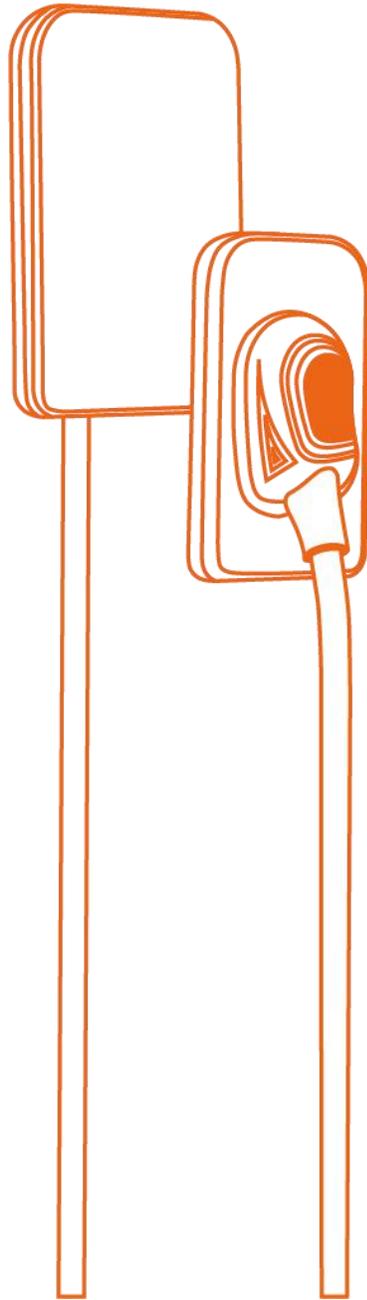




Intraoral Software

User Manual



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1. General Information

1.1. Indication for use

Intraoral Software is indicated to acquire radiological images to be stored, visualized and manipulated for evaluation and analysis by dentists. The software should be used only in hospital environments, radiology clinics, dental offices and handled by qualified and trained professionals.

1.2. Contra Indication

Not known.

1.3. Safety Instructions

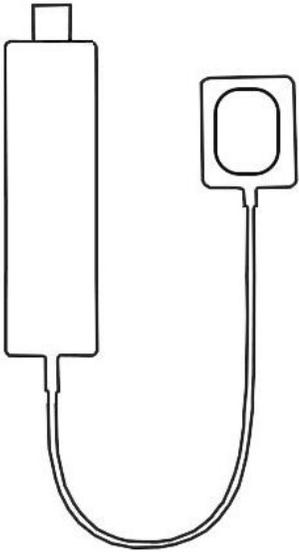
- Please read this manual before use.
- Intraoral Software safety regulations and guidelines must be installed and used following the purposes specified in the manual.
- It is recommended that a dedicated computer be used for the server of this software. Any other hardware and software devices that are unnecessary to use must be removed or disabled.
- It is recommended that the computer used by the software have real-time protection of viruses and active firewalls. Action of viruses and malicious programs can irreversibly damage data systems.
- The operator is responsible for backup policy and protection measures to prevent data loss and corruption.
- The software must be operated by qualified and trained professionals.
- Always observe the messages and warnings of the software to detect early any problem.

- To avoid accidental changes of the patient's examinations, the top bar shows the patient's information, where the patient's full name will always remain visible to the operator. Always check if the running exam belongs to the patient indicated.
- The software uses the date and time of the operating system installed on the computer as a date and time reference. If the operating system date and time are incorrect, the date and time of scan scans saved at the time of the exam is performed are incorrect. For this reason, the date and time of your computer's operating system should be checked periodically.
- The diagnosis and calculations generated by the software depend on the external capture devices, and the operator is responsible for proving their information, performing the procedures correctly, validating calculations and diagnosing based on the data generated by the software.

2. Product

2.1 Accessories

Open the outer packaging to access and check the available accessories.

ACCESSORY	DESCRIPTION:
	<p>Lightning sensor</p>
	<p>Be USB</p>

	Support
	Disposable plastic protection

2.2 symbology

	Instructions for operations
	Follow the instructions for use
	Maker
	Date of manufacture
	Reference number
	Serial number
	General warning symbol
	Stay away from moisture
	Fragile
	This side up
	Stay away from sunlight
	Air humidity limits
	Atmospheric pressure limits
	Temperature limits

3. Software installation

3.1. Software requirements

For the correct use of Intraoral Software, the following software must be installed on your computer.

- .Net Framework 4.7.2 Runtime: Is a managed execution environment for Windows that provides a variety of services and features for your running applications.
- Visual C++ Redistributable Packages 2015 - 2019: Install software libraries that are required to run C++ applications that are built using Visual Studio 2015-2019.
- PostgreSQL 10.5: is a POSTGRES-based object-relational database management system. It supports a large part of the SQL standard and offers many modern features, including complex queries, foreign keys, encryption, upgradeable views, transactional integrity, and multiple version concurrency control.

3.2. Hardware requirements

As this software is not computer equipped, during the installation of this product, customers need to provide a laptop or computer. The specific performance requirements of the computer are as follows:

Operating system	Microsoft Windows 7 SP1 32 or 64-bit Microsoft Windows 8 and 8.1 64-bit Microsoft Windows 10 64-bit Microsoft Windows 11 64-bit
CPU	Intel Core i5-2520M 2.5 GHz or higher
RAM	4 GB or higher
Free disk memory space	Minimum 1GB
Monitor	1024x768
USB port	Minimum one free USB 2.0 or 3.0 port

3.3. Cyber Security

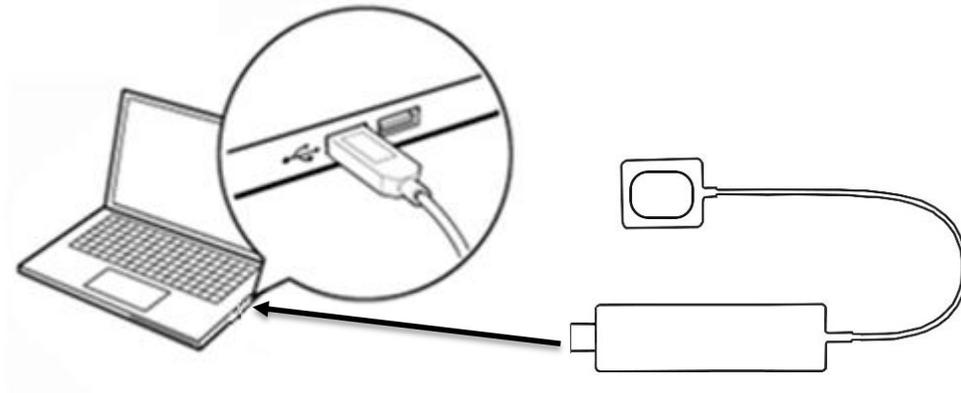
- Internet: Intraoral Software only requires Internet access at the time of license activation, when sending exams by email, and to the cloud sharing service.
- Security: It is necessary to use antivirus and/or firewall use for adequate protection against viruses, malware, and intrusions. Security software should be an effective version that can ensure the security of the computer system.
- Data interface and transfer protocol: USB2.0.
- Data format: JPEG, PNG, BMP, DICOM, JPG and TIFF.
- Access control:

- Software access: The software requires login credentials to start, operators can open the software only after entering the correct username and password.
- Encryption: The software is encrypted and linked with Intraoral Digital Image Sensor. Only when the license file and sensor calibration file are included, the user can use the software normally.

3.4 Sensor installation

3.4.1 Connecting the sensor

Insert the sensor into the USB input port of a desktop or laptop device.



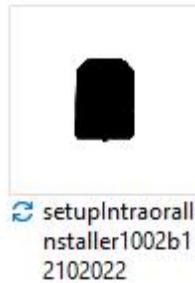
3.4.2 Fixation

Secure the stand in a convenient location near the computer that will use the sensor for housing and protection.

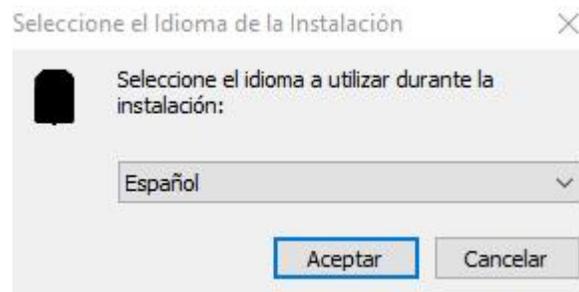


3.5 Software Installation

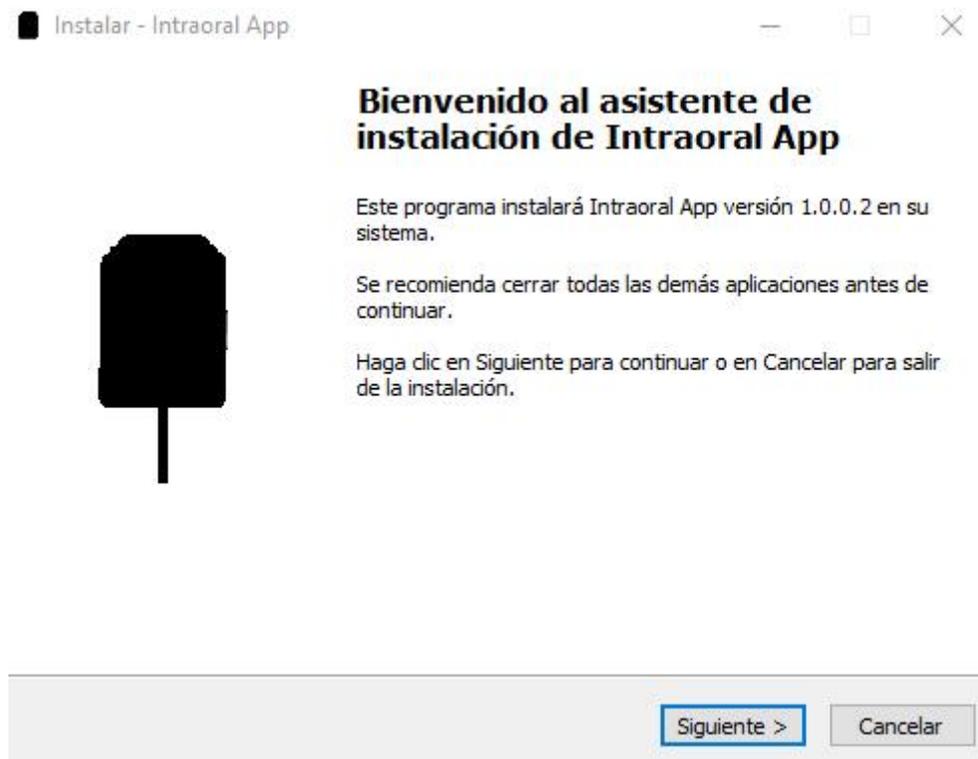
Double click on the executable "setupIntraoralInstaller1000b22072022" to start the installer.



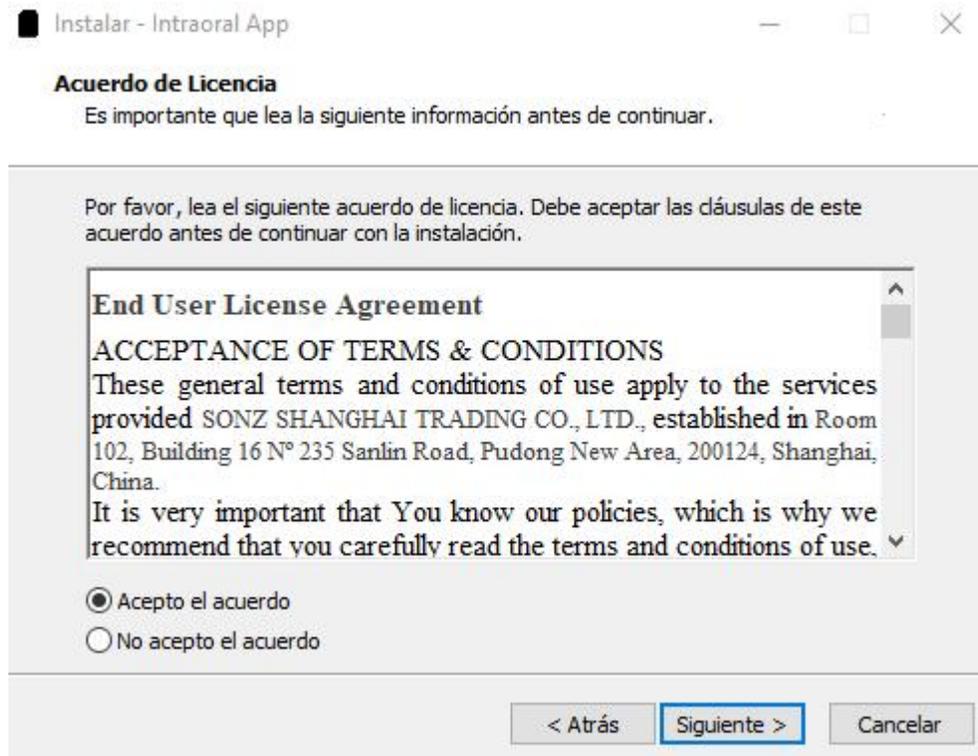
Select the installation language.



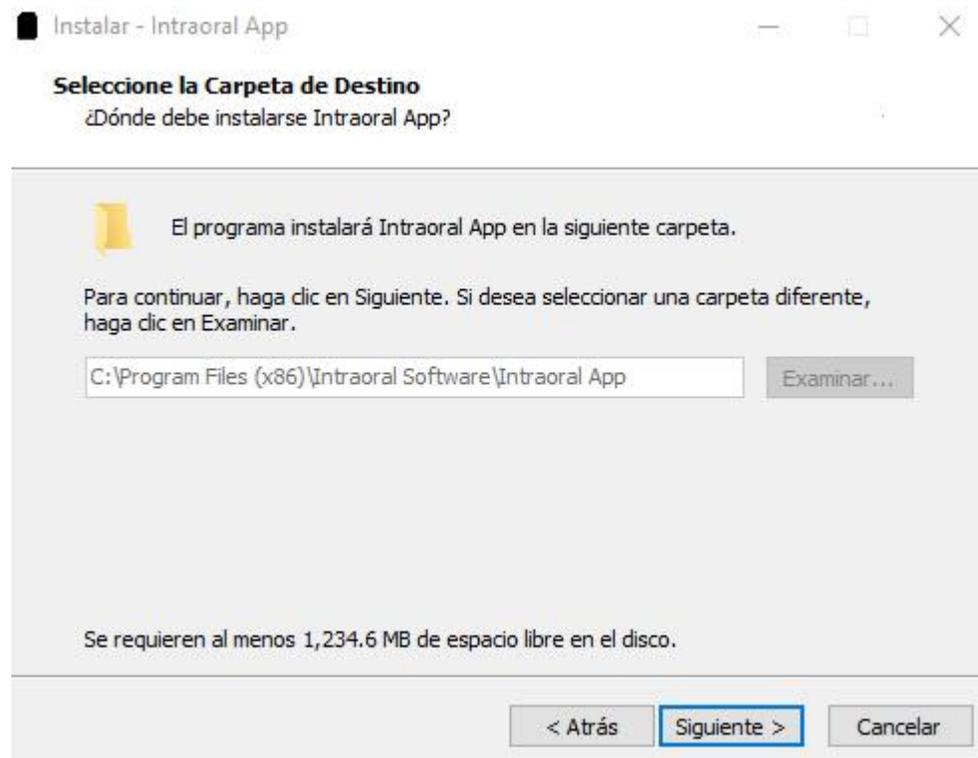
Click "Next" in the Welcome message.



Read and understand the end-user license agreement and if accepted, select the "I accept agreement" option and click "Next".

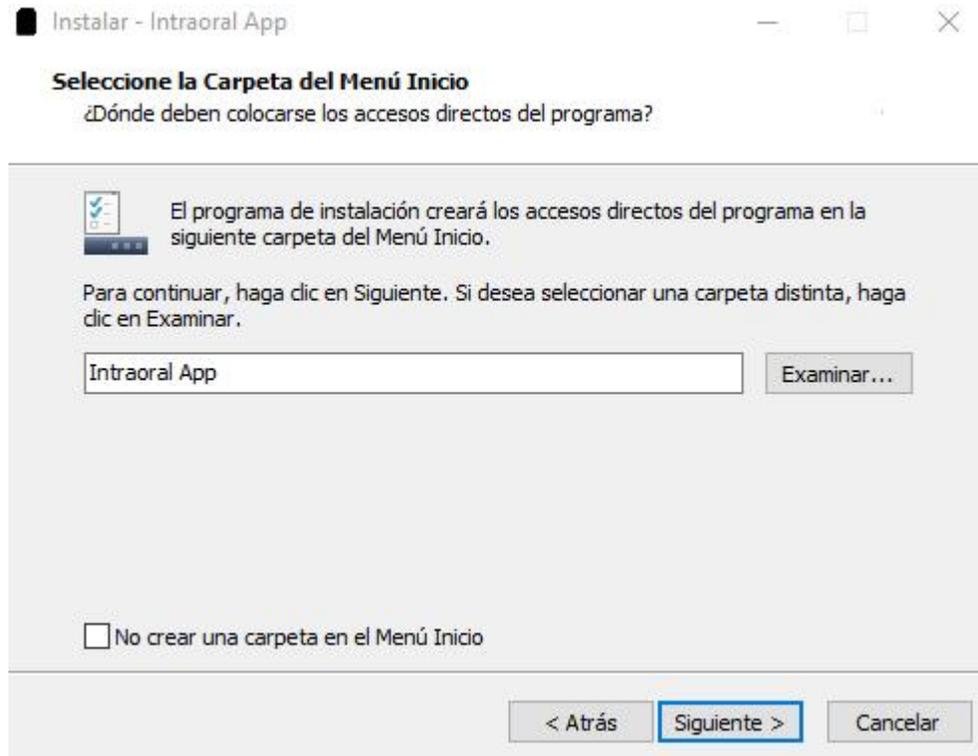


Review the installation directory and click "Next."

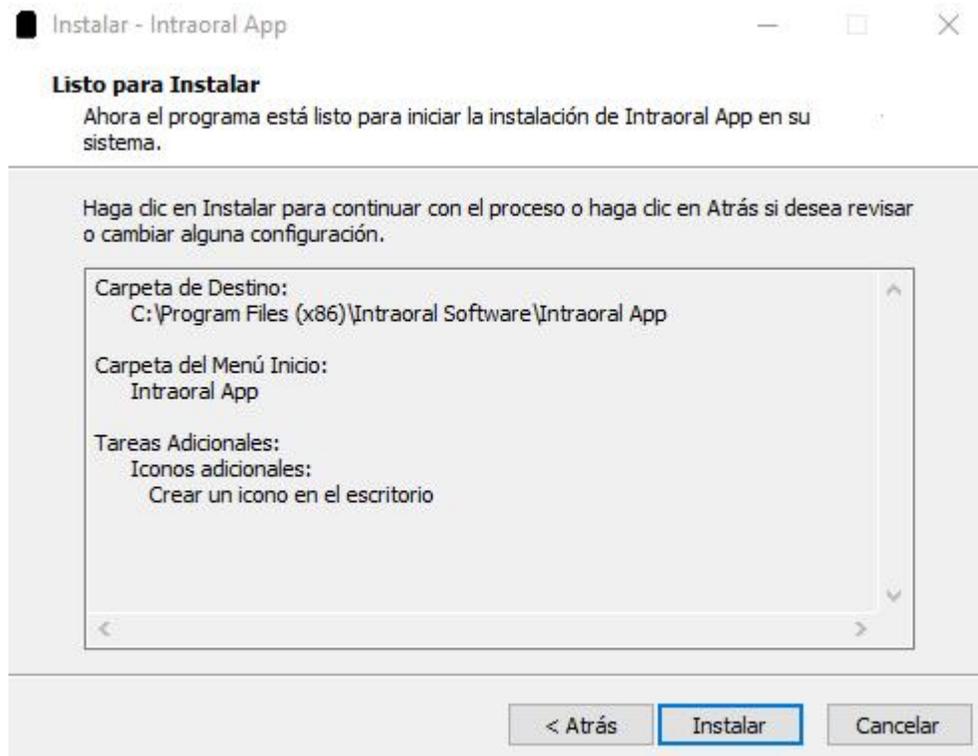


NOTE: It is not possible to change the installation directory.

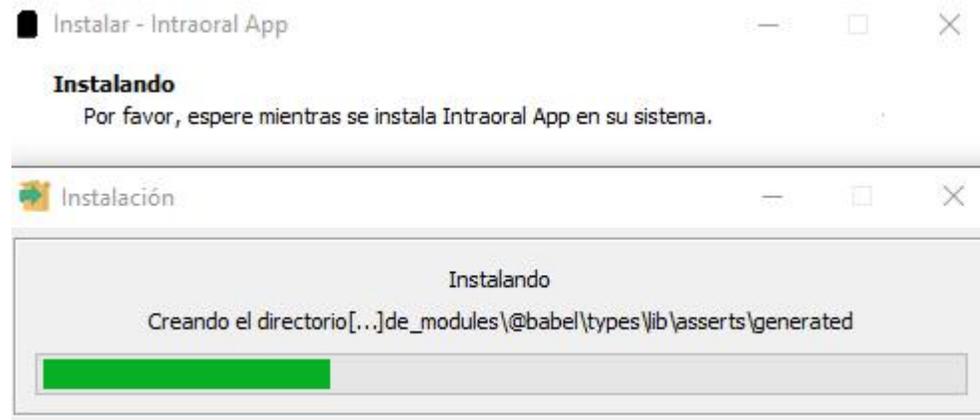
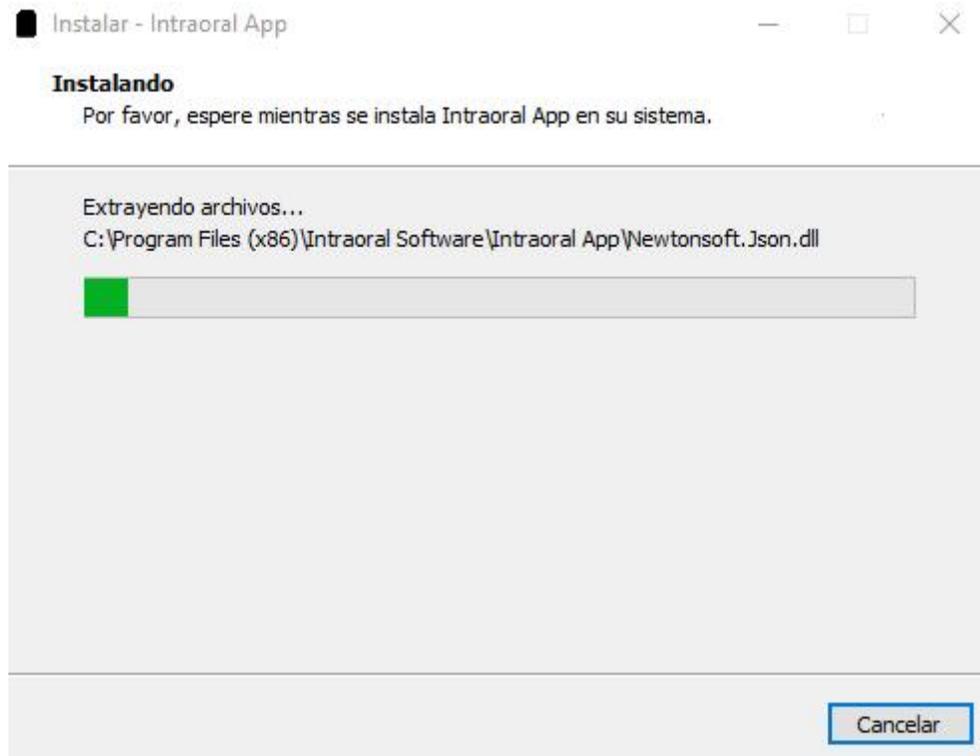
Select to create an icon on the Desktop and click "Next."



Review the information and click "Install".



Wait for the full installation to end. This operation may take few minutes.



Select Yes, to restart your computer now, or no, to restart it later.

Click "Finish" to conclude the installation.



4. Software operation

4.1. Open the software

Double-click the software shortcut on the desktop.

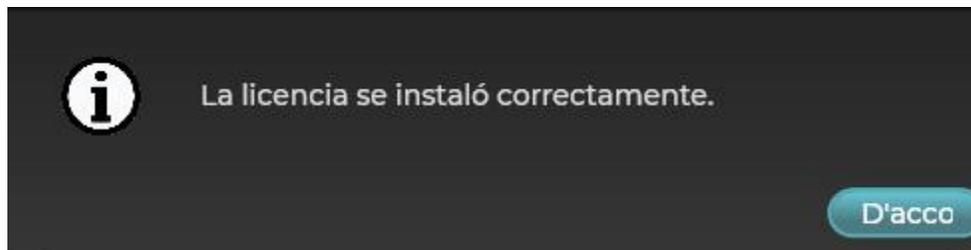


4.2. Activate the software

Plug the Intraoral Sensor into your computer's USB, wait for green indicator and its serial number confirmation, then fill in the form fields with clinic data. Click "Confirm" to activate the license.



If the license is activated, the message "License was installed successfully" appears. Click OK.

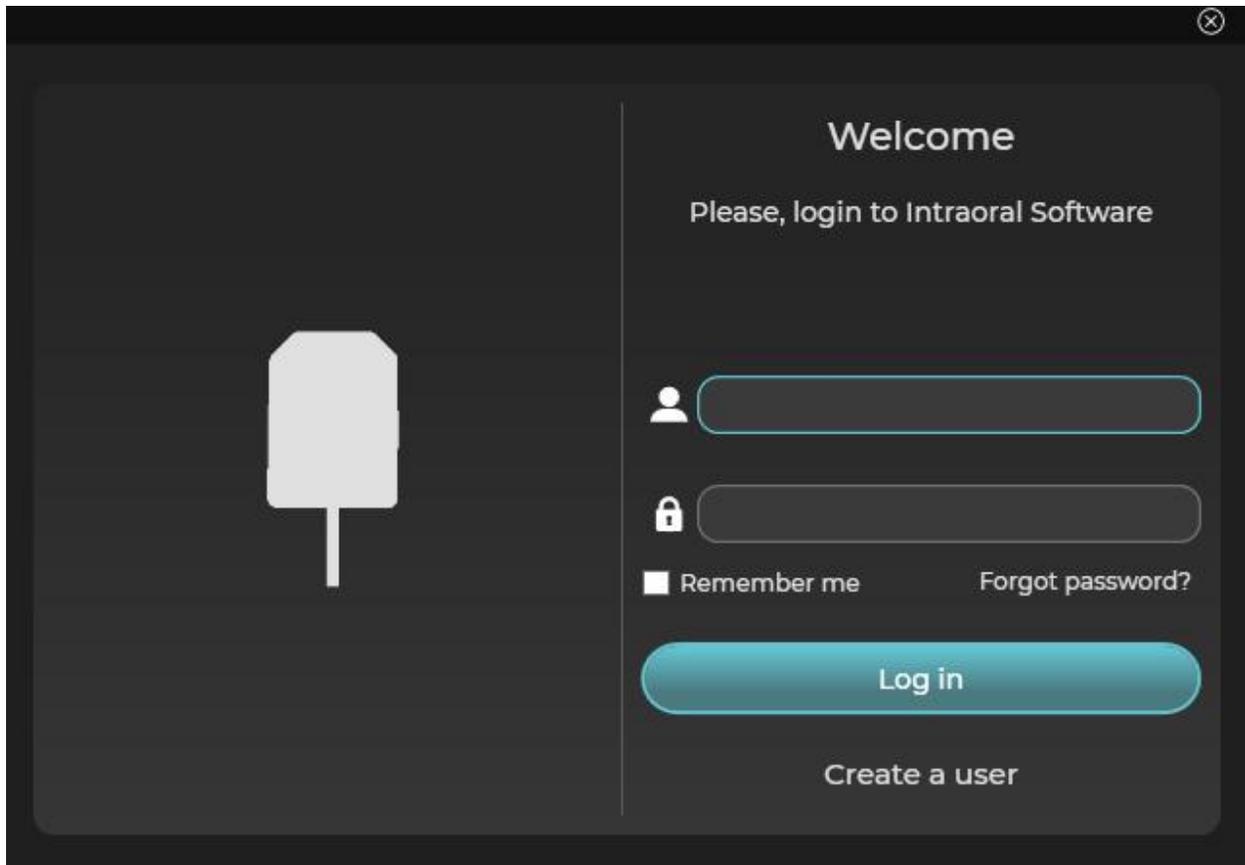


Software will automatically reboot.

4.3. Login

The login interface below is displayed every time the software starts.

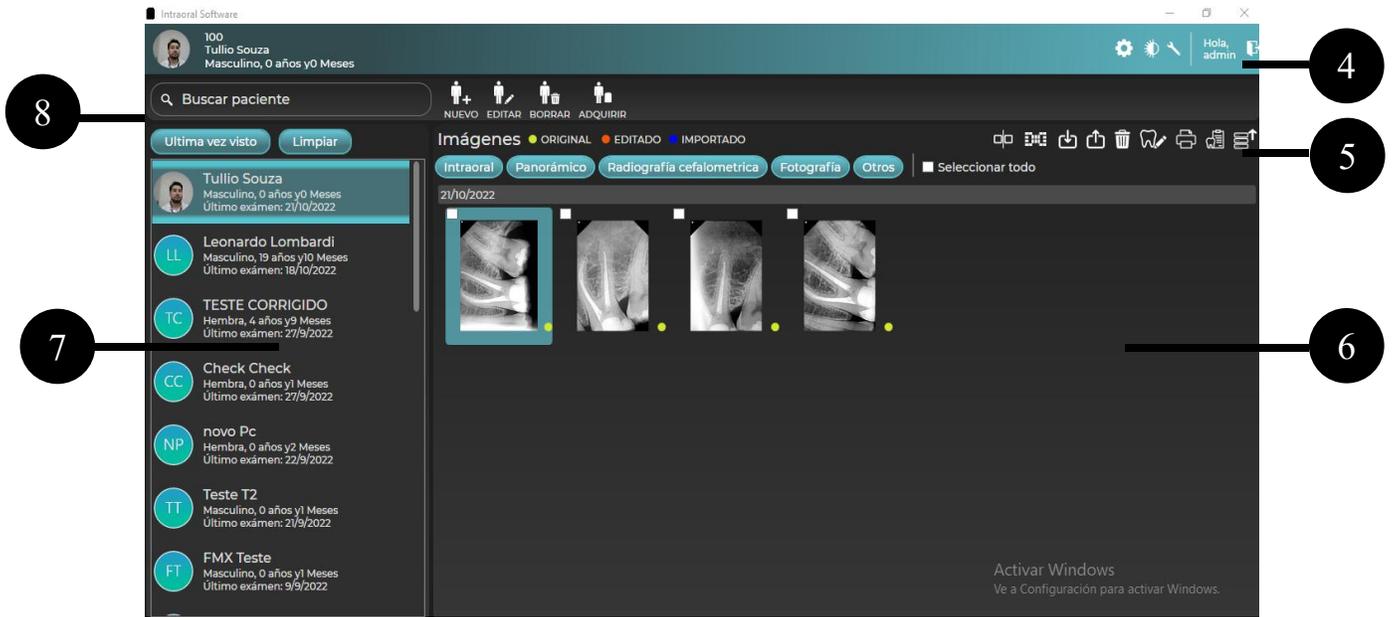
Sign in with your credentials (user and password) and click "Log in".



4.4. Patient search

After completing the user's login, the software enters the search for patients:



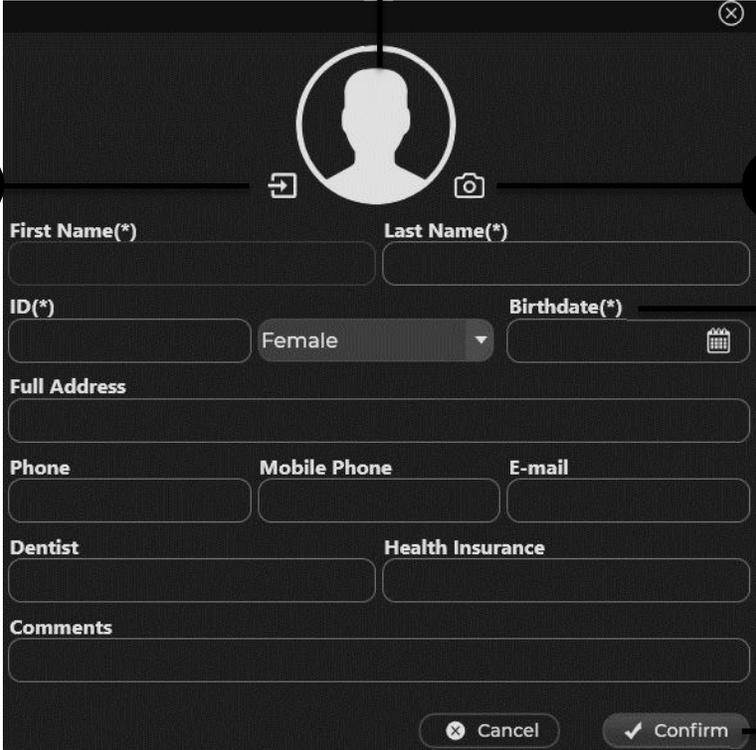


Item	Description								
1	Patient Information: Basic information of the current patient selected by the user: <ul style="list-style-type: none"> ● Patient photo, when there is. ● Patient's first and last name. ● Gender and age (Years and months). 								
2	Menu to create, edit, delete patients and acquire intraoral examination. <table border="1" data-bbox="363 1188 1414 1600"> <tbody> <tr> <td data-bbox="363 1188 516 1297"></td> <td data-bbox="516 1188 1414 1297">New patient.</td> </tr> <tr> <td data-bbox="363 1297 516 1404"></td> <td data-bbox="516 1297 1414 1404">Edit patient.</td> </tr> <tr> <td data-bbox="363 1404 516 1509"></td> <td data-bbox="516 1404 1414 1509">Delete patient.</td> </tr> <tr> <td data-bbox="363 1509 516 1600"></td> <td data-bbox="516 1509 1414 1600">Acquire intraoral examination.</td> </tr> </tbody> </table>		New patient.		Edit patient.		Delete patient.		Acquire intraoral examination.
	New patient.								
	Edit patient.								
	Delete patient.								
	Acquire intraoral examination.								
3	Software settings menu: <table border="1" data-bbox="363 1696 1414 1881"> <tbody> <tr> <td data-bbox="363 1696 516 1791"></td> <td data-bbox="516 1696 1414 1791">Open settings menu.</td> </tr> <tr> <td data-bbox="363 1791 516 1881"></td> <td data-bbox="516 1791 1414 1881">Change user interface between dark and light theme.</td> </tr> </tbody> </table>		Open settings menu.		Change user interface between dark and light theme.				
	Open settings menu.								
	Change user interface between dark and light theme.								

	 Open settings tools menu.																		
4	Log out.																		
5	<p>Exam manipulation toolbar.</p> <table border="1"> <tr> <td></td> <td>Compare up to four tests.</td> </tr> <tr> <td></td> <td>Open template preview.</td> </tr> <tr> <td></td> <td>Import exams.</td> </tr> <tr> <td></td> <td>Export exams.</td> </tr> <tr> <td></td> <td>Delete tests.</td> </tr> <tr> <td></td> <td>Edit up to four exams.</td> </tr> <tr> <td></td> <td>View the impression of exams.</td> </tr> <tr> <td></td> <td>Generate report report.</td> </tr> <tr> <td></td> <td>Export exams to DICOM server.</td> </tr> </table>		Compare up to four tests.		Open template preview.		Import exams.		Export exams.		Delete tests.		Edit up to four exams.		View the impression of exams.		Generate report report.		Export exams to DICOM server.
	Compare up to four tests.																		
	Open template preview.																		
	Import exams.																		
	Export exams.																		
	Delete tests.																		
	Edit up to four exams.																		
	View the impression of exams.																		
	Generate report report.																		
	Export exams to DICOM server.																		
6	List of examinations of the selected patient organized in chronological order from the most recent to the least recent.																		
7	List of registered patients.																		
8	<p>Patient search filters by:</p> <ul style="list-style-type: none"> ● Text of first and last name. ● Last seen. ● Clear list. 																		

4.5. Create and edit patients

Click the button  to create a patient. The following interface will appear:



The screenshot shows a patient registration form with the following elements:

- 1**: A circular profile picture placeholder.
- 2**: A camera icon next to the profile picture placeholder.
- 3**: The Birthdate(*) field, which includes a calendar icon.
- 5**: The Cancel button at the bottom right.
- 5**: The Confirm button at the bottom right.

The form fields include: First Name(*), Last Name(*), ID(*), Gender (Female), Birthdate(*), Full Address, Phone, Mobile Phone, E-mail, Dentist, Health Insurance, and Comments.

Item	Description
1	Photo of the patient to be registered.
2	Take a picture of the patient on webcam.
3	Patient registration form. Required fields: <ul style="list-style-type: none"> • Name (*). • Last name(*). • ID (*). • Gender (*): Male, Female or Other. • Date of birth (*).

4	Confirm or cancel registration.
5	Import patient photo.



Click the button  to edit a patient. The form fields and the patient's photo will be filled in with the information recorded in the database.

4.6. Acquire and edit exams



Click the  button to start acquiring exams.

Connect the intraoral sensor to the COMPUTER's USB port.

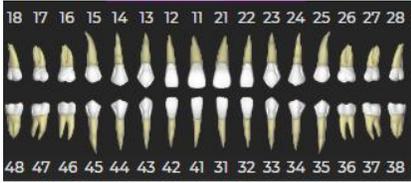
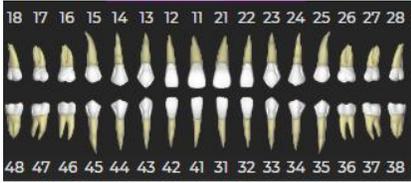
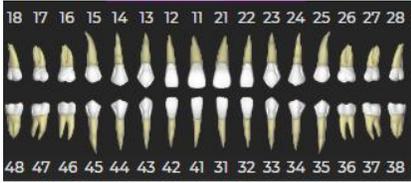
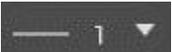
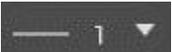
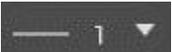
Select the exposure parameters (time and kV) on the X-ray emitter and shoot to perform the image acquisition. The following interface should appear.





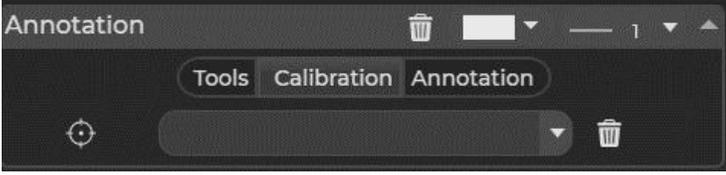
Item	Description								
1	<p>Sensor connection status:</p> <table border="1"> <tbody> <tr> <td></td> <td>The sensor is not plugged into your computer's USB port.</td> </tr> <tr> <td></td> <td>The sensor is not calibrated.</td> </tr> <tr> <td></td> <td>The software is connecting with the sensor.</td> </tr> <tr> <td></td> <td>The sensor has been recognized by the software and is ready to acquire images.</td> </tr> </tbody> </table>		The sensor is not plugged into your computer's USB port.		The sensor is not calibrated.		The software is connecting with the sensor.		The sensor has been recognized by the software and is ready to acquire images.
	The sensor is not plugged into your computer's USB port.								
	The sensor is not calibrated.								
	The software is connecting with the sensor.								
	The sensor has been recognized by the software and is ready to acquire images.								
2	<p>Exam export tools menu.</p> <table border="1"> <tbody> <tr> <td></td> <td> <p>Menu to change the type of acquisition template:</p> <ul style="list-style-type: none"> • An image. • Full mouth series with 18 acquisitions. • Full mouth series with 14 acquisitions. • Full mouth series with 10 acquisitions. • Bitewing. </td> </tr> <tr> <td></td> <td> <p>Change the exam editing layout:</p> <ul style="list-style-type: none"> • Layout 1x1: An image. • 1x2 layout: two images in a row, two columns. • 2x1 layout: two images in two rows, one column. • 2x2 layout: four images in two rows, two columns. </td> </tr> </tbody> </table>		<p>Menu to change the type of acquisition template:</p> <ul style="list-style-type: none"> • An image. • Full mouth series with 18 acquisitions. • Full mouth series with 14 acquisitions. • Full mouth series with 10 acquisitions. • Bitewing. 		<p>Change the exam editing layout:</p> <ul style="list-style-type: none"> • Layout 1x1: An image. • 1x2 layout: two images in a row, two columns. • 2x1 layout: two images in two rows, one column. • 2x2 layout: four images in two rows, two columns. 				
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	<p>Change the exam editing layout:</p> <ul style="list-style-type: none"> • Layout 1x1: An image. • 1x2 layout: two images in a row, two columns. • 2x1 layout: two images in two rows, one column. • 2x2 layout: four images in two rows, two columns. 								

	<div data-bbox="529 268 1398 741"> </div> <div data-bbox="375 768 505 827"> </div> <div data-bbox="529 768 933 800">Open scan print preview interface.</div> <div data-bbox="375 852 505 911"> </div> <div data-bbox="529 852 763 884">Export scan to disk.</div> <div data-bbox="375 999 505 1058"> </div> <div data-bbox="529 999 1015 1031">Export exam to the cloud sharing service.</div> <div data-bbox="375 1083 505 1142"> </div> <div data-bbox="529 1083 795 1115">Export exam by email.</div> <div data-bbox="375 1167 505 1226"> </div> <div data-bbox="529 1167 1023 1199">Export exam to registered DICOM server.</div> <div data-bbox="375 1251 505 1310"> </div> <div data-bbox="529 1251 893 1283">Open report view of the report.</div> <div data-bbox="375 1335 505 1394"> </div> <div data-bbox="529 1335 787 1367">Save scan to database.</div> <div data-bbox="375 1419 505 1478"> </div> <div data-bbox="529 1419 966 1451">Return to the patient search interface.</div>
<div data-bbox="204 1524 277 1591"> <p>3</p> </div>	<div data-bbox="358 1556 828 1587">Set the number of captures in sequence.</div> <div data-bbox="367 1619 505 1688"> </div> <div data-bbox="529 1619 901 1661">Increase the number of catches.</div> <div data-bbox="367 1703 505 1772"> </div> <div data-bbox="529 1703 909 1745">Decrease the number of catches.</div> <div data-bbox="367 1787 505 1856"> </div> <div data-bbox="529 1787 885 1818">Number of catches remaining.</div>
<div data-bbox="204 1892 277 1959"> <p>4</p> </div>	<div data-bbox="358 1881 1161 1913">Odontogram: Click on the teeth corresponding to the acquired exam</div>

	<table border="1"> <tr> <td data-bbox="365 254 802 363"></td> <td data-bbox="802 254 1417 363">Clear all selected teeth.</td> </tr> <tr> <td data-bbox="365 363 802 472"></td> <td data-bbox="802 363 1417 472">Show permanent dentition.</td> </tr> <tr> <td data-bbox="365 472 802 581"></td> <td data-bbox="802 472 1417 581">Show deciduous dentition.</td> </tr> <tr> <td data-bbox="365 581 802 835"></td> <td data-bbox="802 581 1417 835"> <p>Select the anatomical region you want by clicking the button corresponding to the teeth on the odontogram.</p> <p>The numbers of the selected teeth are displayed in the exposure window (according to the odontogram defined)</p> </td> </tr> </table>		Clear all selected teeth.		Show permanent dentition.		Show deciduous dentition.		<p>Select the anatomical region you want by clicking the button corresponding to the teeth on the odontogram.</p> <p>The numbers of the selected teeth are displayed in the exposure window (according to the odontogram defined)</p>										
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5	<p>Measurement and Annotation tools.</p> <table border="1"> <tr> <td data-bbox="365 932 662 1014"></td> <td data-bbox="662 932 1417 1014">Delete all notes.</td> </tr> <tr> <td data-bbox="365 1014 662 1096"></td> <td data-bbox="662 1014 1417 1096">Select color from the measurement and annotation tool.</td> </tr> <tr> <td data-bbox="365 1096 662 1178"></td> <td data-bbox="662 1096 1417 1178">Select thickness of the measurement and annotation tool.</td> </tr> <tr> <td data-bbox="365 1178 662 1287"></td> <td data-bbox="662 1178 1417 1287"> <p>Simple measurement Performs a measurement between two points in the exam.</p> </td> </tr> <tr> <td data-bbox="365 1287 662 1434"></td> <td data-bbox="662 1287 1417 1434"> <p>Multiple measurement Performs distance measurement of multiple points in the image.</p> </td> </tr> <tr> <td data-bbox="365 1434 662 1543"></td> <td data-bbox="662 1434 1417 1543"> <p>Angular measurement Performs three-point angular measurement in the image.</p> </td> </tr> <tr> <td data-bbox="365 1543 662 1652"></td> <td data-bbox="662 1543 1417 1652"> <p>Rectangle Inserts a rectangle into the image.</p> </td> </tr> <tr> <td data-bbox="365 1652 662 1761"></td> <td data-bbox="662 1652 1417 1761"> <p>Ellipse Inserts an ellipse into the image.</p> </td> </tr> <tr> <td data-bbox="365 1761 662 1871"></td> <td data-bbox="662 1761 1417 1871"> <p>Straight Inserts a line into the image.</p> </td> </tr> </table>		Delete all notes.		Select color from the measurement and annotation tool.		Select thickness of the measurement and annotation tool.		<p>Simple measurement Performs a measurement between two points in the exam.</p>		<p>Multiple measurement Performs distance measurement of multiple points in the image.</p>		<p>Angular measurement Performs three-point angular measurement in the image.</p>		<p>Rectangle Inserts a rectangle into the image.</p>		<p>Ellipse Inserts an ellipse into the image.</p>		<p>Straight Inserts a line into the image.</p>
	Delete all notes.																		
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	Select thickness of the measurement and annotation tool.																		
	<p>Simple measurement Performs a measurement between two points in the exam.</p>																		
	<p>Multiple measurement Performs distance measurement of multiple points in the image.</p>																		
	<p>Angular measurement Performs three-point angular measurement in the image.</p>																		
	<p>Rectangle Inserts a rectangle into the image.</p>																		
	<p>Ellipse Inserts an ellipse into the image.</p>																		
	<p>Straight Inserts a line into the image.</p>																		

	<p>Arrow Inserts an arrow into the image.</p>
	<p>Freehand drawing Inserts a freehand drawing into the image.</p>
	<p>Asterisk Inserts an asterisk into the image.</p>
	<p>Memo Inserts a memo with predefined texts in the image.</p>

Distance calibration tools.

	<p>Distance calibration Performs distance calibration on the image.</p> <p>Mark two points from a known distance in the image and type the value in millimeters of that distance. Enter the calibration name and click "Ok".</p> 
	<p>Select an existing calibration for the exam.</p>
	<p>Delete calibration selected.</p>

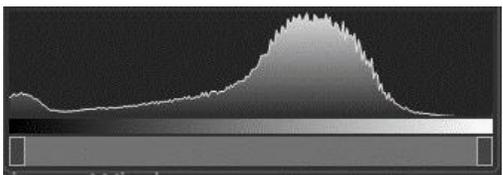
List of measurement and annotation tools inserted, containing the type, color and description.

	<p>Click a row from the list to select the corresponding tool.</p>
---	--

6

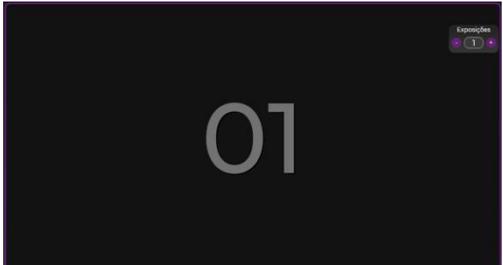
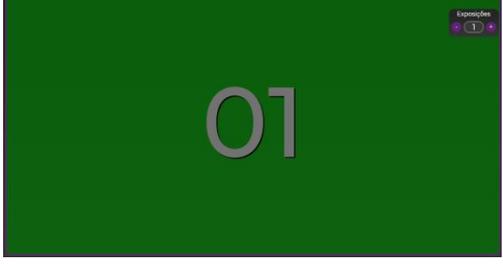
Image processing filters.

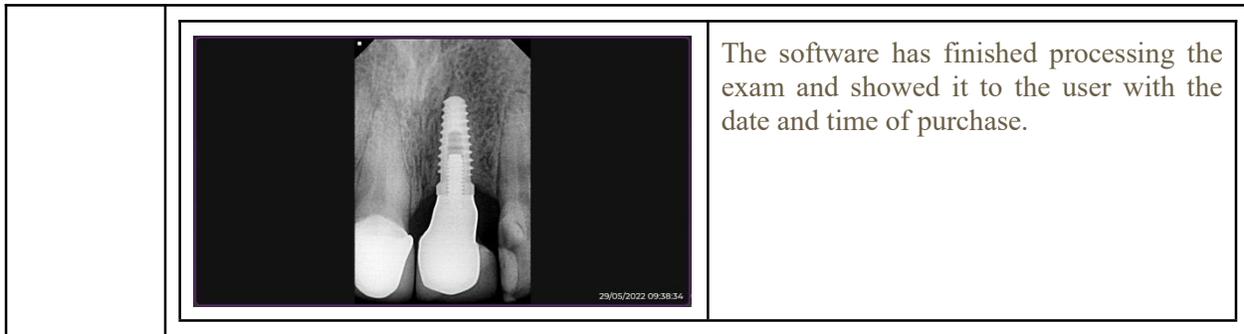
	<p>Contrast Adjust the contrast level of the exam from -99 to 99.</p>
	<p>Brightness</p>

	Adjust the brightness level of the exam from -99 to 99.
	Gamma Adjust the exam gamma correction from -99 to 99.
	Sharpen Adjust the sharpness of the exam with intensity 0 to 7.
	Denoise Remove noise on the exam with intensity 0 to 3.
	Emboss Apply self-relief filter with intensity from 0 to 3.
Histogram.	
	<p>Histogram Graph</p> <p>The number of tones occurring throughout the image. The horizontal axis represents the values of the tones, where the left side represents pixels with low values (black areas or shadows), the right side represents those with high values (highlights or light areas).</p> <p>To adjust the minimum and maximum levels, drag the respective sliders. Setting the minimum level makes dark tones darker. On the other hand, adjusting the maximum level makes the lighter tones lighter.</p>
	<p>Pseudo colorization</p> <p>Grayscale images are mapped to a new map color to improve the viewing of regions with the same contrast.</p> <p>The available pseudo colorization filters are:</p> <ul style="list-style-type: none"> ● Grayscale. ● Negative. ● HSV. ● Map of warm colors. ● Film.
	<p>Histogram equalization</p> <p>Equalizes the grayscale scans in the</p>

	<p>image.</p>										
<p>Historic</p>	<div data-bbox="362 390 878 653">  </div> <div data-bbox="362 653 878 1062">  </div> <div data-bbox="894 390 1419 1062"> <p>Filter list List of filters applied in the exam containing type and intensity.</p> <p>Double-clicking a row from the list returns image processing to the corresponding stage.</p> <p>Presets List of predefined filters to be applied to the exam.</p> <p>Click to  add a new preset matching the list of filters applied to the exam.</p> <p>Click  to delete the selected preset.</p> <p>Click to  add a preset.</p> </div>										
<p>7</p>	<p>Report edition:</p> <p>Click on the  button to expand the text box for report editing.</p> <div data-bbox="362 1230 1419 1472">  </div> <table border="1" data-bbox="362 1503 1419 1885"> <tr> <td data-bbox="362 1503 651 1587"></td> <td data-bbox="651 1503 1419 1587">Undo the last edit of the text.</td> </tr> <tr> <td data-bbox="362 1587 651 1671"></td> <td data-bbox="651 1587 1419 1671">Redo the last text change.</td> </tr> <tr> <td data-bbox="362 1671 651 1745"></td> <td data-bbox="651 1671 1419 1745">Format text to bold.</td> </tr> <tr> <td data-bbox="362 1745 651 1818"></td> <td data-bbox="651 1745 1419 1818">Format text to italics.</td> </tr> <tr> <td data-bbox="362 1818 651 1896"></td> <td data-bbox="651 1818 1419 1896">Format text for underscore.</td> </tr> </table>		Undo the last edit of the text.		Redo the last text change.		Format text to bold.		Format text to italics.		Format text for underscore.
	Undo the last edit of the text.										
	Redo the last text change.										
	Format text to bold.										
	Format text to italics.										
	Format text for underscore.										

	Add bookmark.										
	Add numeric marker.										
	Align text to the left.										
	Center text.										
	Align text to the right.										
	Justify text.										
	Select the font type.										
	Select the font size.										
<p>List of patient exams:</p>  <p>Filter the tests to be shown by category (Intraoral, panoramic, teleradiograph, photography and others). Double-click on the exam to show it in the acquisition area.</p>											
8	<p>Exam acquisition area: site intended to show the exam purchased and being worked.</p> <p>Exam manipulation tools.</p> <table border="1"> <tr> <td data-bbox="363 1367 670 1465"></td> <td data-bbox="670 1367 1412 1465">Zoom in.</td> </tr> <tr> <td data-bbox="363 1465 670 1564"></td> <td data-bbox="670 1465 1412 1564">Zoom out.</td> </tr> <tr> <td data-bbox="363 1564 670 1663"></td> <td data-bbox="670 1564 1412 1663">Magnifying glass.</td> </tr> <tr> <td data-bbox="363 1663 670 1761"></td> <td data-bbox="670 1663 1412 1761">View the exam in full screen.</td> </tr> <tr> <td data-bbox="363 1761 670 1850"></td> <td data-bbox="670 1761 1412 1850">Rotate the exam 90th hour.</td> </tr> </table>		Zoom in.		Zoom out.		Magnifying glass.		View the exam in full screen.		Rotate the exam 90th hour.
	Zoom in.										
	Zoom out.										
	Magnifying glass.										
	View the exam in full screen.										
	Rotate the exam 90th hour.										

	Rotate the exam 90° counterclockwise.
	Hide/show notes.
	View comparison between original and edited exam.
	View grid lines.
	Capture exam area and save it to disk.
Acquisition area status.	
	The software is waiting for the intraoral sensor to connect to the USB port.
	The software is awaiting the capture of the examination by the intraoral sensor.
	The software has acquired the intraoral sensor exam and is processing the exam before showing it to the user.



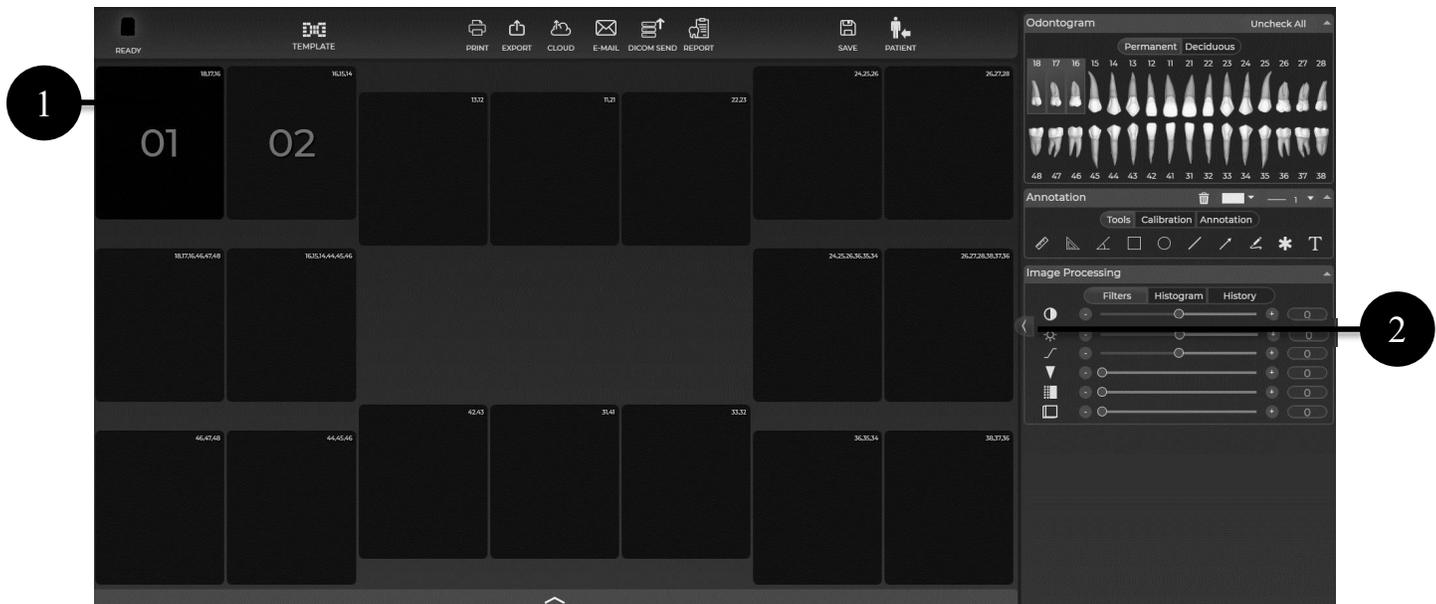
4.7. Capturing templates

Click the  button to start acquiring exams.

Click the button  and select one of the existing options: FMX 18, FMX 14, FMX 10 and bitewing.

Connect the intraoral sensor to the COMPUTER's USB port.

Select the exposure parameters (time and kV) on the X-ray emitter and shoot to perform the image acquisition. The following interface should appear.

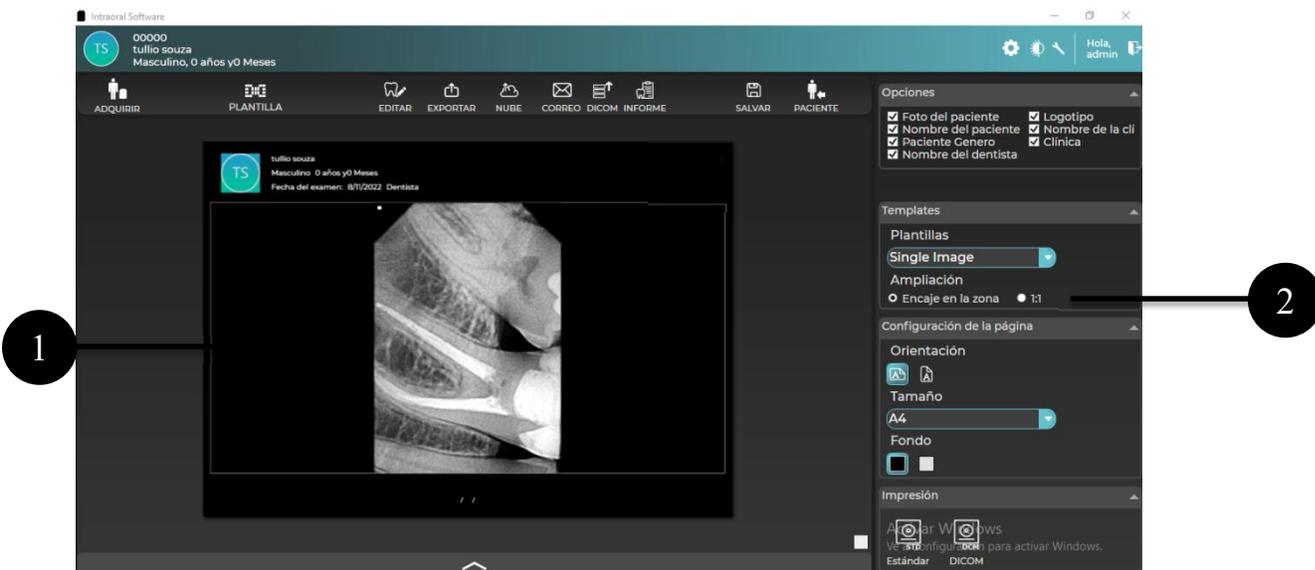


Item	Description
------	-------------

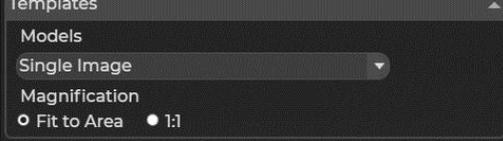
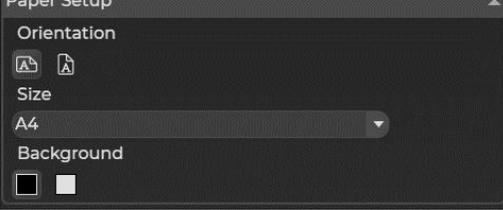
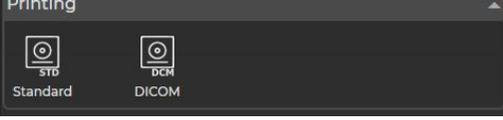
<p>1</p>	<p>Template area: Select the acquisition sequence by clicking on the image boxes. The software will follow the automatically established sequence.</p>
<p>2</p>	<p>Click the show/hide the large image button.</p>

4.8. Exam printing

Click the  button to show the scan print preview.
The following interface should appear.



<p>1</p>	<p>Preview area of print templates.</p>
<p>2</p>	<p>Printing tools.</p>

	<p>Viewing options:</p> <ul style="list-style-type: none"> ● Patient photo. ● Patient name. ● Patient gender. ● Name of the dentist. ● Right from the clinic. ● Name of the clinic. ● Clinic info.
	<p>Select available models:</p> <ul style="list-style-type: none"> ● Unique image. ● Pan + Peri. ● Mouth complete. ● Endo 10. <p>Select magnification:</p> <ul style="list-style-type: none"> ● Fit in the area. ● 1:1 Printing
	<p>Select template orientation:</p> <ul style="list-style-type: none"> ● Landscape. ● Portrait. <p>Paper size:</p> <ul style="list-style-type: none"> ● A4, A3, 8x10in, 10x12in, 10x14in, 11x14in, 12x14in, 14x14in, 14x17in, 24x24cm and 24x30cm. <p>Template background:</p> <ul style="list-style-type: none"> ● Dark. ● Clear
	<p>Print type:</p> <ul style="list-style-type: none"> ● Default: Printer printing installed on the operating system. ● DICOM: PRINTING ON DICOM printer registered in the settings.

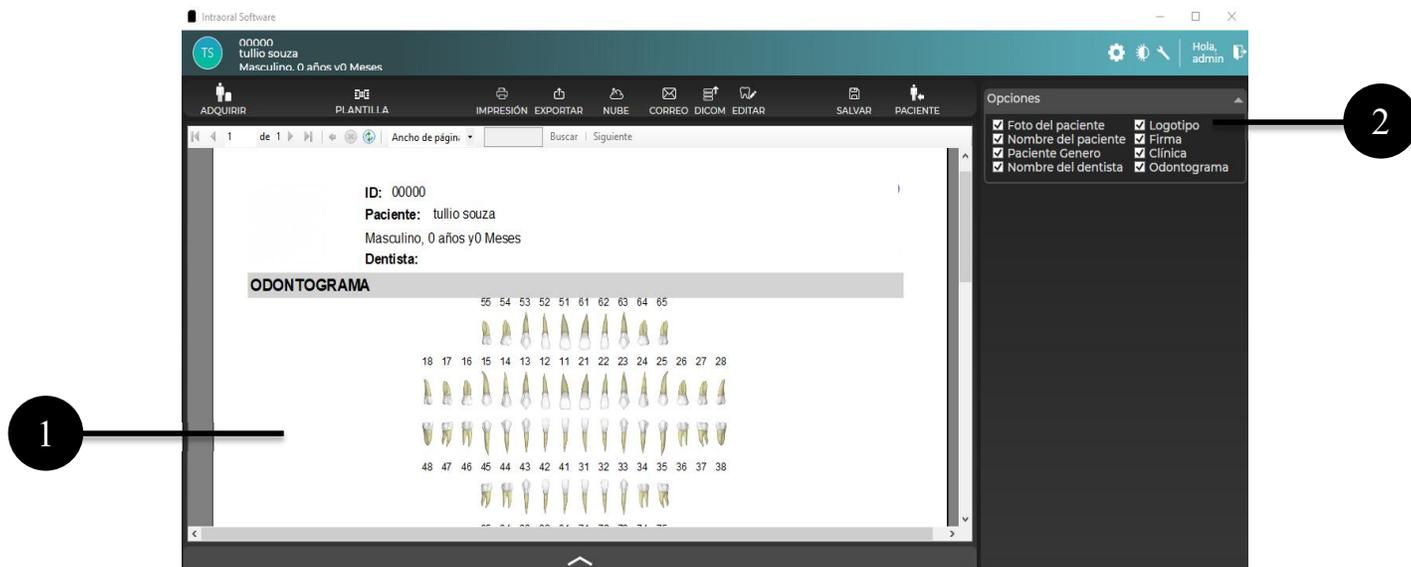
4.9. Report



Click the  button to show the report view of the report.

Click the Print, Export, Cloud, and Email buttons to send the report to the desired option.

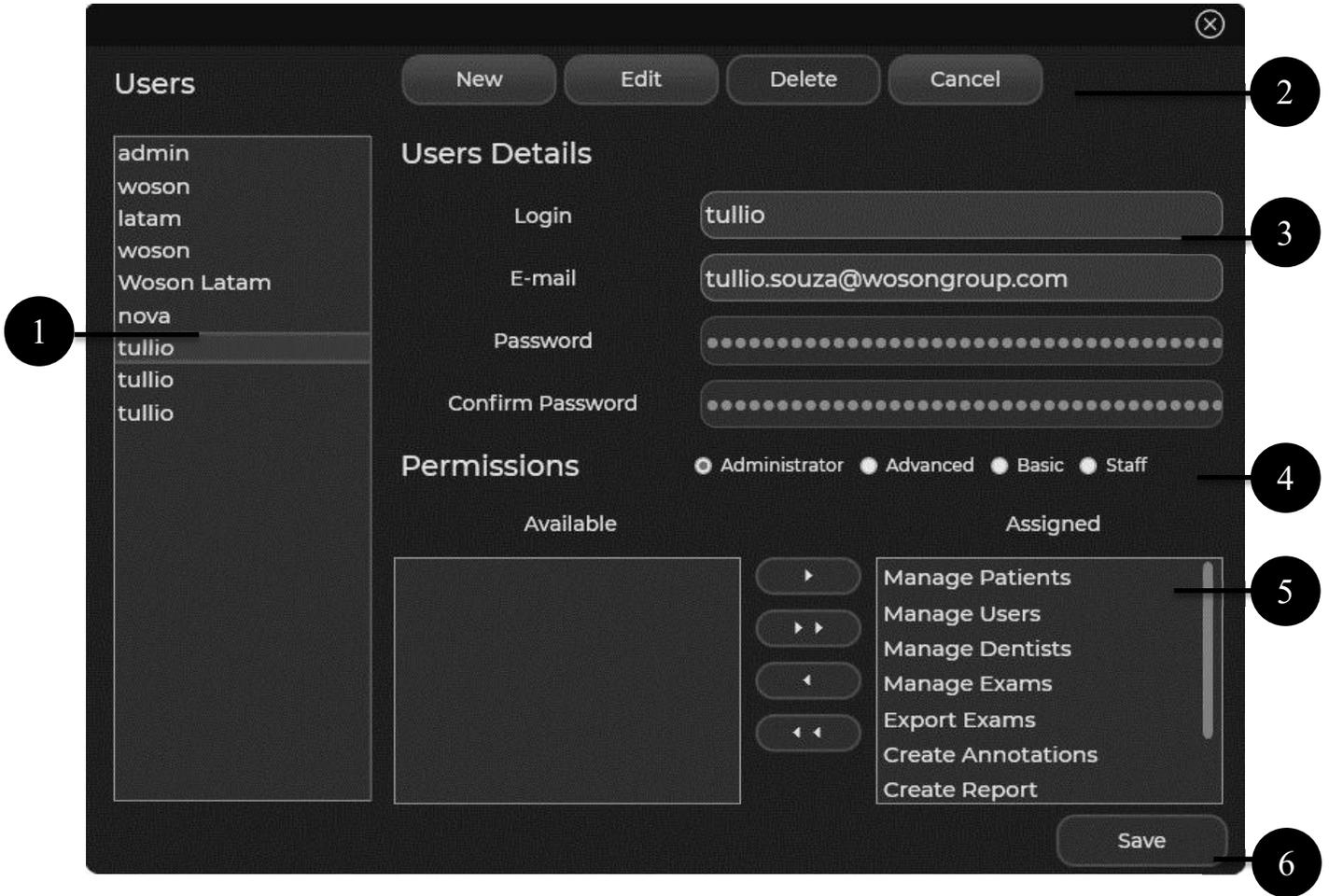
The following interface should appear.



1	Report preview area.
2	<p>Viewing options:</p> <ul style="list-style-type: none"> ● Patient photo. ● Patient name. ● Patient gender. ● Name of the dentist. ● Right from the clinic. ● Signature. ● Clinic info. ● Odontogram.

4.10. Manage Users

Click the button  and select the Manage Users option.
The following interface should appear.

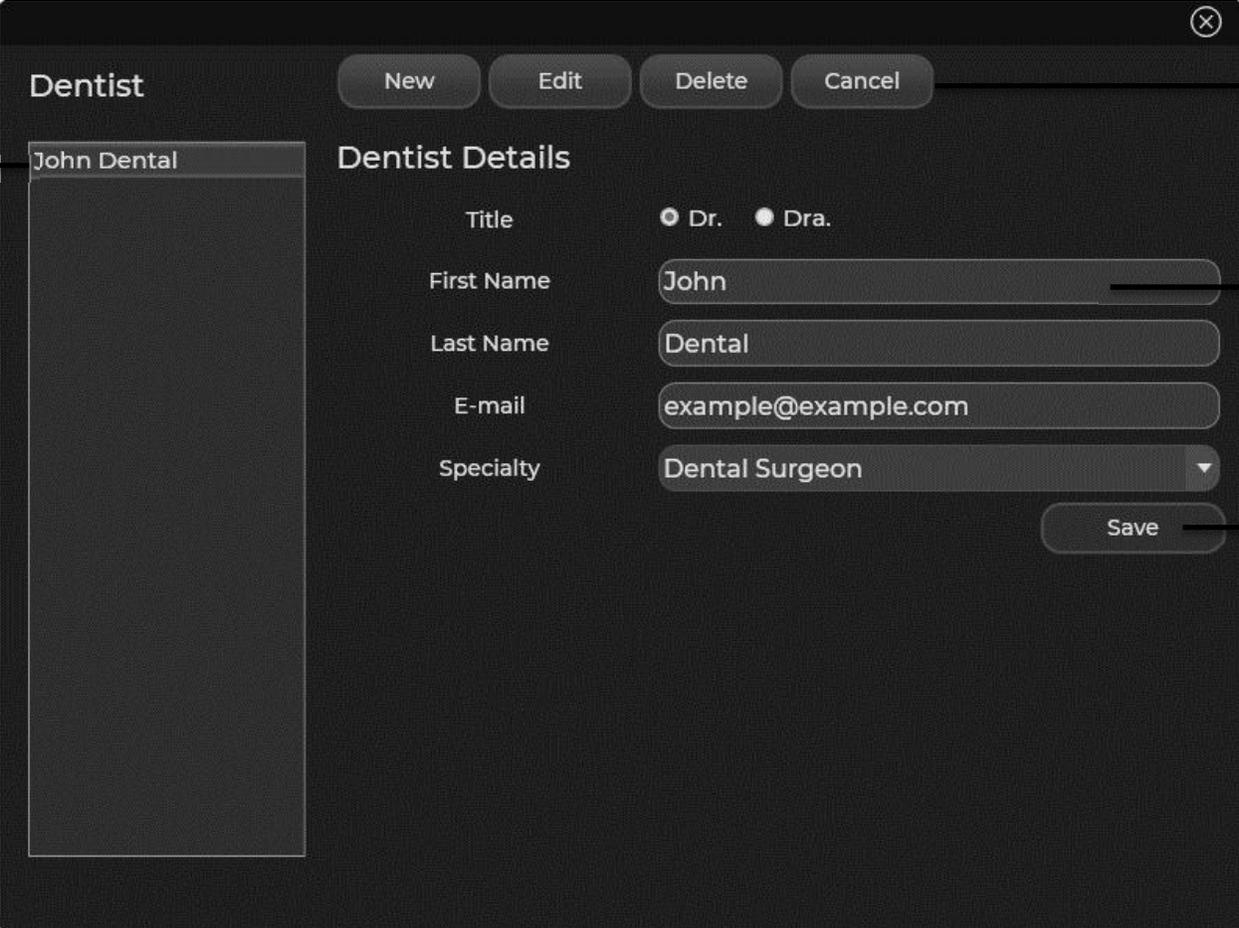


Item	Description
1	List of users.
2	Operations to create, edit, delete, or cancel the user's change. Note: The master user cannot be deleted.
3	User details: <ul style="list-style-type: none"> • Login. • Email. • Password. • Confirm password.
4	User permission group: <ul style="list-style-type: none"> • Administrator. • Advanced. • Basic. • Staff.

5	<p>Available permissions:</p> <ul style="list-style-type: none"> • Manage patients. • Manage users. • Manage dentists. • Manage exams. • Export exams. • Create annotations. • Create reports. • Change settings.
6	Save changes.

4.11. Manage Dentists

Click the button  and select the Manage Dentists option.
The following interface should appear.



The screenshot shows a dark-themed 'Dentist' management window. At the top, there are buttons for 'New', 'Edit', 'Delete', and 'Cancel'. A close button (X) is in the top right corner. On the left, a list shows 'John Dental' with a callout '1' pointing to it. The main area is titled 'Dentist Details' and contains the following fields:

- Title:** Radio buttons for 'Dr.' and 'Dra.' with 'Dr.' selected.
- First Name:** Text input field containing 'John' with callout '3'.
- Last Name:** Text input field containing 'Dental'.
- E-mail:** Text input field containing 'example@example.com'.
- Specialty:** Dropdown menu showing 'Dental Surgeon' with a callout '4' pointing to the 'Save' button below it.

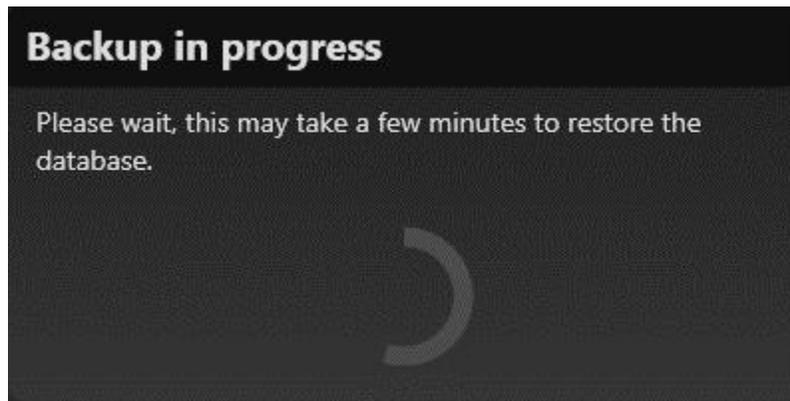
A 'Save' button is located at the bottom right of the form.

Item	Description
1	List of dentists.
2	Operations to create, edit, delete, or cancel the dentist's change.
3	Dentist details: <ul style="list-style-type: none"> • Title. • Name. • Surname. • Email. • Specialty: Dentist, endodontist, periodontist, implantodontist, stomatologist, oral pathologist, radiologist.
4	Save changes.

4.12. Database backup and restore

Click the button  and select the Backup option.

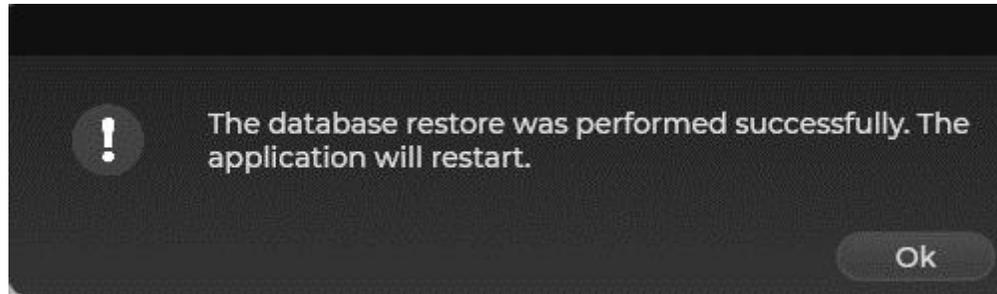
The software should start the database backup process automatically and save the resulting file to the chosen directory in the settings.



Click the  button and select the Database Restore option.

The software should prompt the user to choose the backup file and start the database restore process automatically.

After the end, the software should show the following message:



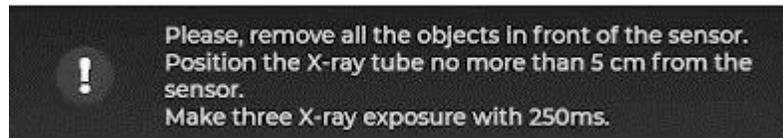
4.13. Image calibration

Click the button  and select the Calibration option.

The software should ask if the user wants to proceed with calibration and redirect to the acquisition interface.

Remove all objects between the sensor and the X-ray emitter and perform three acquisitions with exposure time of 100ms or 250ms at 5cm distance.

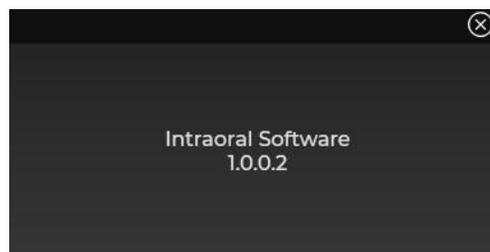
After calibration has ended, the software must be restarted.



4.14. Software information

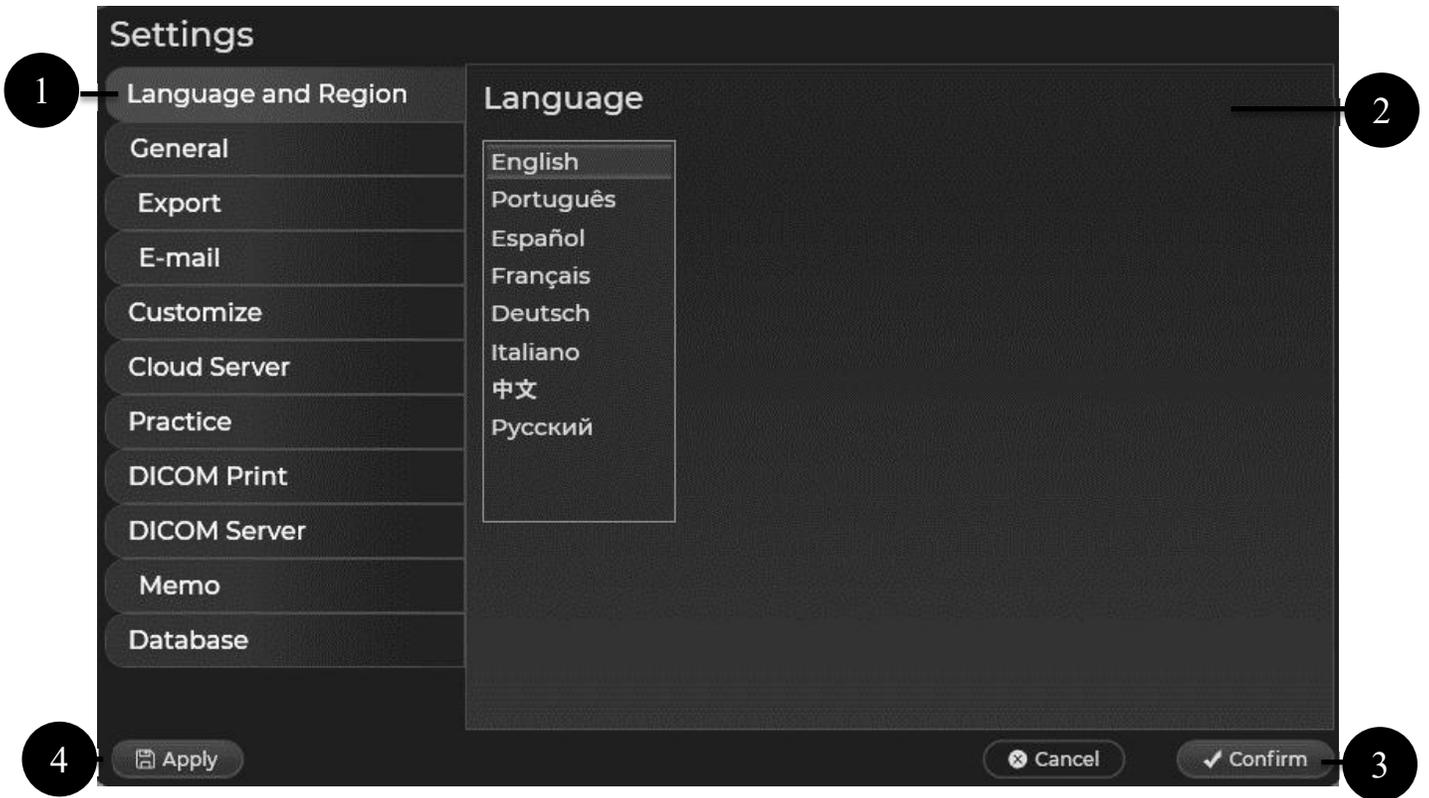
Click the button  and select the About option.

The software must show the name and version information of the software.



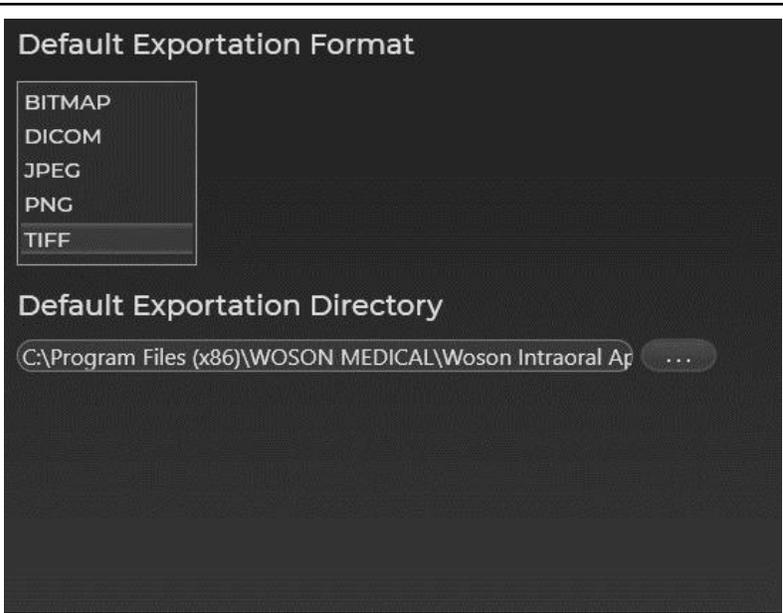
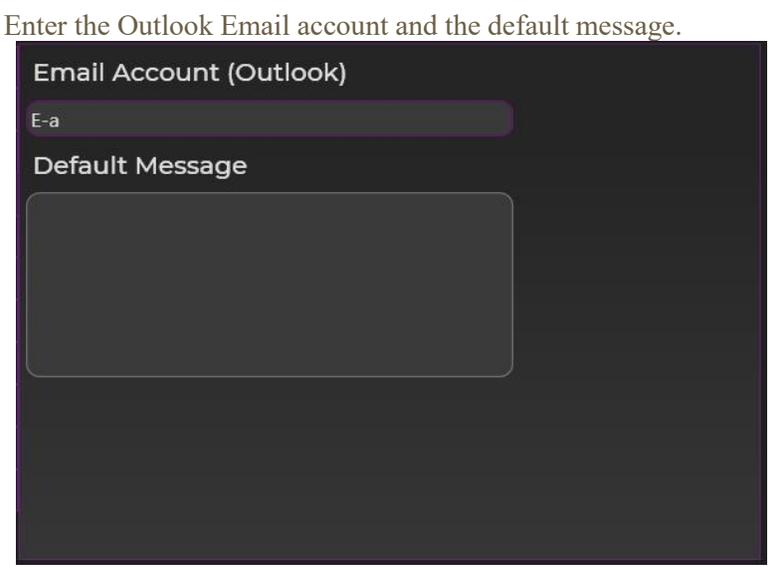
4.15. Settings

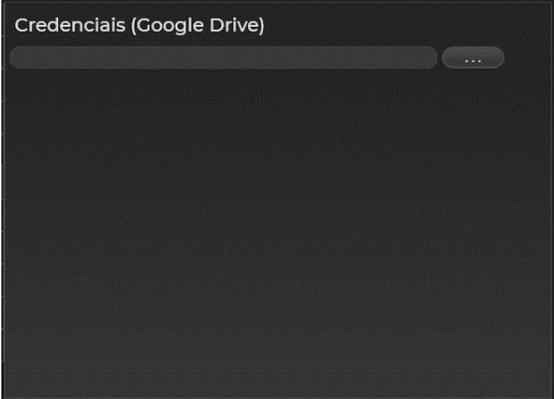
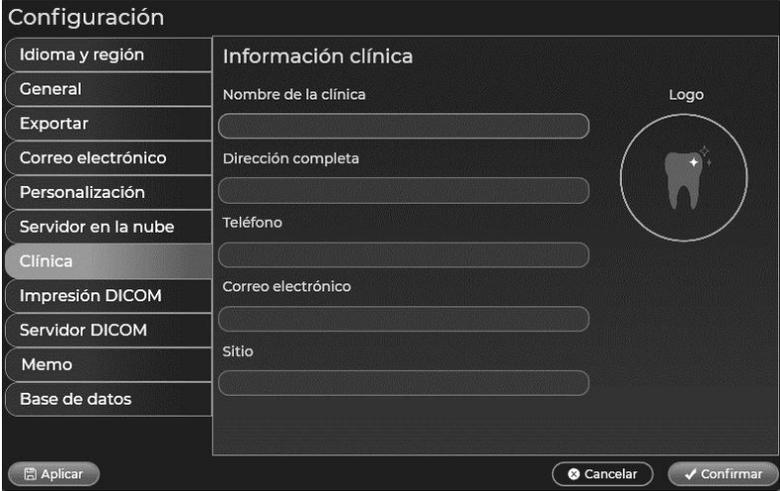
Click the button  to open the Settings window.

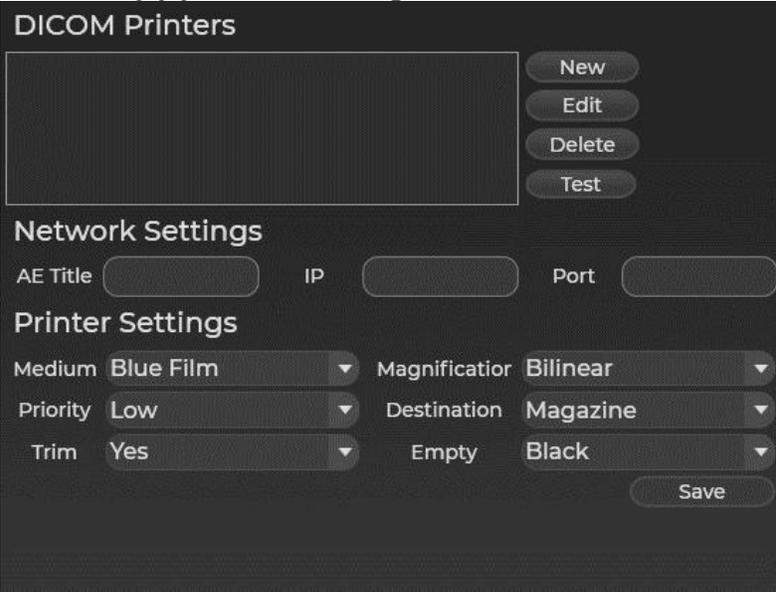
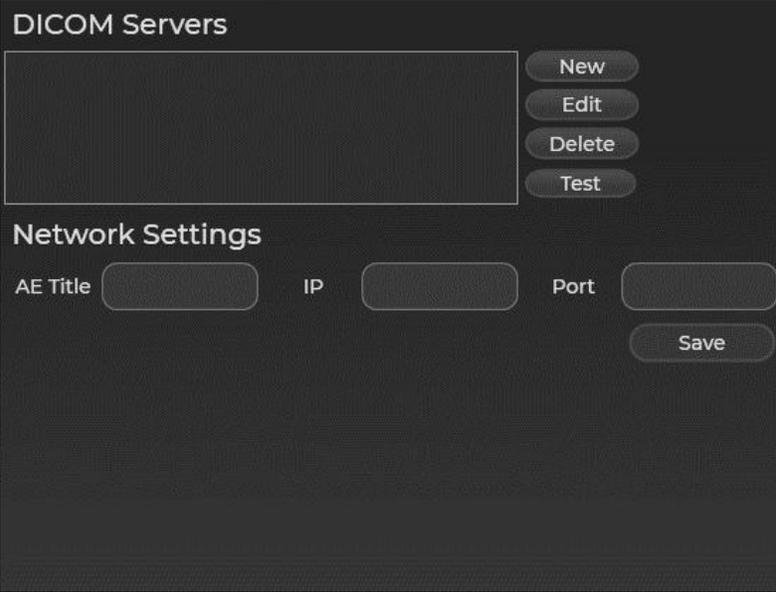


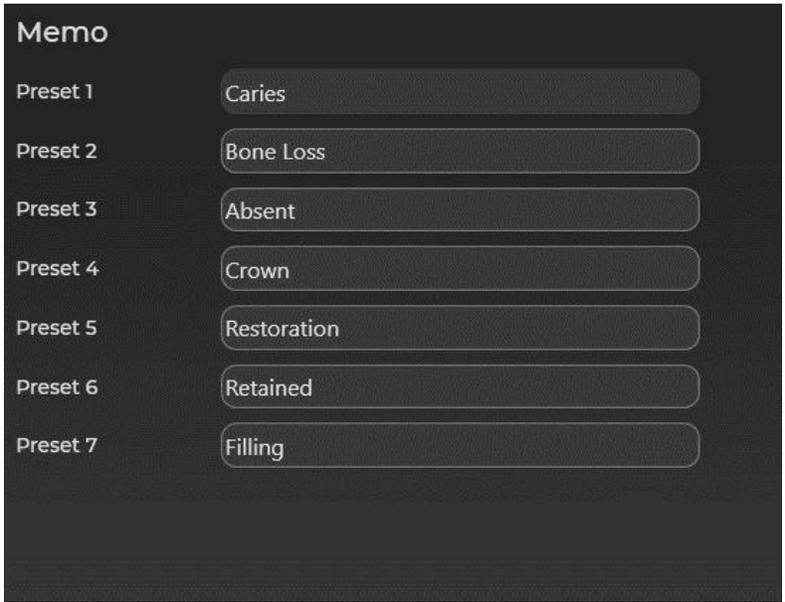
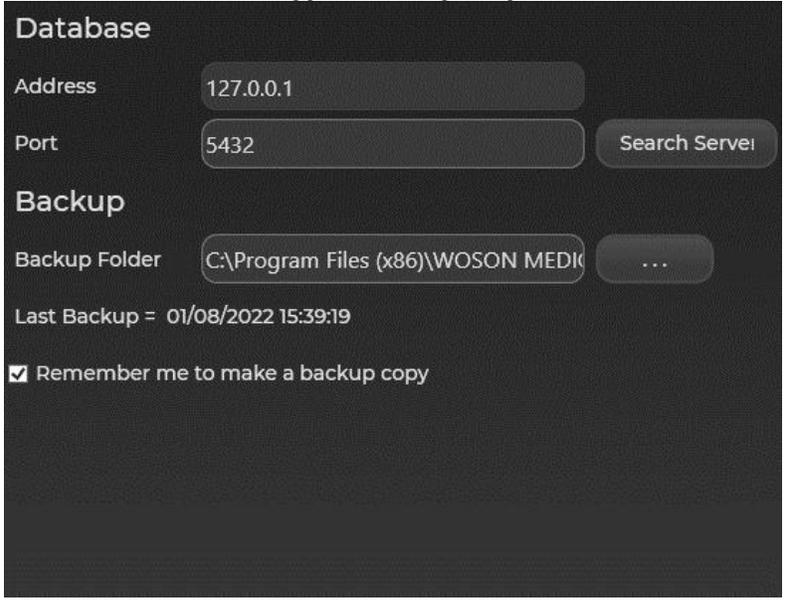
Item	Description		
1	Settings tabs: Click the desired tab to configure the software.		
2	Configuration area of the options. <table border="1" data-bbox="363 1304 1416 1398" style="margin-left: 20px;"> <tr> <td data-bbox="363 1304 607 1398">Language and Region</td> <td data-bbox="607 1304 1416 1398">Select from: English, Portuguese, Spanish, French, German, Italian, Chinese and Russian.</td> </tr> </table>	Language and Region	Select from: English, Portuguese, Spanish, French, German, Italian, Chinese and Russian.
Language and Region	Select from: English, Portuguese, Spanish, French, German, Italian, Chinese and Russian.		

		<p>Language</p> <ul style="list-style-type: none">EnglishPortuguêsEspañolFrançaisDeutschItaliano中文Русский
	General	<p>Select the numbering system: FDI, Universal and Palmer.</p> <p>Tooth Numbering System</p> <ul style="list-style-type: none">FDIUniversalPalmer
	Export	<p>Select the default export format: Bitmap, Dicom, Jpeg, Png and Tiff.</p> <p>Select the default export directory by clicking the .</p>

		 <p>The screenshot shows two settings sections. The first is 'Default Exportation Format' with a list of options: BITMAP, DICOM, JPEG, PNG, and TIFF. The second is 'Default Exportation Directory' with a text field containing the path 'C:\Program Files (x86)\WOSON MEDICAL\Woson Intraoral Ap' and a browse button '...'.</p>
	Email	<p>Enter the Outlook Email account and the default message.</p>  <p>The screenshot shows two settings sections. The first is 'Email Account (Outlook)' with a text field containing 'E-a'. The second is 'Default Message' with a large empty text area.</p>
	Customization	<p>Configure the visibility of image editing tools: Odontogram, image processing and measurement.</p>

	<p>Toolbar</p> <p>Odontogram <input type="checkbox"/></p> <p>Image Processing <input type="checkbox"/></p> <p>Measurement <input type="checkbox"/></p>
<p>Cloud Server</p>	<p>Select the Google Drive credentials file.</p> 
<p>Clinic</p>	<p>Edit clinic information: name, address, phone number, email and website.</p> 

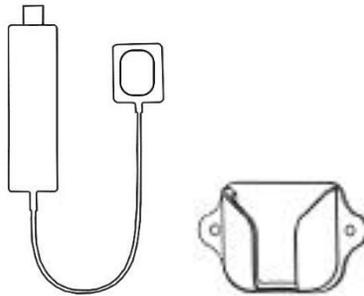
	DICOM Printing	<p>Options for creating, editing, deleting, and testing connections to DICOM printers.</p> <ul style="list-style-type: none"> • Network configuration: AE Title, IP and Port. • Media: Blue Film, Clear Film or Paper. • Magnification: Bilinear, Replicate, or Cubic. • Priority: Low, Med or High. • Destination: Magazine or Preprocessor. • Cut: Yes or No. • Empty part fill: dark or light. 
	DICOM Server	<p>Options for creating, editing, deleting, and testing connection to DICOM servers.</p> <ul style="list-style-type: none"> • Network configuration: AE Title, IP and Port. 
	Memo	Setting up the text presets of the Memo tool.

	
Database	<p>Options for configuring the database.</p> <ul style="list-style-type: none"> ● Address. ● Door. ● Backup folder. ● Date and time of last backup. ● Remember to copy the backup daily. 
3	Option to confirm or cancel the configuration.
4	Apply the changes.

5. Maintenance

5.1 Cleaning and disinfection

Accessories that require cleaning and disinfection after each use are the Sensor and the holder.



Note:

Only the use of 70% alcohol is indicated for disinfection.

Do not use other disinfectants and do not do so with the sensor connected to a desktop or laptop workstation.

Equipment that cannot be sterilized in a steam autoclave or any other sterilizer.

Do not use hard brushes or scrapers of any kind to clean or strong acids or alkaloides.

5.2 Conditions of transport, storage and operation

Ambient temperature: 5°C to 40°C

Relative humidity: <80%

Atmospheric pressure: 70kPa to 106kPa

5.3 Troubleshooting

If you have problems with the operation of the software, check the following:

Symptoms	Diagnosis and Solution
----------	------------------------

The sensor does not connect to the software	<p>The software does not recognize the sensor.</p> <ul style="list-style-type: none"> • Make sure the USB cable is properly connected to your computer. • Unplug and reconnect the sensor to the USB port. • Make sure the intraoral sensor drivers are installed.
The sensor is not calibrated	<p>The software did not find the sensor calibration files.</p> <ul style="list-style-type: none"> • Follow the steps in section 4.13
Sensor status is "Connecting"	<p>The software cannot connect to the sensor.</p> <ul style="list-style-type: none"> • Make sure the USB cable is properly connected to your computer. • Unplug and reconnect the sensor to the USB port. • Check that the intraoral sensor drivers are installed.
The image does not appear after X-ray exposure	<p>The software did not acquire the sensor image.</p> <ul style="list-style-type: none"> • Make sure the USB cable is properly connected to your computer. • Check the operation of the X-ray transmitter. • Check the X-ray exposure time. • Make sure that the active area of the sensor is oriented towards the X-ray emitter and that they are properly aligned. • Recalibrate the sensor by section 4.13.
The examination appears incomplete after the acquisition	<p>Loss of communication with the sensor during exam transfer.</p> <ul style="list-style-type: none"> • Make sure the USB cable is properly connected to your computer. • Unplug and reconnect the sensor to the USB port.
Very clear acquired examination	<ul style="list-style-type: none"> • Insufficient exposure time. • The voltage of the generator is insufficient. • Adjustments to your monitor. (Brightness and contrast). • Check to see if there is a filter preset being applied. • Recalibrate the sensor by section 4.13.
Examination acquired too dark	<ul style="list-style-type: none"> • Exposure time too high. • Generator voltage's high. • Adjustments to your monitor. (Brightness and contrast). • Check to see if there is a filter preset being applied.
Existence of rows and columns in the exam	<p>It is necessary to recalibrate the image.</p> <ul style="list-style-type: none"> • Follow the steps in section 4.13

When you open the software, the activation screen appears	The software is not activated. <ul style="list-style-type: none"> Follow the instructions in section 3.2
The software is not enabled for the intraoral sensor serial number	<ul style="list-style-type: none"> Follow the instructions in section 3.2
When activating the software, activation does not recognize the sensor serial number	Sensor not registered. <ul style="list-style-type: none"> Contact technical support.
User and password are invalid	Reset the user's password.
The software does not find the database	The software does not connect to the database. <ul style="list-style-type: none"> Add the software to the antivirus and firewall exception list. Contact technical support.
Error sending scan to DICOM printer	The software does not connect with the printer. <ul style="list-style-type: none"> Add the Printer TCP port to the antivirus and firewall exception list. Check the connection to the printer. Check the printer configuration in the software according to section 3.15.
Error sending scan to DICOM server	The software does not connect to the server. <ul style="list-style-type: none"> Add the TCP port from the server to the antivirus and firewall exception list. Check the connection to the server. Check the server configuration in the software according to section 3.15.

5.4 Recommended exposure time

The exposure time selected for each X-ray shot depends directly on the bone density, age and gender of each patient. In addition, it can be directly influenced by the issuing source and should be adjusted for better image acquisition.

In pediatric patients, exposure time should be adjusted according to the recommendation of their age.

Served	Exposure time
Incisors	0.1-0.2
Canines	0.1-0.2
Premolars	0,15-0,25

Molars	0,15-0,25
--------	-----------

Recommended table for an adult patient using a 60kV/2mA emitter beam



NOTE:

Adjustments of $\pm 25\%$ of the recommended table are recommended for clinical cases of edentulous patients, patients up to 21 years old or x-ray sources with different parameters of 60kV/2mA to obtain a clear picture or according to the expectations of each user.

6. Technical data

The images depicted in this manual are for technical reference only and the manufacturer reserves the right to make changes without notice.

This manual may not be reproduced and/or altered without the prior permission of the manufacturer or importer.

6.1 General

MODELS	Z-sensor	Z-sensor Max
Packing size	30,0x11,0x3,2 cm	30,0x11,0x3,2 cm
sensor size	25 0x38,0x4,5mm	32,0x54,0x4,5mm
Active area	20x30mm ²	26x36mm ²
pixel matrix	(1,5M) 1000x1500	(2,34M) 1300x1800
Data interface	USB Direct, USB 2.0/3.0	USB Direct, USB 2.0/3.0
Sensor technology	APS CMOS	APS CMOS
centelleador	CsI:TL	CsI:TL
Connector cable size	3m	3m
pixel size	20 μ m	20 μ m
Resolution (theoretical)	25lp/mm	25lp/mm
grayscale	16 bits	16 bits
Exposure mode	Smart DEA	Smart DEA
Protection index	IP68 (disinfection)	IP68 (disinfection)
Protocol of dos	Yes	Yes
Energy range (X-rays)	55-100kV	55-100kV
Electrical safety class	Class II	Class II

Recommended separation distances between portable or mobile RF communication device and detector: Portable RF communications equipment, including antennas, may affect medical electrical equipment. A wear distance of at least 30 cm (12 inches) from any part of the sensor, including cables specified by the manufacturer, shall be considered."

Cable supplied for EMC

Longitude	armor	The amount	Cable classification
-----------	-------	------------	----------------------

2,8 m	armored	1 unit	DC Power
-------	---------	--------	----------

6.2 Throw away

At the end of the life of this equipment, it should be disposed of in an appropriate place, avoiding environmental impact, contamination, or improper use

ADD: Room 15, Floor 8, Building 7, No.289

Xisanhuan Road, High-tech Zone,

Zhengzhou, Henan

E-mail: info@wukongdent.com

Web: wukongdent.com