

USER GUIDE

CADENT

iTero™

creating the perfect byte.

Software Version 4.0

May 2011



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Chapter 1: Overview

iTero Optical Impression Device

The iTero Optical Impression Device is a mobile office unit that contains all of the necessary hardware and software components for performing case scanning. Once a case has been scanned and viewed, it may be uploaded to the Cadent Center for further processing.

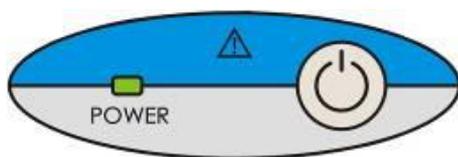
Main Features

- ⇒ PC-based system
- ⇒ LCD monitor with built-in speakers
- ⇒ Optical scanner with flexible cable
- ⇒ Integrated keyboard
- ⇒ Wireless mouse
- ⇒ Wireless foot pedals
- ⇒ Four lockable wheels
- ⇒ Two ventilation fans (inside grids)
- ⇒ Wireless internet connection
- ⇒ Internal UPS

NOTE: For detailed hardware specifications, see the *Operation Manual*.

Booting the System

To turn the system on/off, press the blue “POWER” button above the keyboard. For further operation details, refer to the *Operation Manual*.



About This User Guide

This User Guide describes how to use the iTero Scanner application to scan cases, and how to use the Case Manager application to monitor case status. From within each application, you may press F1 to access context-sensitive help.

Refer to the *Operation Manual* for hardware specifications and for detailed descriptions regarding booting, shutdown, cart relocation, UPS usage, safety, disinfection, sleeve swapping and maintenance.

Moving the Cart

Since the system is equipped with an internal UPS, the system may be left running during short moves within the office. Before relocating the cart, unplug the power cable from the wall and properly secure all cords and cables on the cart.

NOTE: The system will not allow scanning while operating on UPS backup power.

When fully charged, the internal UPS provides about 5 minutes of power. As soon as the cart reaches its destination, it should be plugged in immediately. If the system is left unplugged, warning messages begin to appear on the screen and the status of the internal UPS battery will be displayed. When the internal UPS battery is nearly empty, the system will automatically shut down in a safe manner.

For further details regarding the UPS and moving of the cart, refer to the *Operation Manual*.

iTero Scanner Sleeves

The system uses disposable white plastic Scanner Sleeves (imaging shields) to ensure maximum infection control. A special red protective sleeve is used to protect the scanner head during shipping and between patient sessions.

- ⇒ At the start of each scanning session, remove the red protective sleeve and attach a new white sleeve.
- ⇒ At the end of each scanning session, discard the dirty sleeve according to standard procedures. Then use disinfectant wipes to clean the scanner wand, scanner cradle, keyboard and mouse. Finally, attach the red protective sleeve for protection.

WARNING: For a detailed description of changing scanner sleeves between patients, refer to the *Operation Manual*.



Mouse & Foot Pedal Batteries

The system notifies the user when batteries need to be replaced in the mouse or foot pedals. See the *Operation Manual* for battery specifications and for instructions on changing batteries.

Entering the iTero Desktop

To enter the iTero desktop, the password is “cadent” (all lowercase).



Desktop Icons

The following icons should appear on your desktop.

	<p>The iTero Scanner application provides an intuitive user interface for performing digital scanning. The doctor is guided through the scanning sequence by means of visual, text and voice assistance. The foot pedals and mouse are used to respond to screen instructions and perform scanning.</p>
	<p>The Case Manager works interactively with iTero Scanner and handles file communications between the doctor’s office, partnered labs, and the Cadent Center. The Case Manager allows doctors to view the current status of all cases.</p>
	<p>In general, the Cadent Support icon should not be used. If you contact Cadent Support for assistance, you may be requested to double-click this icon to enable the support engineer to view & control your system from a remote station.</p>

Opening the iTero Scanner Application

Double-click the iTero icon to open the iTero Scanner application.

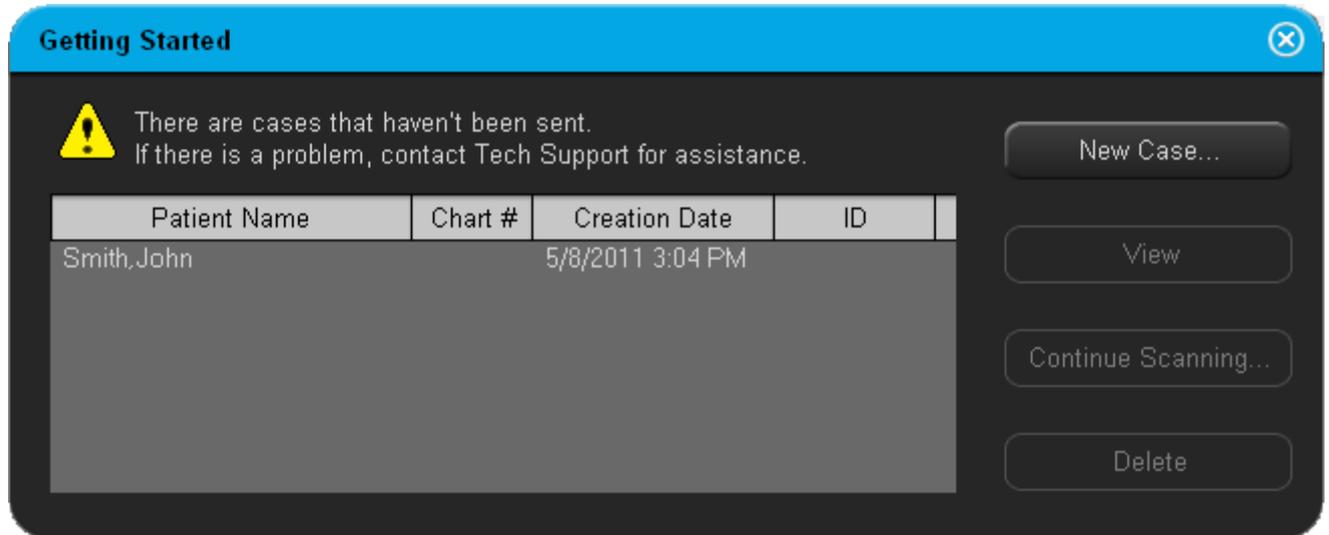
You will be requested to Login:



Chapter 2: User Interface

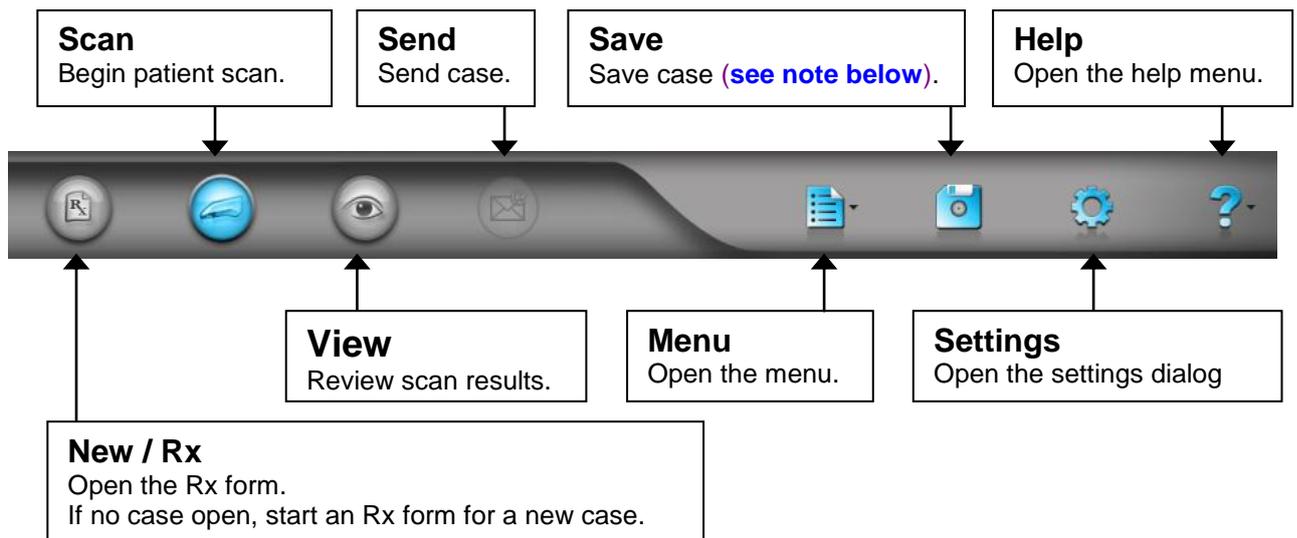
Getting Started Dialog

When the iTero Scanner application is opened, the system checks for “unsent” cases on your local system. If such cases exist, the Getting Started dialog appears with a list of unsent cases. (Cases which have already been sent, may be opened using the Case Manager.)



Main Toolbar

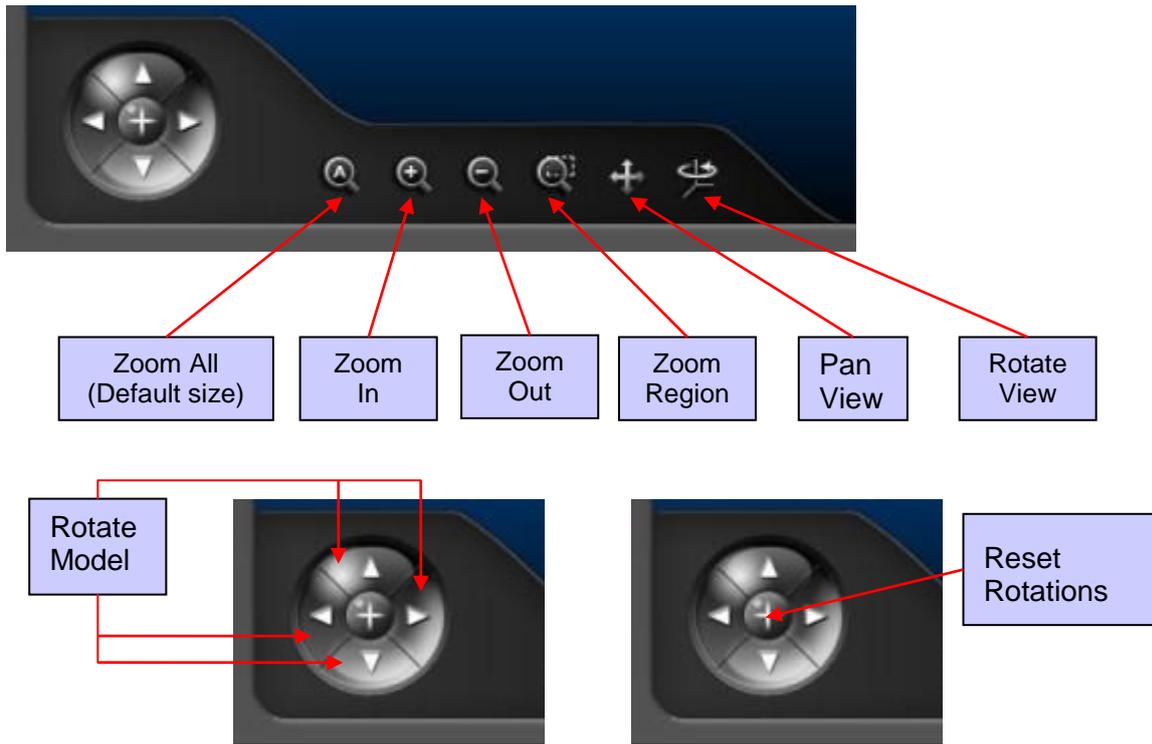
The main toolbar of the iTero Scanner application contains the following icons.



NOTE: The system saves the case automatically on a regular basis and saves the case before closing it. In addition, you may use the **Save** command manually whenever desired.

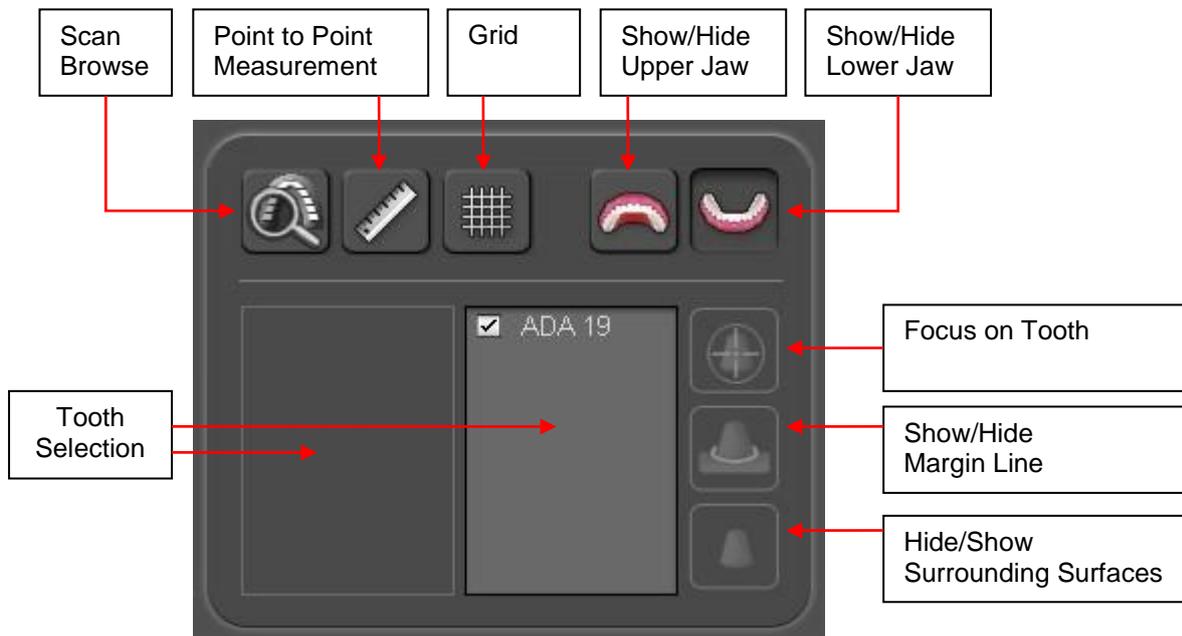
View Control

The View Control can be used to manipulate the 3D image in the graphic window.



Visibility Control

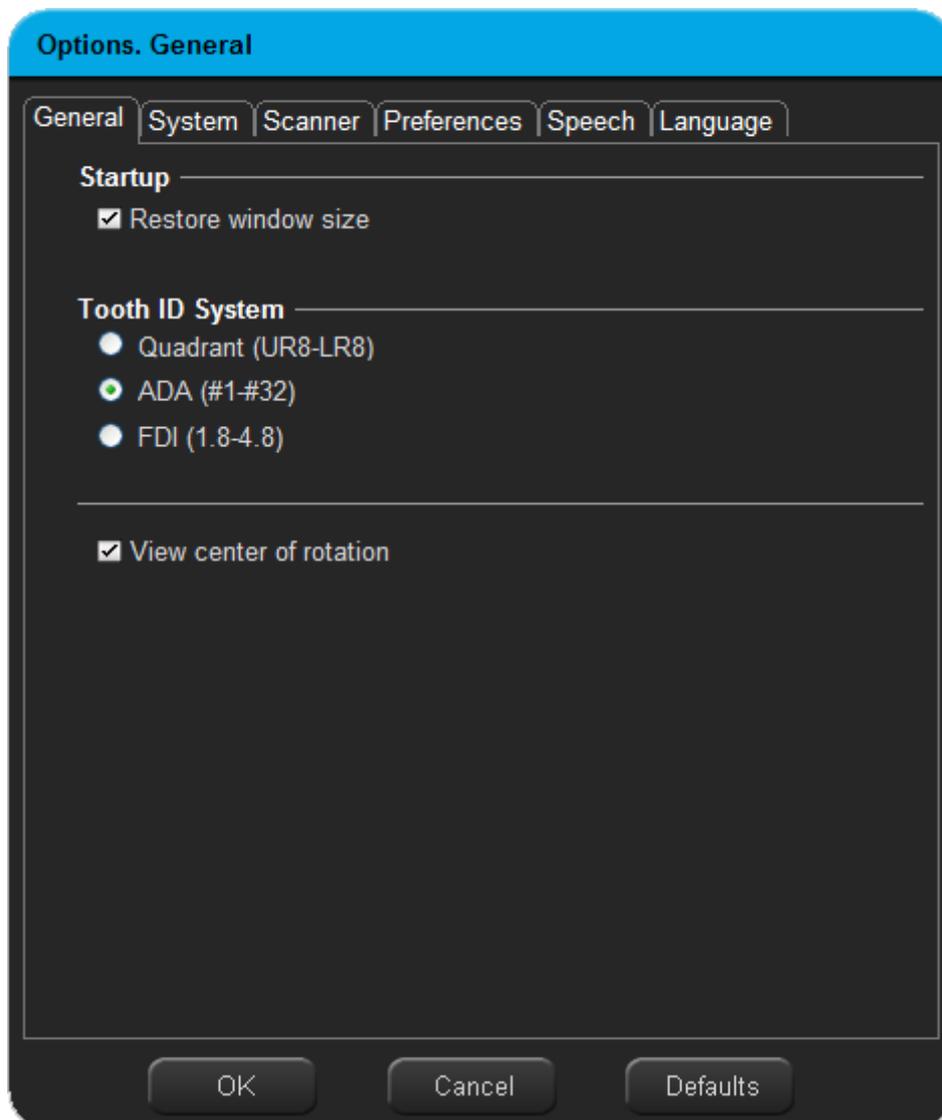
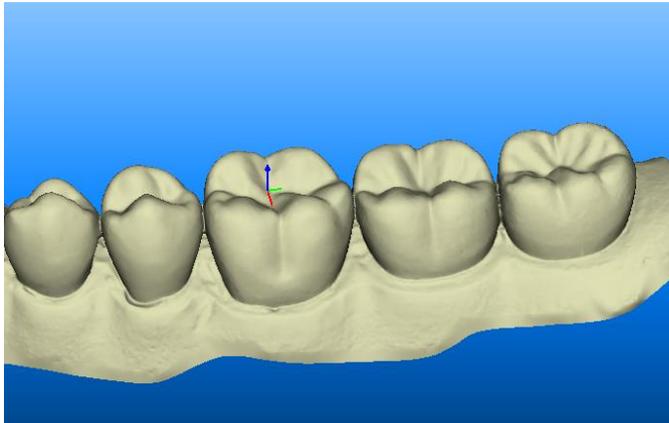
The Visibility Control can be used to Show/Hide elements in the 3D model and to activate measurement and analysis tools.



Center-of-Rotation

To move the center-of-rotation symbol to a different place on the 3D image, press Alt and then click somewhere on the image. The 3D image will then rotate around that point.

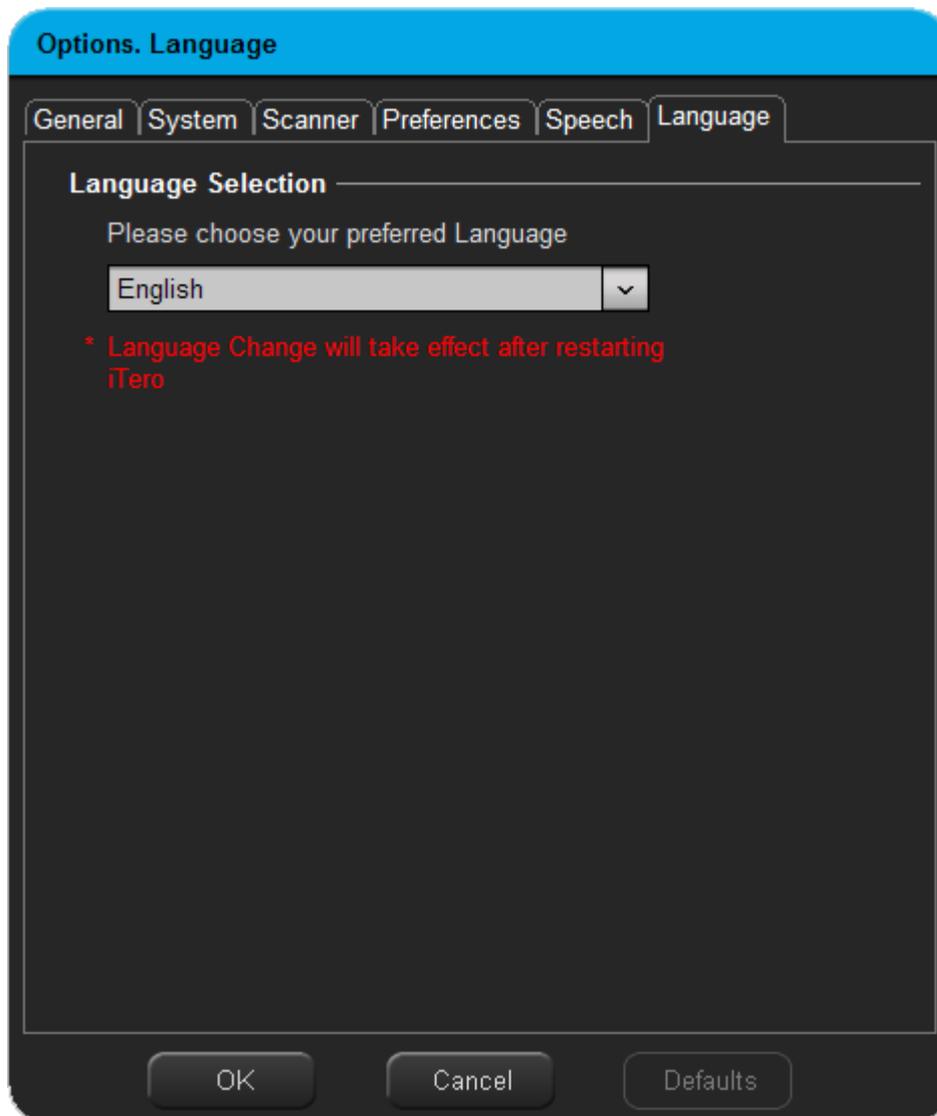
You can choose to hide or display the center-of-rotation symbol using the General options.



Multilingual Support

To change languages in the iTero Scanner application, use the Language Options.

NOTE: The change will take affect only after restarting the application.



Keyboard & Mouse Shortcuts

Functions	Cursor Icon	Sequence	Description
Zoom		Shift + left-mouse	Zoom an area of the 3D image.
Pan		Alt + Shift + left-mouse OR Mouse-wheel + right-mouse	Move 3D image within graphic window.
Rotate Freely		Alt + left-mouse OR Mouse-wheel	Rotate 3D image in any direction.
Swivel		Mouse-wheel (at edges)	Move cursor close to left or right edge of graphic window, press mouse wheel, and move mouse up/down .
Swivel		Ctrl + Mouse-wheel	Press Ctrl key and mouse-wheel and move mouse in circular motion.
Rotate with Arrows		↑ ↓ ← →	Click in graphic window and then press arrow keys. Press up/down arrows to rotate vertically. Press left/right arrows to rotate horizontally. Hold down arrow for continuous rotation.
Move the Center-of-Rotation		Alt + click left-mouse OR Click mouse-wheel	To move the center-of-rotation symbol to a different spot on the 3D image.
Scan Explorer		Ctrl + E	Hide/display the Scan Explorer dialog.
Context-sensitive help		F1	Click in any dialog or window and then press the F1 key to display context-sensitive help.

Chapter 3: Treatment Information (Rx form)

Opening a New Case

To register a new patient, click on the “New” icon in the main toolbar. Or click on “New Case” in the Getting Started dialog.

Treatment Information (the digital Rx form)

The “Treatment Information” window is the digital prescription form used by partnered labs to fabricate the requested restoration (eliminating the need for a paper form).

- ⇒ Required fields are marked with an asterisk (*).
- ⇒ Click a tooth in the tooth diagram to select preparation and bridge types.
- ⇒ The “Number of Scans” field shows the total number of scans required for the case (based on preparation and bridges selections).
- ⇒ For more details, press F1 to open the help system.

Treatment Information

Case

* Patient First Name:

* Patient Last Name:

Chart #:

* Case Type:

Dates

* Due Date:

Scanning:

Scanning Order

* Scanning Order:

Dentist

* Name:

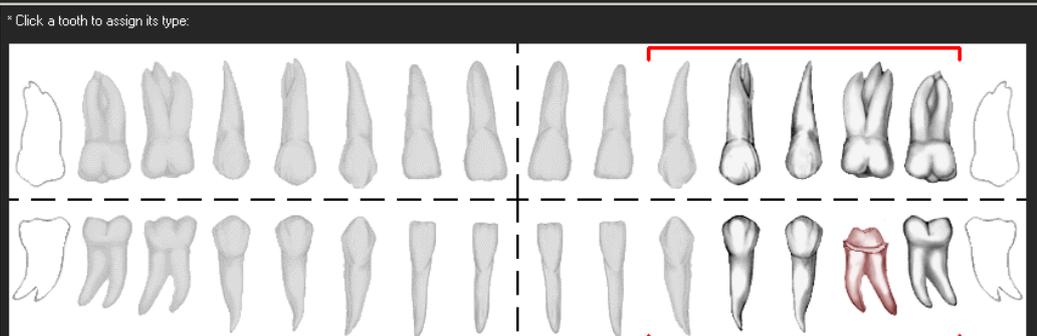
* License #:

Signature:

Ship To

* Lab:

* Click a tooth to assign its type:



Same design for all teeth (copied from top line) Shade System:

ID (FDI): Type	* Material	* Preparation Design Buccal / Lingual		* Margin Design Buccal / Lingual		Shade			Stumpf Shade
						Gingival	* Body	Incisal	
36: Crown	<input type="text" value="Composite: Lab Preferer"/>	<input type="text" value="Shoulder"/>	<input type="text" value="Shoulder"/>	<input type="text" value="Metal Porcelain Junction"/>	<input type="text" value="Metal Porcelain Junction"/>	<input type="text" value="A1"/>	<input type="text" value="A1"/>	<input type="text" value="A1"/>	

Notes:

Attachment:

Pre-Entering Patients

You may pre-enter patients in the system in order to save time during the actual patient sessions. To pre-enter a patient, fill in the Rx and then click **Scan Later**. The patient name will then appear in the Getting Started dialog each time you open the iTero Scanner application.

On-Screen Keyboard (for Rx)

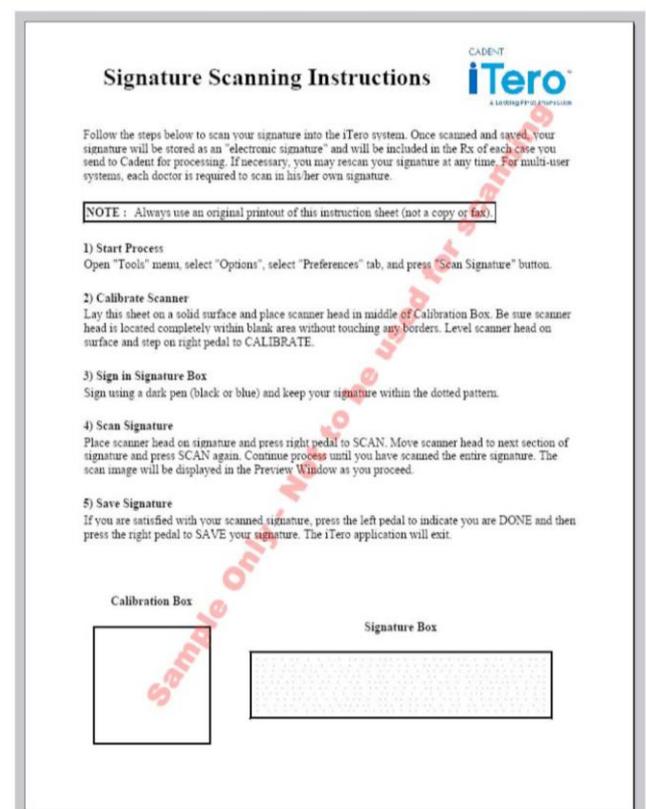
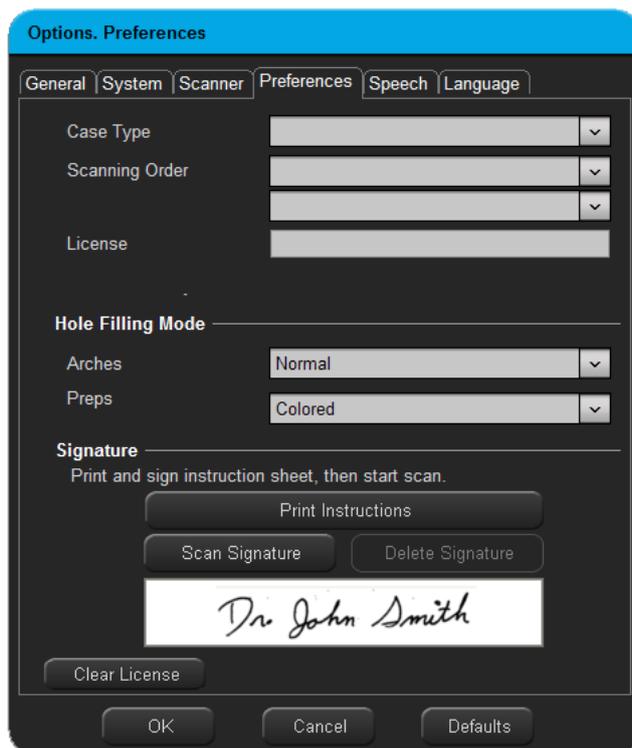
Information may be entered into the Rx form using the built-in keyboard on your workstation. Alternatively, you may type using the virtual **On-Screen Keyboard**.



Digital Signature

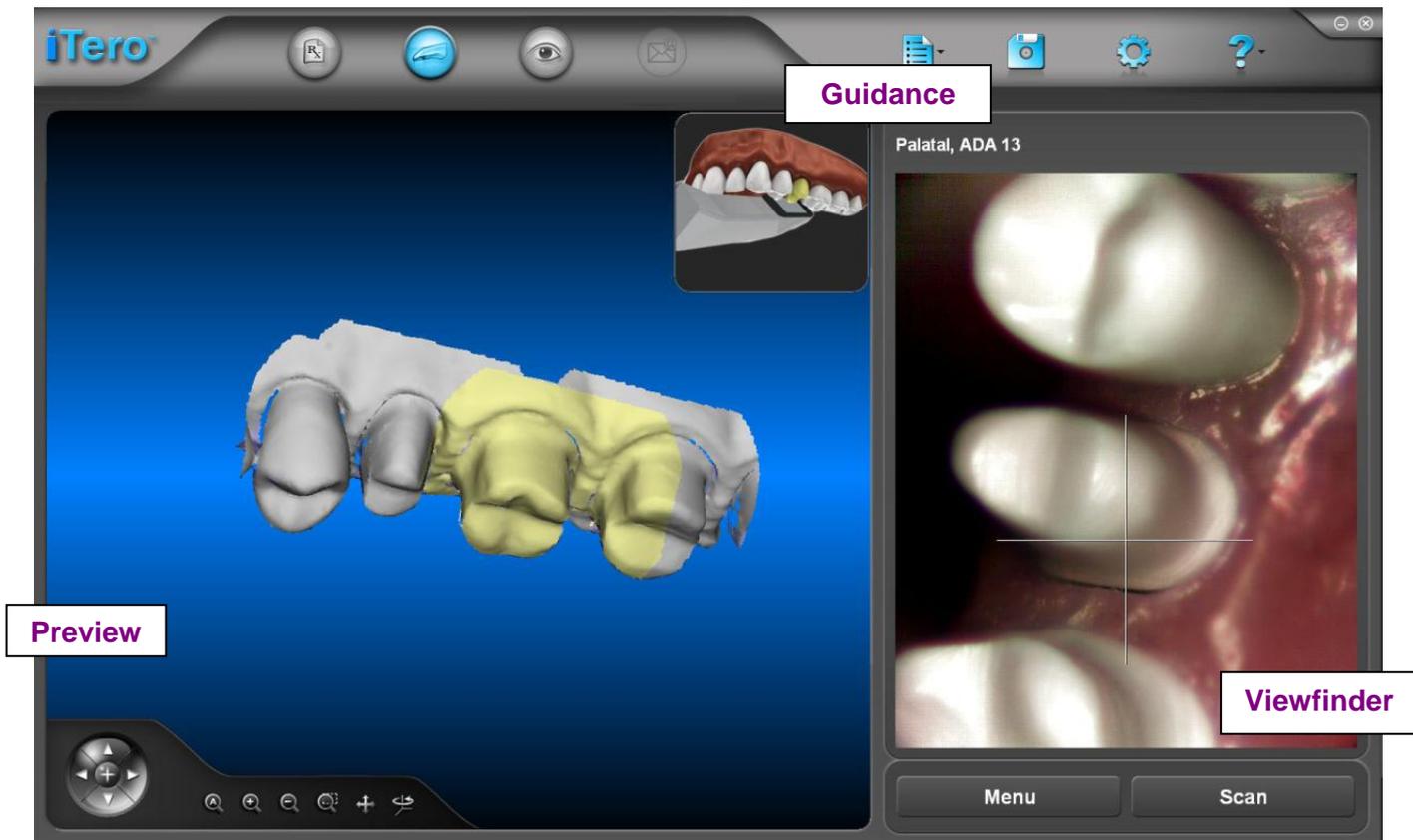
Each doctor may enter a digital signature in the system. Once entered, the digital signature will be displayed in the **Signature** field of the Rx form at the doctor's office and at any partnered lab.

- ⇒ For multi-user systems where each doctor enters the system with a unique password, each doctor is required to scan in his/her own signature.
- ⇒ Signatures are stored in an encrypted format that cannot be used outside of the iTero software (protecting users from unauthorized use).
- ⇒ To create your digital signature, open the Preferences options and click "Print Instructions". The instructions sheet includes a calibration box and a signature box.
- ⇒ It is essential to use an **ORIGINAL PRINTOUT** of the "Signature Scanning Instructions". Do not use a copy or faxed version of the sheet.



Chapter 4: Scan Tool

The Scan Tool consists of the following elements:



Guidance

For each individual scan, the system provides three types of instructions:

- ⇒ Text command (**Guidance**, above the **Viewfinder**)
- ⇒ Visual command (**Guidance**, in the top right corner of the 3D preview)
- ⇒ Voice command (thru built-in speakers)

Viewfinder

The **Viewfinder** helps you to position the scanner head correctly.

- ⇒ Use the crosshairs to align the scanner on the tooth indicated by the **Guidance**.
- ⇒ The entire area displayed within the **Viewfinder** will be scanned.
- ⇒ The **Viewfinder** is for positioning purposes only. In some instances, the target area may appear slightly out of focus and you should attempt to improve the focus. Even if the focus remains poor in the **Viewfinder**, the actual scan resolution will be fine.

Preview

After performing a scan in the **Viewfinder**, the results are displayed in the **Preview** for immediate review. Press the **Menu** pedal and select **Undo** if you wish to retake the scan for any reason.

Performing a Scan

In general, the scanning process is controlled using the two foot pedals. You can also use the mouse to click commands in the Pedals dialog.

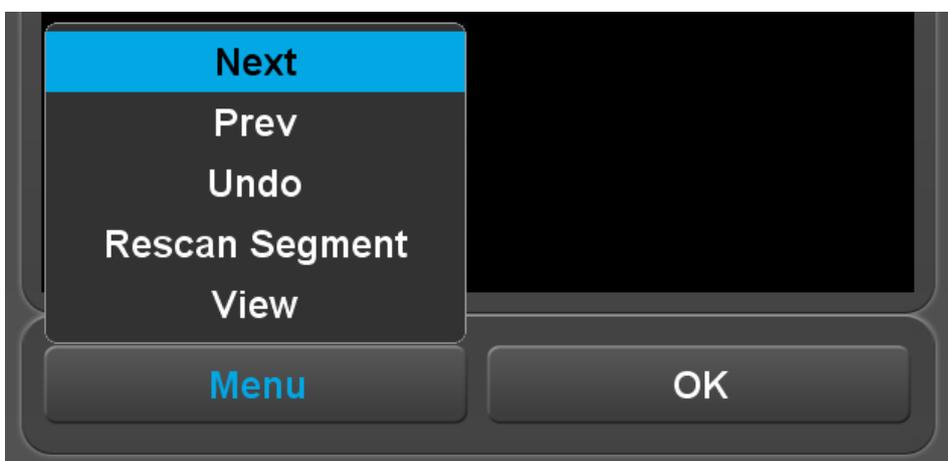
- ⇒ To take a scan, first stabilize the image. Then press and release the right foot pedal to **Scan**. The right pedal in the pedal dialog will become pressed to indicate that a scan has been initiated. Once the image becomes steady, an audible beep indicates that the scan is in progress.
- ⇒ If the patient or doctor moves during the scan, the system may request a rescan.
- ⇒ You may also decide on your own (for any reason) that you wish to redo the scan. Press the left pedal (**Menu**) to open the menu. Pressing the left pedal again moved the menu selection. After the menu selection is on **Undo**, press the right pedal (**OK**).



Pedals Dialog – ready to scan:



Pedals Dialog – menu open:



Scanning Tips & Techniques

Scanning Basics

- ⇒ Each scan should have crosshairs following the natural shape of the arch (tangential).
- ⇒ Buccal and lingual scans should include occlusal information (scan at 45 degree angle).
- ⇒ We recommend the use of cheek retractors to avoid excessive tissue from being scanned (especially for scanning anterior teeth).

Slow Scanner Response after Pressing Pedals

- ⇒ Ensure that an overhead light is not shining directly on the area being scanned.
- ⇒ Verify that patient and scanner are not moving during scan.
- ⇒ Check that saliva is not blocking the field of vision. Dry the area in question.
- ⇒ Ensure that interference is not occurring (tissue, lips, tongue, etc.)
- ⇒ Check that patient is holding tongue still.
- ⇒ If necessary, ask the patient to position tongue on the opposite side of the mouth.

Viewfinder Displays Blurred Image

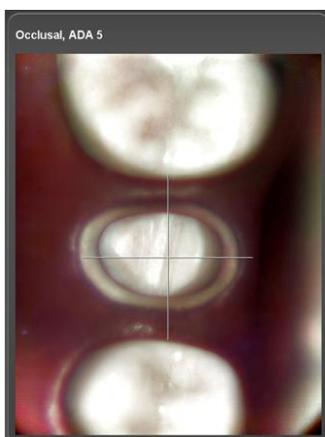
- ⇒ Try cleaning the external scanner sleeve window with clean cotton or paper.
- ⇒ If cleaning does not help, try replacing the scanner sleeve with a new sleeve.
- ⇒ If the new sleeve doesn't help, contact Cadent support for assistance.

Jaw Relation Scans

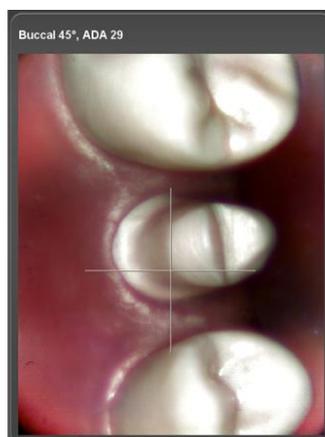
- ⇒ Center reference line should follow the occlusal plane.
- ⇒ The jaw relation scan should contain teeth data from both jaws, for a better registration.

Scanning Samples

Occlusal View (prep)



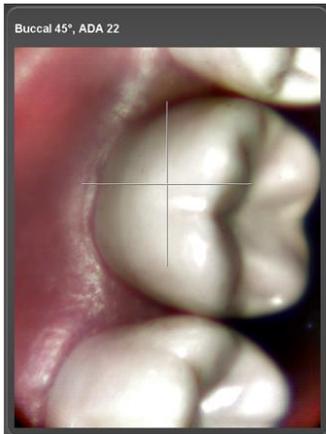
Buccal View (prep)



Lingual View (prep)



Buccal View (non-prep)



Lingual View (non-prep)



Jaw Relation



Opposite Jaw First Finished

If user chose scanning order of “Opposite Jaw First”, at the end of scanning the opposite jaw, the system announces that “Segment Finished”:

Segment Finished

The right pedal will show “View” and the left pedal will show “Add Scans”:

Add Scans

View

Press “View” to pause the scanning and go to the View Tool to review the scanned jaw. In the View Tool, press the “Scan” pedal to return to the Scanning Tool and scan the prep jaw.

Press “Add Scans” to add scans to the opposite jaw.

Scanning Finished

At the end of the scanning process, the system announces that “Scanning Finished”:

Scanning Finished

The right pedal will show “View” and the left pedal will show “Add Scans”:

Add Scans

View

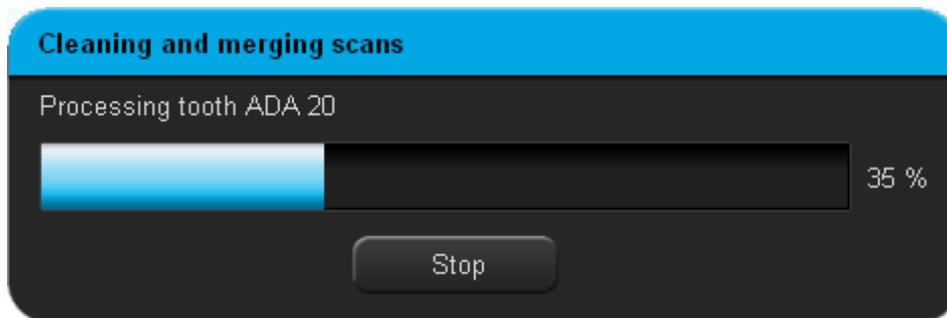
Press “View” to go to the View Tool to review the scanned jaw.

Press “Add Scans” to add scans to the last scanned jaw.

Chapter 5: View Tool (for Case Review)

Merge of Scan Images

After the scanning is complete, the system merges all scans into a single graphic image and displays the resulting image for review. Progress bars are displayed during the merge process.

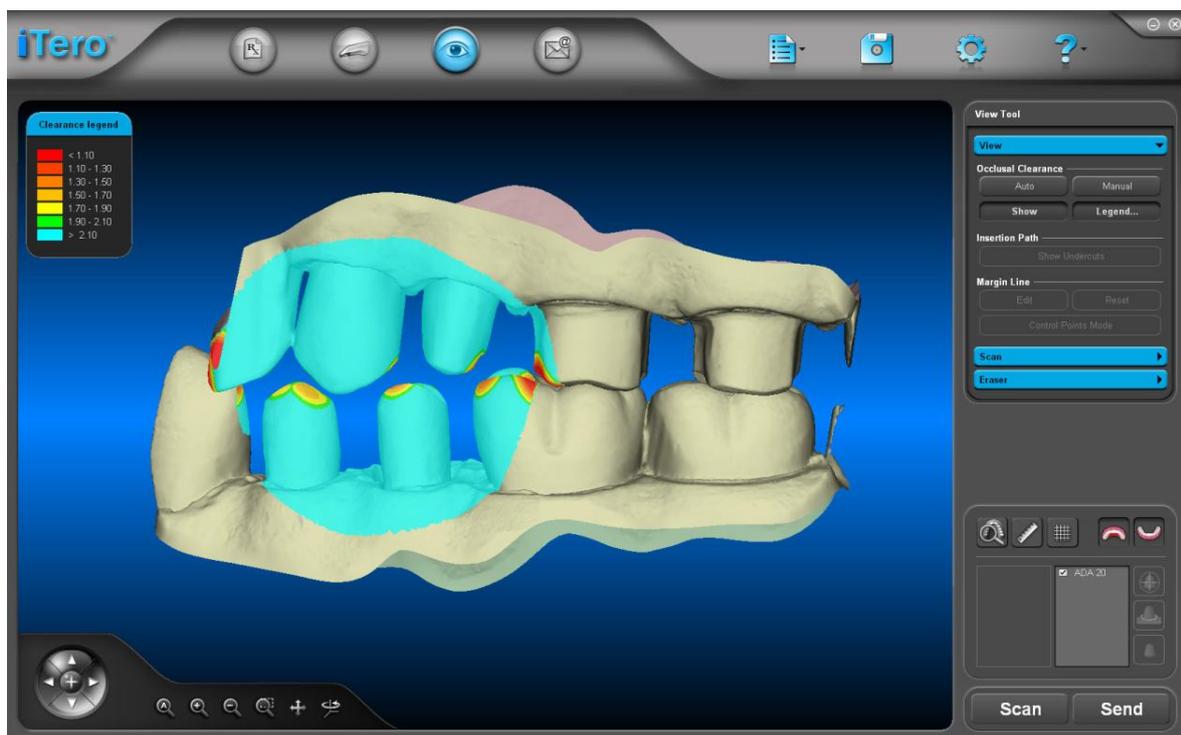


Case Review with Patient Present

It is important to review the case with the patient still present, since rescanning may be required. Be sure to check that proper retraction was obtained for a clear margin and that the tooth reduction was adequate.

Checking Occlusal Clearance

Use the Show command in the Analyze tab to show/hide occlusal clearance colors along with the Clearance Legend (showing mm distances). If you perform further reduction on the preparation tooth, you will need to do rescanning afterwards.

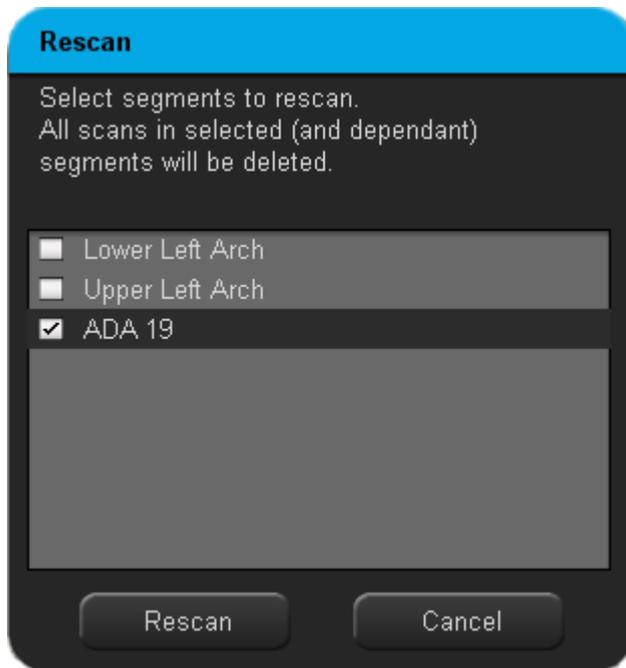


Rescanning

To perform rescanning, click the “Rescan...” command in the Scan tab.

Choose the desired rescan area(s) and press “Rescan”.

The system will automatically begin the rescanning sequence. When complete, the system indicates that the “Scanning is Done” and the updated scans are remerged for final review in the View Tool.



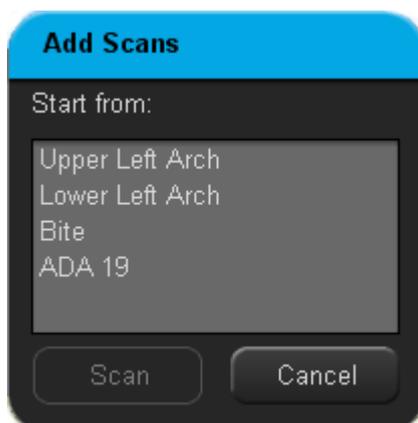
Adding Scans

After reviewing the case in the View Tool, user may want to add scans to the model – to capture missing areas or other additional data.

To add scans, click the “Add Scans...” command in the Scan tab

Choose the area in which scans should be added and press “Add Scans”.

The system will automatically go to scanning mode and continue from a segment according to user selection. When complete, user should move back to the View Tool to review the new merged model.



Chapter 6: Sending Case

Once you have finished scanning and reviewing the case, click on the “Send” icon in the main toolbar to send the case to the Cadent Center.

The iTero Scanner application will automatically close, and the file transfer process will be handled by the Case Manager application. First the file data will be processed, and then the case will be sent to the Cadent Center. To confirm that the file has been sent (or is queued for sending), open the Case Manager.

Chapter 7: Case Manager

Overview of Case Manager

The Case Manager application works interactively with the main iTero Scanner application to provide the following capabilities.

- ⇒ Displays case essentials (case ID, patient, dentist, lab, etc.)
- ⇒ Shows current status of all cases.
- ⇒ Opens cases in the iTero Scanner application (for viewing & editing).
- ⇒ Uploads new cases from your office to the Cadent Center.
- ⇒ Downloads the latest version of a case from the Cadent Center to your office for viewing purposes. (OPTIONAL)

Entering Case Manager

Double-click the Case Manager icon to start the application.

The Case Manager application contains two tables, as described below. Your selections in the top three fields (Case ID, Patient Name, Lab Name) serve as a filter for determining which cases are displayed in the two tables. Click **Clear** to empty the three fields and display all cases.



Cases to Work On:

Case ID	Patient Name	Due Date	State Time (Local)	Dentist Name	Lab Name	Local State
8294	Jones,May	2009-09-02	2009-08-19 18:02:28	Dr. Dds1QA, Dds1QA	Lab1	Waiting for Send
	Brooks,Patty	2009-09-10	2009-08-19 17:01:52	Dr. Dds1QA, Dds1QA	Lab1	New File

Cases:

Case ID	Patient Name	Due Date	State
8280	SpecSleeveTwo,Blackholetest	2009-09-02	Cadent Modeling
8281	SpecSleeveThree,Blackholetest	2009-09-02	Cadent Modeling
8282	SpecSleeveFour,Blackholetest	2009-09-02	Cadent Modeling
8283	SpecSleeveFive,Blackholetest	2009-09-02	Cadent Modeling
8284	SpecSleeveSix,Blackholetest	2009-09-02	Cadent Modeling
8285	SpecSleeveSeven,Blackholetest	2009-09-02	Cadent Modeling
8286	SpecSleeveEight,Blackholetest	2009-09-02	Cadent Modeling
8287	SpecSleeveNine,Blackholetest	2009-09-02	Cadent Modeling
8288	SpecSleeveTen,Blackholetest	2009-09-02	Cadent Modeling
8289	SpecSleeveA,Blackholetest	2009-09-02	Cadent Modeling
8290	SpecSleeveB,Blackholetest	2009-09-02	Cadent Modeling
8291	SpecSleeveC,Blackholetest	2009-09-02	Cadent Modeling
8292	SpecSleeveD,Blackholetest	2009-09-02	Cadent Modeling
8293	SpecSleeveE,Blackholetest	2009-09-02	Cadent Modeling
8294	Jones,May	2009-09-02	
	Brooks,Patty	2009-09-10	

There are 3 cases to work on.

Cases to Work On (top table)

The top table lists cases that have not yet been sent to the Cadent Center. These cases are also displayed within the Getting Started dialog when opening the iTero Scanner application. Double-click a case to open it. Or right-click on a case and select the desired action. The case are color-coded as follows.

Blue Cases

New Case (not yet sent)

Case information has been entered but case has not yet been “sent” to the Cadent Center (the case may or may not be scanned.) **These cases require action by the user.**

Red Cases

Waiting for Send

Case has been scanned and sent. The case file is queued for upload transmission in the next communication session with the Cadent Center. **No action is required by the user.**

All Cases (bottom table)

The bottom table displays all cases from the past sixty days.

- ⇒ This list includes all cases that appear in the top table (colored **blue** and **red**).
- ⇒ This list also shows cases that have been sent (colored **black bold**). Viewing of these cases is not required. If you do wish to view a case, simply double-click the case and it will be opened for viewing. Once viewed, the case remains black (but not bold).

Refresh Case Manager Display (F5)

To refresh the table display, use the “Refresh” command in the Tools Menu (or press F5).

In general, the Case Manager tables are updated automatically and the Refresh command is not needed. However, there is one particular situation where the Refresh command can be of assistance. After sending out a number of cases, it may take a few minutes for the communication session to complete. During this time, the Case Manager will not update the display until all cases are processed. However, if you issue the Refresh command, the Case Manager tables will be updated immediately based on the current state of communications.

For example, if six cases were sent but only two were actually transferred at this point in time, pressing Refresh would update the tables accordingly.

Files Remain Red in Tables

If files remain red in the Case Manager tables for an extended period of time, there may be a problem.

- ⇒ Ensure that the Internet is operational in your office. If not, you may need to contact your Internet service provider or local technician
- ⇒ If the Internet is accessible in the office but not on the cart, contact Cadent Support.
- ⇒ If the Internet is accessible on the cart but cases still remain red, try pressing Send/Receive button in the Case Manager.

USER GUIDE



CADENT

iTero[™]

creating the perfect byte.

