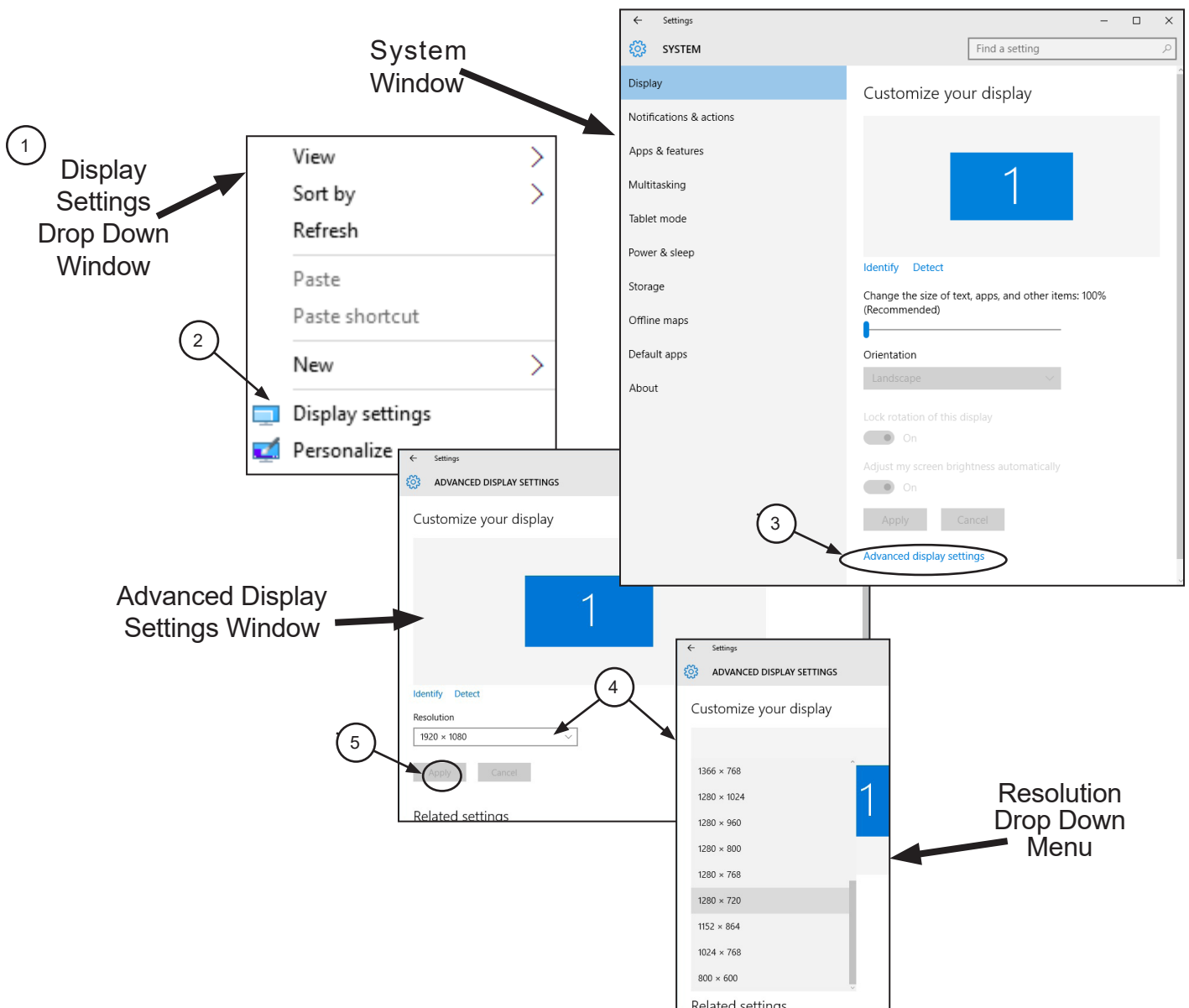
- 2.2. Perform the following to check or set the monitor resolution in computers using Windows 8.1.
1. Right click the desktop and click the **Screen resolution** option.
 2. Select the **Resolution** drop down field from the **Screen Resolution** window.
 3. Using the slider control, set to display at least 1280 X 1024. The maximum setting is recommended.
 4. Click the **OK** tab to complete the selection.



MONITOR RESOLUTION SETTING - WINDOWS 10

2.3. Perform the following to check or set the monitor resolution in computers using Windows 10 Professional or Enterprise.

1. Right click the Desktop and observe that the **Settings** pop up window opens.
2. Select **Display settings** to open the **System** window.
3. Select the **Advanced display settings** located at the bottom of the window to open the **Advanced Display Settings** window.
4. Using the resolution drop down menu, set to display at least 1280 X 1024. The maximum setting is recommended.
5. Click **APPLY** to accept setting and return to the Desktop window.



3. **VistaEasy Installation.** The **CamX Triton** must be identified and setup on the facility computer before the device will operate properly. This is accomplished by installing the VistaEasy program provided with the device on the DBSWIN disk. In addition to providing support for the TWAIN interface still image capture feature, VistaEasy also installs the Driver Setup program which provides the necessary device drivers for camera button freeze/save operation.

VistaEasy is installed the first time from the supplied disk. The program allows the setup of multiple devices. When the CamX Triton HD camera and optional heads are purchased together, they can be setup on the computer together. Once installed, the Driver Setup program is run from the Windows Start button whenever additional devices are installed.

Important: Do not turn or twist the **CamX Triton** head when connecting to the Triton handpiece. Each head mates straight on with the handpiece connector.

It is recommended to connect the device handpiece prior to setup. This is done by aligning the connector key of the CamX head with the handpiece mating connector. Insert the CamX head straight into handpiece connector until secure in place.

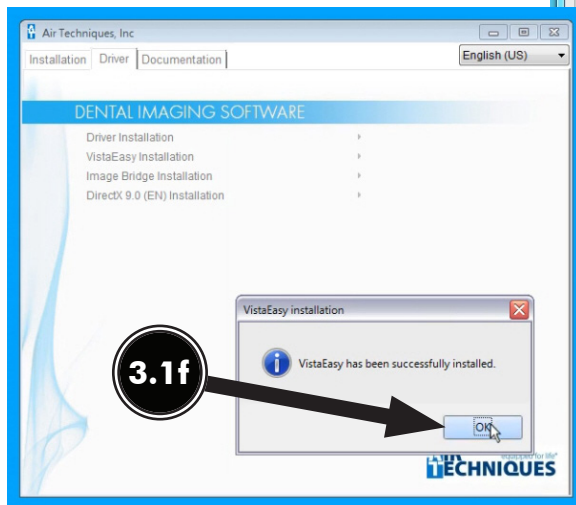
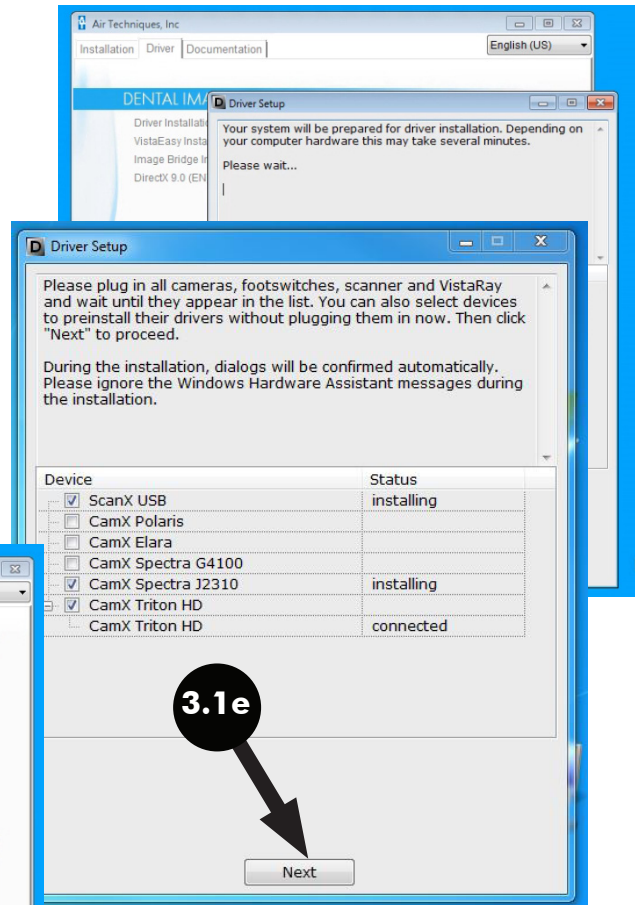
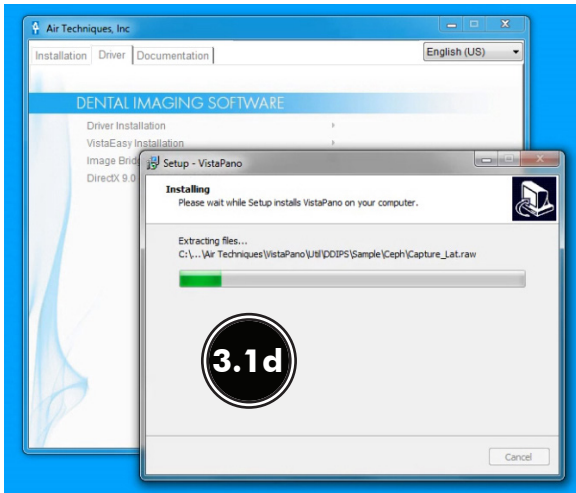
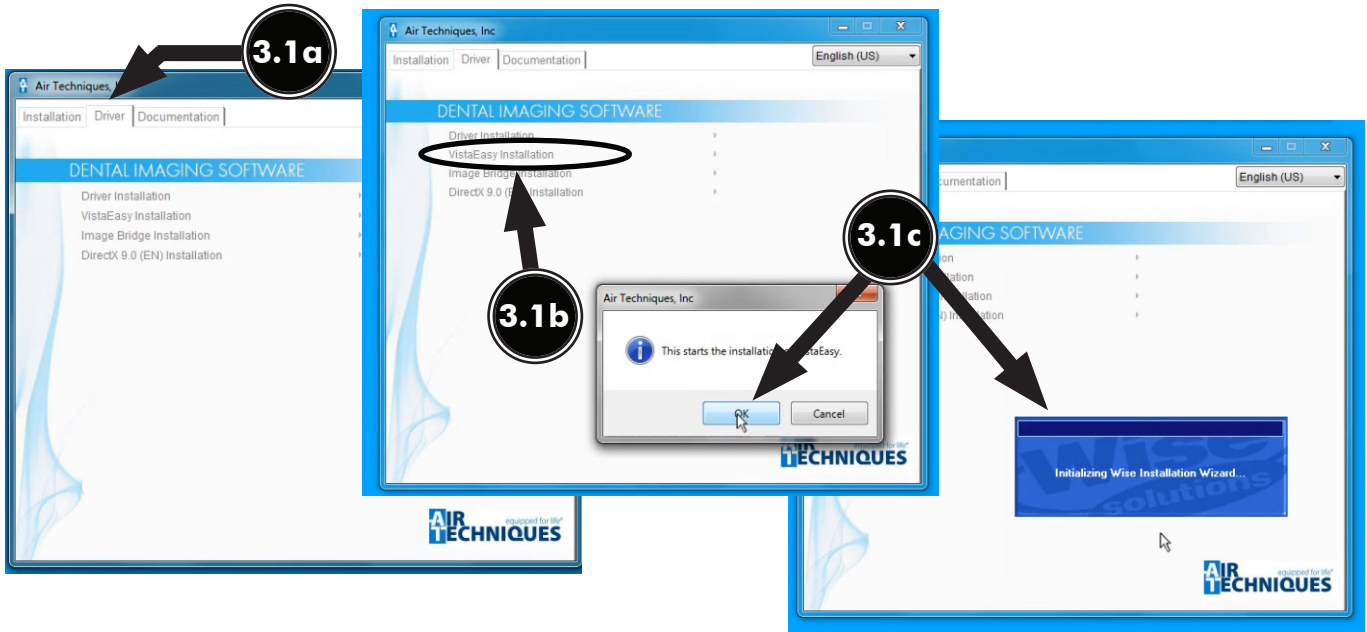
Note: The DBSWIN disks supplied with CamX are identical and one can be used to set up all devices.

A message may appear upon initial connection of the **CamX Triton** stating: "Device driver software was not successfully installed". Ignore this message and continue with the VistaEasy installation.

- 3.1 **VistaEasy Installation from Disk.** Make sure the CamX head or heads being setup are connected and install VistaEasy from the DBSWIN disk. Normally, this program runs automatically when the disk is inserted into the drive for the first time. If not, run the setup program located in the root directory of the disk (typically **D:\CD_Start.exe**). Once running, observe that the Setup window displays and perform the following steps.

Note: Only installation of VistaEasy is necessary to set up the **CamX Triton**.

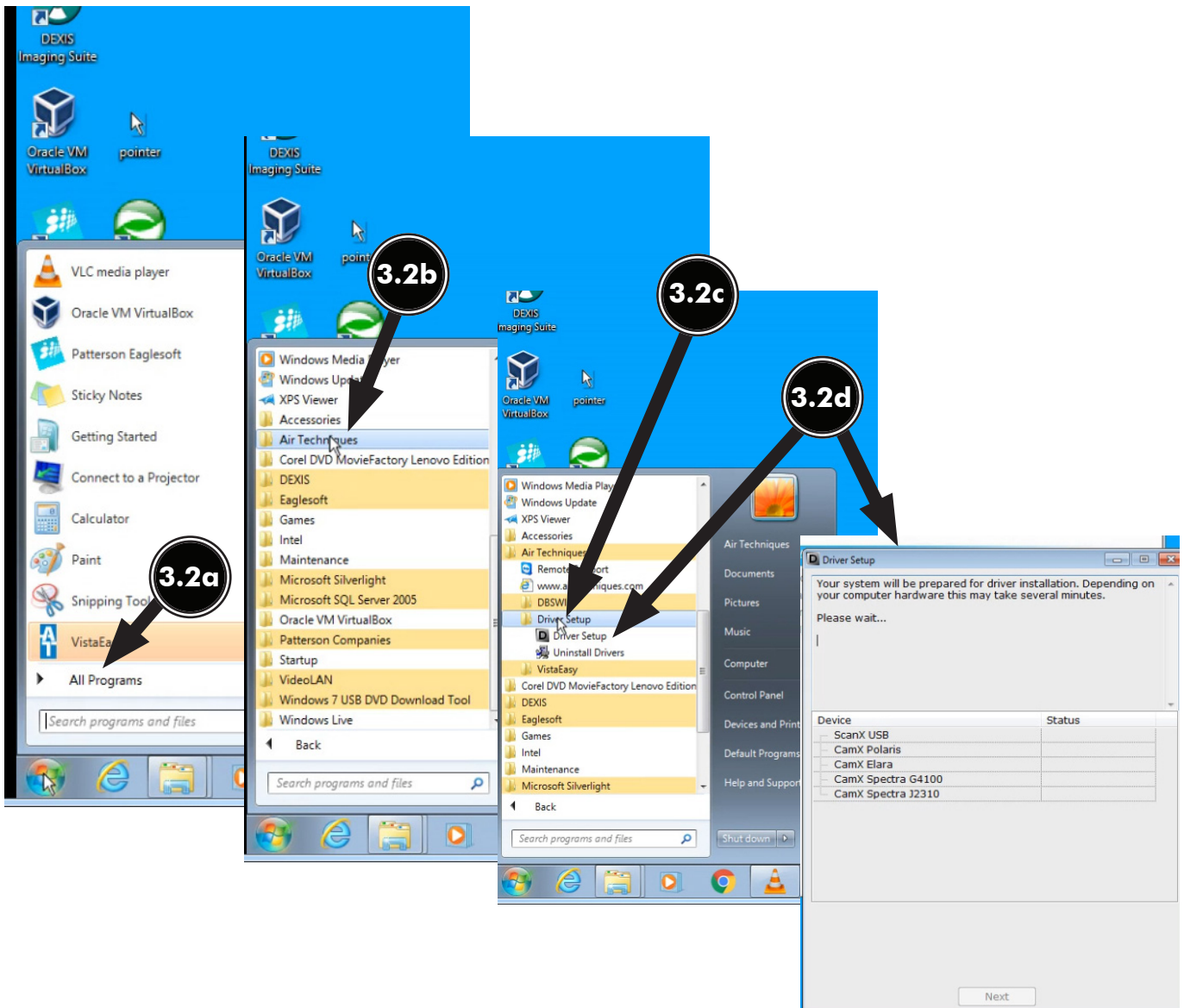
- a. Select the Driver Tab and observe that installation software options appear.
- b. Select the VistaEasy installation option from the menu and observe that the VistaEasy installation pop up window opens.
- c. Click **OK**. Notice that the installation wizard message appears and observe that additional windows appear questioning device setup options. Accept the defaults and click **Next** and then **Install** to advance the installation.
- d. Observe that the installation runs automatically showing various completion status windows such as the one shown. Please wait as the installation progresses.
- e. At this point, the Driver Setup windows opens. This is where the drivers for each connected device are installed making it able to operate properly. Click **Next** when the setup is completed for all connected devices.
- f. Observe that a pop up window opens stating a successful installation. Click **OK**.



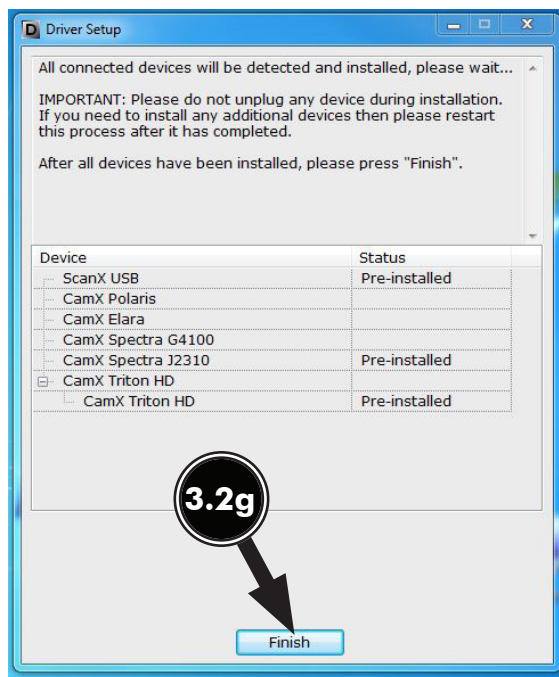
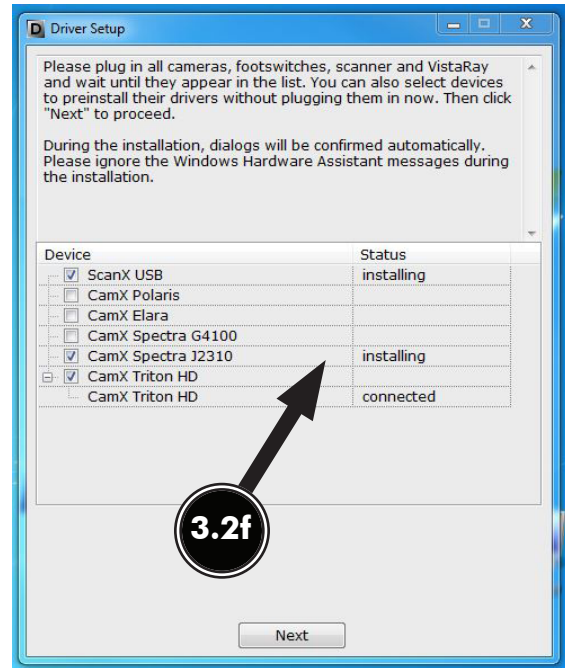
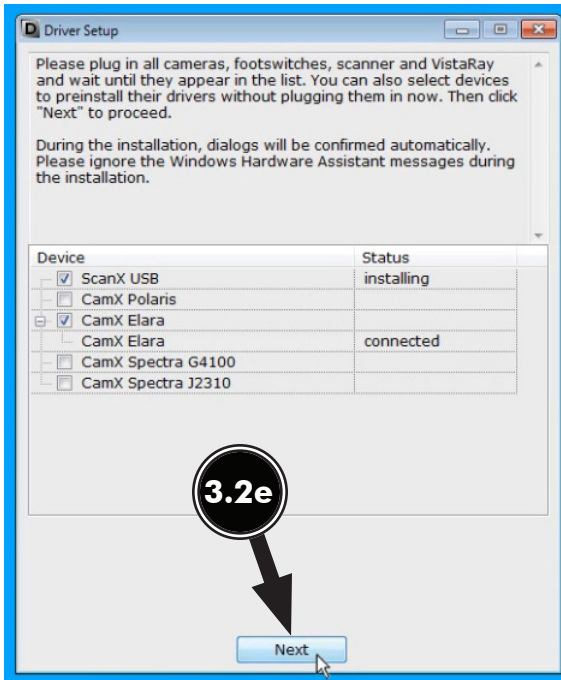
Note: VistaEasy must be installed before running the Driver Setup program from the start button. See section 3, VistaEasy installation.

3.2 Running the Driver Setup program from the Windows Start button. This section only applies to additional devices that need to be set up because they were not set up during the VistaEasy install process from the DBSWIN disk. Run Driver Setup from the Start button by performing the following steps.

- a. Click the Windows Start button and select All Programs from the menu.
- b. Select the Air Techniques listing and observe that the Driver Setup option appears.
- c. Click Driver Setup to expand the option. Notice that the Driver Setup and Uninstall Driver options appear.
- d. Click Driver Setup option. Observe that the Driver Setup window opens and the program automatically searches for the attached devices.



- e. At this point, the Driver Setup window changes to show identified device listing. Click **Next** to advance the installation.
- f. Observe that the Driver Setup window changes to show the device installing. Wait as the installation progresses.
- g. Finally, the Driver Setup window changes again to show that the device was successfully installed. Click **Finish**.



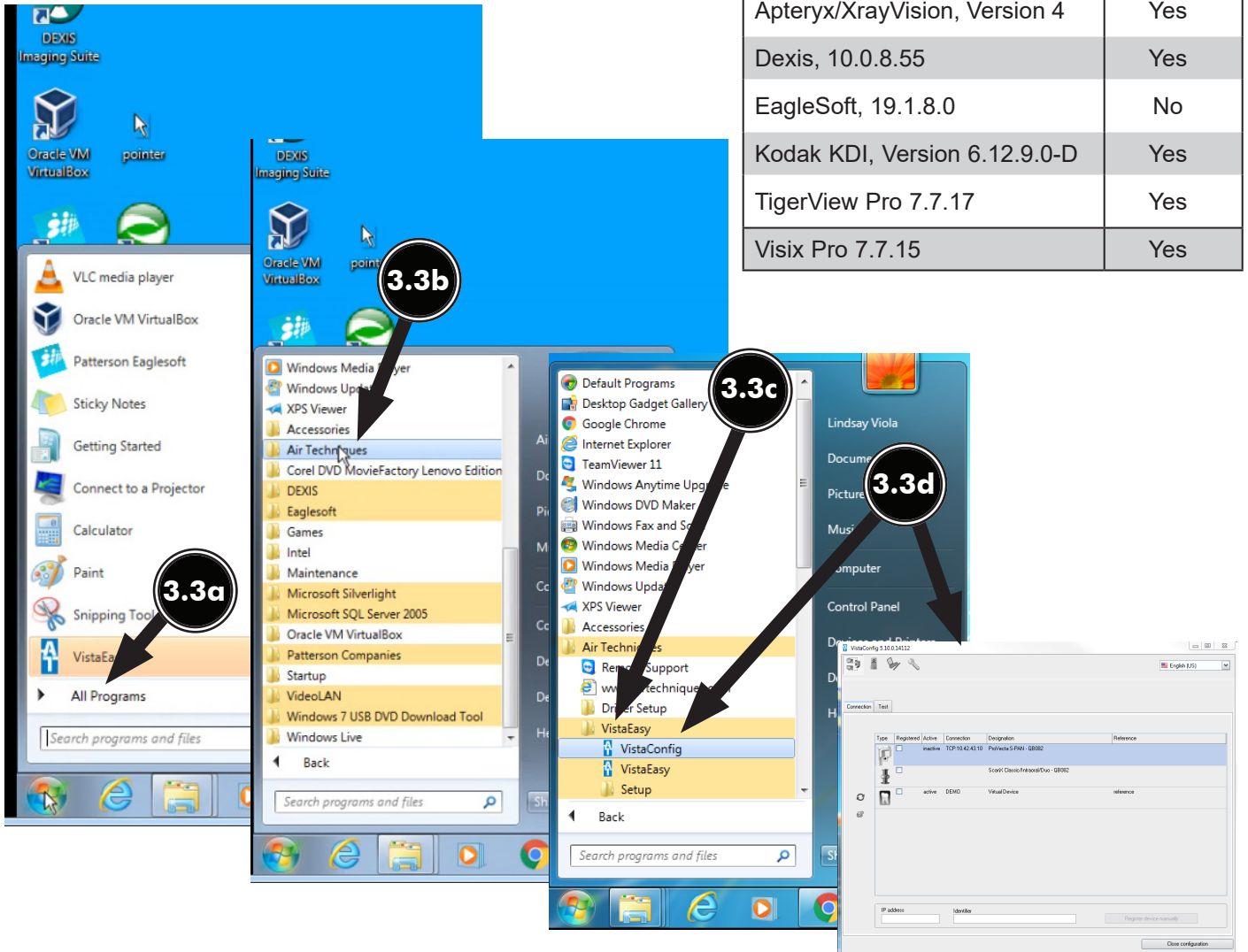
Note: VistaEasy must be installed before activating VistaEasy View program from the start button. See section 3, VistaEasy installation.

3.3 Activating VistaEasy View program from the Windows Start button. VistaEasy View is required by various third party image applications listed below to allow the acquisition of multiple images. Activate VistaEasy View from the Start button by performing the following steps.

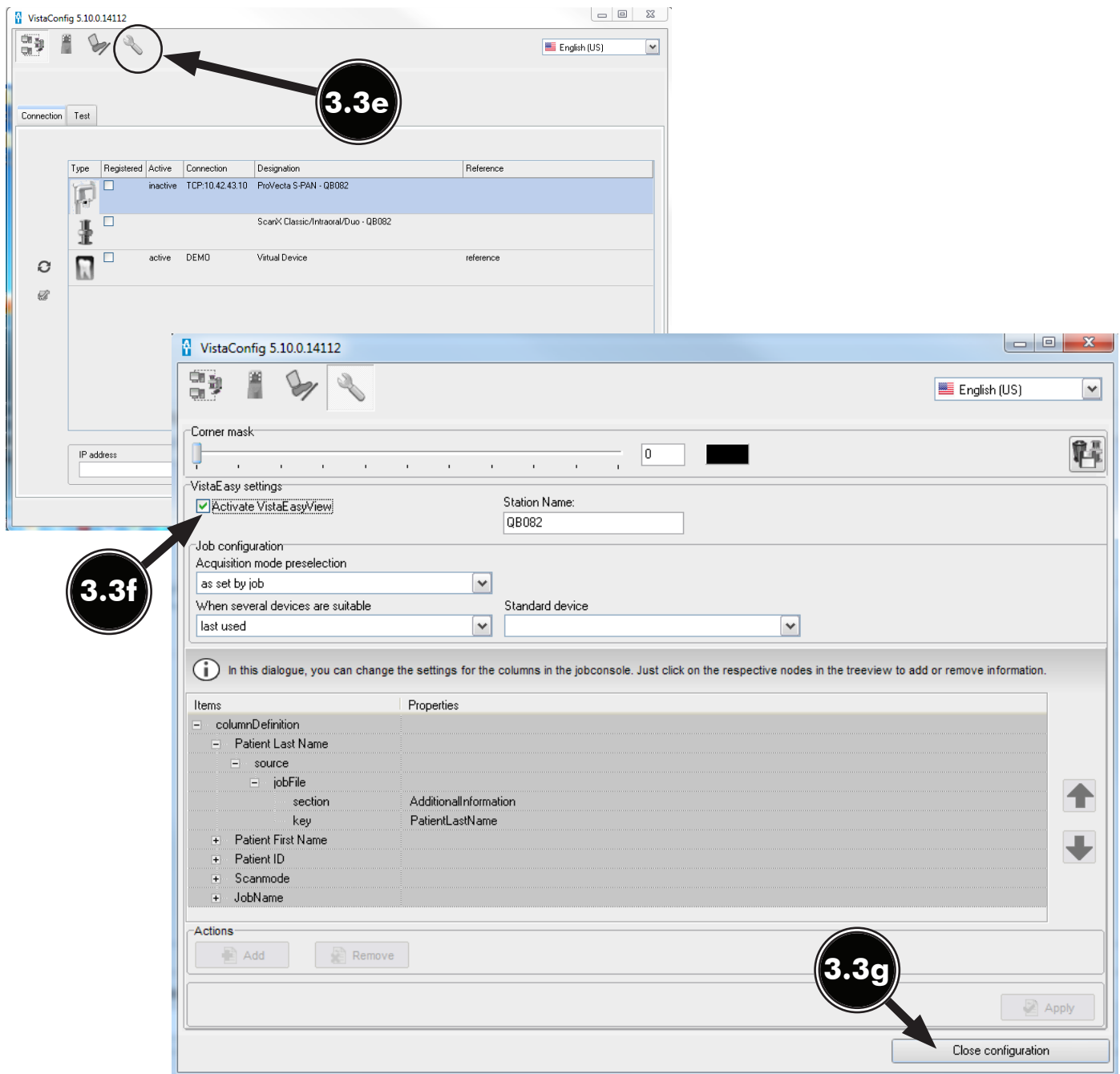
- a. Click the Windows Start button and select All Programs from the menu.
- b. Select the Air Techniques listing and observe that the VistaEasy option appears.
- c. Click VistaEasy to expand the option. Notice that the VistaEasy and VistaConfig options appear.
- d. Click the VistaConfig option and observe that the VistaConfig window opens.

Applications Requiring VistaEasy View

Application	VistaEasy View
Apteryx/XrayVision, Version 4	Yes
Dexis, 10.0.8.55	Yes
EagleSoft, 19.1.8.0	No
Kodak KDI, Version 6.12.9.0-D	Yes
TigerView Pro 7.7.17	Yes
Visix Pro 7.7.15	Yes



- e. Click the Wrench Icon button and observe that the VistaEasy changes showing VistaEasy setting options.
- f. Select Activate VistaEasy View option and make sure that a check appears in the check box.
- g. Click Close configuration to return to the desktop.



4.1. Apteryx Setup for Intraoral Cameras.

The following provides setup instructions for **Apteryx** imaging software, XrayVision Version 4, allows **CamX Triton** to acquire images via the TWAIN interface.

4.1a. Make sure that the device drivers have been installed. Refer to the Device Setup, section 3, as necessary.

Note: Apteryx requires VistaEasy View to acquire images.

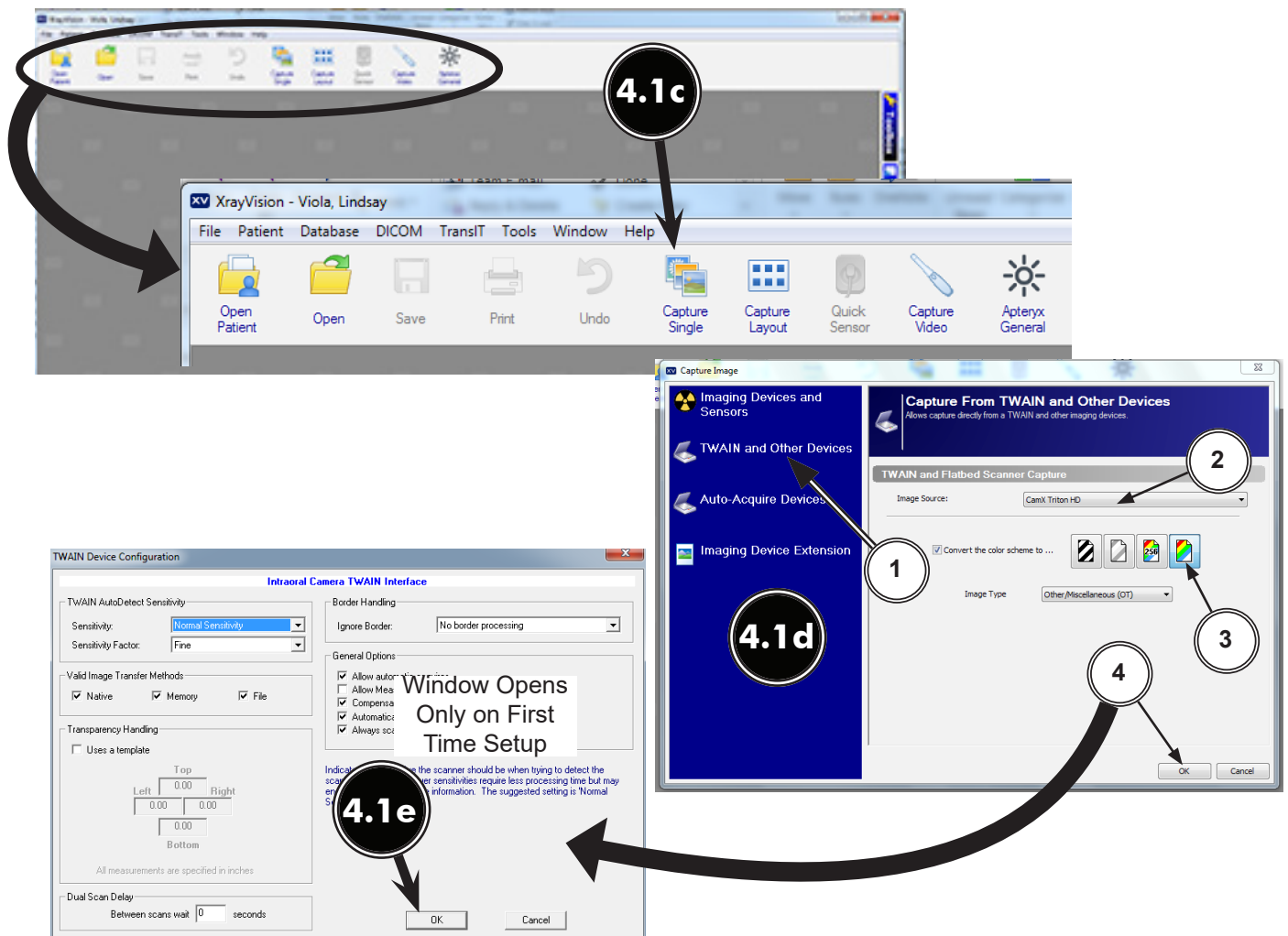
4.1b. Activate VistaEasy View by performing procedure 3.3 located in section 3. Start **Apteryx** and observe that the main window displays. Click the **Open Patient** tab and select a patient.

4.1c. Select the **Capture Single Image** icon located on the top tool bar and observe that the **Capture Image** window opens.

4.1d. Perform the following for TWAIN acquisition for all CamX heads.

1. Choose the **TWAIN and Other Devices** tab.
2. Select **CamX Triton HD** from the drop down menu.
3. Select full color image tab.
4. Choose **OK** tab.

4.1e. Observe that the **TWAIN Device Configuration** window may open the first time TWAIN is being setup. Choose the **OK** tab.



4.2. Dexis 10 Setup for Intraoral Cameras. This software allows all **CamX Triton** heads to acquire images via the TWAIN interface.

4.2a. Make sure that the device drivers have been installed. Refer to the Device Setup, section 3, as necessary.

Note: Dexis 10 requires VistaEasy View to acquire images.

4.2b. Activate VistaEasy View by performing procedure 3.3 located in section 3.

4.2c. From the **DEXIS Administration** window, select the **Tool Icon** from the main tool bar and observe that the **Preferences** window opens.

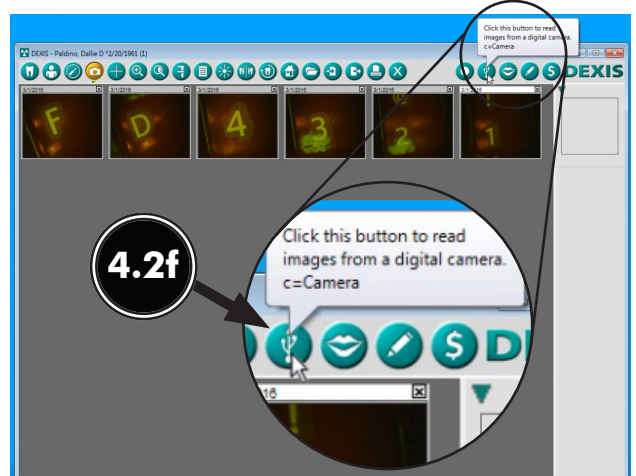
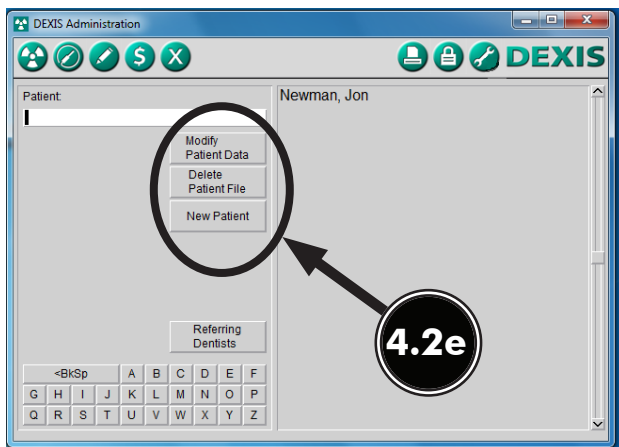
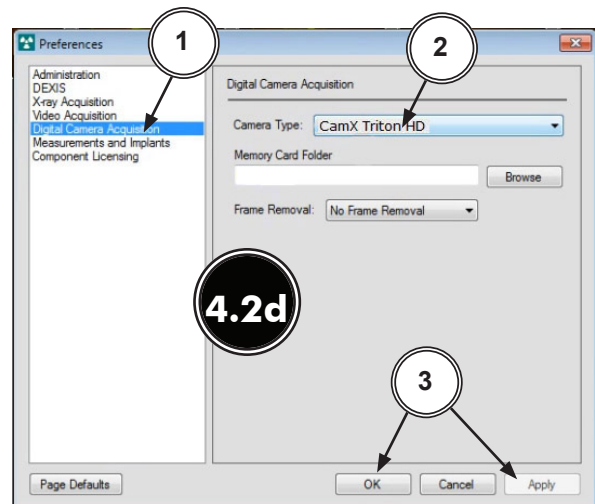
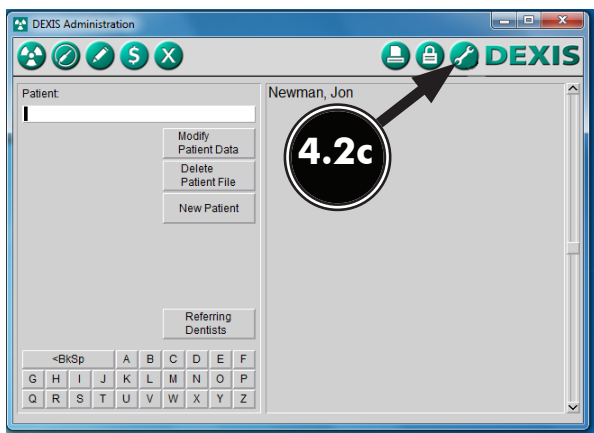
4.2d. Perform the following for TWAIN acquisition for all CamX heads.

1. Select **Digital Camera Acquisition** option from the list on the left.
2. Select **CamX Triton HD** from the drop down menu on the right.
3. Click the **Apply** and **OK** tabs to return to the **DEXIS Administration** window.

4.2e. Select a patient and observe that the **Main Imaging** window opens.

4.2f. Choose the **TWAIN** acquisition mode icon.

Operate **Dexis 10** normally to acquire an image via the **CamX Triton** head. Refer to the corresponding Operator's Manual as necessary.



Note: Eaglesoft requires VistaEasy View to acquire images.

4.3. Eaglesoft19 Setup for Intraoral Cameras. This software allows all **CamX Triton** heads to acquire images via the TWAIN interface.

Perform steps 4.3a through 4.3d to setup the camera to operate in the TWAIN acquisition mode. Steps 4.3e through 4.3g shows the typical TWAIN procedure to acquire an image via all **CamX Triton** heads. Refer to the Installation and Operating Instructions manual as necessary.

4.3a. Refer to the Device Setup, section 3, and install device drivers. Activate VistaEasy View by performing procedure 3.3 located in section 3.

4.3b. From the main program menu, select **File** to open a drop down list of operational functions.

4.3c. Select **Preferences** from the list, which opens a new window as shown. Select the following.

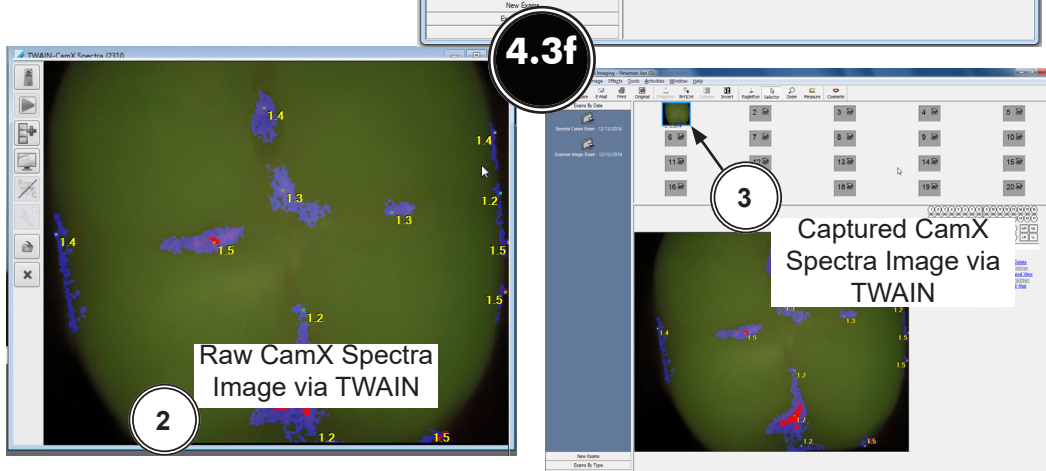
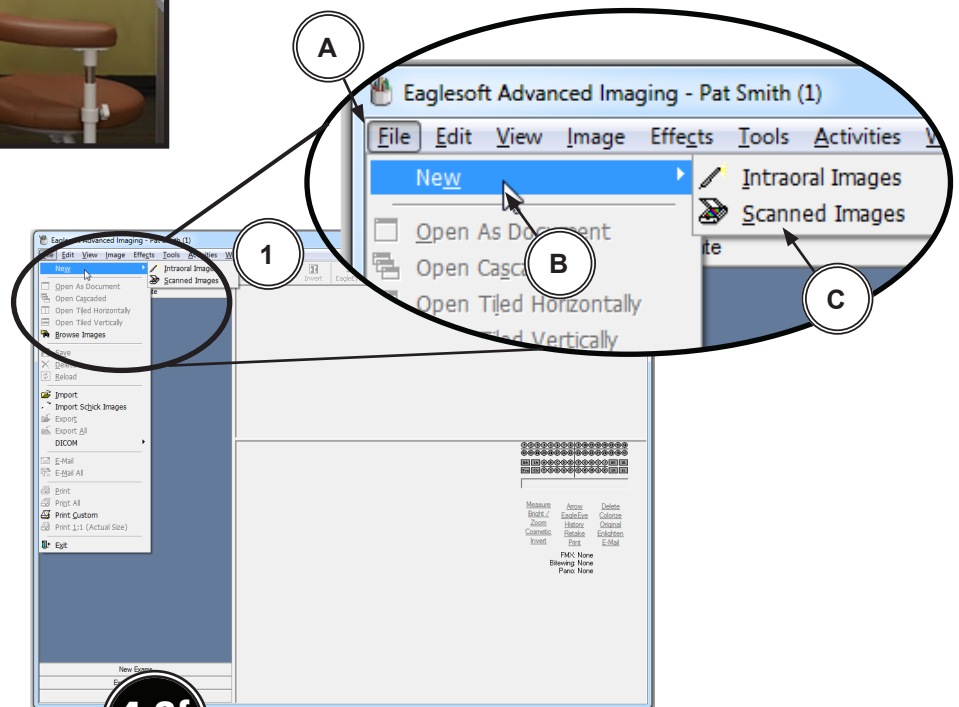
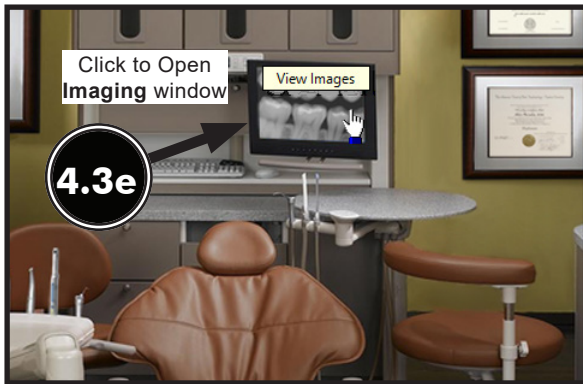
1. Select **X-ray** tab
2. Check **“use scanner default interface”** check box.
3. Press **Scanner** button

4.3d. Observe that the **Select Source** pop up window opens and perform the following for all CamX heads.

1. Highlight **CamX Triton HD** from the source list.
2. Click the **Select** button to select the TWAIN option as the source module and return to the **Preferences** window.
3. Select **OK** in the upper right hand corner to return to the main program window. The application is now set to acquire images via TWAIN using all the **CamX Triton** heads.



- 4.3e.** From the **Clinical** window, open the **Imaging** window by selecting the X-ray picture shown on the **Clinical** window.
- 4.3f.** Acquire an image via all **CamX Triton** heads in the TWAIN acquisition mode as follows.
1. From the main program menu, select **File (A)**, **New (B)** and **Scanned Images (C)**.
 2. Observe the raw video image is shown in a pop up window screen
 3. Observe the captured CamX image via TWAIN on screen.



4.4. KODAK Dental Imaging (KDI) Software Setup for Intraoral Cameras This software allows all **CamX Triton** heads to acquire images via the TWAIN interface. The following steps sets up KDI for multiple image acquisitions:

4.4a. Make sure that the device drivers have been installed. Refer to the Device Setup, section 3, as necessary.

Note: Kodak requires VistaEasy View to acquire images.

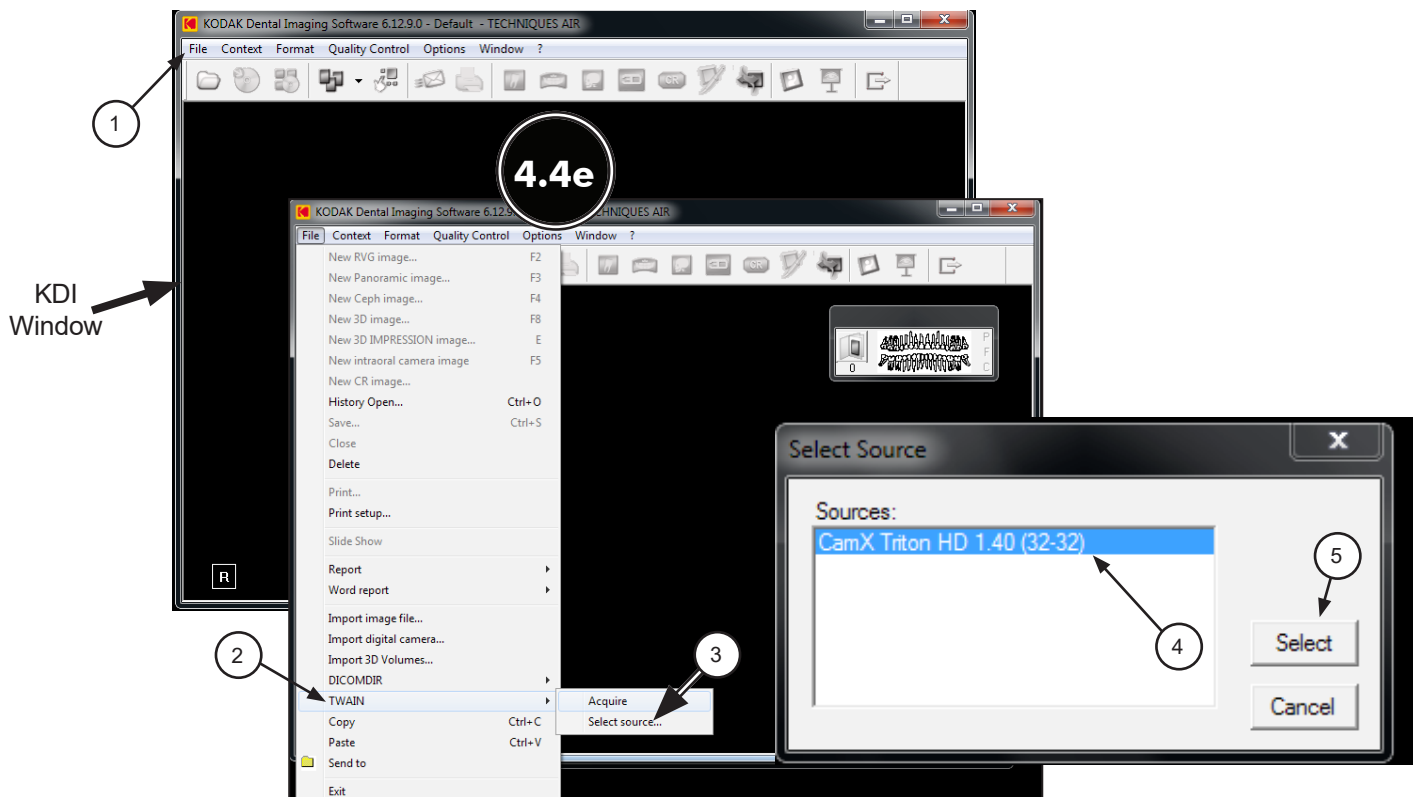
4.4b. Activate VistaEasy View by performing procedure 3.3 located in section 3.

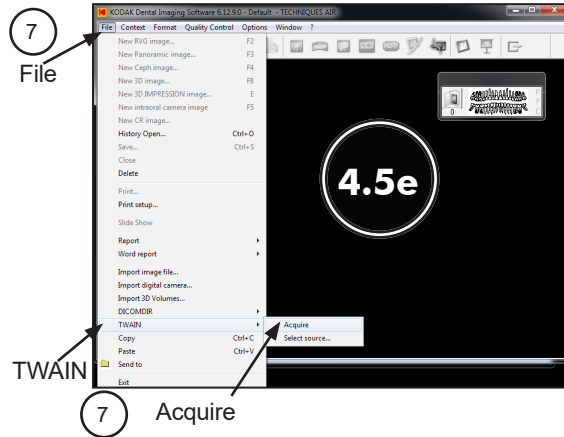
4.4c. Start the application and observe that the **KDI** window displays.

4.4d. Perform the steps of paragraph 4.4e when running **KDI** for the first time. Otherwise, proceed to paragraph 4.4f to acquire images via the installed intraoral camera.

4.4e. Setup all **CamX Triton** heads to work with **KDI** for the first time by performing the following.

1. Select **File** to open a drop down list of operational functions.
2. Select **Twain** from the menu list
3. Choose **Select source...** and observe that the **Select Source** window opens.
4. Highlight **CamX Triton HD 1.4 (32-32)** from the source list.
5. Click the **Select** button to set it as the source for the capture device.
6. Return to the **KDI** window.
7. Select **File/Twain/Acquire** to display the **CamX Triton HD 1.4 (32-32)** Select Source window.





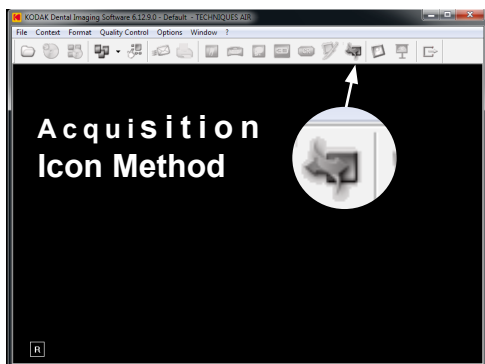
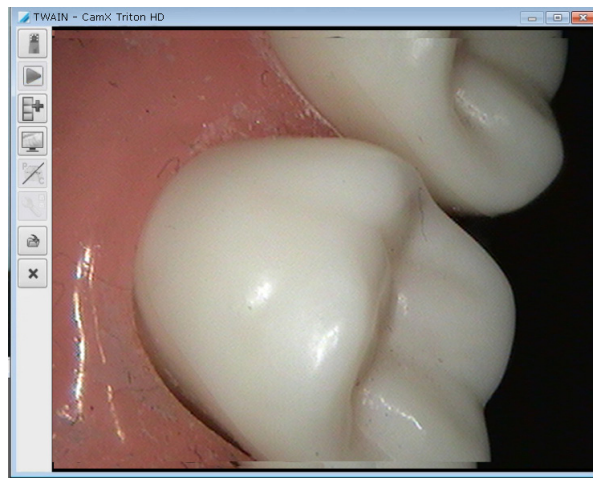
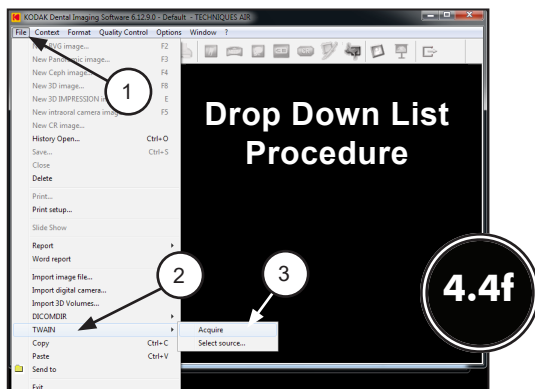
4.4f . Refer to the corresponding Operator’s Manual as necessary. **KDI** acquires images by using either the drop down list procedure to bring up the acquisition screen or using the **Acquisition Icon**.

Drop Down List Procedure

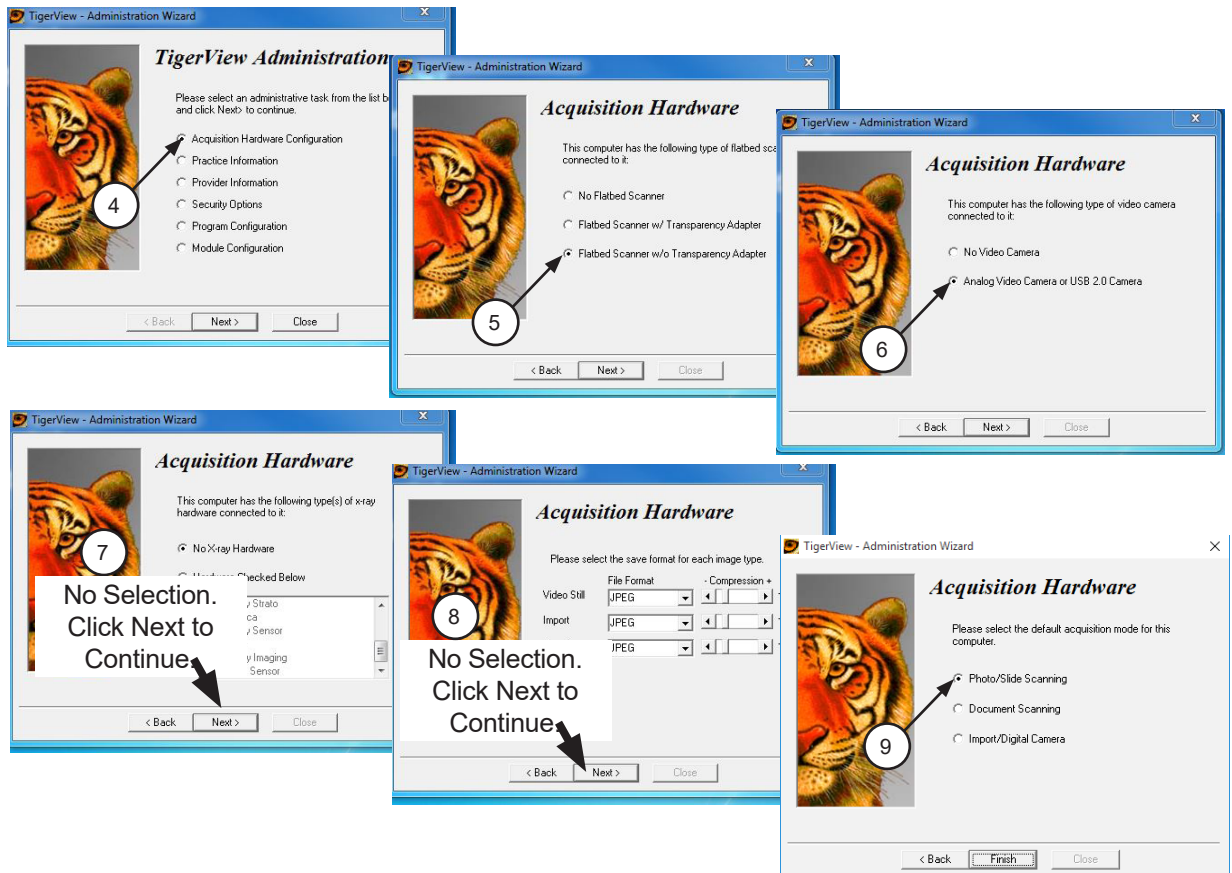
1. Select **File** to open a drop down list of operational functions.
2. Select **Twain** from the menu list
3. Choose **Acquire** and observe that images appear on the acquisition screen once the connected **CamX Triton** device head is turned on.

Acquisition Icon method

Click the **Acquisition Icon** located on the top tab and observe that images appear on the acquisition screen once the connected Triton device is turned on.



- 4.5. TigerView Pro Setup for Intraoral Cameras.** This software allows all **CamX Triton** heads to acquire images via the TWAIN interface.
- 4.5a.** Make sure that the device drivers have been installed. Refer to the Device Setup, section 3, as necessary.
- Note:** **TigerView Pro** requires VistaEasy View to acquire images.
- 4.5b.** Activate VistaEasy View by performing procedure 3.3 located in section 3.
- 4.5c.** Perform the steps of paragraph 4.5d when running **TigerView Pro** for the first time. Otherwise, proceed to paragraph 4.5e to acquire images via the installed intraoral camera.
- 4.5d.** Setup cameras to work with **TigerView Pro** for the first time by performing the following.
1. Click the Windows Start button and select All Programs from the menu.
 2. Select the **TigerView** listing and observe that the **TigerView Administration** option appears.
 3. Click **TigerView Administration**, which opens the **TigerView Administration** window.
 4. Choose **Acquisition Hardware Configuration** and click Next.
 5. Select **Flatbed Scanner w/o Transparency Adapter** and click Next
 6. Select **Analog Video Camera or USB 2.0 Camera** and click Next.
 7. Observe that a new window opens. Make no selections and click Next to continue.
 8. No selections are needed in the new window that opens. Just click Next to continue.
 9. Select **Photo/Slide Sharing** and click Finish to complete the setup.
 10. Proceed to paragraph 4.6e to acquire images via the installed intraoral camera.



4.5e. Start the application and observe that the **TigerView Pro Patient** window displays.

4.5f. With a patient selected, click the **Acquire** tab and observe that the Acquisition window opens.

4.5g. Make sure that **CamX Triton HD** is selected for TWAIN Devices and **Custom** from Type, Size and Resolution drop down lists. Switch to the TWAIN acquisition window by clicking the **Start** button.

4.5h. Observe that images appear on the acquisition screen once the connected **CamX Triton** head is turned on. Refer to the camera manual as necessary and use the connected device to acquire images.

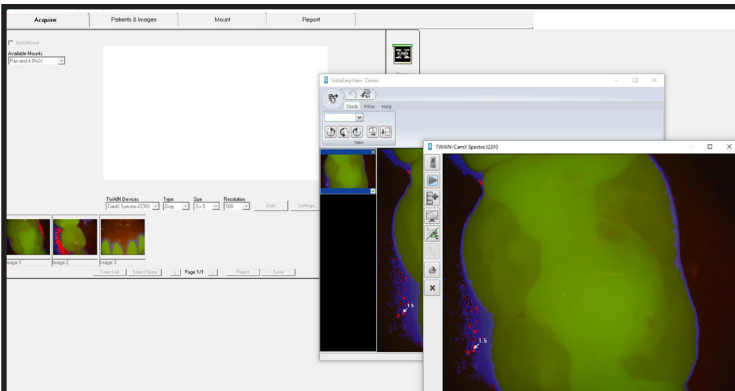
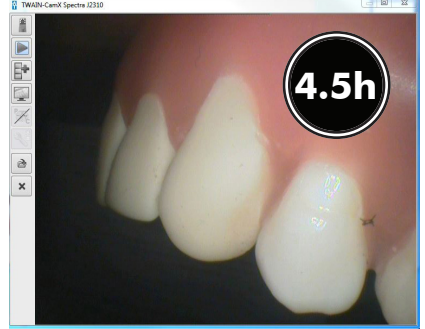
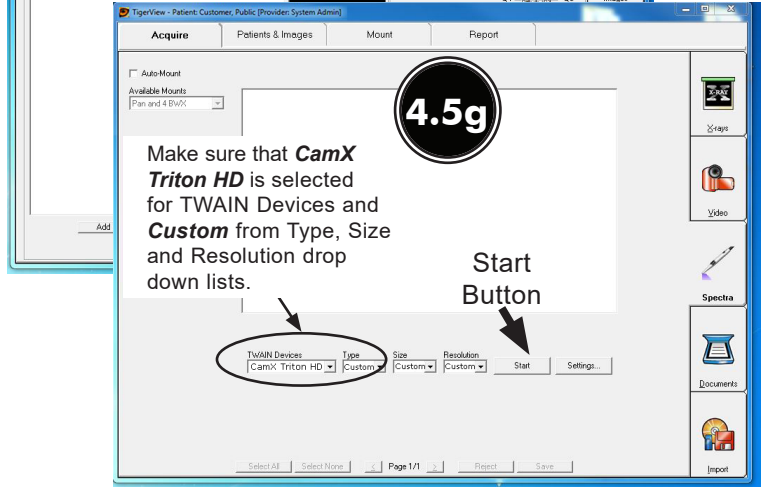
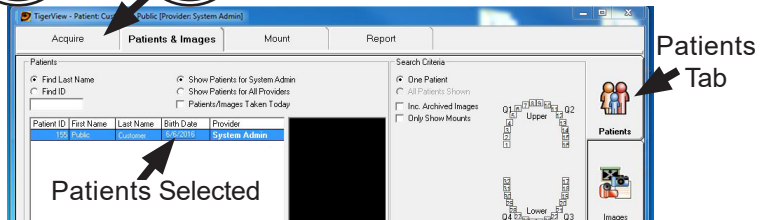
4.5j. Observe that the new capture screen opens showing the acquire images. Continue acquiring and capturing images as necessary.

4.5k. Transfer acquired images to **TigerView Pro** by clicking the transfer button.

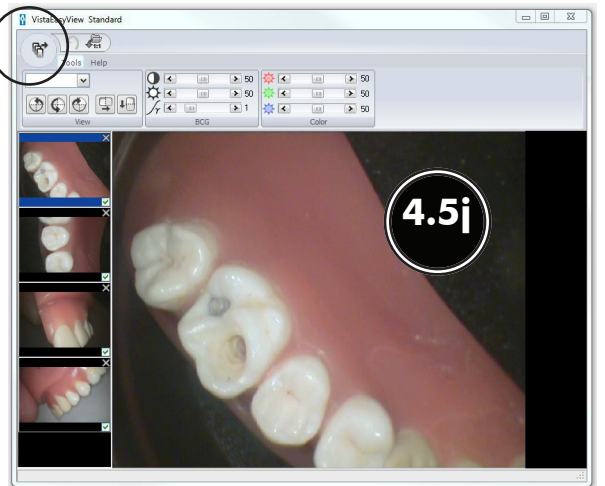
4.5l. Select and save images to **TigerView Pro**.

4.5e

4.5f

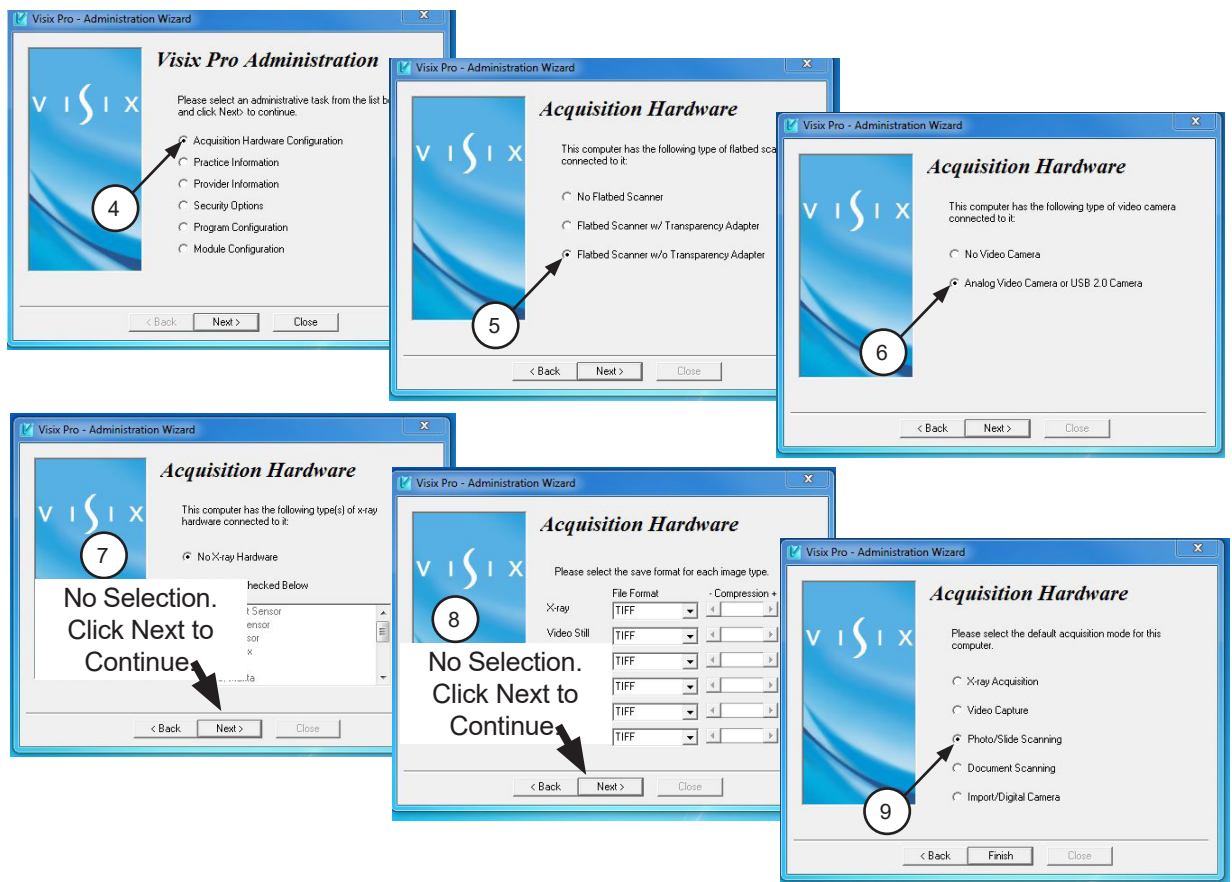


Typical Captured Images via CamX Spectra



Typical Captured Images via CamX HD

- 4.6. VISIX Pro Setup for Intraoral Cameras.** This software allows all **CamX Triton** heads to acquire images via the TWAIN interface.
- 4.6a.** Make sure that the device drivers have been installed. Refer to the Device Setup, section 3, as necessary.
- Note:** **VISIX Pro** requires VistaEasy View to acquire images.
- 4.6b.** Activate VistaEasy View by performing procedure 3.3 located in section 3.
- 4.6c.** Perform the steps of paragraph 4.6d when running **VISIX Pro** for the first time. Otherwise, proceed to paragraph 4.6e to acquire images via the installed intraoral camera.
- 4.6d.** Setup cameras to work with **VISIX Pro** for the first time by performing the following.
1. Click the Windows Start button and select All Programs from the menu.
 2. Select the **Visix** listing and observe that the **Visix Administration** option appears.
 3. Click **Visix Administration**, which opens the **Visix Pro Administration** window.
 4. Choose **Acquisition Hardware Configuration** and click Next.
 5. Select **Flatbed Scanner w/o Transparency Adapter** and click Next
 6. Select **Analog Video Camera or USB 2.0 Camera** and click Next.
 7. Observe that a new window opens. Make no selections and click Next to continue.
 8. No selections are needed in the new window that opens. Just click Next to continue.
 9. Select **Photo/Slide Scanning** and click Finish to complete the setup.
 10. Proceed to paragraph 4.6e to acquire images via the installed intraoral camera.



4.6e. Start the application and observe that the **VISIX Pro Patient** window displays.

4.6f. With a patient selected, click the **Acquire** tab and observe that the Acquisition window opens.

4.6g. Make sure that **CamX Triton HD** is selected for TWAIN Devices and **Custom** from Type, Size and Resolution drop down lists. Switch to the TWAIN acquisition window by clicking the **Start** button.

4.6h. Observe that images appear on the acquisition screen once the connected **CamX Triton** head is turned on.

Refer to the camera manual as necessary and use the connected device to acquire images.

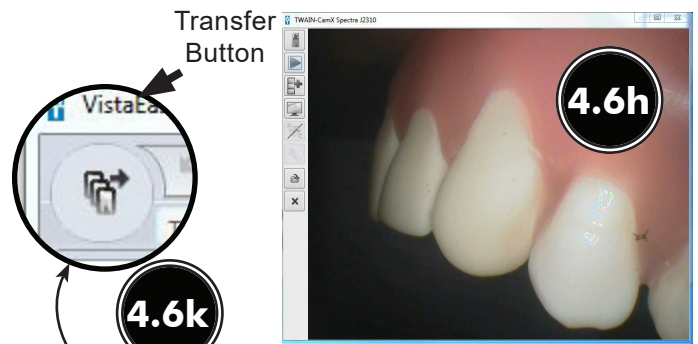
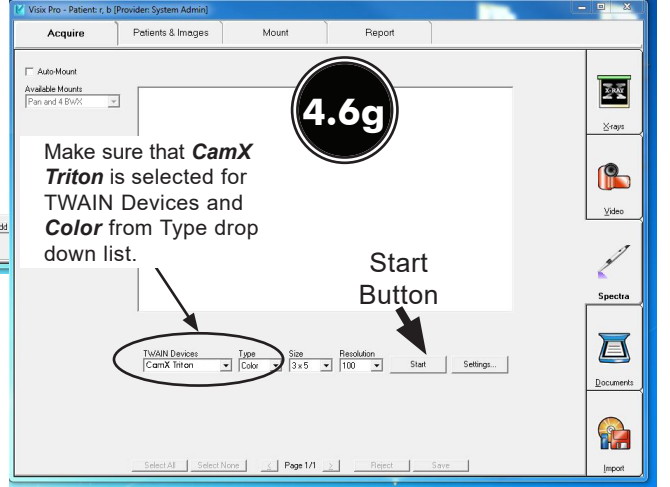
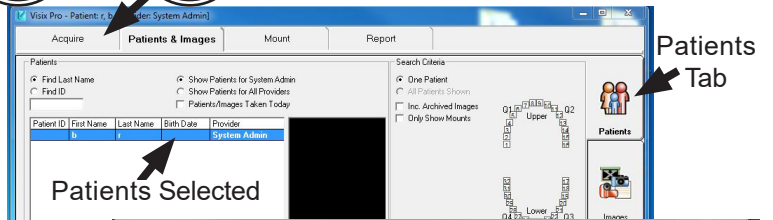
4.6j. Observe that the new capture screen opens showing the acquire images. Continue acquiring and capturing images as necessary.

4.6k. Click the transfer button to transfer acquired images to **VISIX Pro**.

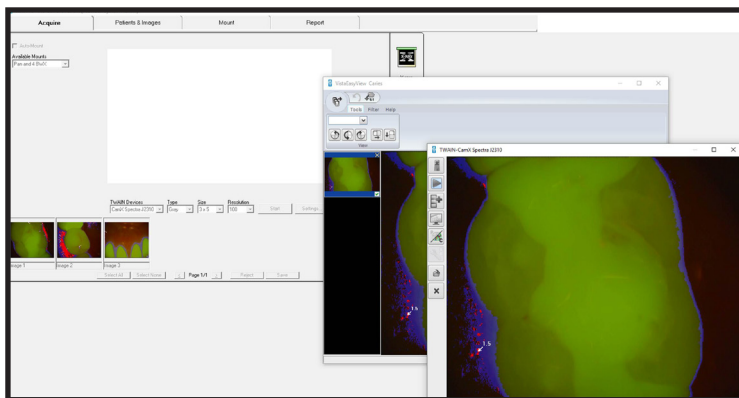
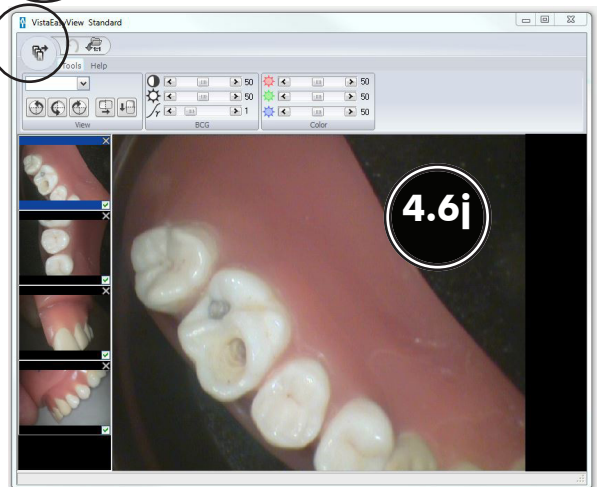
4.6l. Select and save images to **VISIX Pro**.

4.6e

4.6f



4.6k



Typical Captured Images via CamX Spectra

Typical Captured Images via CamX HD

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Corporate Headquarters

1295 Walt Whitman Road | Melville, New York 11747- 3062
Phone: 800-247-8324 | Fax: 888-247-8481

www.airtechniques.com

