English

SOFTWARE MANUAL

eagle eye

DABI ATLANTE

Cód.: 77000001208 - Rev.:03

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PRESENTATION OF THE MANUAL

Technical Name: Software
Trade name: Dental Imaging Software
Models: Eagle Eye
Brand: Dabi Atlante

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REF 77000001208 - Review: 03 - August / 21

Document originally written in Portuguese.

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Dabi Atlante is a registered trademark of Alliage S/A.

Microsoft, Windows, NET Framework, and Microsoft Visual C++, are tools developed by Microsoft Corporation in the United States and other countries.

PostgreSQL is a database maintained by Oracle.

Java is a programming language maintained by Oracle.

INDEX

INDEX

1

GENERAL IDENTIFICATION

Alliage S/A Industrias Médico Odontológica
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1. GENERAL INFORMATION

1.1. DEAR CUSTOMER

Congratulations on your excellent choice. By purchasing a software with Dabi Atlante quality, you can be assured of purchasing technology products compatible with the best in the world in its class. This manual provides an overview of the Dental Imaging Software Eagle Eye model, describing important details that will lead to your correct use, as well as in solving small problems that may eventually occur. No additional training is required beyond reading this manual.
This manual must be read in full before the first use of the equipment and kept for future reference.

1.2. INDICATION FOR USE

The Dental Imaging Software is indicated to manage radiological images of oral anatomy, including teeth, maxillofacial areas, oral structures, images of the carpal and bone regions of the head and neck, and the same system, of exclusive dental use, should be handled by qualified and properly trained health professionals.

1.3. CONTRAINDICATION

None known

1.4. SYMBOLOGY

The following symbols are used both throughout this manual and in the product. Make sure that you fully understand each symbol and follow the accompanying instructions.

	Recyclable		Catalog number
	Model number		Serial number
	Model		Software Version
	Manufacturer		Manufacturing Date

	Attention		General warning
	Mandatory action		Follow the instructions for use

2

WARNINGS AND RECOMMENDATIONS

Alliage S/A Industrias Médico Odontológica
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2. WARNINGS, CAUTIONS AND RECOMMENDATIONS

2.1. GENERAL WARNINGS

	Read and understand all the instructions described in this manual carefully before installing or using the software.

	Any reproduction, transfer, distribution or storage of the contents of this document, in part or in whole, and in any form without the prior written permission of Alliage, is prohibited.

During software installation

• It is strongly recommended that a dedicated computer be used for the server of this application. All hardware and software devices that are unnecessary for use must be removed or disabled.
• Failures in power supply to the computer can irreversibly damage data systems and are not covered by the warranty. The computer used for the application must be connected to the same electrical network with a protective ground and must be protected by a no-break to avoid permanent data loss due to power grid fluctuations. The use of a medical grade PC with a high-quality power supply is highly recommended.
• It is strongly recommended that the computer used by the application have real-time protection from viruses and active firewalls. Action of viruses and malicious programs can irreversibly damage the data systems and are not covered by the warranty.
• It is the user's sole responsibility to adopt protection measures and backup policy to prevent such losses.
• The equipment must only be installed by qualified person.
• Install your computer in a location where you will not be in contact with moisture, water, plants, and animals.
• Install the computer in a place where it will not be damaged by pressure, temperature, humidity, direct sunlight, dust, salts or corrosive products.

During the use of the software

• This application is intended for dental radiographic examination and diagnosis of diseases of teeth, jaw and oral structures, and should be used and handled by qualified personnel, according to current legislation or determined by the class council.
• Always observe the messages in the application to detect any problems early.
• To prevent the user from accidentally exchanging the patient's examinations, the patient information bar, which displays 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 scans saved at the time the exam is performed are incorrect. For this reason, the date and time of your computer's operating system should be checked periodically.
• The application is designed for continuous operation.

	It is imperative that this software be installed and operated by personnel who have specific qualification to perform the procedures of examinations, diagnoses and reports.

	The diagnosis and calculations generated by this system depend on the external capture devices and it is up to the user to prove their information. The use of specific equipment and safety precautions are considered out of the scope of this document, however such topics should be considered prior to use. It is the total responsibility of the health professional to perform the procedures correctly, validate the calculations and diagnose based on the data generated by the system.

	To avoid data loss in case of security failure, computer system malfunction or any other system defect, backups of information should be made at regular intervals. Aiming to minimize the risk of data loss, a backup should be regularly scheduled. Check about database backup.

Precautions in case of change in the operation of the software

If the software has any abnormality, restart the application and computer.
If the problem cannot be resolved, turn off your computer and contact an Alliage Authorized Service Center.

	Only personnel authorized by Alliage are qualified to maintain this software. Any attempt to maintain this software by unauthorized persons will void the product warranty.

	The manufacturer is NOT responsible for: • The app is used for purposes other than those for which it was designed. • Damage caused to the application, operator and/or patient because of incorrect installation and maintenance procedures in disagreement with the operating instructions accompanying the software. • Improper operation and errors arising from the misuse of the system.

Precautions for environmental impact reduction

Alliage S/A aims to achieve an environmental policy to promote the supply of environmentally conscious medical and dental products that continuously minimize environmental impact and are more environmentally friendly to the environment and human health.
To maintain a minimal impact on the environment, please note the recommendations below:
• After installation, forward the recyclable materials to the recycling process.
• During the application usage cycle, turn off the computer when it is not in use.

	Eagle Eye Software packaging consists of cardboard, plastic and ethylene vinyl acetate (EVA) which are 100% recyclable materials.

DIMENSIONS:
Packing: 31 X 96 X 141 /MASS: approximately: 0.140 Kg

2.2. LEGAL NOTICE

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THE LIABILITY OF THIRD PARTIES FOR BODILY INJURY, INCLUDING DEATH, RESULTING FROM THE EAGLE EYE SOFTWARE SHALL NOT BE AFFECTED BY THE LIMITATIONS OF LIABILITY STATED ABOVE IN THIS SECTION.

3

GENERAL DESCRIPTION

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3. SYSTEM OVERVIEW

3.1. DESCRIPTION OF SYSTEM

The software Eagle Eye is a complete solution for patient management, digital dental imaging acquisition, image processing and enhancement, measurement and annotations, cephalometric tracing, 2D implant planning, exam printing on conventional printers and DICOM, export and storage of exams.

3.2. MODULES

The software is composed of modules, each of which has a different application and use. The following is the description of each module:

3.2.1. Basic Module

This module is a prerequisite for the installation of all other modules, and they do not work without this. This module aims at managing patients, dentist and users, acquisition and processing of images among other functions.

Information database
The software allows to perform the registration and database management of the information of patients, dentists and users, in addition to enabling to perform searches based on identification number (ID), first name, last name and status of the exam, storing exams, etc.

Scheduling services
Allows the user to register an exam list with date and status to follow the clinic.

Image acquisition
This module allows to acquire images of equipment efficiently. Image acquisition can be performed by selecting the type of examination (panoramic, cephalometric or tomography) and exposure parameters, such as kV, mA and exposure time. After acquiring the image, the software will display the image to the user, automatically archive it into the database and make it available for future evaluations, viewing and exporting.

Edition
The basic module provides the possibility of image editing such as histogram adjustment/equalization, brightness adjustment, contrast and gamma, increased sharpness and noise reduction, enhancement application, image coloring as grayscale filter, negative, heat map and HSV, rotate and crop image.

Report
This function allows the preparation of dental documentation and report generation.
Among the tools available are tools to measure distances and angles in calibrated 2D images, nerve marking, thumbnail creation, annotations and odontogram.
Annotations can be made by inserting geometric shapes (arrows, rectangles, ellipses, straights, and hand drawing), free text, and markers.
Users can also perform dental reports using standard dental and added radiographic images.

Printing images
The software allows to create print templates and print them on conventional printers installed on the operating system and DICOM printers.

Export
This module allows scans to be exported to the hard drive and to email in various image formats, such as jpeg, png, tiff, bmp, or DICOM.

3.2.2. Ceph Module
This module allows the user to execute lateral and frontal cephalometric tracings. Based on several tracing techniques it is possible to make changes between the standard values of each technique and the calculations performed by the system. The software allows the printing of a report of the measurement and measurement reports and comparison of the measured values.

3.2.3. AI Diagnostic Module
This module has all of the tools of the Ceph module; however, it allows the user to mark the anatomical points for cephalometric tracings in an automated way.

3.2.4. IP module
This module allows the user to insert previously registered implant models. The software allows the printing of reports with the planning carried out.

3.2.5. Connection Module
This module allows the user to use communication protocols PACs, Dicom Worklist and also enables the generation and viewer programs (Viewer) that allows its execution on a third computer to view the scan generated in the software.

4

SOFTWARE INSTALLATION

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4. SOFTWARE INSTALLATION

	The software must be installed and configured by a qualified technician.

	The computer system must be dedicated to the workstation and follow the specified minimum requirements.

4.1. SOFTWARE REQUIREMENTS

For the correct functioning of Eagle Eye software, some basic software is necessary, which are described below.

.Net Framework 4.5.1 SP1: the NET Framework is essential to run several programs that have been developed using this technology from Microsoft. This framework provides several features for agile and robust application development.

Visual C++ Redistributable Packages for Visual Studio 2013: Visual C++ redistributable packages install runtime components that are required to run C++ applications that are built using Visual Studio 2013.

Java Runtime Environment 8.0: JDK is a development environment for building applications using the Java programming language that includes useful tools for developing and testing programs written in the Java programming language and running on the JavaTM platform.

PostgreSQL 10.5.2: PostgreSQL is a relational object database manager (DBMS) system, developed as an open source project with features such as:

- Complex queries
- Foreign keys
- Transactional integrity
- Multi version competition control
- Support for object-relational hybrid model
- Ease of Access
- Triggers
- Visions
- Procedural language in multiple languages (PL/pgSQL, PL/Python, PL/Java, PL/Perl) for Stored Procedures
- Text indexing
- Structure for saving Data Generate Referenced PostGIS

The software necessary for the operation of Eagle Eye software will be installed automatically, in the form of prerequisites, during the installation of the application, offering the user greater speed and greater convenience.

4.2. HARDWARE REQUIREMENTS

To use Eagle Eye software, it is necessary to have a computer system that meets the following requirements.

Table 1 - Minimum Computer System Specifications

Components		Server	Customer	Customer with 2D acquisition	Customer with 3D acquisition
Computerized system	Operating system	Windows 7 Professional - 64-bits Windows 8 Professional - 64-bits Windows 8.1 Professional - 64-bits Windows 10 Professional - 64-bits	Windows 7 Professional – 64 bits Windows 8 Professional – 64 bits Windows 8.1 Professional – 64 bits Windows 10 Professional – 64 bits	Windows 7 Professional – 64 bit Windows 8 Professional – 64 bit Windows 8.1 Professional – 64 bit Windows 10 Professional – 64 bit	Windows 7 Professional – 64 bit Windows 8 Professional – 64 bit Windows 8.1 Professional – 64 bit Windows 10 Professional – 64 bit
	CPU	Intel ® Core ™ i5 3.0 GHz or superior	Intel ® Core ™ i5 3.0 GHz or superior	Intel ® Core ™ i7 4.0 GHz or superior	Intel ® Core ™ i7 4.0 GHz or superior
	HDD	2 TB or superior	1 TB or superior	1 TB or superior	1 TB or superior
	RAM	8 GB	8 GB	16 GB	16 GB
	PCI	-	-	-	NVIDIA GeForce GTX 1060 6GB or superior
	NIC	Fast Ethernet (10/100 Mbps)	Fast Ethernet (10/100 Mbps)	Gigabit Ethernet dedicated (10/100/1000 Mbps)	Gigabit Ethernet dedicated (10/100/1000 Mbps)
	Video card	-	-	-	NVIDIA GeForce GTX 1060 6GB or superior
	Power supply	-	-	-	400 W with additional PCI express power connectors compatible with video card
	Monitor resolution	21.5” - resolution of 1920x1080 or superior	21.5” - resolution of 1920x1080 or superior	21.5” - resolution of 1920x1080 or superior	21.5” - resolution of 1920x1080 or superior

Table 2 - Table 1 - Minimum network specifications

Components		Server	Customer	Customer with 2D acquisition	Customer with 3D acquisition
Network	Speed	100 Mbps	100 Mbps	1000 Mbps	1000 Mbps
	Type	Standard IEEE 802.11n cable or wireless network	Standard IEEE 802.11n cable or wireless network	Standard IEEE 802.11n cable or wireless network	Standard IEEE 802.11n cable or wireless network
	Door	Door 5432 Released	-	-	-

⚠	All the requirements necessary for the operation of the network connection such as infrastructure, installation, configuration, consumption material and labor, are the responsibility of the user.

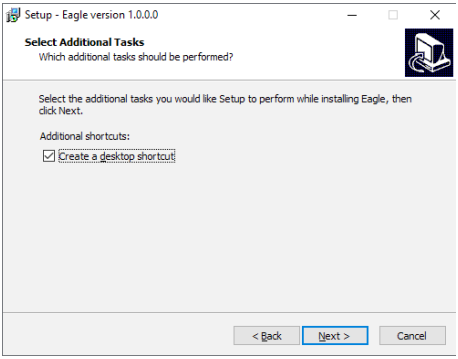
4.3. INSTALLATION PROCEDURE

4.3.1. Initial procedure

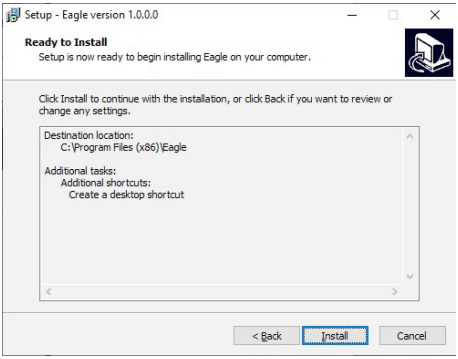
For the installation of the application, follow the instructions below:
- Insert the installation media into the computer.
- Double-click the installer icon of the software.

Select the language to use during installation and click "OK".

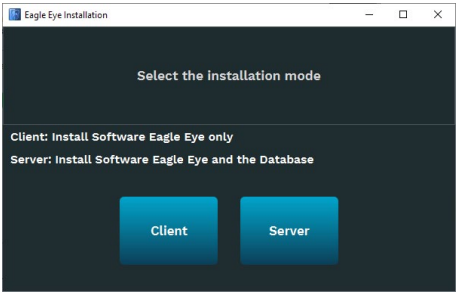
The "End User License Agreement" is shown in the next step. Read the contract carefully and completely. If you have read and understood this agreement and accept the terms and conditions thereof, click "I accept the agreement" and proceed with the installation of the software.



If you want to create an icon on the desktop, check the option and click "Next"



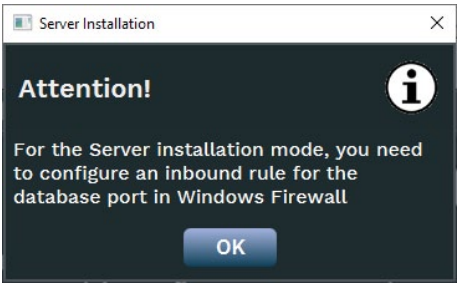
After this step click "Install" to start the installation. The installer will extract the files, and this may take several minutes. Do not turn off the computer.



After extracting the files, the installation mode should be selected. Select between Client and Server

4.3.2. Server mode installation

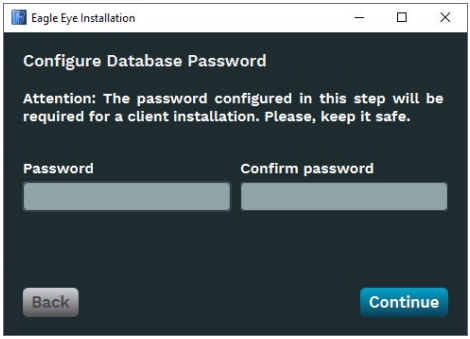
When you select Server, the Eagle Eye application and database will be installed



The firewall rule creation procedure is described in this manual

⚠	If door 5432 is occupied, the application will automatically attempt to configure the access on the door immediately thereafter and so on. The door configured by the installer can be observed on the software configuration tab.

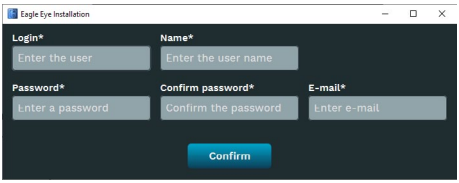
The server configuration screen will be displayed.



Set a password for the server and keep it in a safe place.

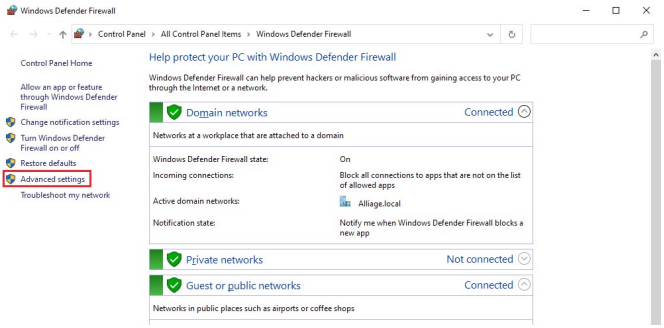
	The server password is the responsibility of the database manager and must be stored in a safe place. The loss of this password can cause permanent loss of access to the installed database and, consequently, permanent loss of data.

The Master user setup screen will be displayed. Login, Name, Password and Email data must be filled in. After filling, select Confirm

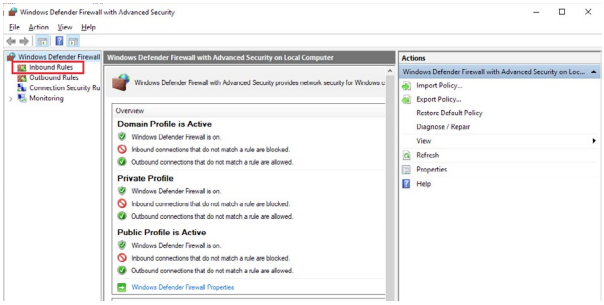


Rule creation in Windows Firewall

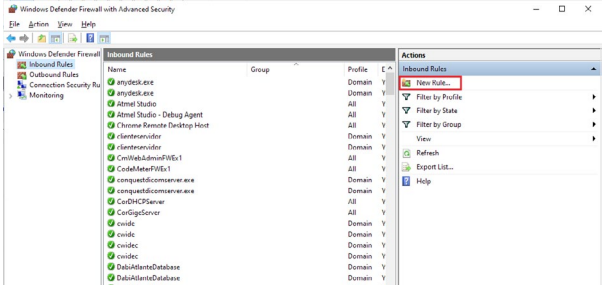
To create the rule in windows firewall, follow the instructions below.
Control Panel > System and Security > Windows Defender Firewall
Select Advanced settings



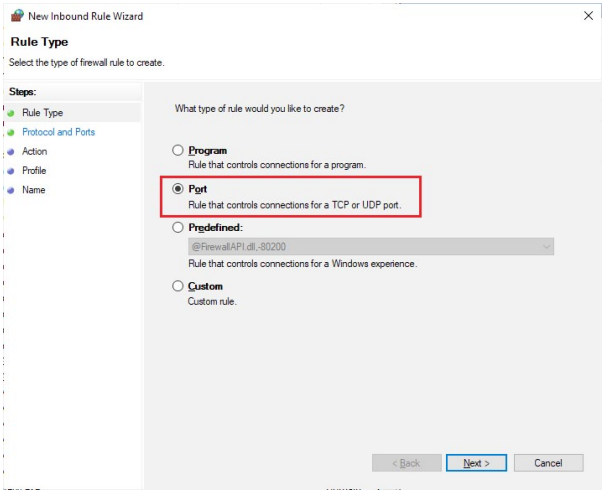
Select Entry Rule



In the Actions field, select New Rule

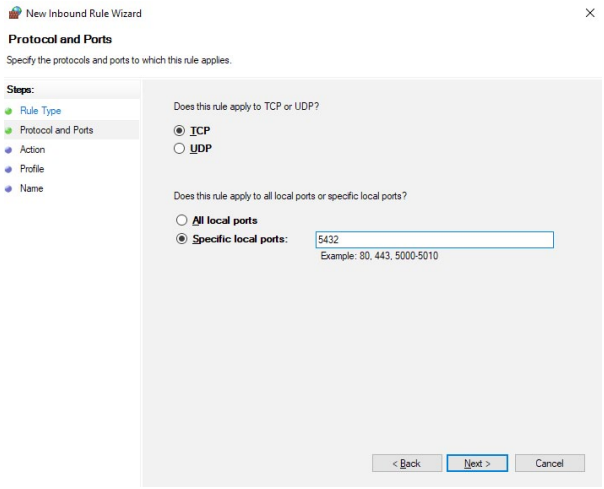


Under Rule type select Door. Press Next

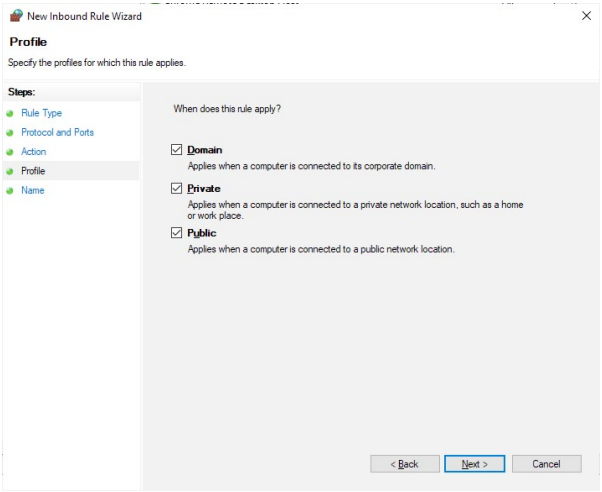


Leave TCP selected and in the Specific Local Doors field, enter the door number. The default port is 5423. Select Next.

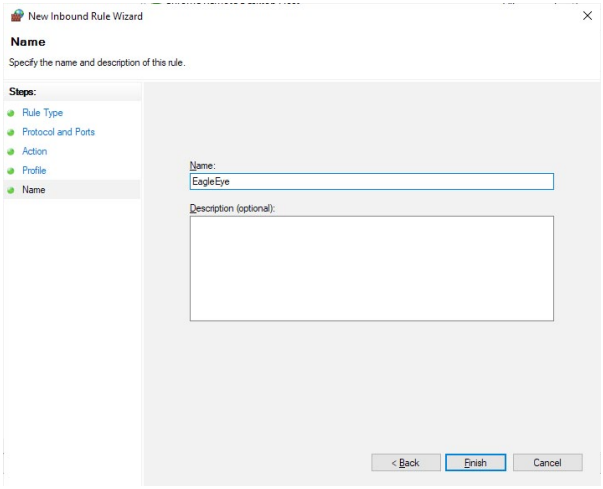
⚠	If during installation another port was defined, enter the configured port instead of the default port. The port configured by the installer can be seen in the software configuration tab.



Leave selected Allow connection and select Next

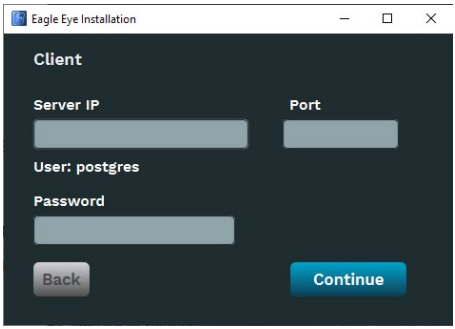


Leave Domain, Private, and Public selected, and select Next



4.3.3. Client mode installation

By selecting Client, only the Eagle Eye app will be installed.
The server configuration screen to be connected to the client mode will be displayed, where the server IP, port and password must be entered.



Server IP: IP number where the server was installed. For servers installed on a local network, enter the IP of the computer or localhost
Door: 5432
Password: Enter password defined in server mode installation

⚠	If during installation another port was defined, enter the configured port instead of the default port. The port configured by the installer can be seen in the software configuration tab

5

SOFTWARE OPERATION

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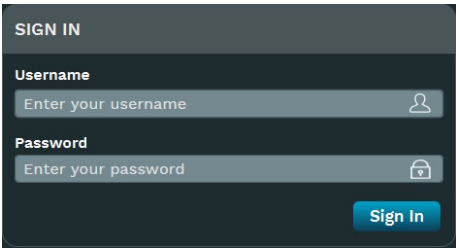
5. SOFTWARE OPERATION

5.1. INITIALIZATION

5.1.1. Open the software

Double-click the software icon on the desktop.

5.1.2. Login



After the software is started, the login window will be opened.

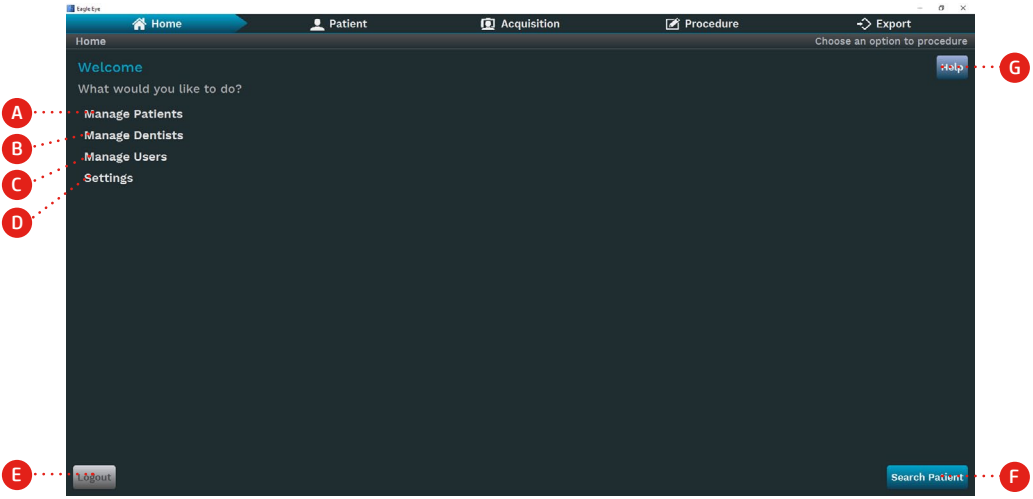
Enter your credentials (username and password). Click the button Sign In to proceed.

5.1.3. Logout

To change users, click on the icon Logout .

5.2. HOME STAGE

The home stage is the first window of the software which is displayed after the login or by clicking the icon Home It shows the logged-in user and contains some options for the user to start a task quickly.



Description

A. Manage patients: Click to create, edit, update, or delete patients.

B. Manage Dentists: Click to create, edit, update, or delete dentists.

C. Manage Users: Click to create, edit, update, or delete users.

D. Settings: Click to change the settings.

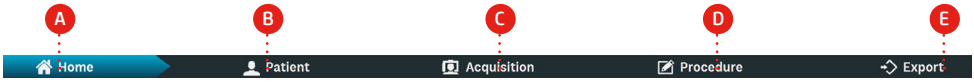
E. Exit: Close the user section and return to the login.

F. Find patient: Go to the patient search window.

G. Help: Click to open this manual.

5.2.1. Workflow bar

The software always displays a workflow bar at the top in order to guide the user during use. This bar allows the user to move through the software's operating steps



The workflow bar has five steps, and the user can access each step by clicking on them.

Description

A. Home: home window with some database management options and software settings

B. Patient: manage patients and view their exams.

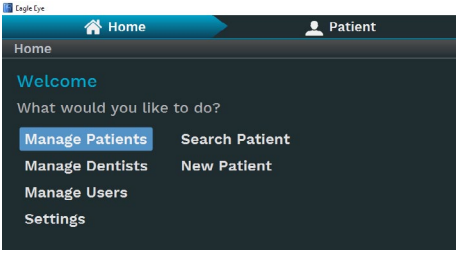
C. Acquisition: to acquire the image.

D. Procedure: view of the exam.

E. Export: Export or print exams.

5.2.2. Patient Management

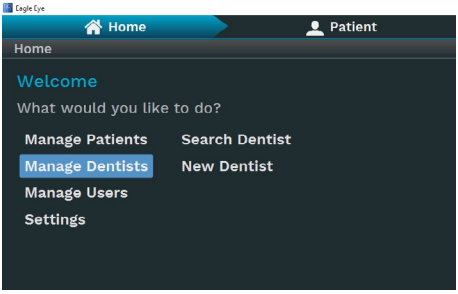
When clicking the Manage Patient icon, the user must select between the seek patient or new patient options.



By selecting the desired option, the software opens the patient stage.

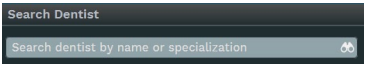
5.2.3. Dentist Management

When clicking the Manage Dentists icon, the user must select from the Search Dentist or New Dentist options.



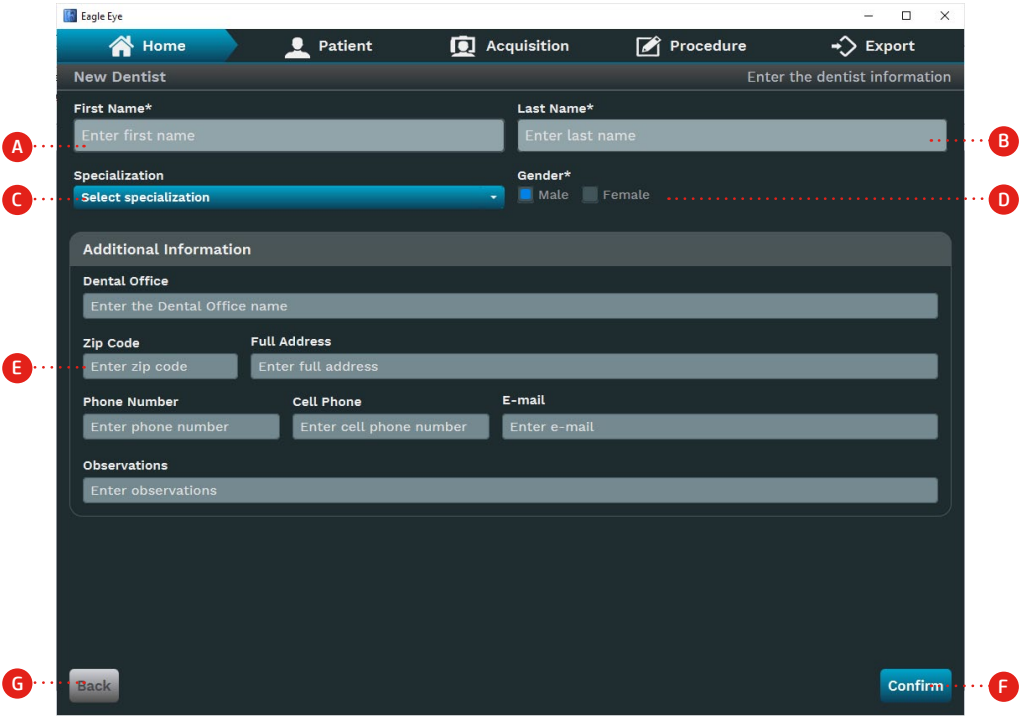
a) Find Dentist

The user can search for dentist in the database by typing a Name or specialty in the search bar. The software updates the list of dentists with the filtering values.



b) New Dentist

By clicking New Dentist, the software will display the window to add a new dentist.



Description

A. First Name: Type the first name. **Required field**

B. Last name: Type the last name. **Required field**

C. Specialization: Click to choose the following areas.

- Dentist
- Endodontist
- Periodontist
- Radiologist
- Implantodontist
- Stomatologist
- Oral pathologist

D. Gender: choose the gender. **Required field**

E. Additional information:

- Name of dental office
- Zip code

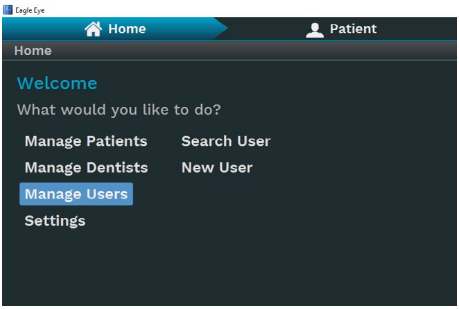
- Address
- E-mail
- Observations
- Phone number

F. Confirm: Save the dentist.

G. Back: Cancel and return to the previous window.

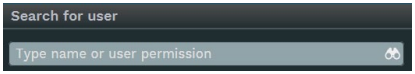
5.2.4. User Management

When clicking the Manage Users icon, the user must select from the Find User or New User options.



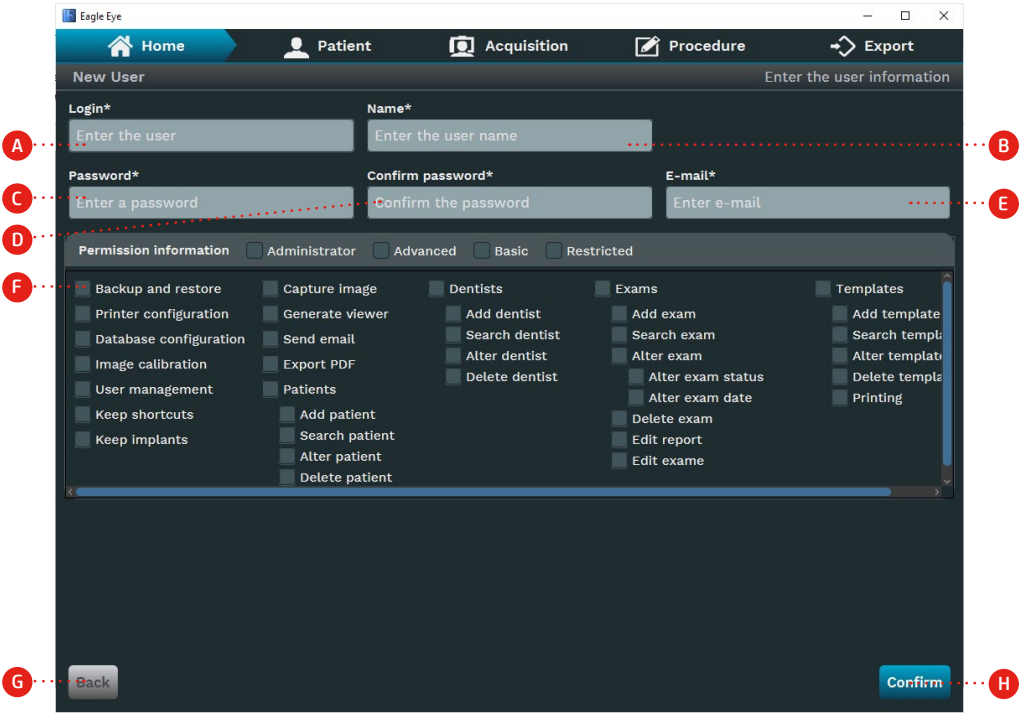
a) User Search

The user can search for users in the database by typing a username or permission in the search bar. The software updates the list of users with the filtering values.



b) New User

Click New user. the software will display the window to add a new user.



Description

A. Login: Type the username. **Required field**

B. Name: Type the last name. **Required field**

C. Password: Enter the password. **Required field**

D. Password confirmation: Confirm the password. **Required field**

E. E-mail: Enter the e-mail. **Required field**

F. Permission information: Select from the predefined access permission groups on the system

- Administrator
- Advanced
- Basic
- Restricted

Attention: User information can be customized if desired

G. Back: Cancel and return to the previous window.

H. Confirm: Save the user.

Predefined permissions can be seen in the table below.

Permission Items	Permission Groups			
	Administrator	Advanced	Basic	Restricted
Perform backup and restore	X	X		
Printer setup	X	X	X	
Set up database	X	X		
Image Calibration Management	X	X	X	
User Management	X			
Handle Terms	X	X		
Handle Implant	X	X		
Capture Image	X	X		
Generate Viewer	X	X		
Send E-mail	X	X		
Export PDF	X	X		
Handle Patient	X	X		
- Include patient	X	X	X	X
- Consult patient	X	X	X	X
- Change patient	X	X	X	X
- Delete patient	X	X		
Handle Dentist	X	X		
- Include dentist	X	X		X
- Consult dentist	X	X	X	X
- Change dentist	X	X		X
- Exclude dentist	X	X		
Handle Exam	X	X		
- Include exam	X	X	X	
- Consult exam	X	X	X	X
- Change exam	X	X	X	X
- Change exam status	X	X	X	X
- Change exam schedule	X	X	X	X
- Delete exam	X	X	X	
- Edit report	X	X		
- Edit exam	X	X		

Handle template	X	X		
- Include template	X	X		
- See template	X	X	X	X
- Change template	X	X		
- Delete template	X	X		
- Printing	X	X	X	X

5.3. PATIENT STAGE

The stage is displayed by clicking the icon 

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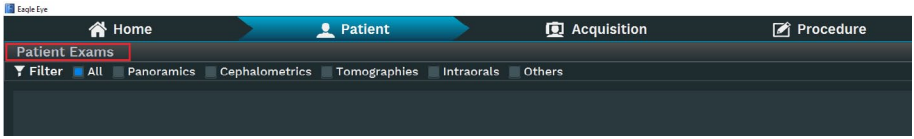
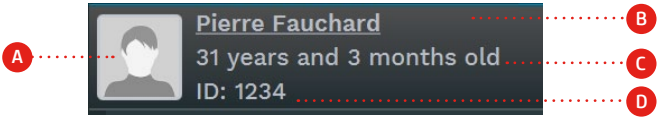
5.3.1. Patient information bar

To access it, just click on the tab "Patient exams"



The patient information bar provides basic information about the current patient selected by the user. If you want to edit the registration information, click on the patient's name.



Description

A. Photo: patient photo.

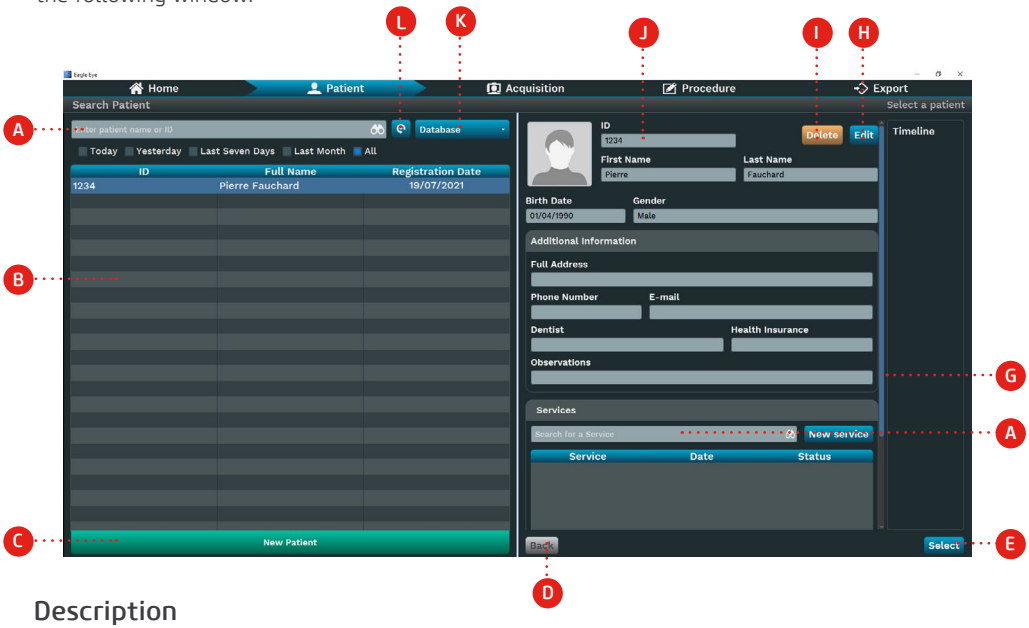
B. Full name: full name of the patient.

C. Age: the patient's age.

D. ID: The patient's identification number (ID).

5.3.2. Patient management

At this stage, the user can manage patients, like adding, searching for them, updating them, and deleting them.
To enter this stage, click "Patient" in the workflow bar or home stage. The software will display the following window.



Description

A. Patient search bar: Filter and search patients by their ID or full name.

B. Patient List: present the last patients created or according to the filter applied to the patient search bar.

C. New Patient: Click to add a new patient.

D. Back: Click to return to the start stage.

E. Select: Click to view the patient's exams.

F. Service: Click to include a patient service

G. Timeline: Shows the thumbnails of the patient's images.

H. Edit: Click to edit the registration data of the selected patient.

I. Delete: Click to delete the selected patient.

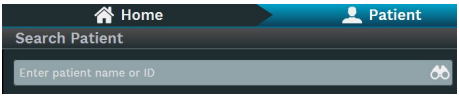
J. Patient information: Shows the selected patient information in the list.

K. Choose database: Select the source of the patient list

L. Update: Click to update the database.

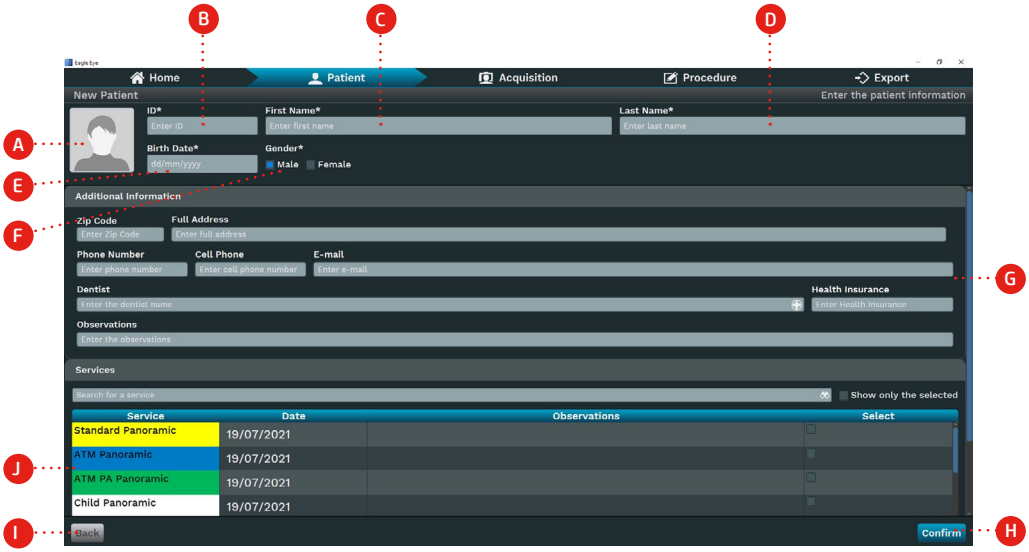
a) Search for patients

The user can search for patients in the database by typing a full ID or name in the search bar. The software updates the list of patients with the filtering values.



b) New patient

Click the button **New Patient** to create a patient. The software will display the screen below.



Description

A. Patient Photo: Import the photo from your computer or take a photo using a webcam.

B. ID: Enter the ID. Required field

C. Name: Type the first name. Required field

D. Last name: Type the last name. Required field

E. Birth date: Enter the date of birth. Required Field

F. Gender: Choose male or female. Required field

G. Additional information (optional):

- Zip code
- Full address
- Phone number

- Cell phone
- Dentist: Type the name to automatically search or click to register a new dentist.
- Health Insurance Company name
- Observations

H. Confirm: Create the patient in the database.

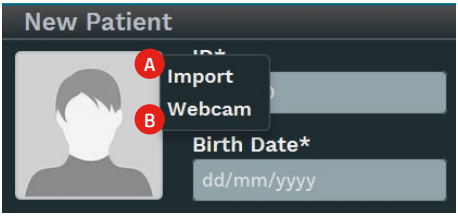
I. Back: back to previous window

J. service: List of services associated with the patient

Identification, first name, last name, date of birth, and gender fields are required. At the end of the registration, click **Confirm** to create the patient. The software will go to the patient examination window.

c) Patient photo

To insert a patient photo, the user can import the patient's photo from the computer or take a photo using a webcam. To do this, click on the photo field and select the desired option.



Description

A. Import: A dialog window will appear to import the photo.

B. Webcam: A dialog window will appear and open the camera.

d) Edit a patient

Choose a patient from the list and click **Edit** to edit patient information. The software will allow the user to edit the information and save it.

e) Delete a patient

Choose a patient from the list and click **Delete** to delete the patient from the database. The software will ask the user to confirm the operation. Once the user deletes a patient, images belonging to the patient will be deleted from the database as well.

5.3.3. Choose database

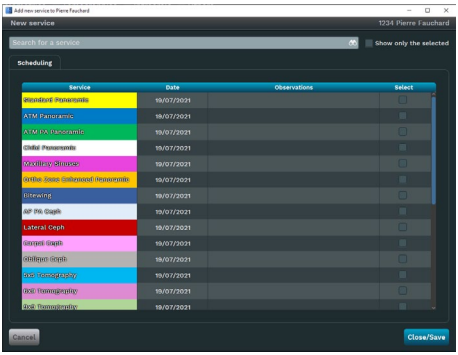
The software allows the user to choose between database, worklist , server PACs and server DICOM worklist.
To do this, click Database to choose one of these options. If the option is worklist, the software will display the scheduled services to the patient.

Name	Service	Date	Status
Pierre Fauchard	Maxillary Sinuses	19/07/2021	Not started
Pierre Fauchard	Bitewing	19/07/2021	Not started
Pierre Fauchard	Standard Panoramic	19/07/2021	Not started
Pierre Fauchard	Lateral Ceph	19/07/2021	Not started

Click Not started to change the status of the service, which can be: Not started, in progress, executed, Make the report, print, and export. The user can delete the service by clicking .

5.3.4. Services

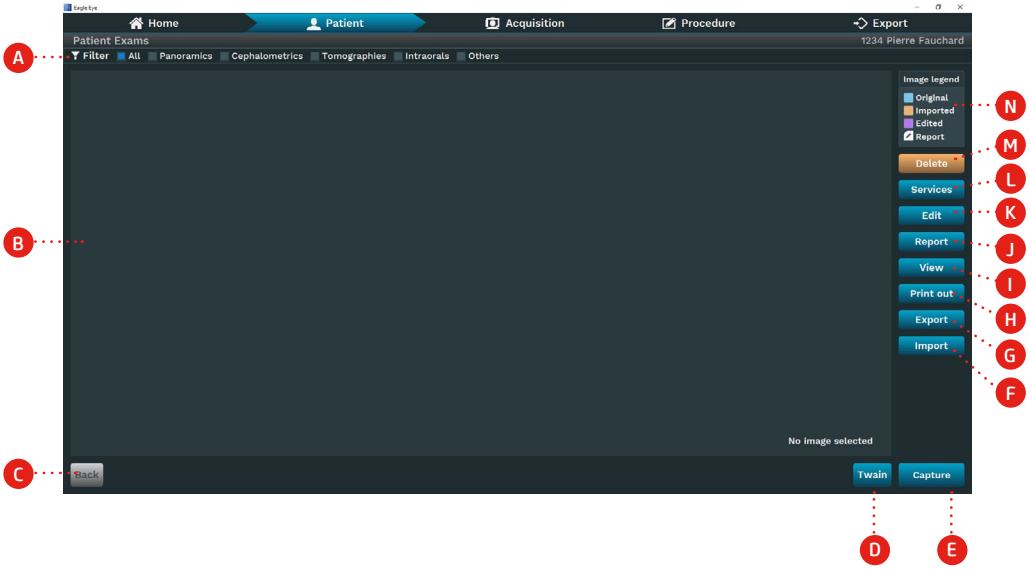
The software allows the user to manage the services of their patients.
To add a new service to the patient, click New Service. The software will open the screen to create a new service.



Select the services you want to schedule. After that, click Close/Save to schedule the new service. This service will appear in the Worklist database.

5.3.5. Patient examinations

The software displays thumbnails of all images of the selected patient. The images are arranged in chronological order with the most recent at the top. The user can edit, delete, view, print and export the images. It is also possible to filter the images according to the modalities: all images, panoramic, cephalometric, periapical, tomography and others.
The software displays the following screen to show the patient's exams.



Description

A. Filters: Filter images by all panoramics, cephalometric, tomography exams or others.

B. Exam History: Show exam history sorted by date according to filters.

C. Back: Click to return to the previous window.

D. TWAIN: Click to acquire exam from a TWAIN source.

E. Capture: Click to go to the acquisition phase.

F. Import: Click to import scans from the hard drive.

G. Export: Click to save exams to hard drive, email, send to PACS server, and export to viewer.

H. Print: Click to print using print templates on conventional or DRY printers.

I. Preview: Click to view and compare up to four exams.

J. Report: Click to add measurements and notes to the exam, perform implant planning and cephalometric tracing.

K. Edit: Click to apply image processing filters to the exam.

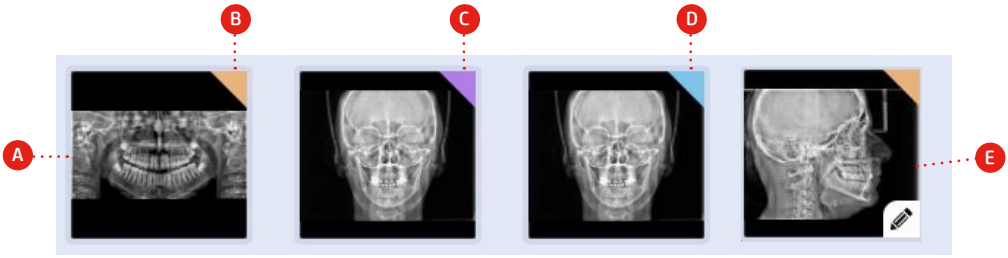
L. Service: Click to select the service.

M. Delete: Click to delete a selected exam. The software will display a confirmation message.

N. Image caption: Displays caption to identify image types relative to their source.

a) Image caption

Each exam has a caption to indicate its source and whether it has been edited. The caption is a colored triangle placed in the upper-right corner of the thumbnail, as follows:



Description

A. Image: Thumbnail of the image saved to the database.

B. Imported: Image imported into the software. The color of the imported images is orange ( ).

C. Edited: image edited in software. The color of the edited images is purple ( ).

D. Original: Image captured on software. The color of the original images is blue ( ).

E. Report: reported image. Indicated by the image of a pencil in the lower right corner of the image ( ).

b) Delete exam

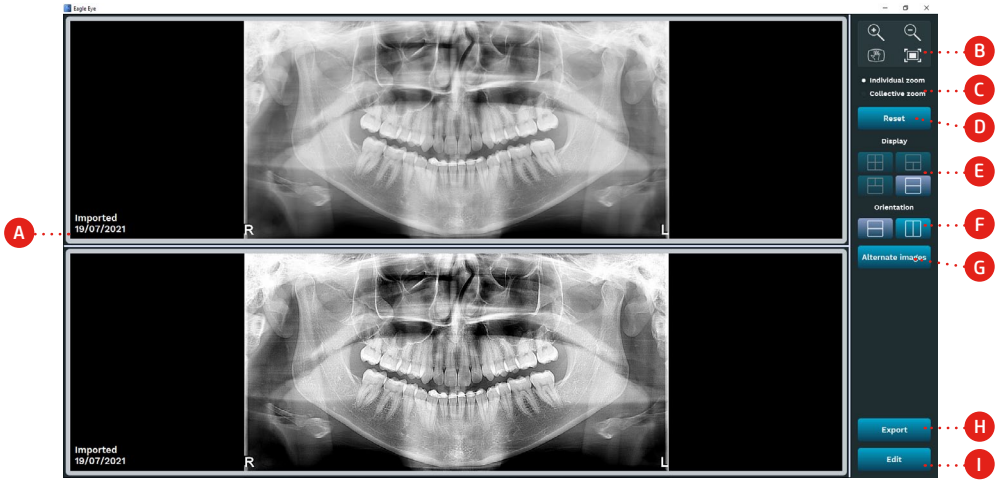
The user needs to select an exam and click Delete .
The software will display a confirmation message to delete the image from the database.

c) Edit image

Select an exam and click Edit .
The software will display the image in the procedure. Please refer to the chapter Image Editing for more details.

d) View images

The software allows to view up to four images at the same time.
Press and hold the button Ctrl and choose the images to view.
Click View to open the images.
The software displays the following window for viewing and comparing the exams.



Description

A. Image area: Region to display up to four images.

B. Manipulation tools: Options to increase the zoom, decrease the zoom, pan and emphasize a region.

C. Zoom options: Zoom in on an image individually or collectively.

D. Reset: Rearrange the images to the original layout.

E. Display: Set the exposure layout to rearrange the images..

F. Orientation: View the images in the horizontal or vertical layout.

G. Switch images: Move images clockwise.

H. Export image: Select an image and export it to disk.

I. Edit: Select an image and edit it in the procedure.

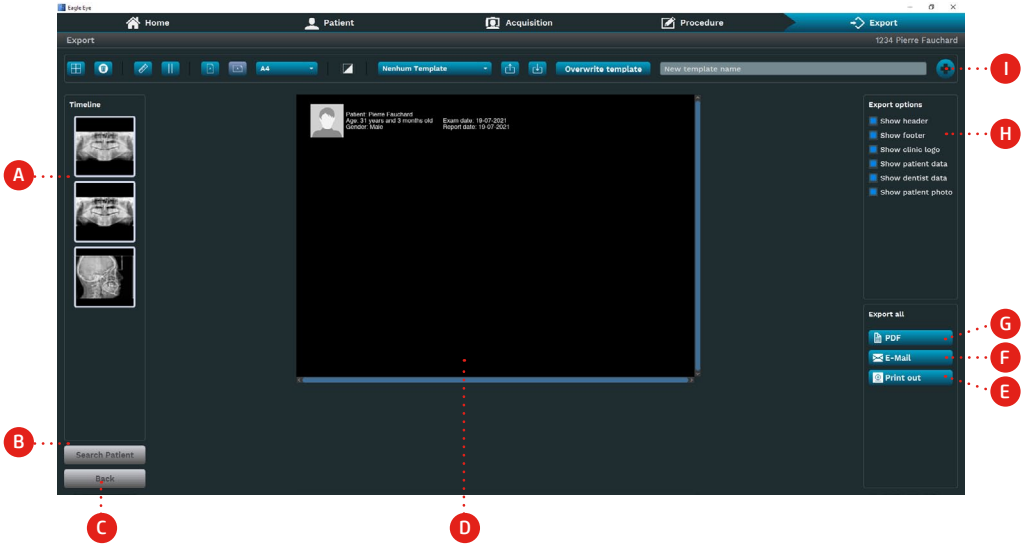
The following tools and settings are available to view images:

TOOL	ICON	DESCRIPTION	OPERATION
HANDLING		Increase the zoom	To zoom in, select the image you want to enable the zoom-in or zoom-out icon and click the image. You can also perform dynamically using the mouse wheel over the images.
		Decrease the zoom	If enabled "individual zoom", the software will enlarge only the image over the mouse. If "collective zoom" is enabled, the software will enlarge all images.
		Drag image	When enabled allows you to click and drag the area of the desired image.
		Adjust image	Returns the image to its original size.
ORIENTATION		Four regions	Organizes images in four regions.
		Three regions inferior	Arranges images in three regions: one at the top, two at the bottom
		Three regions superior	Arranges images in three regions: two at the top, one at the bottom
		Two regions	Organizes images into two regions.
		Vertical orientation	Arranges images vertically.
		Horizontal orientation	Arranges images horizontally.

5.3.6. Print

Select an exam and click Print out.
The software will direct to print templates step.

a) Print template



Description

A. Timeline: Area showing the patient's scans.

B. Find Patient: Click to return for the search for patients.

C. Return: Click to return to the patient exams screen.

D. Archive: Area that shows the file where the templates will be created.

E. Print: Click to print the print template.

F. E-mail: Click to send the template by email.

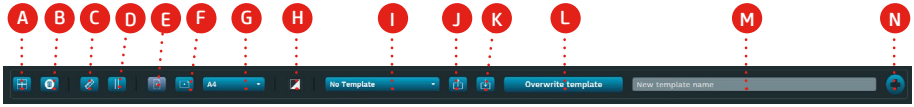
G. PDF: Click to export the PDF file.

H. Export Options: Select the options you want to show in the template

- Show header
- Show footer
- Show logo of the clinic
- Show patient data
- Show dentist data
- Show exam data
- Show patient photo

I. Toolbar: Shows the tools to create/edit the template

b) Template Toolbar



Description

A. Select model item: Click to show the types of image areas.

B. Remove all templates: Click to remove all added image areas.

C. Insert/remove measuring ruler: Click to add/remove side ruler in the template to align objects.

D. Insert/remove grid lines: Click to add/remove grid lines in the template.

E. Portrait Orientation: Click to change the orientation of the template to portrait

F. Landscape Orientation: Click to change the orientation of the template to landscape.

G. Sheet Size: Click to choose the size of the sheet. Below sizes available

- A3,
- A4,
- 8x10in,
- 10x12in,
- 10x14in,
- 11x14in,
- 14x14in,
- 14x17in,
- 24x24cm,
- 24x30cm

H. Invert color: Inverts template color between white and black

I. Saved Templates: Displays all saved templates.

J. Export template: Click to export template to a file

K. Import template: Click to import template from a file

L. Overwrite model: Click to overwrite the current template.

M. Template Name: Enter the name of the template.

N. Add button: Click to add the template to the database.

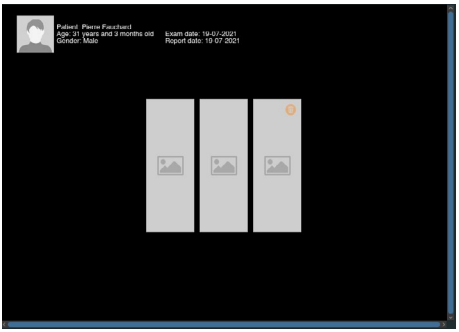
c) Templates

The software presents a number of image area options for the template. Click  to show the models. The software will show you the following options.

ICON	DESCRIPTION
	Arrange the image in 1:1 aspect ratio
	Organize an image in a single region
	Arrange two images horizontally
	Arrange images in three regions: one at the top, two at the bottom
	Arrange two images vertically
	Arrange four images in four regions
	Arrange three images vertically
	Arrange images in six regions: three at the top and three at the bottom
	Arrange three images horizontally
	Arrange images in four regions: one at the top and three at the bottom
	Arrange the image in 4 vertical regions
	Arrange images in eight regions: four at the top and four at the bottom

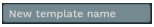
ICON	DESCRIPTION
	Arrange images in five regions: one at the top and four at the bottom
	Arrange four images horizontally
	Arrange the images in twelve regions: three at the top, three at the left side, three on the right side and three at the bottom
	Arrange the images in fourteen regions: three at the top, four on the left side, four on the right side and three at the bottom
	Arrange images in fourteen regions: three at the top, four in the center-left region, four in the center-right region, and three at the bottom
	Arrange images in eighteen regions: three at the top, six in the center-left region, six in the center-right region, and three at the bottom

After choosing a template, the user must press the chosen template with the left button of the mouse. The software will create the template in the file. The user can drag this model to another position by simply clicking the left button of the mouse and drop in the wanted position. The user can increase or decrease the size of this template. Just click on the template and then click on corner of the area that will appear around the template. To change the size, press the left button of the mouse and drag the cursor to the position you want and then release the button.

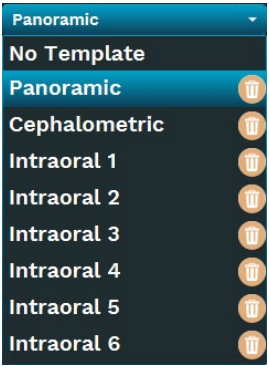


To add images in this template, the user must press the left button of the mouse over the image, drag the cursor and release it to the chosen position. The software will show the model with the images.

To delete this template, just click with the left button of the mouse on the button  . The user can put multiple templates in the same file, just repeat the procedure described. The user can also save the templates and thus use them at other times, without having to repeat the procedure. To do this, create a template that you want to save.

Click 

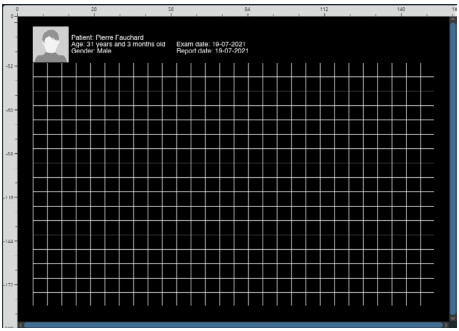
and type the name of the template that will be saved. After that, click  to add this new template. The software will show the saved template in the template options bar. The user can add numerous templates and select them as desired.



The user can delete the created template by clicking  . If the user wants the file without any template, click No Template.

d) Measuring ruler and grid line

To add a ruler to the file, click . To add grid lines, click . the software will show the file with these options added.



e) Template orientation

The user can choose the orientation with which the file will be generated, for this choose between landscape mode and portrait mode .

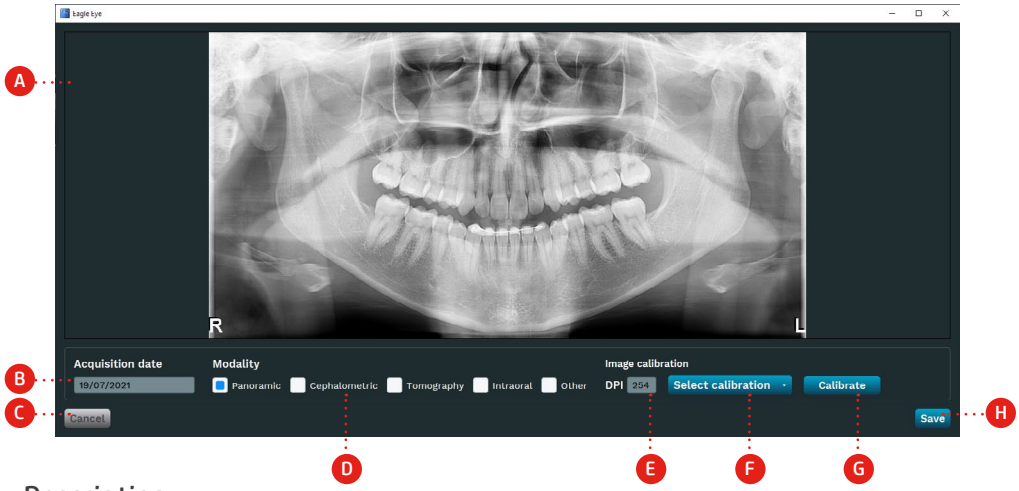
5.3.7. Export

Select an exam and click Export .
The software will direct to export step.
The software allows to export the scans to the hard drive with JPEG, PNG, BMP, TIFF, DICOM or PDF format, send by e-mail, export to PACS server and generate DICOM viewer.
See chapter Export for more information on the export of exams.

5.3.8. Import

a) Individual import

When the user clicks Import , the software will allow the user to choose the exam directory to be imported.
After selecting the exam, the software will display the selected exam and allow to specify the date of acquisition, modality and calibration of the image. The calibration of the image is done by setting the DPI. The DPI value of the image can be set manually, set by performing the calibration or selecting a calibration already performed.



Description

A. Image Area: Show the imported image.

B. Acquisition Date: Enter the date the image was acquired.

C. Cancel: Click to return to the previous window.

D. Mode: select the type of exam: Panoramic, cephalometric, Tomography, Periapical and Other.

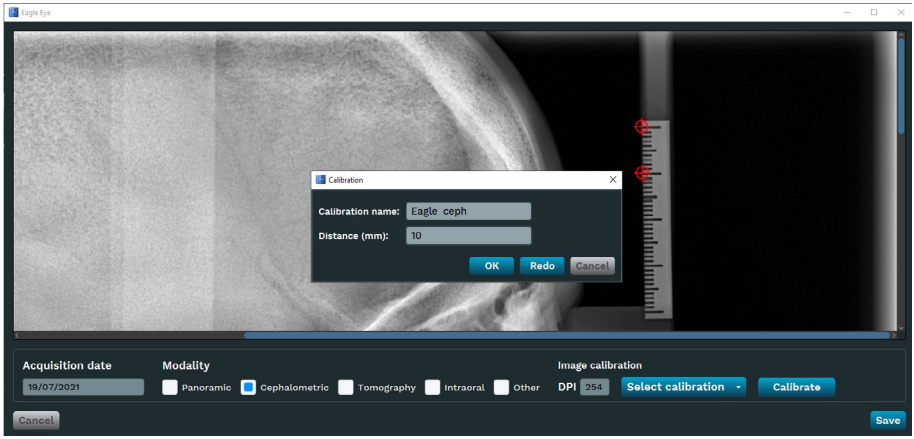
E. DPI: insert the DPI of the acquired image

F. Select calibration: Click to select and apply an already performed calibration

G. Calibrate: Click to perform a calibration

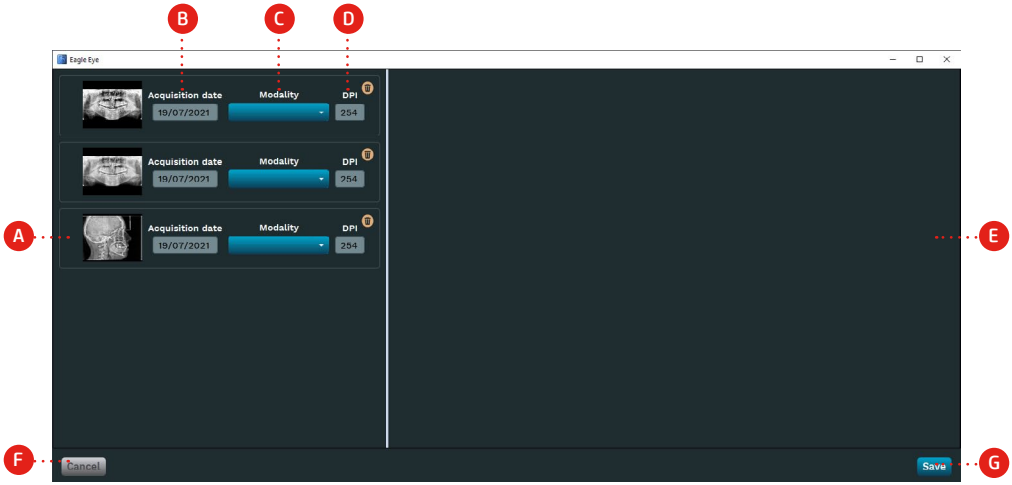
H. Save: Click to save the scan to the database

When the user clicks **Calibrate**, the software will allow the user to mark two points in the image, inform the distance between the two points and set a name for the calibration.
If correct, click **OK**. If you want to re-do click **Redo** and mark the two points again.



b) Multiple import

When the user clicks **Import**, the software will allow the user to perform multiple import of images.
To do this, just press and hold the key SHIFT and select the images you want to import.



Description

A. Image Area: Show the imported image.

B. Acquisition Date: Enter the date the image was acquired.

C. Mode: select the type of exam: Panoramic, Cephaloimetric, Tomography, Periapical and Other.

D. DPI: insert the DPI of the acquired image

E. Preview area: Shows the selected image

F. Cancel: Click to return to the previous window.

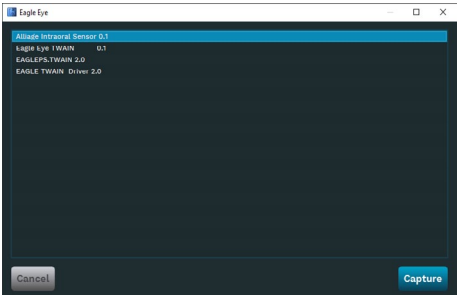
G. Save: Click to save the scan to the database

The user can delete the image by clicking  .

5.3.9.TWAIN

TWAIN is a standard interface for acquiring images captured by third-party sources such as scanners, digital cameras, or other acquisition equipment.

Click in **Twain** to acquire third-party device scans by TWAIN. The software will show the 32-bit TWAIN fonts installed on the operating system.



Select a font and click **Capture**. Follow the instructions of the selected device to capture the image. After capturing, choose the mode, the DPI of the image and click save. The image will be stored in the software.

5.4. ACQUISITION STAGE

The stage is displayed by clicking the icon 

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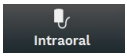
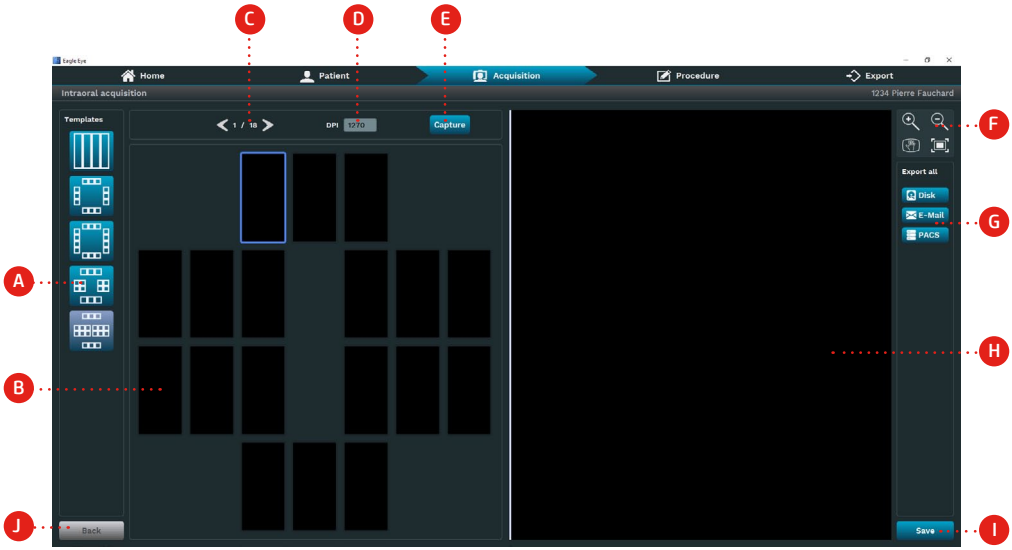
5.4.1. Acquisition of Intraoral images

a) Intraoral examinations

Click the icon 

to start intraoral acquisition.



Description

A. Template: Select the intraoral acquisition template

B. Image Area: Show the imported image.

C. Position selection: Selects the image capture position in the template

D. DPI: insert the DPI of the acquired image

E. Capture: Click to capture the intraoral image

F. Zoom: zoom tools

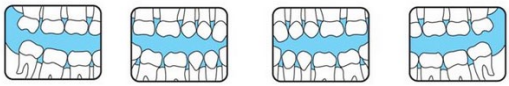
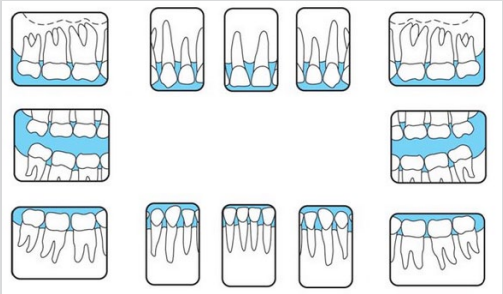
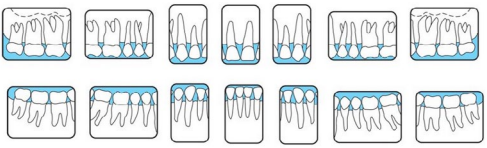
G. Export: Click to export the image to disk, email, or PACS

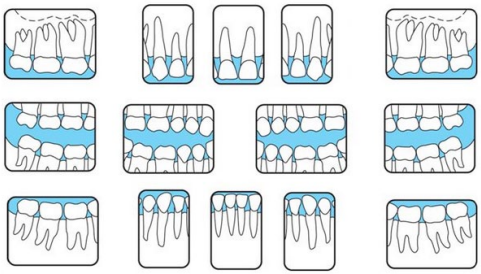
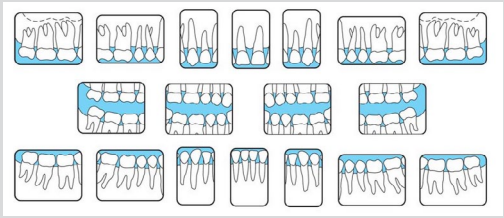
H. Preview area: Shows the selected image

I. Save: Click to save the scan to the database

J. Back: Click back to the previous window.

The following intraoral capture templates are available:

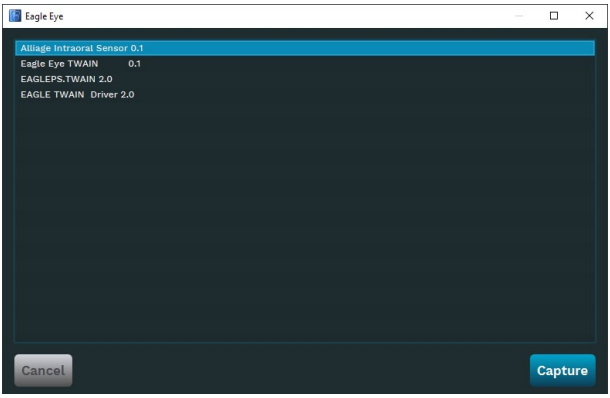
ICON	DESCRIPTION	INDICATION OF TEMPLATES
	Series of 4 images	This series consists of an acquisition of 4 images, being indicated for: mandibular occlusal radiography, maxillary occlusal and 2 posterior bitewing  Or 4 bitewing images 
	Series of 12 images	This series consists of an acquisition of 12 periapical images, being indicated for: Periapical images of upper and lower permanent incisors, four periapical radiographs of primary canines, periapical radiographs of four molars and two posterior bitewing radiographs 
	Series of 14 images	This series consists of an acquisition of 14 images being indicated for: 14 periapical 

ICON	DESCRIPTION	INDICATION OF TEMPLATES
	Series of 14 images with bitewing	This series consists of acquisition of 14 images, being indicated for: 10 periapical and 4 bitewing 
	Full mouth series	This series consists of an acquisition of 18 images, being indicated for: 14 periapical and 4 bitewing 

b) Acquisition of Intraoral Images

	Before starting the acquisition procedure, prepare the patient for exposure as described in the equipment user manual.

Intraoral acquisition is performed through the TWAIN interface. By clicking on the icon **Capture**, the software will show the 32-bit TWAIN fonts installed on the operating system.



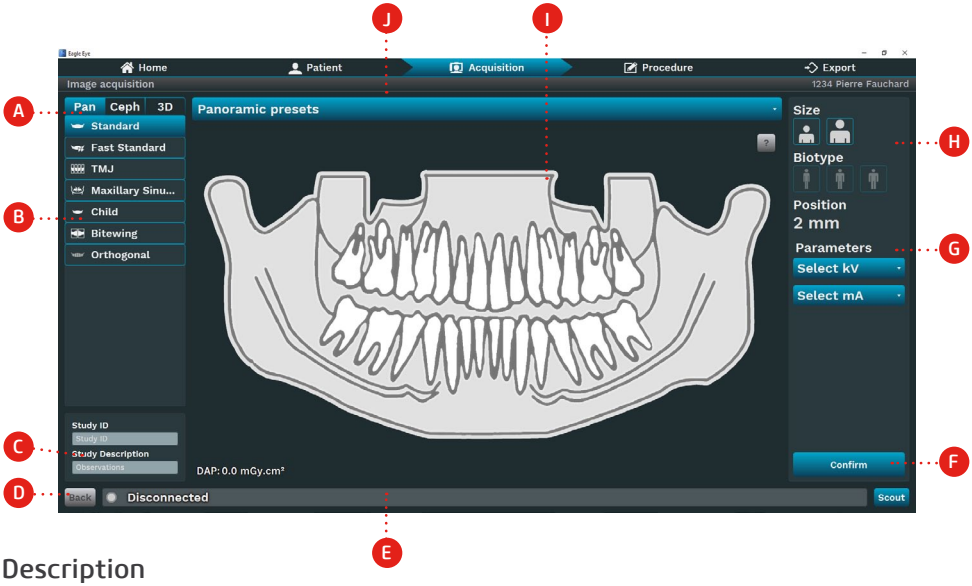
Select a font and click **Capture**. Follow the instructions of the selected device to capture the image.

ICON	DESCRIPTION	OPERATION
	Vertical orientation	Arranges images vertically
	Horizontal orientation	Arranges images horizontally

5.4.2. Panoramic and Cephalometric Image

a) Panoramic Exams

Select the PAN tab to set up the pan scan.



Description

A. Exam type: Choose from Pan, Ceph or 3D exam options, depending on the equipment model.

B. Profile type: Choose from profiles according to exam type. Profiles are enabled according to the equipment model.

C. Study ID and Description: Allows to enter the exam ID and Description

D. Back: back to previous window

E. Bar status: display the status equipment with operational messages.

F. Confirm: Click to send the acquisition parameters to the equipment.

G. Exposure parameters:

- Voltage: kV value of Tube Pipe Head
- Anodic current: mA value of Tube Pipe Head
- Time: exposure time in seconds
- Canine position: canine laser position in millimeters

H. User profile:

- Size: child or adult
- Biotype: small, medium or large

I. Profile design: View a profile drawing according to the profile type.

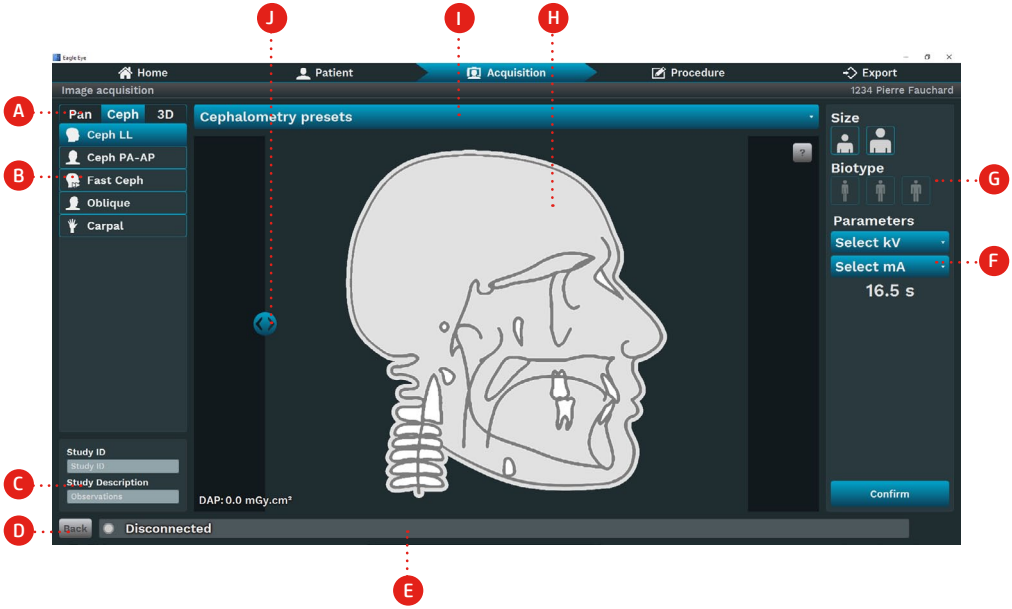
J. Profile region: Click to choose the profile region:

- Complete
- Left segment
- Central segment
- Right segment

b) Cephalometric examinations

⚠	When the user changes the exam type, the equipment will move to the scan position and display a warning message in the exam bar status.

Select the Ceph tab to set up the cephalometric exam.



Description

A. Exam type: Choose from Pan, Ceph or 3D exam options, depending on the equipment model.

B. Profile type: Choose from profiles according to exam type. Profiles are enabled according to the equipment model.

C. Study ID / Study Description: Enter the study ID and exam study description.

D. Back: back to previous window

E. Bar status: display the status equipment with operational messages.

F. Exposure parameters:

- Voltage: kV value of Tube Pipe Head
- Anodic current: mA value of Tube Pipe Head
- Time: exposure time in seconds

Canine position: canine laser position in millimeters

G. User profile:

- Size: child or adult
- Biotype: small, medium or large

H. Profile Drawing: View a profile drawing according to the profile type.

I. Cephalometric pre-configure: Select predefined exposure presets for Cephalometric:

- Full: Set the selector control to capture the full image.
- Low dose: Set the selector control to capture the partial image.

J. Cephalometric region: Use the selector control to select the cephalometric region. The software updates exposure time when the user moves the selector control.

c) Acquisition of Panoramic and Cephalometric Images

	Before starting the acquisition procedure, prepare the patient for exposure as described in the equipment user manual.

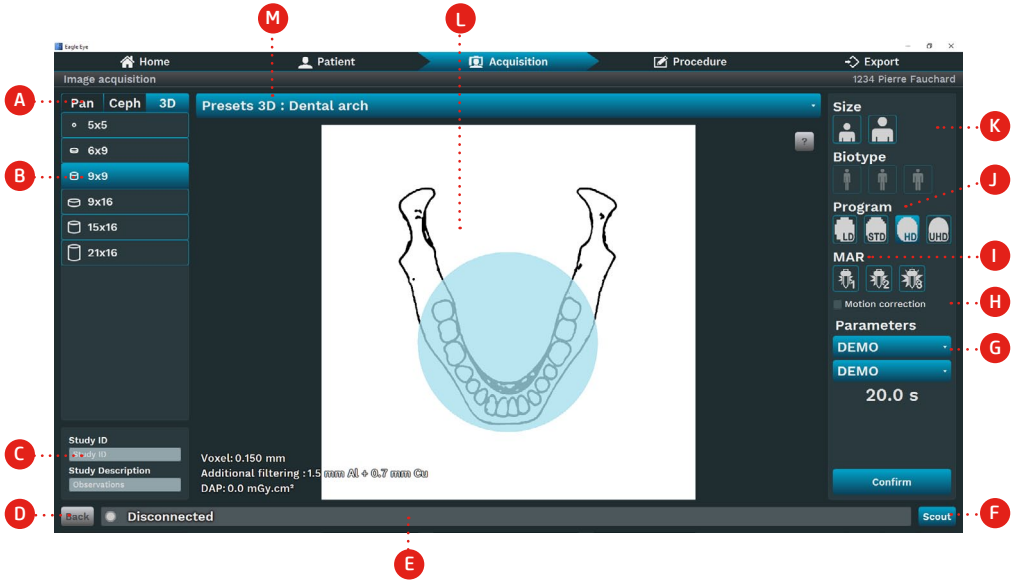
To perform the acquisition, choose the desired profile type, select the exposure parameters and patient profile.
Check that the status indicates that the equipment is "ready to display" and performs the acquisition.
After acquiring the image, the software will display the exam image.

5.4.3. Tomographic Image

a) CT scan

	When the user changes the exam type, the equipment will move to the scan position and display a warning message in the exam bar status.

Select the 3D tab to set up the CT scan.



A. Exam type: Choose from Pan, Ceph or 3D exam options, depending on the equipment model.

B. Field of View (FOV): Choose from FOV sizes available on the equipment.

C. Study ID / Study Description: Enter the study ID and exam study description.

D. Back: Back to previous window

E. Bar status: View the status equipment with operational messages.

F. Scout: Capture a imagem scout.

G. Exposure parameters:

- Voltage: kV value of Tube Pipe Head
- Anodic current: mA value of Tube Pipe Head
- Time: exposure time in seconds

H. Fix Move: Enable move artifact correction

I. MAR (Metal artifact reduction): reduction of the metal artifact (Intensity 1, 2 or 3)

J. Program:

- Scout: Scout Image
- LD: Low Dosage
- HD: High Definition
- UHD: Ultra High Definition

K. User profile:

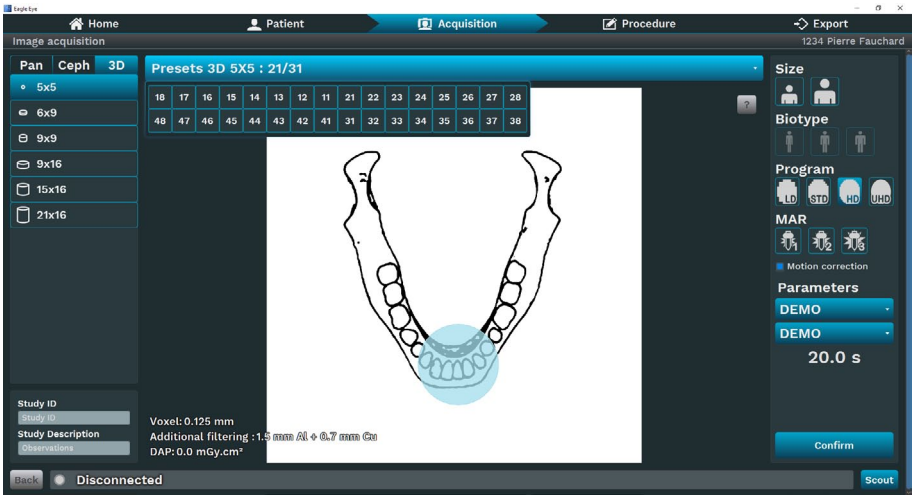
- Size: child or adult
- Biotype: small, medium or large

L. FOV Region: View a representation of FOV.

M. Regions list bar: Select a region according to FOV size.

b) Select the FOV region

The user can choose the FOV region button in the regions list bar.
The software will display FOV region options according to FOV size.
For all FOV, except FOV 5x5, the software will display three regions: dental arch, left condyle and right condyle.
If the user selects the FOV 5X5, the software displays an odontogram with the tooth number.

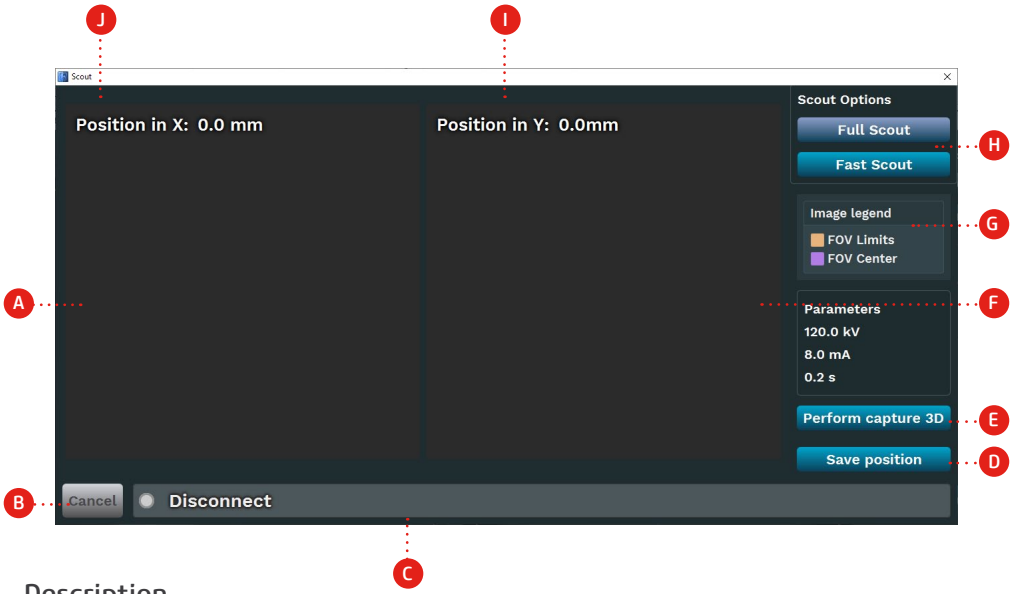


c) Acquisition of "Scout" Images

	Before starting the acquisition procedure, prepare the patient for exposure as described in the equipment user manual.

The images Scout are used only as a reference for the FOV preview and cannot be used for diagnosis. It is recommended that the user always capture and check the images Scout before the CT scan to acquire the correct region of the FOV and avoid retaking the examination.
Select the FOV size and FOV region, then click **Scout**.

Exposure parameters (kV, mA and time) will be set automatically.
Check that the status indicates that the equipment is "ready to display" and performs the acquisition.



Description

A. Lateral Scout: Area of the image to show the lateral Scout.

B. Cancel: Go back to the previous window and cancel the exam.

C. Bar status: Display the status equipment with operational messages.

D. Record Position: Click to send the device to position X and Y.

E. 3D capture: Click to acquire a tomography with the previously selected parameters

F. Front Scout: Area of the image to show the frontal Scout.

G. Exposure parameter information: Reports kV, mA, and exposure time parameters

H. Options for Scout: Select Fast Scout or Complete Scout.

I. Position Y: FOV position (mm) on the Y axis.

J. Position X: FOV position (mm) on the X axis.

	To change the position of the Scout's X and/or Y, click on the image and drag horizontally. After repositioning, press record position for repositioning of the equipment. If desired, a new scout can be performed.

d) Acquisition of Tomographic Images

	Before starting the acquisition procedure, prepare the patient for exposure as described in the equipment user manual.

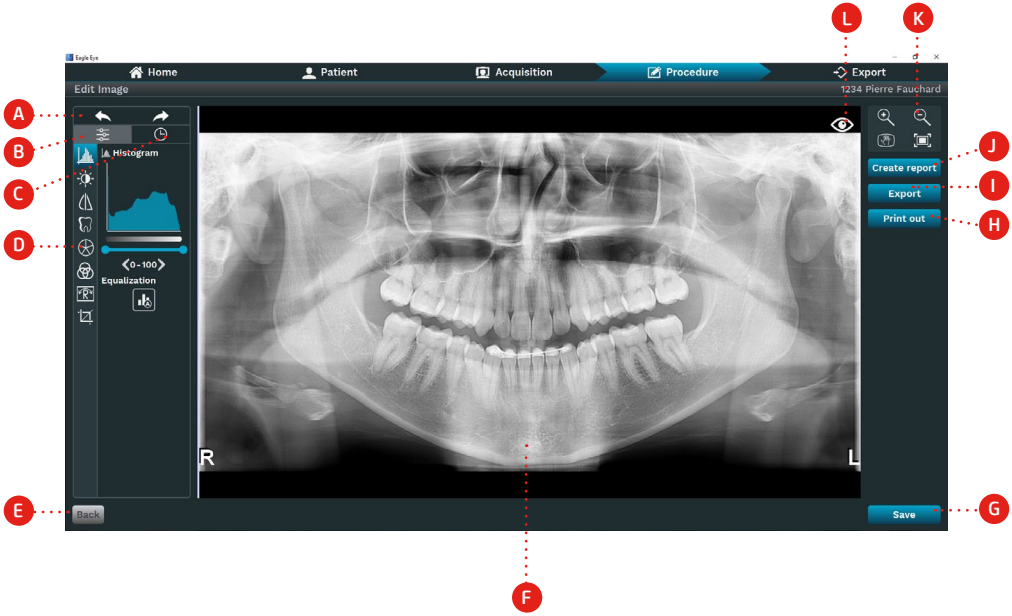
Select FOV, select exposure parameters, program, filters and patient profile.
Check that the status indicates that the equipment is "ready to display" and performs the acquisition. The software waits for the x-ray exposure to complete the acquisition and begin the reconstruction process. After that, the software saves the DICOM slices to the disk for viewing.

5.5. PROCEDURE STAGE

The stage is displayed by clicking the Procedure.

5.5.1. Image editing

In image editing, the user can manipulate the images by applying image processing filters. The software offers a series of image filter processing scans to extract the best structures from the image.



Description

A. Undo/Repeat: Undoes or repeats the last filter applied
Shortcut:

- Undo - Ctrll + z
- Redo - Ctrl + y

B. Filters Tab: View the image processing options or the

C. Historic: Image processing history applied

D. Image processing options: Display the options for image processing categories:

- Histogram
- Brightness, contrast and gamma
- Sharpness and noise reduction
- Relief
- Color
- Presets

• Rotate
• Cut

E. Back: Go back to the previous window and discard all modifications. The software will display a confirmation message before returning.

F. Image Area: Work area to display the image.

G. Save: Save the edited image. The software will ask if the user would like to create a new image or replace the original.

H. Print: Click to print using Windows printers.

I. Export: Export the edited image. the software will show three export options, including:

• For disc format (JPEG, PNG, BMP, TIFF or PDF)
• By E-mail
• To the PACS server

J. Generate Report: Software will show screen to generate report

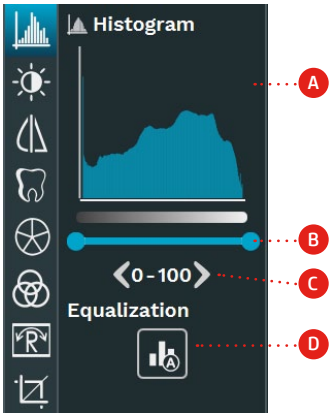
K. Manipulation tools: Options to zoom in, zoom out, pan, and adjust to the screen.

L. Show original image: Press and hold the left button of the mouse to view the original image.

a) Histogram

The histogram represents on a graph the number of tones occurring throughout the image. The horizontal axis represents the values of the tones, where the left side represents the Pixels with low values (black areas or shadows), the right side represents those with high values (highlights or light areas) and the middle part is that of the halftones (gray areas). The vertical axis represents the number of Pixels with a certain tone.

The user can view the histogram of the image by clicking  . The software will display the following tools:



Description

A. Histogram chart: Show the distribution of tones on the image.

B. Level selector: Change the minimum and maximum levels to adjust the dark and bright value of the image.

C. Level values: Display the value of the minimum and maximum levels.

D. Self-equalization: Equalize the occurrences of the ceiling values on the image.

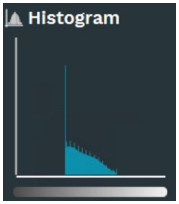
To adjust the minimum and maximum levels, press the left button of the mouse on the level bars and move them. Setting the minimum level makes dark tones darker. On the other hand, adjusting the maximum level makes the bright tones brighter. The comparison of the original image, the histogram level between minimum 20 / maximum of 100 and the histogram level between the minimum of 0 / maximum of 80 is described below:

Original image

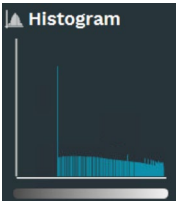
Image with histogram of minimum 20 and maximum 100

Image with histogram of minimum 0 and maximum 80

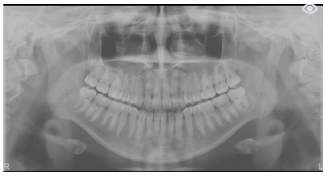
The equalization of histograms allows low-contrast images to improve with the distribution of tone occurrences along the values of the Pixels.



Low-contrast image histogram



Histogram after equalization

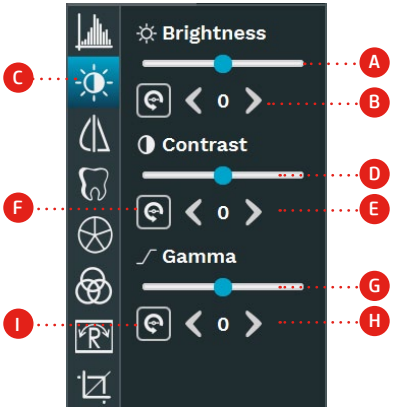


Original image with low contrast

Image after histogram equalization

b) Brightness, contrast and gamma

The user can change the brightness, contrast and gamma of the image by clicking  .
The software will display the following tools:



Description

A. Brightness selector: Change the brightness value.

B. Brightness value: Show the brightness value.

C. Brightness Reset: Set the brightness value to 0.

D. Contrast selector: Change the contrast value.

E. Contrast value: Show the contrast value.

F. Contrast reset: Set the contrast value to 0.

G. Gamma selector: Change the gamma value.

H. Gamma value: Show the gamma value

I. Gamma reset: Set the gamma value to 0.

Brightness

The brightness filter illuminates or darkens the image. Negative values make the image darker. Similarly, positive values make the image clearer. Press the left button of the mouse over the brightness bar and move it. The software updates the image with the brightness value.


Original image

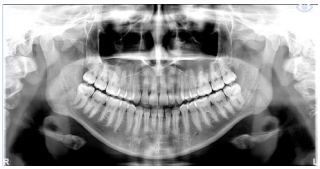

Brightness -10


Brightness 10

Contrast
The contrast filter controls the difference between the black and white regions. Negative values make the black and white regions less distinct. Similarly, positive values make the black and white regions more distinct. Press the left button of the mouse over the contrast bar and move it. The software updates the image with the contrast value.


Original image


Contrast -20


Contrast 20

Gamma
Gamma correction controls the luminance of the image. The negative value makes shadows lighter. Similarly, positive values darken shadows. Press the left button of the mouse on the gamma selector and move it. The software will update the image with the gamma value.

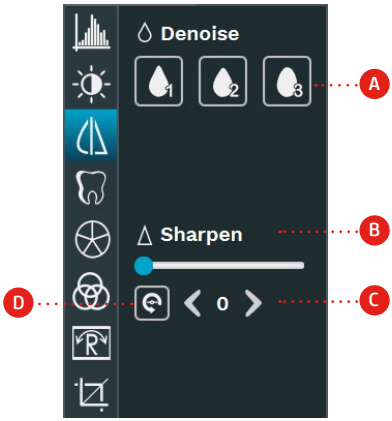

Original image


Gamma -10


Gamma 10

c) Smoothing and sharpness

The user can apply smoothing and sharpening filters on the image by clicking  . The software will display the following tools:



Description

A. Smoothing: three intensities to reduce image noise.

B. Sharpen selector: Apply the sharpening filter.

C. Sharpening value: Display of sharpness values.

D. Sharpness reset: Set the value to 0 and remove the sharpness filter.

Smoothing

The smoothing filter reduces image noise. It replaces the Pixels by a weighted average of Pixels Neighbors. It smooths the edges when applied many times. The software provides three levels of smoothing filter  . Click on one of these levels, and the software apply the filter.

Original image

Image after smoothing filter

Sharpness

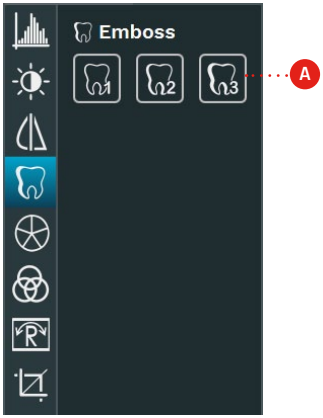
Sharpen filters highlight the edges and thin structures of the image. They also increase contrast at the edges, making them more visible. The software provides ten levels of sharpness. Press the left button of the mouse on the sharpen selector and move it to apply the filter.

Original image

Image after sharpen filter

d) Relief

The user can apply relief filter on the image by clicking . The software will display the following tools:



Description

A. Relief filters: three intensities to reduce image noise.

The relief filter uses image contrast to remap each pixel for a highlight or a shadow and create a 3D effect. The software offers three levels of relief. Click one of the buttons  , and the software applies the filter.

Original image

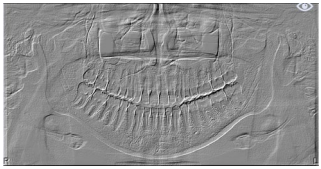
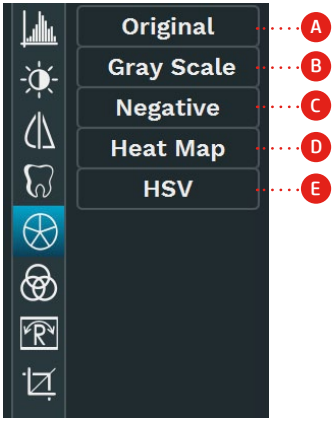


Image after relief 1

Image after relief 2

e) Colorize

The user can apply pseudo colorization filters on the image by clicking  . The software will display the following tools. Pseudo colorization filters map grayscale images to a new map color to improve viewing of regions with the same contrast.



Description

A. Original: Shows the original image.

B. Grayscale: Return of the grayscale image of the color on the map..

C. Negative: Invert the color of the map in grayscale.

D. Heat map: Apply the color of the black-red-yellow-white map.

E. HSV: Apply the color of the red-yellow-green-cyan-magenta map.

Negative

The negative filter inverts the colors of the image. It replaces the dark tones with its complementary light tones and vice versa. Click the button **Negative** to apply the filter.

Original image

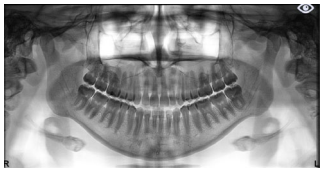


Image after negative filter

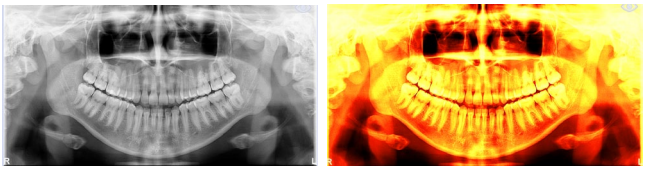
Heat map

The heat map converts the value of the pixel by the color of the white black-red-yellow map. The Pixels low value will be mapped to the black color, and the Pixels high-value will be mapped to white color. The Pixels average value will receive red or yellow. The color map palette is shown below.

Pixels of low value

Pixels of high value

Click the button **Heat Map** to apply the filter.



Original image

Image after heat map filter

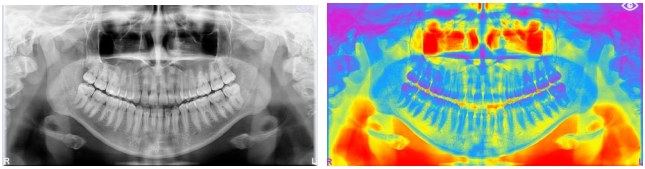
HSV

The HSV converts the value of pixel for the red-yellow-green-cyan-magenta color map. The Pixels low-value will be mapped to red, and the Pixels high-value will be mapped to magenta. The Pixels average value will receive yellow, green or cyan. The color map palette is shown below.

Pixels of low value

Pixels of high value

Click the button **HSV** to apply the filter.

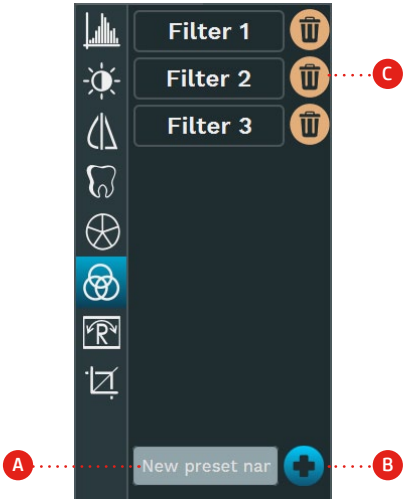


Original image

Image after HSV filter

f) Presets

The user can create a preset of filters applied to the image by clicking . The software will display the following tools.



Description

A. Name of the new preset: Enter the name for the new preset

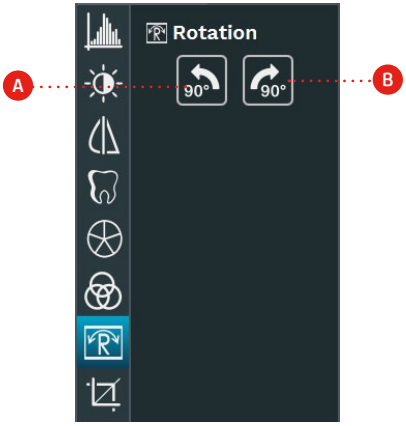
B. Add new preset: Click to add this new preset

C. List of presets: Lists with the filter presets saved in the database.

The user can add a new preset by clicking the and fill in the name of the new preset.
Click a preset to apply the filters to the image.
The preset can be deleted by clicking .

g) Rotation

The user can rotate the image by clicking  . The software will display the following tools.

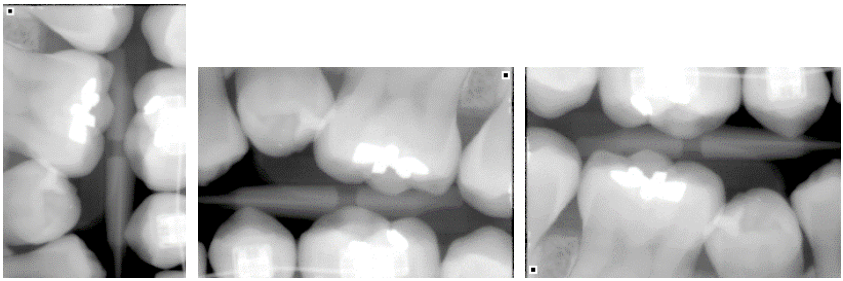


Description

A. Rotate counterclockwise: rotate the image 90° counterclockwise.

B. Rotate clockwise: Rotate the image 90° clockwise.

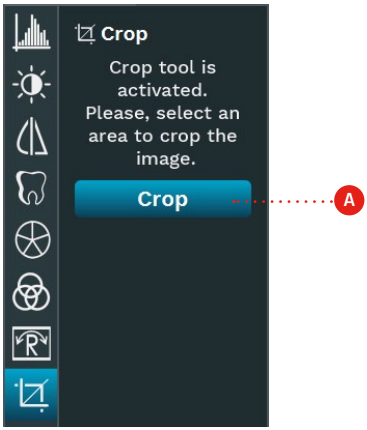
Click the button  to rotate the image counterclockwise or  to rotate clockwise.



Original image | Image rotated 90° clockwise | Image rotated 90° counterclockwise

h) Cut image

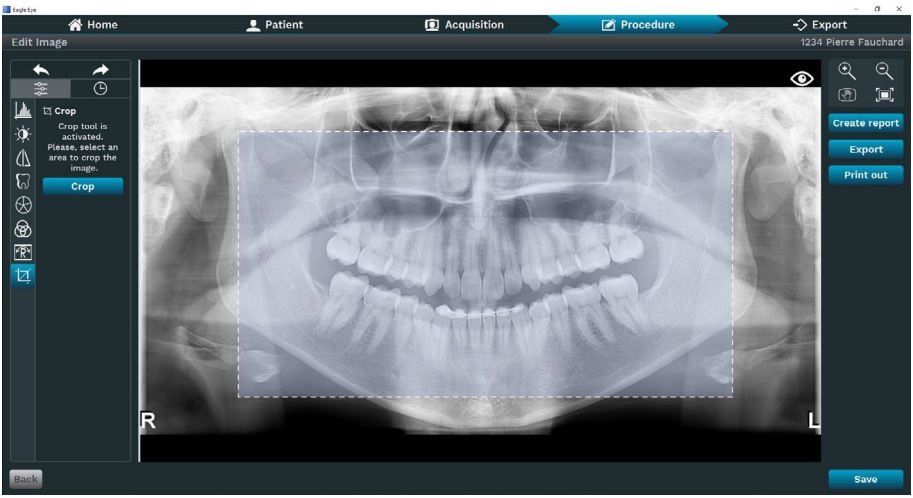
The user can cut the image by clicking  . The software will display the following tools.



Description

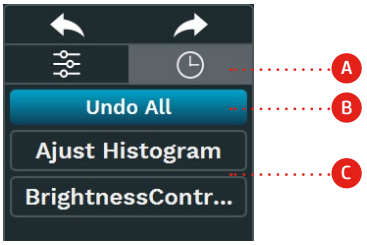
A. Cut: Keep a selected region of the image.

To select the region of interest to cut, Mouse over a point on the image, click on a point, move the cursor and click again . The software will draw a rectangle to mark the selected region. Click the button **Crop** to cut the region.



I) Filter history

To view the image processing history, click  . The software will display all filters applied to the image in chronological order.



Description

A. Filter history: Click to view the filters applied to the image.

B. Undo all: Undo all filters applied to the image.

C. Filter list: Display the filters applied to the image in chronological order.

Click the button 

to remove all filters and revert the image to its original state, as it was open before editing.
The filters applied to the image are displayed in a dark blue box with its name and value. Click a filter to revert the image to the state when the filter was applied. The broken filters will be displayed in a blue illuminated box.

j) Handling tools

The handling tools are:

ICON	DESCRIPTION	OPERATION
	Increase the zoom	To zoom, select the image you want to enable the zoom-in or zoom-out icon and click the image. You can also perform dynamically using the mouse wheel over the images. If "individual zoom" is enabled, the software will zoom only the image over the mouse. If "collective zoom" is enabled, the software will enlarge all images.
	Decrease the zoom	
	Drag image	When enabled allows you to click and drag the area of the desired image
	Adjust image	Returns the image to its original size

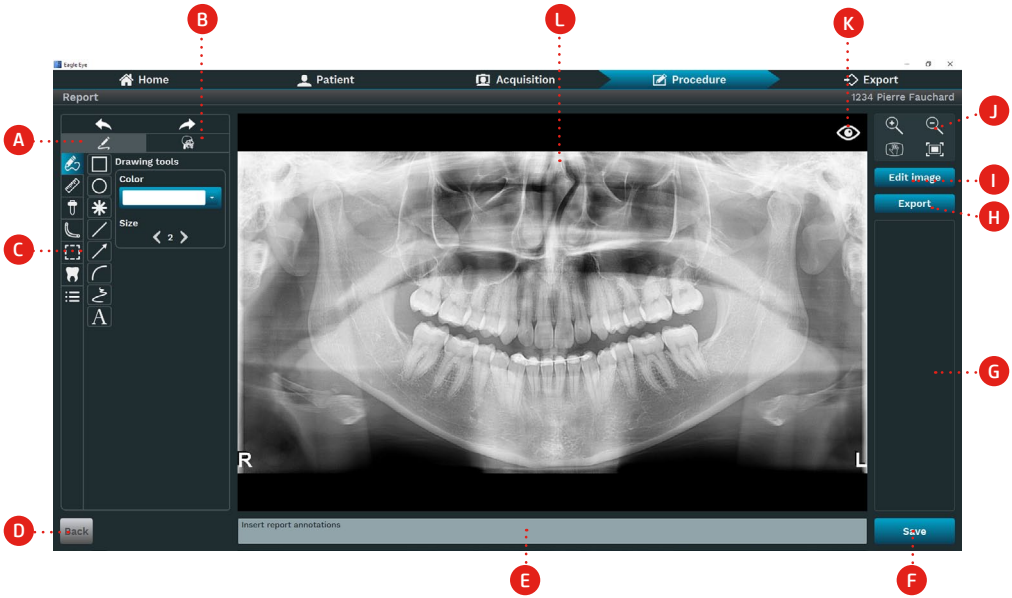
The user can zoom by moving the wheel of the mouse over the images or by selecting the options  or  . The tool  restores the zoom of the image.
To move the image, select the panoramic tool  , press the left button of the mouse and drag the cursor over the image.

5.5.2. Report

As ferramentas de manipulação são:

	To take distance and angle measurements, it is mandatory that the pixel/mm ratio of the scan is calibrated. Read the section “Measurement Tools" to calibrate the exam.

In Report, the user can add drawings, annotations, measurements, implants and nerve drawings in the image, visualize the odontogram and make the cephalometric tracing. The software offers a number of tools to assist the user.



Description

A. Report tools

B. Cephalometric tracing tools

C. Report tool options: View the report tool options:

- Drawing tools
- Measuring tools
- Implant tools
- Thumbnail tools
- Odontogram tools
- Nerve
- Historic

D. Back: Discards all tools added to the image and returns to the previous screen. The software will display a confirmation message before discarding.

E. Notes Report: Click to add annotations to the report.

F. Save: Save the tools added to the image.

G. Thumbnail area: Area that will display user-created thumbnails through thumbnail tools.

H. Export: Click to proceed to the export screen[1].

I. Edit image: Click to go to the image editing screen[1].

J. Manipulation tools: Options to zoom in, zoom out, pan, and adjust to the screen.

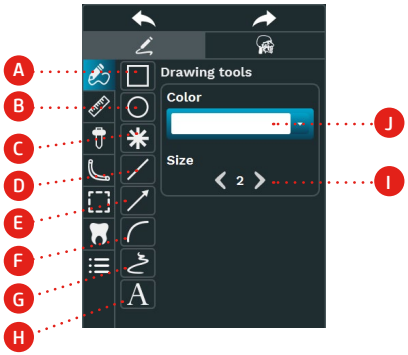
K. Show original image: Press and hold the left button of the mouse to view the original image.

L. Image Area: Work area to display the image.

[1]IF any changes have been made, the software will ask if the user wants to save the change before changing the screen.

a) Drawing tools

Drawing tools are used to add drawings and text to the image. By clicking  the software displays the following drawing tools.



Description

A. Draw rectangle: Click to draw a rectangle.

B. Draw ellipse: Click to draw an ellipse..

C. Draw asterisk: Click to draw an asterisk.

D. Draw line: Click to draw a line.

E. Draw arrow: Click to draw an arrow.

F. Draw curve: Click to draw a curve.

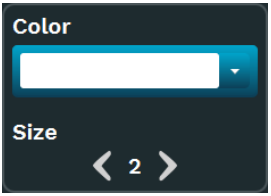
G. Pencil: Click to activate free drawing

H. Text tool: Click to add text to the image.

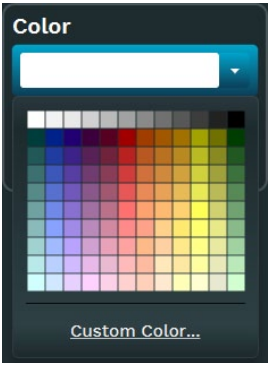
I. Drawing thickness: Click to increase or decrease the thickness of the added drawing.

J. Choose color: Click to open the color palette and choose the color with which the drawing will be made in the image.

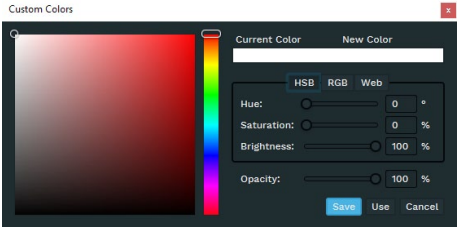
The user can choose the color and thickness with which the drawing will be made in the image.



Click the button  to choose the color of the drawing to be added. The software will show a palette of available colors.

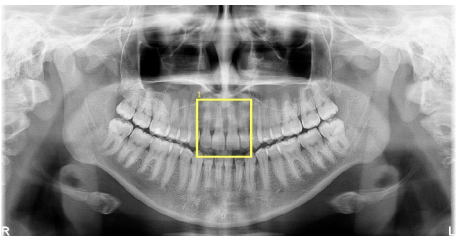


If the user wants a different color, he can choose a custom color by clicking Custom Color... . The software will display the following color customization options.

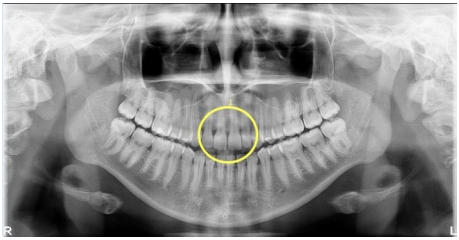


Click the button  to increase the thickness and click the  to decrease the thickness. The center number indicates the size of the drawing, and it ranges from 1 to 10.

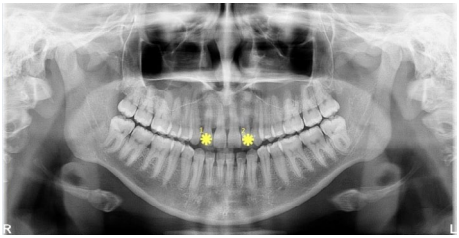
Click the button  to add a rectangle to the image. To draw the rectangle, click on a point, move the cursor and click again . The software will draw a rectangle between these two points.



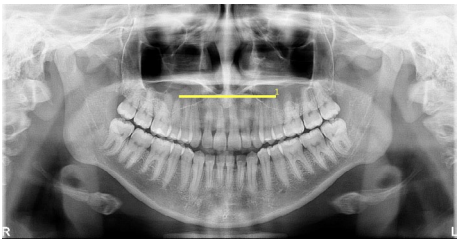
Click the button  to add an ellipse to the image. To draw the rectangle, click on a point, move the cursor and click again. The software will draw an ellipse in this area.



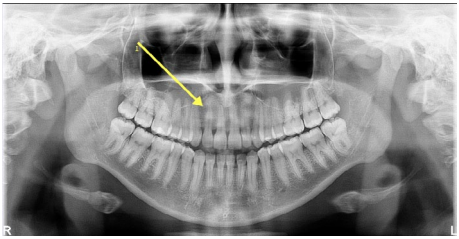
Click the button  to add an asterisk to the image. To draw the asterisk, place the mouse over a point in the image and click the left button of the mouse.



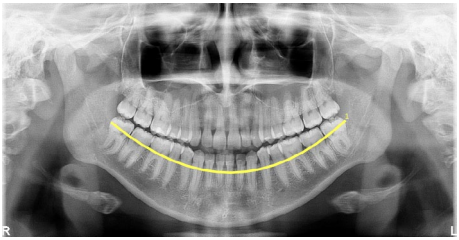
Click the button  to add a line to the image. To draw the rectangle, click on a point, move the cursor and click again. The software will draw a line between these two points.



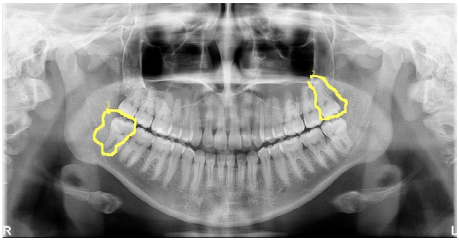
Click the button  to add an arrow to the image. To draw the rectangle, click on a point, move the cursor and click again. The software will draw an arrow on these two points.



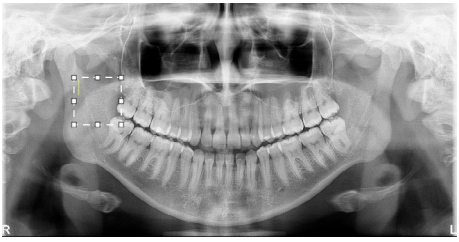
Click the button  to add a curve to the image. To draw the curve, place the mouse over a point in the image, press the left button of the mouse, drag the cursor to another position and re-press the left button of the mouse. After that, drag the cursor to the position you want, as this will determine the curvature of this drawing, and then re-press the left button of the mouse. The software will draw a curve in the image.



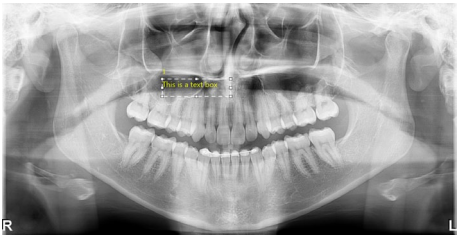
Click the button  to draw the free hand in the image. Left-click the mouse over a position in the image, move the mouse cursor freely in the image and release the left button of the mouse to finish the drawing.



Click the button  to add text to the image. This tool allows the user to add a text box over the image. To do this, place the mouse over a point in the image, press the left button of the mouse. The software will draw a text box.

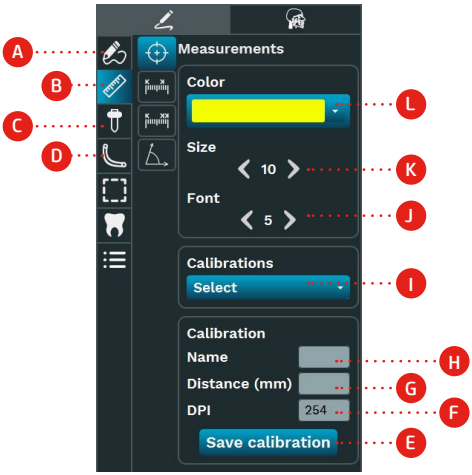


To type inside the text box, left-click the mouse inside the text box and add the text using the computer keyboard. To change the size of the text box, click the ends of the box with the left mouse button, drag the cursor to another position, and release the button.



b) Measurement tools

The measurement tools are used to calibrate and measure distances and angles in the image. By clickin the software displays the following measurement tools.



Description

A. Calibration tool: Tool to calibrate the image.

B. Measuring tool between two points: Click to measure the distance between two points.

C. Multi-point measuring tool: Click to measure the distance of multiple points.

D. Angle measuring tool: Click to measure an angle in the image.

E. Save calibration: Click to save a new calibration.

F. DPI: Shows the number of dots per inch.

G. Distance (mm): Shows the distance in millimeters between the two points of the line added by the calibration tool.

H. Name: Name of the calibration to be added.

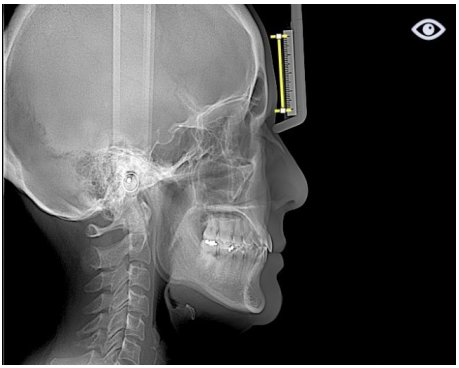
I. Calibration: Shows the saved calibrations and allows the user to choose a calibration.

J. Font: Click to increase or decrease the size of the added font.

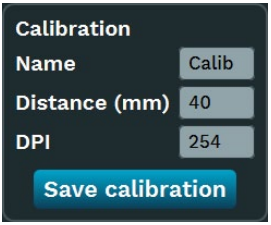
K. Size: Click to increase or decrease the thickness of the added drawing.

L. Color: Click to open the color palette and choose the color with which the drawing will be made in the image.

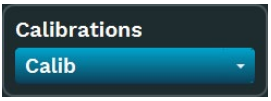
Click the button  to calibrate the image. This tool allows the user to calibrate the image from a known referential measure. To do this, place the mouse over a point in the image, press the left button of the mouse drag the mouse cursor to another point and hit the left button again. The software will draw a line between these two points.



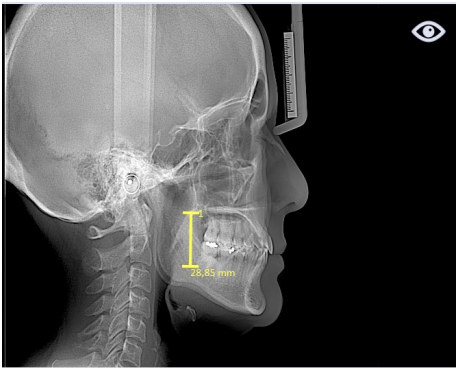
After you create the calibration line, set a name for the calibration and enter the distance and DPI information for the image. In the example above, the ruler is 40 mm in size.



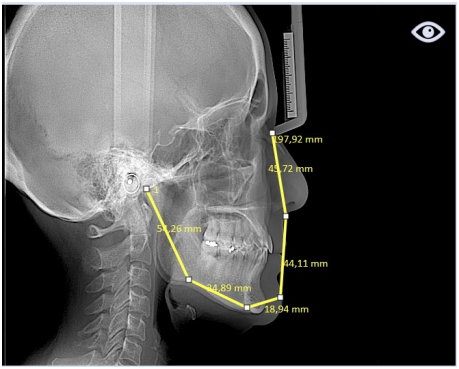
Click **Save calibration** to save this new calibration. After that, the image is calibrated and the software will show this new calibration.



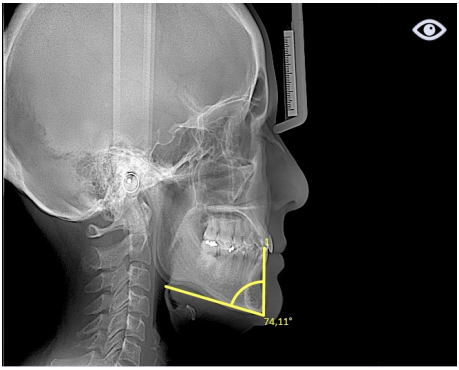
Click the button  to add a measurement between two points in the image. This tool shows the distance in millimeters between two points. Place the mouse over a point in the image, left-click the mouse, drag the cursor to another position you want to make the measurement and click again with the left button of the mouse.



Click the button  to add multiple measurements to the image. This tool allows to request for multiple distances in the image by tracing straights as the user presses the mouse button. To do this, place the mouse over a point in the image, press the left button of the mouse drag the mouse cursor to another point and hit the left button again. This process can be repeated numerous times. When the user wishes to finish using the tool, simply right-click the mouse. The software will draw multiple lines and show the distance between each point of the drawing made and also show the total distance of the measurement.



Click the button  to make an angle measurement in the image. This tool allows to calculate the angle between two lines. Place the mouse over a point in the image, left-click the mouse, move the cursor to another point and left-click to draw the first straight. With the first straight created, drag the cursor back to another point and click again with the left button of the mouse. The software will draw two lines and will show the angle in degrees between the lines.

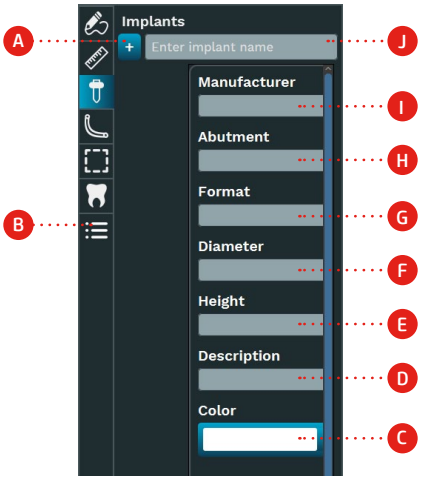


The accuracy of the distance and angle measurement is shown in the table below.

Parameter	Range	Precision
Distance	0,00 to 1000,00 mm	0,01mm
Angle	0,00 to 180,00°	0,01°

c) Implant tools

Implant tools are used to add implants to the image. Clicking  the software will display the following implant tools.



Description

A. Add implant: Click to add an implant to the database.

B. List of implants: Area that shows the list of implants saved in the database.

C. Color: Click to open the color palette and choose the color with which the drawing will be made in the image.

D. Description: Click to add a description to the implant.

E. Height: Click to add the height of the implant.

F. Diameter: Click to add the diameter of the implant.

G. Format options: Display the options of implant formats to be added:

- Conical
- Cylindrical

H. Platform options: Display the implant platform options to be added:

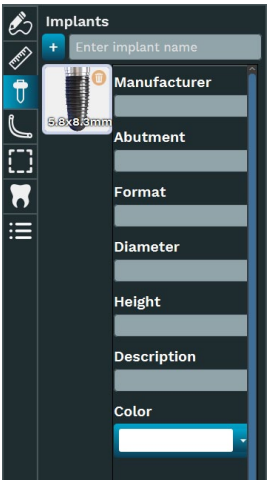
- Inner hexagon
- External hexagon
- Cone Morse
- External octagon
- Switching

I. Manufacturer: Click to add the name of the implant manufacturer.

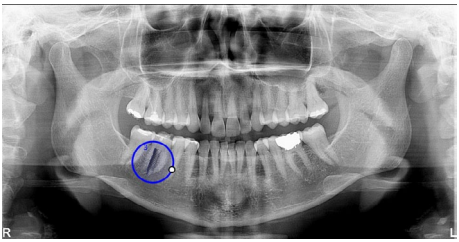
J. Search box: Click to search for the implants by manufacturer, height, diameter or description.

To add a new implant, click + . After that, the user must fill in the implant fields to be added, and it is mandatory to fill the height and diameter of the implant. Click the button OK to save the new implant.

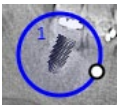
Click Cancel to cancel the procedure of adding a new implant. The software will display the new implant in the implant tools.



To add an implant to the image, press the left button of the mouse about the thumbnail and drag the cursor to the position of the image where you want to add the implant. Release the button to add the implant to the image. The software will display the implant in the image



The user can rotate the added implant in the image. To do this, press the left button of the mouse on the implant in the image. The software will display a blue circle around the implant in the image.



To rotate the implant, press the  and drag the cursor. Release the button on the mouse to fix the rotation of the implant as desired.

d) Nerve tools

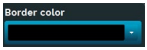
Nerve tools serve to add nerve to the image. Clicking  the software displays the following nerve tools.

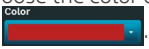
Description

A. Edge color: Click to choose the color of the nerve edge.

B. Nerve color: Click to choose the central color of the nerve.

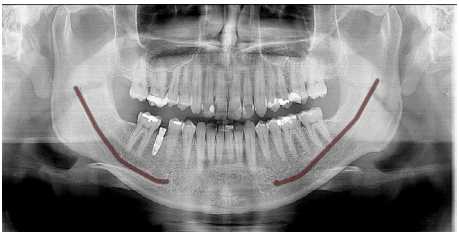
C. Size: Click to increase or decrease the thickness of the nerve to be drawn.

To choose the color of the nerve edge, click 

. To choose the central color of the nerve, click 

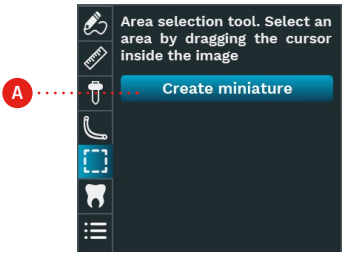
. The software displays the color palette to the user. To increase the thickness size, click  and click the button  to decrease nerve thickness.

To add a nerve to the image, place the mouse over a point in the image, press the left button of the mouse drag the mouse cursor to another point and hit the left button again. This process can be repeated numerous times. When the user wishes to finish using the tool, simply right-click the mouse. The software will display the nerve in the image.

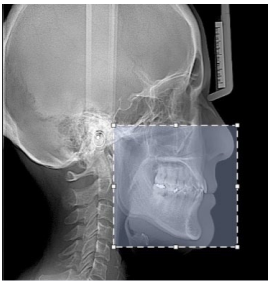


e) Thumbnail tools

Thumbnail tools are used to create thumbnails of the image. By clicking the software displays the following thumbnail tool.



To select the region of interest to create one, place the mouse over a point in the image, press the left button of the mouse, drag the cursor to another position and release the mouse. The software will draw a rectangle to mark the selected region.

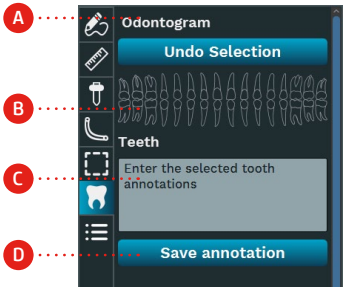


Click the button **Create miniature** to create a thumbnail of this region. The software displays a thumbnail of this area on the right side of the screen.

The user can make numerous thumbnails. To do so, just click **Create miniature**. If you want to delete the thumbnail, click .

f) Odontogram

The odontogram allows the user to select the teeth individually to make notes. By clicking the software displays the following tool.



Description

A. Odontogram: Click to select the odontogram teeth

B. Teeth: Area to display the number of teeth selected

C. Notes: Area to type annotations for selected teeth

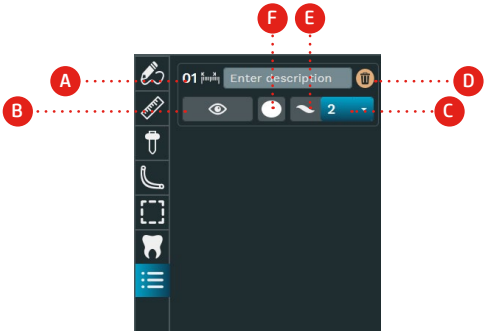
D. Save Note: Click to save annotation

The user can select dental teeth and make notes. To do this, left-click the mouse on the tooth you want to select. The selected tooth will have the contour highlighted. The software will display the selected teeth.
To add an annotation, click the annotation field and type the text you want. Click **Save annotation** to save the annotation. The software will display the saved annotation.

To delete the annotation you made, click .

g) History

The History is used to view and edit all measurements and annotations added to the image. Click for the software to display all tools applied to the image in chronological order.



Description

A. Number and tool information: Indicates which number and what annotation was made.

B. Show/hide annotations in the image: Click to hide/show this drawing in the image.

C. Change annotation size: Click to increase/decrease annotation thickness.

D. Delete annotation: Click to delete this annotation from the image.

E. Enter description: Click to add a description in this annotation.

F. Change annotation color: Click to change the color of the annotation made.

To hide the annotation in the image, click the  . When clicked, the button will be  . This action can be undone by clicking this button again.

h) Shortcuts

You can enter predefined texts using shortcuts. To do this, simply type the shortcut in the Notes Report and press Enter. The software will automatically replace the shortcut with the text associated with it. Below is shown the predefined table in the software.

Shortcut	Description
d62	Tooth 62:
d65	Tooth 65:
d11	Tooth 11:
d72	Tooth 72:
d64	Tooth 64:
d63	Tooth 63:
d71	Tooth 71:
d48	Tooth 48:
d47	Tooth 47:
d46	Tooth 46:

Shortcut	Description
d45	Tooth 45:
d44	Tooth 44:
d43	Tooth 43:
d42	Tooth 42:
d85	Tooth 85:
d75	Tooth 75:
d81	Tooth 81:
d82	Tooth 82:
d83	Tooth 83:
d84	Tooth 84:
d52	Tooth 52:
d73	Tooth 73:
d61	Tooth 61:
d51	Tooth 51:
d55	Tooth 55:
d54	Tooth 54:
d53	Tooth 53:
d74	Tooth 74:
d17	Tooth 17:
d24	Tooth 24:
d23	Tooth 23:
d22	Tooth 22:
d21	Tooth 21:
d18	Tooth 18:
d25	Tooth 25:
d16	Tooth 16:
d15	Tooth 15:
d14	Tooth 14:
d13	Tooth 13:
d12	Tooth 12:
d41	Tooth 41:
d33	Tooth 33:
d37	Tooth 37:
d36	Tooth 36:

Shortcut	Description
d35	Tooth 35:
d26	Tooth 26:
d34	Tooth 34:
d38	Tooth 38:
d31	Tooth 31:
d27	Tooth 27:
d28	Tooth 28:
aman	In the values observed above, the estimated vertical expansion discount of 25% for this device has already been made.
mpovhs	Moderate vertical/horizontal bone loss in alveolar corticals.
seri	Interproximal radiographic examination is suggested for better evaluation of proximal and cortical alveolar faces.
srp	In digital periapical radiographic status by the parallelism method it is observed:
ost	Radiopaque image of clear boundaries suggestive of osteosclerosis
serp	Periapical radiographic examination is suggested by the parallelism method.
cmre	Semilunar radiopaque image suggestive of retention mucous cyst in the left maxillary sinus.
cmrd	Semilunar radiopaque image suggestive of mucous cyst retaining the right maxillary sinus.
rps	In panoramic radiographic examinations and periapical status, it is observed:
cp	Prosthetic crown.
nm	Interradicular core and/or pin.
ted	Endodontic treatment.
lapro	Apical injury and/or bone repair process.
aplad	Loss of peculiar convex morphology of the right mandibular condyle presenting the flattened joint strand, suggestive of facet.
aplae	Loss of peculiar convex morphology of the left mandibular condyle presenting the flattened joint strand, suggestive of faceting.
mch	Homogeneous condylar mobility.
irl	Unilocular radiolucent image of clear boundaries, with circular shape, surrounded by discrete radiopaque line,
mrrc	Restorative material in the cervical region.
dhcnd	Mild hypertrophy of right nasal conchae.
hcn	Hypertrophy of nasal conchae.
hcnd	Hypertrophy of the right nasal conchae.

Shortcut	Description
hcne	Hypertrophy of the left nasal conchae.
dvsm	Discreet sealing of the maxillary sinuses.
dhcn	Mild hypertrophy of the conchae.
rrcp	Radiopaque restoration and/or prosthetic crown.
mfrrc	Radiolucent lining material and / or caries recurrence
ni	Not erupted.
sam	Medical evaluation is suggested.
eaptsm	Alveolar extensions and to the tuber of the maxillary sinuses.
rcd	Complete rhizogenesis.
gds	Dental germs.
dvsme	Discreet sealing of the left maxillary sinus.
dvsmd	Discreet sealing of the right maxillary sinus.
nfo	On the occlusal face.
sec	Clinical examination is suggested.
if	Physiological inclusion.
ppnn	Presence of piercing in the nostril
ped	Total edentate.
ppi	Implant planning
camx	Cortical alveolar jaw.
camd	Cortical alveolar jaw.
sfn	Floor of the nasal fossa and anterior nasal spine.
smd	Right jaw sinus.
sme	Left maxillary sinus.
cbm	Internal cortical of the mandibular base.
cmd	Mandibular canal and right mentonian foramen.
cme	Mandibular canal and left mentonian foramen.
cprac	Radiolucent prosthetic crown and/or absence of crown.
dad	Root laceration.
teii	Incomplete and/or unsatisfactory endodontic treatment.
nfod	On the occluso-distal faces.
nfmo	On the mesio-occlusal faces.
eacm	Anterior extension of the side mandibular canal
erp	In digital periapical radiographic examination by the parallelism method it is observed:

Shortcut	Description
rzd	Rhizolysis.
mcd	Microdontia.
aod	Orthodontic appliance in teeth
demsme	Mild thickening of the mucosa of the left maxillary sinus.
dspm	Disjunction of the median palatine suture.
bod	Orthodontic band.
rc	Caries recurrence?
rre	External root resorption.
rri	Internal root resorption.
rrte	Residual root and/or root residue with endodontic treatment in the tooth region
povh	Vertical/horizontal bone loss in alveolar corticals.
apovh	Marked vertical/horizontal bone loss in alveolar corticals.
sr	(Radiographic status).
vsm	Sealing of the maxillary sinuses.
vsmd	Right maxillary sinus sealing.
vsme	Left maxillary sinus sealing.
ppf	Fixed partial prosthesis in the tooth region
pad	Adhesive prosthesis in the tooth region
mig	Migration to the tooth region
lgd	Lateral /gyro version.
dsn	Supernumerary tooth
foc	Orthodontic wire for tooth restraint
amd	Anterior of the mandible.
rrex	Radiopaque restoration with excess
srcp	Periapical radiographic control is suggested by the parallelism method.
sml	It is suggested a method of localization and/or cone beam computed tomography.
ioi	Dental implant in the tooth region
psi	Prosthesis on implant.
cpsarc	Prosthetic crown without adaptation and/or caries recurrence.
cma	Asymmetric mandibular condyles.
nrcd	On the distal face, cervical region.
cppee	Partial calcification of the styloid process on left side.
cpped	Partial calcification of the styloid process on the right side.

Shortcut	Description
seratm	Radiographic examination of TMJ by the Updgrave method (3 incidences) is suggested.
cpd	Semilunar radiolucent image, with a discrete radiopaque sclerotic halo more evident near the cervical neck, involving the disto-coronary region. Cyst?
dpat	Wear and tear by attrition.
dpab	Wear and tear by abrasion.
ed	Extrusion.
dc	Conoid tooth.
tmd	Transmigration. Impacted in a horizontal position below the apexes of the incisors having migrated towards the contralateral side, exceeding the midline.
amx	Anterior of the maxilla.
stvp	Pulp vitality testing is suggested.
hd	Hypercementosis.
pir	Intra-root pin
tend	Endodontic treatment in teeth
pmf	Pulpotomy and / or lining material.
vpsmd	Partial sealing of the right maxillary sinus.
vpsme	Partial sealing of the left maxillary sinus.
rpd	In the digital panoramic radiographic examination it is observed:
scr	Radiographic control is suggested.
rpdp	In the digital and periapical panoramic radiographic examination it is observed:
nfi	On the incisal face.
sero	Occlusal radiographic examination is suggested.
eap	Joint space preserved in closed mouth.
hoecm	Hypo excursion of the mandibular condyle in relation to the articular tubercle.
camsm	Cortical alveolar up to maxillary sinus in the tooth region
camsfn	Cortical alveolar to floor of the nasal fossa in the tooth region
cambm	Cortical alveolar to the mandibular base in the tooth region
camcm	Cortical alveolar up to mandibular canal in the tooth region
camfme	Cortical alveolar to mentonian foramen on the left side.
camfmd	Cortical alveolar to mentonian foramen on the right side.
nvoa	The values observed above correspond to the measurements that can be performed on the image printed on the digital film (1:1). No vertical magnification occurs.

Shortcut	Description
cameacm	Cortical alveolar up to anterior extension of the mandibular canal tooth region
tdp	All permanent teeth are present.
irs	Radiopaque image suggestive of sealant on the occlusal face.
rid	Incomplete rhizogenesis.
daus	Missing teeth
pral	Alveolar repair process in the tooth region
aoasi	Orthodontic appliance in the upper and lower arches.
eri	In interproximal radiographic examination, it is observed:
nta	In the third apical.
aoas	Orthodontic appliance in the upper arch.
aoai	Orthodontic appliance in the lower arch.
ef	(In formation),
bd	Brackets on teeth
nra	iIn the apical region.
irp	Radiopaque image of sharp boundaries
erml	In radiographic examination of localization method it is observed:
rrei	External and/or internal root resorption.
sb	Biopsy is suggested.
rpdsi	In digital panoramic radiographic examinations, periapical and interproximal radiographic status is observed:
arpr	Area of peri-radicular resorption.
easm	Alveolar extensions of the maxillary sinuses.
rrsarc	Radiopaque restoration without adaptation and/or caries recurrence.
aeo	Area of bone sclerosis
rarre	Apical remodeling and/or external root resorption in teeth
iph	Horizontal pathological inclusion.
fd	Ferulization in teeth
ppp	Temporary partial prosthesis in the teeth region
mfrc	Radiolucent lining material and / or caries.
cpsa	Prosthetic crown without adaptation
ppfr	Radiolucent fixed partial prosthesis and/or absence of prosthetic element in the teeth region.
ipma	Mesio-angular pathological inclusion.
ipv	Vertical pathological inclusion.

Shortcut	Description
ppd	Prosthetic preparation.
rop	Periapical bone rarefaction.
srpi	In periapical and interproximal radiographic status, it is observed:
ipda	Pathological inclusion of distal-angular.
rrp	Radiopaque restoration and/or piercing in the crown.
apt	Tie for orthodontic traction.
nfid	In the incise-distal face.
pea	Preservation of joint space in closed mouth.
demsmd	Slight thickening of the mucosa of the right maxillary sinus.
fcc	Coronary fracture and/or caries.
nfmi	On the mesioincisal face.
nfmod	On the mesio-occlusodistal faces.
erpi	In periapical and interproximal radiographic examination, it is observed:
dm	Mixed dentition.
nfmid	On the mesio-incisodistal faces.
nfc	On the canine face.
ct	Cone Beam is suggested.
dcmr	Discrete semilunar radiopaque image in the maxillary sinuses suggestive of mucous cyst retention.
tdd	Dental transposition between teeth
ddsd	Slight deviation from nasal septum to the right side.
ddse	Mild deviation of nasal septum to the left side.
ppfcp	Fixed partial prosthesis with pontic in the region of the teeth
emo	Extravasation of filling material.
sersf	Radiographic examination is suggested to evaluate the sinus of the face.
povca	Vertical/horizontal bone loss of the alveolar cortical.
tm	Radiopaque image of imprecise limits in the alveolar region of the premolars suggestive of mandibular torus.
dpad	Wear and tear by attrition.
necm	Normo-excursion of the mandibular condyle in relation to the articular tubercle.
hiecm	Hyper-excursion of the mandibular condyle in relation to the articular tubercle.
nfof	On the occlusal face with furcation extension.
rnd	Rhizolysis in teeth
pma	Mesio-angular position

Shortcut	Description
nfmc	On the mesio-canine face.
drhca	Slight horizontal resorption of alveolar corticals.
cpcp	Prosthetic crown with pontic teeth
cpe	Calcification of the style-hyoid process. Eagle syndrome?
cep	With extension for pulp.
pd	Pulpotomy.
coca	Cortical of the articular cavity with normal radiographic features.
cpr	Radiolucent prosthetic crown.
ipds	Pathological inclusion of teeth
aplatae	Loss of peculiar convex morphology of the articular tubercle on the left side, presenting the flattened joint aspect, suggestive of facet.
dcp	Periapical cementary dysplasia.
ml	In the method of localization it is observed:
pohca	Horizontal bone loss in the alveolar corticals of the maxilla and mandible.
pseudo	A well-defined local area of bone rarefaction below the cortical surface of the articular surface of the mandibular condyles, suggestive of subchondral cyst and/or pseudocyst.
dsis	Semi-erupted teeth
dmm	Of the maxilla and mandible.
nfdi	On the face distal-incisal.
obspo	Note. Coronary evaluations are impaired when panoramic radiographic examination is performed in occlusion. Interproximal radiographic examination is suggested for better coronary and cortical evaluation
rpatm	In panoramic radiographic examination for TMA (2 incidences) it is observed:
dptac	Wear and tear by attrition and/or caries.
aplatm	Loss of peculiar convex morphology of the mandibular condyle presenting the flattened joint strand, suggestive of facet.
cef	With extension for furcation.
mrra	Radiopaque image suggestive of restorative material in the alveolar region of the tooth
dds	Deciduous teeth present
cbpe	Bilateral calcification of the styloid process.
dsii	Semi-erupted. Impacted.
rpdi	In the digital and interproximal panoramic radiographic examination, it is observed:
serpan	Panoramic radiographic examination is suggested.

Shortcut	Description
apovhcamd	Marked vertical/horizontal bone loss in the alveolar cortical of the mandible.
cmdsa	Right mandibular condyle with normal radiographic aspect.
cpbpe	Bilateral partial calcification of the styloid process.
obsatm	Note. For the evaluation of joint spaces, excursion of the mandibular condyles and their relationship with the joint cavities, it is suggested radiographic examination of TMT by the Updgrave method (3 incidences).
cpu	Pulp calcification?
pcm	Posteriorization of the mandibular condyle in closed mouth.
rdd	Tooth rhizectomy
apd	Apicectomy.
demsm	Slight thickening of the mucosa of the maxillary sinuses.
ddcrs	Deciduous teeth with rhizolysis
irsd	Radiopaque image suggestive of sealant on occlusal face of teeth
frd	Root fracture
prals	Alveolar repair process in the tooth region
pp	Presence of piercing
irl2	Radiolucent image of sharp boundaries
nmsarc	Nucleus without adaptation and/or recidive of caries.
emrsme	Thickening of the lining mucosa of the left maxillary sinus.
emrsmd	Thickening of the lining mucosa of the right maxillary sinus.
smdsa	Right maxillary sinus with normal radiographic aspect.
smesa	Left maxillary sinus with normal radiographic features.
cmesa	Left mandibular condyle with normal radiographic aspect.
pcd	Coronary pin.
rcmd	Remodeling of the right mandibular condyle.
rcme	Remodeling of the left mandibular condyle.
csi	Crown on implant.
sus	Ultrasound is suggested for salivary glands.
dcf	Multiple irregular sclerotic masses, wrapped by discrete radiolucent halo with bone sequestration characteristics, dispersed in the alveolar process of the maxilla and mandible, suggestive of flowering cemento-osseous dysplasia
easmd	Alveolar extension of the right maxillary sinus.
easme	Alveolar extension of the left maxillary sinus.
cpbp	Bilateral partial calcification of the style-hyoid process.

Shortcut	Description
oep	Osteosclerosis in the apical region.
mdni	Mesiodens not erupted
rce	Condylar remodeling on the left side.
eapt	Alveolar extension and to the tuber of the maxillary sinuses.
npfc	Carbon fiber prosthetic core.
rreap	External root resorption and/or apicectomy.
ircd	Radiopaque image suggestive of resin for bracket fixation on the crown of teeth
brincos1	Note. The patient was unable to remove the earrings whose images during radiography were projected in the maxillary sinus region
cn	Nutrient channels in the region
ddp	of the present teeth.
br	Root bifurcation.
nnd	in the right-hand nostril.
nne	in the left-hand nostril.
frh	Horizontal root fracture.
apohca	Marked horizontal bone loss of the alveolar cortical of the maxilla and mandible.
nlso	in the upper lobe of the ear
rcmca	Remodeling of the mandibular condyles and joint cavities.
lad	Apical injury?
etl	In the Linear Tomographic examination it is observed:
serpo	Periapical radiographic examination is suggested by the parallelism and occlusal method.
dcc	Coronary destruction by caries.
dpa	Missing permanent teeth
nral	in the alveolar region of the tooth
caccrn	Articular cavity with normal radiographic characteristics.
ndcte	In teeth with endodontic treatment, periapical radiographic examination is suggested by the parallelism method.
aped	Stretching of the right styloid process.
iois	Dental implants in teeth regions
csc	Local area of bone rarefaction, well defined, below the intact cortical bone of the articular surface, suggestive of pseudo cyst and/or subchondral cyst, in the mandibular condyle
dac	Anterior displacement of the mandibular condyle in closed mouth.

Shortcut	Description
dpc	Posterior displacement of the mandibular condyle in closed mouth.
dd	Deciduous tooth present
fci	Foramen and incisive canal.
apee	Stretching of the left styloid process.
irpps	Radiopaque images (points) of sharp boundaries
susd	Ultrasound (Doppler) is suggested.
rrc	Radiopaque restoration in teeth
nfoed	in the occlusal and distal faces.
nfmd	in the mesial and distal faces.
nfmeo	in the mesial and occlusal faces.
rbcca	Bilateral remodeling of the condyles and joint cavity.
aplaca	Loss of convex morphology peculiar of the mandibular condyles and joint cavities, suggestive of faceting.
tpm	Third non-erupted premolar,
bods	Orthodontic band on teeth
med	Space maintainer in teeth
apohcamd	Marked horizontal bone loss in the alveolar cortical of the mandible.
qmni	Unerupted fourth molar, in the tuber region of the maxilla on the side
ept	Extension to the tuber of the right maxillary sinus.
atdmx	Absence of maxilla teeth
irccr	Radiolucent image with radiopaque content
nd	in the tooth
nrt	in the tuber region of the maxilla on the side
rro	Radiopaque restoration (Onlay) on the crown.
iinf	Semi erupted in mesio-angular position and impacted on the distal face of the tooth
rpsm	In panoramic radiographic examination for maxillary sinuses it is observed:
dcpd	Radiolucent image of clear boundaries in the apical region suggestive of granuloma, cyst, and/or periapical cementary dysplasia. Pulp vitality testing is suggested.
gd	Dental germ.
dsi	Semi-erupted.
etd	in all teeth.
iinrc	Erupted in a mesio-angular position and impacted in the distal cervical region of the tooth

Shortcut	Description
abpe	Bilateral stretching of the styloid process.
vc	Radiolucent image of clear boundaries, in the anterior region of the maxilla, suggestive of overlap of the space of the cervical vertebrae.
ert	On lateral cephalometric examination, it is observed:
erd	between the roots of the teeth
ldepp	Hard blade and periodontal space preserved.
apm	Anterior and premolars of the maxilla and mandible.
picir	Intra-coronary and/or intra-root pin.
dau	Missing tooth
ddcr	Deciduous tooth with rhizolysis
irps	Clear-bound radiopaque images
od	Radiopaque images (dentiform structures) of clear, well-defined boundaries, surrounded by radiolucent halo, positioned at the root apex of the tooth, suggestive of compound Odontoma. Radiographic examination is suggested
mhcn	Moderate hypertrophy of nasal conchae.
radapm	Apical remodeling in the anterior and premolar teeth of the maxilla and mandible.
ersf	In radiographic examination for the sinus of the face it is observed:
aecm	Absence of excursion of the mandibular condyle in relation to the articular tubercle.
epi	in reverse position,
daep	Slight increase in periodontal space.
ifds	Physiological inclusion of teeth
ppfsa	Fixed partial prosthesis without adaptation and/or caries recurrence in the tooth region
dpp	Permanent teeth present
rrtes	Residual roots and/or root residues with endodontic treatment in tooth regions
irpli	Radiopaque image of imprecise boundaries
cpnd	Prosthetic crown on teeth
dsns	Supernumerary teeth
toq	Keratocystic odontogenic tumor.
irpld	Radiopaque image of diffuse boundaries
rrend	External root resorption in teeth
bnrcp	Bilaterally in the region of canines and lower premolars, suggestive of mandibular torus.

Shortcut	Description
pohvmd	Vertical/horizontal bone loss in the alveolar cortical of the mandible.
cmsmcn	Mandibular condyles, maxillary sinuses and nasal conchae with normal radiographic aspects.
rrdte	Radiopaque restoration with endodontic treatment in the tooth
rrdtes	Radiopaque restoration with endodontic treatment in teeth
cpnmte	Prosthetic crown with metal core and/or intra-root pin and endodontic treatment in the tooth
cpnmtes	Prosthetic crown with metal core and/or intra-root pin and endodontic treatment in teeth
smcn	Maxillary sinuses and nasal conchae with normal radiographic features.
cmsm	Mandibular condyles and maxillary sinuses with normal radiographic aspects.
cprnmteds	Radiolucent prosthetic crown and/or absence of crown with metallic core and/or intra-root pin and endodontic treatment in teeth
odontomacp	Radiopaque images similar to the tooth, of varying shape and size, surrounded by a narrow radiolucent line, suggestive of compound odontoma.
rs	Supplemental root.
ded	Diastema between teeth
sertowne	Towne's anteroposterior radiographic examination is suggested.
ncm	in the body mandibular region of the tooth
rpds	In the digital panoramic radiographic examination and radiographic status it is observed:
cnt	Prosthetic crown with intra-root nucleus and/or pin and endodontic treatment.
pfmx	Screws for fixing on the maxilla.
sev	Overlap of space between cervical vertebrae?
cat	Caries and/or wear and tear by attrition.
nmte	Intra-root nucleus and/or pin with endodontic treatment in teeth
acp	Absence of prosthetic crown.
etsm	Extension to the tuber of the maxillary sinuses.
secera	A comparative study with previous radiographic examinations is suggested.
ebur	Increased radiopacity in the cortical of the joint cavity, suggestive of eburnation.
drmf	Reactionary dentin and/or filling material.
pic	Intra-coronary pin.

Shortcut	Description
nds	in the teeth
osteo	Presence of osteophyte in the anterior articular side of the mandibular condyle
rmr	Residue of restorative material in the alveolar region of the tooth
cnts	Prosthetic crown with intra-root nucleus and/or pin and endodontic treatment in teeth
irsrc	Radiolucent image suggestive of caries recurrence
rind	Incomplete rhizogenesis in teeth
lac	Chronic apical injury?
pod	for the tooth
pods	for teeth
dsar	Teeth requested without noteworthy radiographic changes.
mpovh	Moderate vertical and/or horizontal bone loss of the alveolar cortical.
sar	No noteworthy radiographic changes.
rpo	On panoramic radiographic examination in occlusion, it is observed:
csd	Supra and/or infra-gingival calculus in the teeth present.
rpdo	In the digital panoramic radiographic examination in occlusion it is observed:
cars	with the roots overlapping the mandibular canal. CT is suggested.
snram	overlapped in the ascending branch of the mandible on the side
camxd	Cortical alveolar of the maxilla on the right side.
camxe	Cortical alveolar jaw on the left side.
ii	incomplete and/or unsatisfactory.
cmsa	Mandibular condyles with normal radiographic aspects.
crmf	Recurrent caries, radiolucent filling material, and/or absence of cervical adaptation.
edd	Extrusion of teeth
ec	This examination is complementary, and as such should be analyzed by the requesting professional for interpretation, clinical correlation and therapeutic conduct.
camdd	Cortical alveolar of the mandible on the right side.
camde	Cortical alveolar of the mandible on the left side.
cfc	Caries and/or coronary fracture.
manmx	sharpest in the maxilla.
manmd	sharper in the mandible.
rcnd	Coronary resorption.
ircac	Radiolucent image suggestive of caries and/or coronary opening

Shortcut	Description
d38d48	Teeth 38 and 48:
lf	Furca injury.
aepeld	Increased periodontal space with thickening of the hard blade.
dps	Teeth present:
eosa	Bone structures with normal radiographic characteristics.
rrd	Radiopaque restoration.
irc	Radiolucent image suggestive of caries
rrs	Residual roots and/or root residues in tooth regions
nfd	on the distal face.
irrr	Radiolucent restoration and/or caries
rcmf	Radiolucent image under restoration. Caries recurrence? Filling material?
aep	Increased periodontal space.
nfm	on the mesial face.
fcd	Coronary fracture.
mf	Forging material.
lad2	Radiolucent image in apical region
sgc	suggestive of granuloma and/or cyst.
cs	Supra and/or infra-gingival calculus.
rr	Residual root and/or root residue in the tooth region
eodsa	Bone and dental structures with normal radiographic characteristics.
dpi	Erupted permanent teeth
dpabc	Wear by abrasion and/or caries
eard	involving the root apexes of the teeth
emrsm	Thickening of the lining mucosa of the maxillary sinuses.
nrcm	on the mesial face of the cervical region.
cr	cavity?
irpp	Radiopaque image (point) of sharp boundaries
eaasm	Alveolar and anterior extensions of the maxillary sinuses.
qmi	fourth molar erupted, in the tuber region of the maxilla on the side
acc	Clinical crown augment.
aodasi	Orthodontic appliance disabled in the upper and lower arches.
def	Teeth in formation
aodas	Orthodontic appliance disabled in the upper arch.

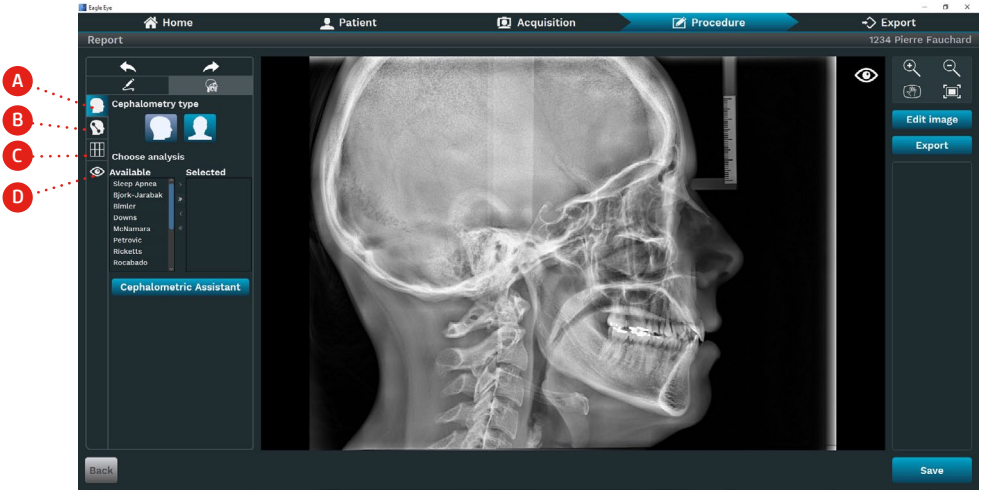
Shortcut	Description
aodai	Orthodontic appliance disabled in the lower arch.
nrc	in the cervical region.
srcm	Overlap of roots in the mandibular canal.
rci	Idiopathic condyle resorption?
ircdpab	Radiolucent image suggestive of caries and/or abrasion wear and tear
etm	soft tissue,
cpcsc	Prosthetic crown with over contour.
ppno	Presence of ear piercing
ostrr	Radiopaque image of clear boundaries suggestive of osteosclerosis and/or root residue in the tooth region
cmdpa	Mandibular condyle shifted to anterior in closed mouth.
cmdpp	Mandibular condyle shifted to posterior in closed mouth.
cmdpi	Mandibular condyle shifted to lower in closed mouth.
ladcp	Apical lesion and/or periapical cementary dysplasia.
nrtrm	in the alveolar region of retromolar trigon on the side
smlte	It is suggested a localization method for individualization of roots for a better evaluation of endodontic treatment.
pbno	Presence of earrings in the ear
nrmv	in the mesio-vestibular root.
smsa	Maxillary sinuses with normal radiographic features.
nrm	in the mesial root.
nrd	in the distal root.
dcmrd	Discrete semilunar radiopaque image suggestive of mucous cyst retaining the right maxillary sinus.
dsd	Nasal septum deviation to the right side.
ero	On occlusal radiographic examination, it is observed:
dse	Nasal septum deviation to the left side.
cnsa	Nasal conchae with normal radiographic aspects.
dcmre	Discrete semilunar radiopaque image suggestive of mucous cyst retaining the left maxillary sinus.
cmr	Semilunar radiopaque image suggestive of mucous cyst retaining the maxillary sinuses.
eoplsm	Bone graft for maxillary sinus lifting in the alveolar region of the tooth
cdpab	Caries and/or abrasion wear and tear

Shortcut	Description
brincosde	Patient could not remove the earrings whose images were projected onto the maxillary sinus on the right side and tuber of the maxilla and condyles on the left side.
eeis	Exposure of implant snares in teeth region
eei	Implant spirals display in tooth region
md	mesiodens
irsrcmf	Radiolucent image suggestive of caries recurrence and/or radiolucent filling material
qie	when the extraction is indicated.
nrmp	in the mesio-vestibular and palatine roots.
nrdp	in the distal-vestibular and palatine roots.
nrmd	in the mesio and distal-vestibular roots.
nrmdp	in the mesium, dosium-vestibular and palatine roots.
lrbr	Root bifurcation region lesion
mvrd	Vertical measurement in tooth region
rcm	Remodeling of the mandibular condyles.
lad	Apical injury?
eratm	In the examination for evaluation of TMJ (3 incidences) it is observed:
cocac	Corticals of the mandibular condyle and joint cavity with normal radiographic characteristics.
aea	Absence of joint space in closed mouth.
apla	Loss of peculiar convex morphology of mandibular condyles presented the flattened joint strands, suggestive of facet.
obspan	Note.: Longitudinal measurements of bone structures are performed on panoramic radiography. The anterior region of the mandible may present anterior extension of the mandibular canal, not observed in this examination.
poi	Increased bone loss in peri-implant tissues with exposure of implant turns.
obsi	Measurements are suggestive. Clinical criteria will determine the choice of the location, size and angulation of the implants.
obscv	Note. In a pandemic and quarantine period due to COVID19, H1N1 and others, so that cross-transmissions with paper impressions, radiographs, CT scans and other tests do not occur, we are
rad	Apical remodeling in teeth
amm	of the maxilla and mandible.
dnis	Unerupted teeth

Shortcut	Description
ip	Pathological inclusion.
dhcne	Mild hypertrophy of left nasal concha.
irr	Radiolucent image under radiopaque restoration suggestive of caries/ forging material on the face
pan	In the digital panoramic radiographic examination it is observed:
sm	Maxillary sinuses with normal radiographic aspects.
ird	radiopaque image
clm	Mesial lingual caries.
tomo1	technique: Cone Beam Volumetric Computed Tomography with axial, panoramic, transverse and 3D reconstructions.
t2	Thickness of tomographic cut: 1mm Interval between cross sections: 2mm

The user can add hotkeys to be used in the annotations in the report. See the section on Software Settings.

5.5.3. Cephalometric tracing



Description

A. Type of tracing/auto-tracing

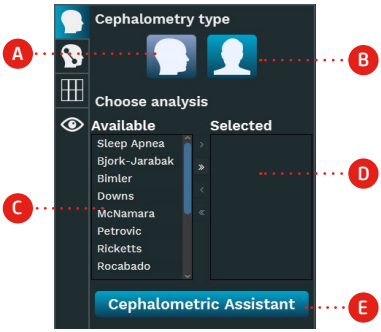
B. Tracing points

C. Factor table

D. Viewing options

a) Cephalometry type

Click  to show cephalometric tracing techniques.



Description

A. Lateral cephalometric tracing: Click to select the lateral cephalometric tracing method.

B. Frontal cephalometric tracing: Click to select the frontal cephalometric tracing method.

C. Cephalometric analyses available: Area that displays all the analyses available in the software.

D. Selected cephalometric analyses: Area that displays user-selected analyses.

E. Cephalometric assistant: Click to have the software making an automatic tracing.

The software allows the user to choose more than one technique to make cephalometric tracing. The software has the following techniques available:

Lateral Cephalometry

- Sleep apnea,
- Bjork-jarabak,
- Bimler,
- Burlington,
- Dental Lower,
- Dental Upper,
- Down,
- MacNamara,
- Owen,
- Petrovic,
- Ricketts,
- Rocabado,
- Soft Tissue,
- Steiner,
- Tweed,
- USP,
- Unesp,
- Unicamp.

Frontal cephalometry

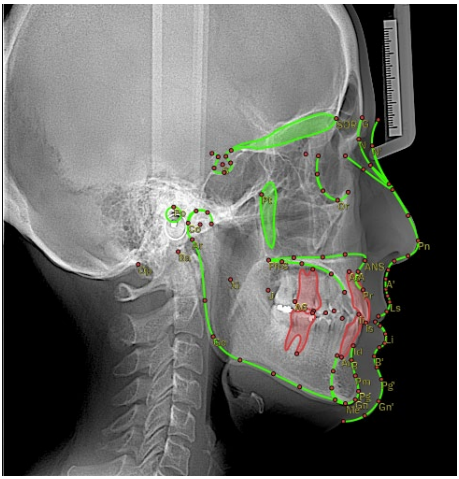
- Ricketts Front

Cephalometric assistant

⚠	The Cephalometric Assistant is only available for the AI Diagnostic module

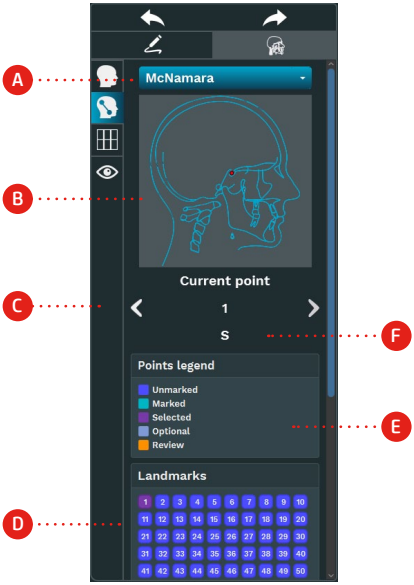
Click at **Cephalometric Assistant** so that the software performs the tracing automatically. The software will suggest the location of the anatomical points of the examination, trace outlines and plans of the chosen cephalometric technique.

⚠	The automatic tracing tool estimates the location of the anatomical points of the exam. It is up to the radiologist or specialized personnel to check the markings and make the necessary adjustments in the positions of the anatomical points and contour drawings. The approval of the marking of the anatomical points is the responsibility of the radiologist or specialized personnel.



b) Anatomical points

Click  to display the tools to mark the anatomical points.



Description

A. Cephalometric analyses: Area that displays the chosen analyses.

B. Points map: Reference image to guide in marking anatomical points.

C. Current anatomical point: Shows the anatomical point selected to mark.

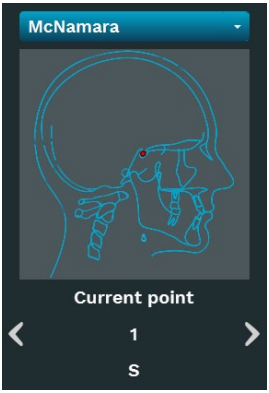
D. Reference points: Table showing all available reference points.

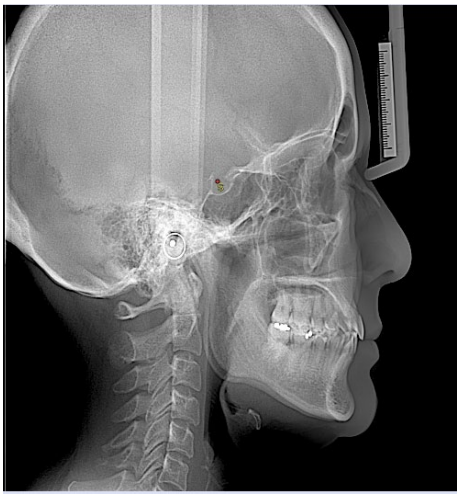
E. Points caption: Status table of marked points.

F. Name of the current point: Area that displays the name of the current point.

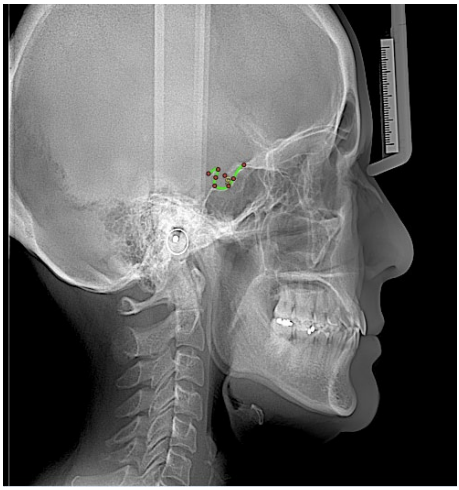
The software has a table of reference points available

The point in orange is the current point. The dots that are in blue color are the points available. The current point will be represented in the reference image.





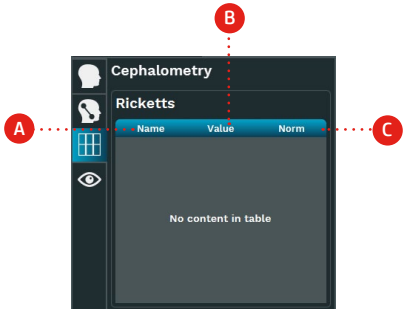
To add the dot to the image, click with the left button of the mouse in the position where you want to add the point. The software will display the point in the image.



The points added to the image will be in color 1. The procedure may be repeated until you get the desired contour. The software will identify the points and add the contour line automatically. As an example, the saddle contour was made.

c) Factor table

By clicking the software will display the following tools.

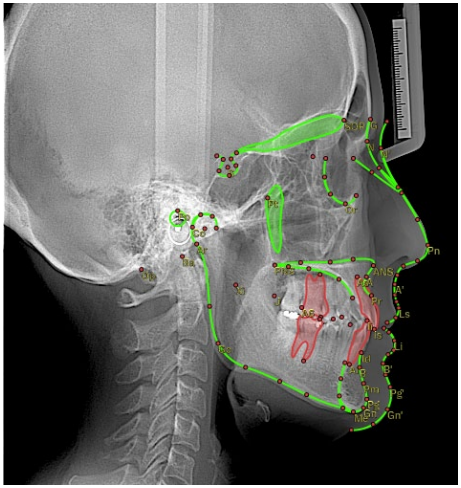


Description

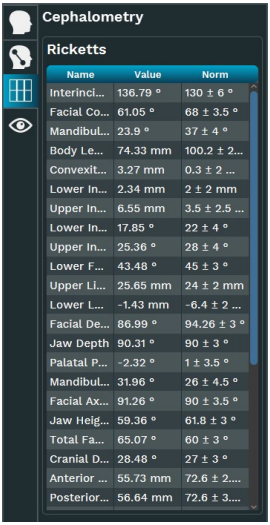
A. Name: Displays the name of the cephalometric factors of the analysis

B. Value: Displays the interest value of cephalometric analysis

C. Norm: Displays the standard of this factor



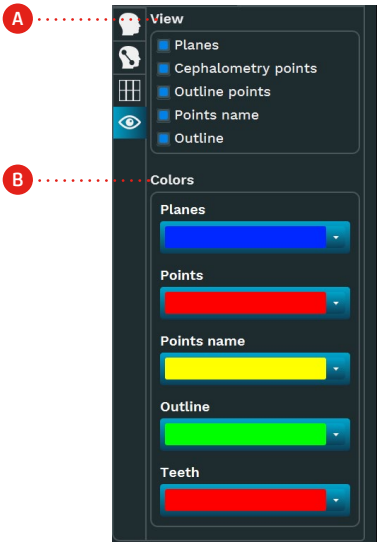
The factor table shows the cephalometric factors of the analysis. To exemplify, Ricketts' layout was made.



The software will display the factor table.

d) Viewing options

By clicking  the software will display the following tools.



Description

A. Preview Options: Click to select the options the user wants to show in the image

- Plans
- Cephalometric points
- Contour points
- Show point name
- Contours

B. Color Options: Click to change the colors in the image

- Plan
- Points
- Name of points
- Contours
- Teeth

The preview options change what should or should not appear in the image. The selected options are represented by  and the options not selected by  . To change, just right-click the mouse on these buttons. To change the color, just click on  .

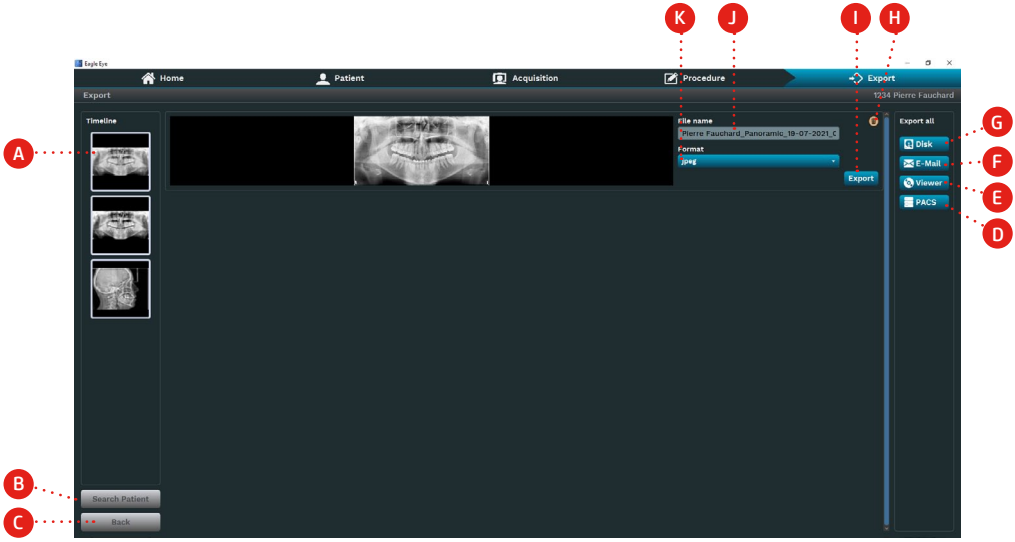
5.6. EXPORT STAGE

The stage is displayed by clicking the 

.
The user can export exams, reports and templates. This export can be done to the hard drive, email, PACS server, and conventional printers or DICOM.

5.6.1. Export Images

The software will display the export images window by clicking Export in Patient Exams or clicking Export Disk on the images preview screen.



Description

A. Timeline: Area where the patient's images appear.

B. Find Patient: Click to go to the patients search screen.

C. Return: Click to return the patient's exam screen.

D. PACS: Click to send to PACS server.

E. Viewer: Click to generate DICOM image viewer.

F. E-Mail: Click to send images by Email.

G. Disk: Click to export images to the hard drive.

H. Delete: Click to delete the image from the export screen.

I. Export: Click to export the image to the hard drive.

J. File Name: Displays the file name.

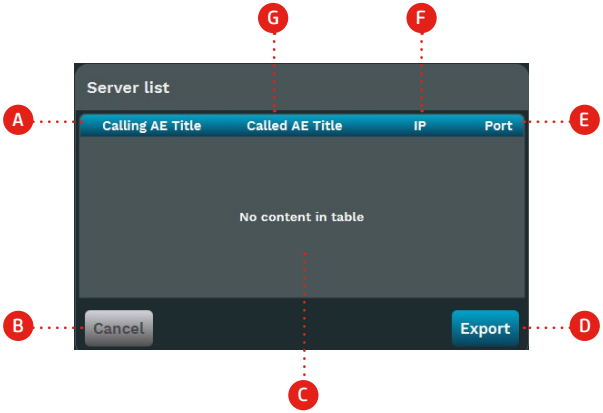
K. Format: click to choose the format of the image that will be exported (png, jpeg, tiff bmp, DICOM).

L. Images: Area that shows the images to be exported.

The user can add other images for export through the timeline. To do this, left-click the mouse on the image you want to add, drag the cursor to the image area and release the left button of the mouse.

a) PACS

The software allows the export of the images to PACS server. To do this, click at the icon PACS the software displays the list of PACS servers registered in the database.



Description

A. Title AE Calling: Identifier name of the software.

B. Cancel: Click to cancel this export

C. Server List: area that shows the registered PACS servers

D. Export: Click to export the images to the server. The software will show a notification with the status of the submission.

E. Door: TCP/IP port number of the server.

F. IP: Network address (IP) of the server.

G. Title AE Called: Name identifier of the server that will receive the exam.

b) Viewer

The user can generate a viewer with the images they want to export in DICOM format. Click the button Viewer and choose the directory in which you want to save the viewer. The software creates a folder in the chosen directory.
Open this file, choose your operating system (Windows or Mac) and click on the file Viewer.exe. The software displays the screen to view the image.

Description

A. List of images: Area that shows the images that were exported in the viewer.

B. Images Area: Area where images are displayed for viewing.

C. Contrast: Click to change the contrast of the images.

D. Brightness: Click to change the brightness of the images.

E. Switch images: Click to move the images clockwise.

F. Orientation: Click to change the arrangement of images between horizontal or vertical.

G. Exhibition: Click to set the display layout and rearrange the images.

H. Show Original: Click to rearrange the images to the original display layout.

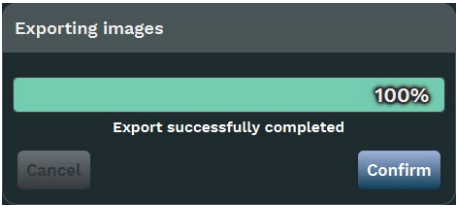
I. Individual Command/Collective Command: Choose one of the options for on-screen actions to be applied to a single image (individual command) or to all images (collective command).

c) Email

The software allows the export of images and sends them via email. To do this, click at the button E-Mail, the software will open an email from your default program with a .ZIP file with exported images.

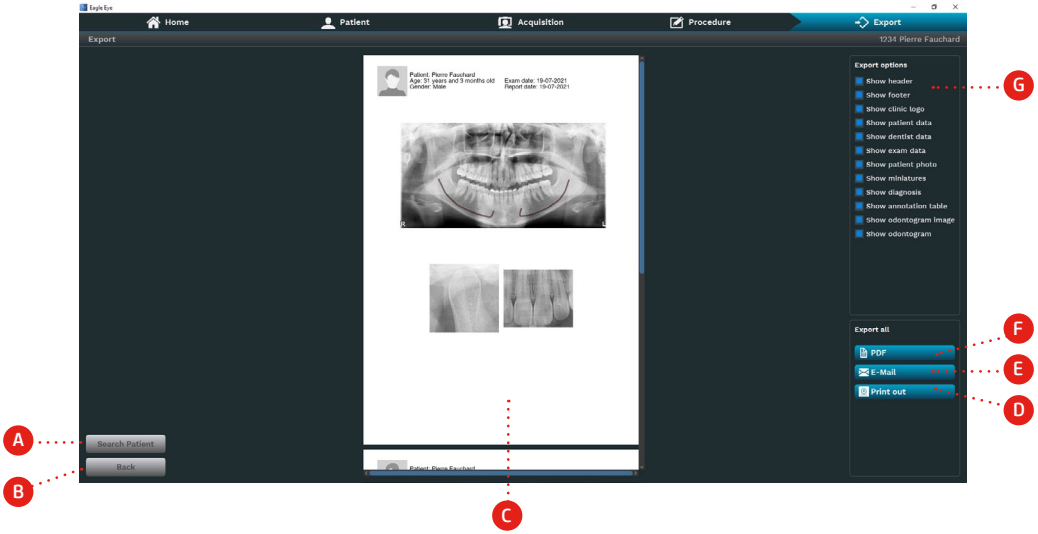
d) Disk

The software allows to export the images and save them to disk. To do this, click the at the icon Disk, the software will prompt the user to select the destination folder and export the images. Wait for the export to finish and click Confirm.



5.6.2. Export Report

The software will display the export report window by clicking Export on the Report screen.



Description

A. Find Patient: Click to return to the patient search screen.

B. Return: Click to return to the report screen.

C. Report: Preview area that shows the report generated in the report.

D. Print: Click to print the report.

E. E-mail: Click to send the report by Email.

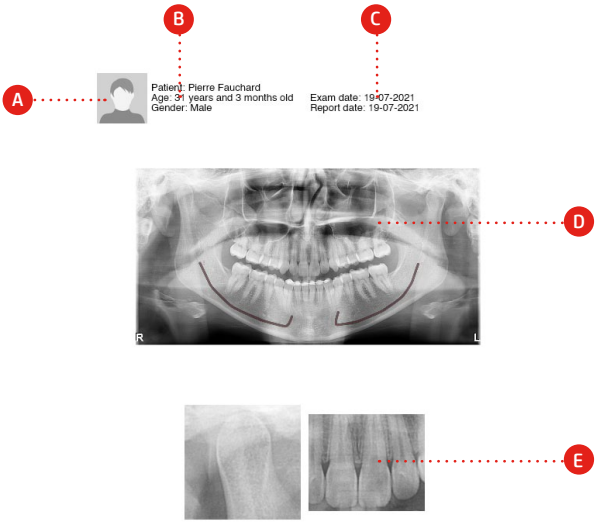
F. PDF: Click to export the report in PDF format on the hard drive.

G. Export Options: Click to select the options that the user wants to show in the file

- Show Header
- Show footer

- Show logo of the clinic
- Show patient data
- Show dentist data
- Show exam data
- Show patient photo
- Show thumbnails
- Show diagnostics
- Show note table
- Show image of odontogram
- Show odontogram table

The report will be composed from the tools used in the report step, in which the report will display only those options selected in the "Export Options". The software displays the image with the added tools and annotations made by the user in the Report step.



Description

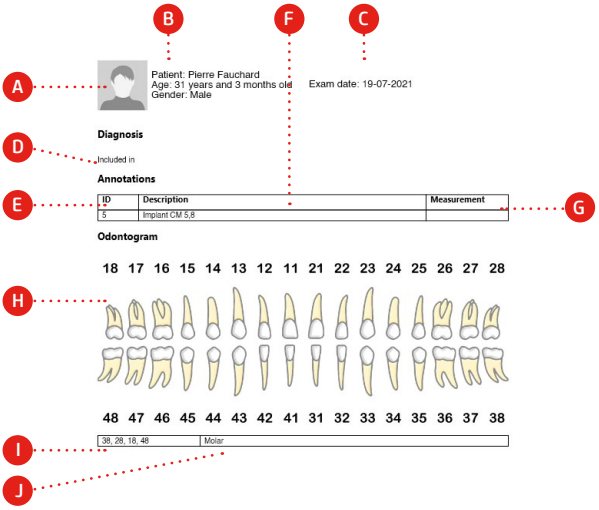
A. Photo: Area showing patient photo

B. Patient data: Area showing the patient's registered data

C. Exam Data: Area showing exam date

D. Image: Area showing report image

E. Thumbnail: Area showing the thumbnails of the report



Description

A. Photo: Area showing patient photo

B. Patient data: Area showing the patient's registered data

C. Exam Data: Area showing exam date

D. Diagnosis: Area showing the diagnosis noted in the report

E. ID: Area showing annotation ID

F. Description: Area showing annotation description

G. Measurement: Area showing the measurement performed

H. Odontogram: Area showing complete odontogram

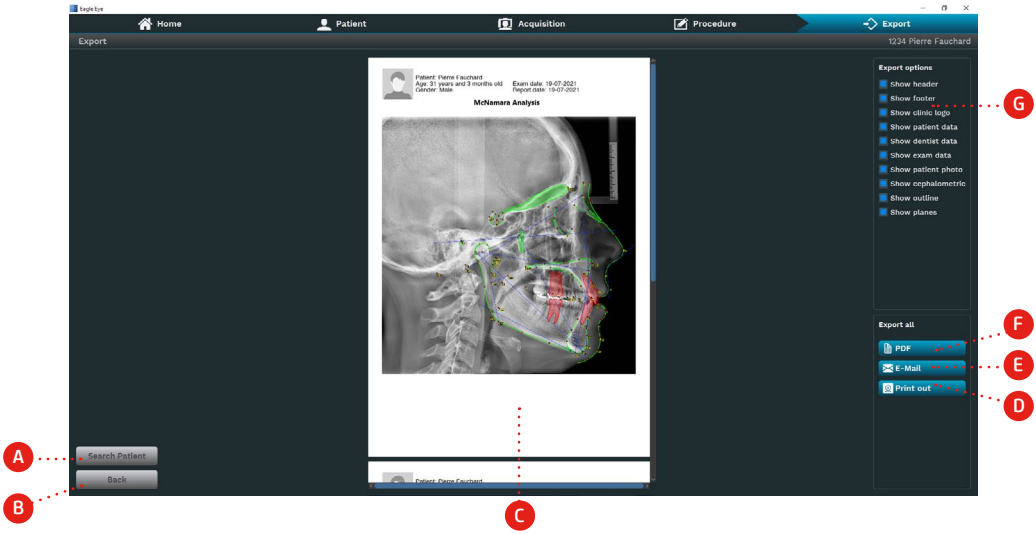
I. Tooth: Area showing tooth on which he had annotation

J. Description: Area showing note made about that tooth

You can export this document. To export in .pdf, click the button PDF; to export by E-mail, click the E-Mail and to print click Print out .

5.6.3. Export Cephalometric Tracing

The software will display the export cephalometric tracing window by clicking Export on the Cephalometric Tracing screen.



Description

A. Find Patient: Click to return to the patient search screen.

B. Return: Click to return to the report screen.

C. Report: Preview area that shows the report generated in the report.

D. Print: Click to print the report.

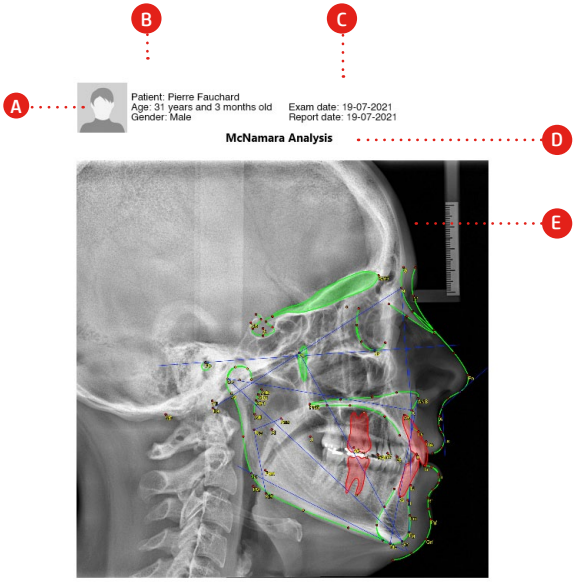
E. E-mail: Click to send the report by E-mail.

F. PDF: Click to export the report in PDF format on the hard drive.

G. Export Options: Click to select the options that the user wants to show in the file

- Show Header
- Show footer
- Show logo of the clinic
- Show patient data
- Show dentist data
- Show exam data
- Show patient photo
- Show cephalometric
- Show Contours
- Show Plans

The cephalometric tracing will be composed from the tools used in the tracing step, in which the report will display only those options selected in the "Export Options".



Description

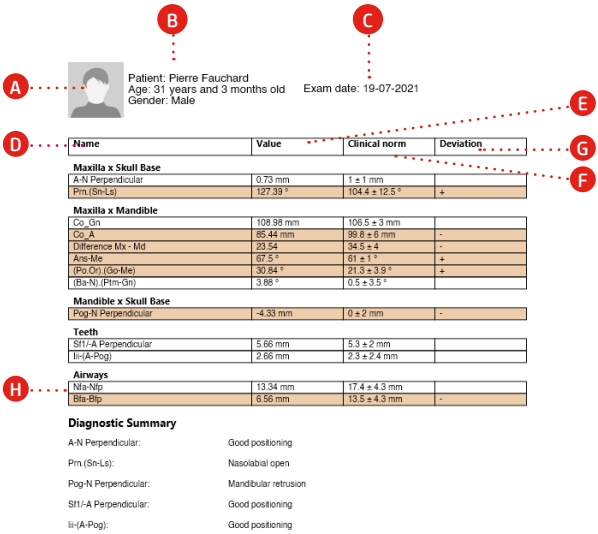
A. Photo: Area showing patient photo

B. Patient data: Area showing the patient's registered data

C. Exam Data: Area showing exam date

D. Exam Name: Area shows the name of the exam performed

E. Image: Area showing cephalometric tracing image



Description

A. Photo: Area showing patient photo

B. Patient data: Area showing the patient's registered data

C. Exam Data: Area showing exam date

D. Name: Area showing the names of tracing markings

E. Value: Area showing measured values

F. Standard: Area indicating the measurement standard for the selected tracing

G. Detour: Standard indicates whether a deviation from the measured value has occurred in relation to the standard including tolerance. The deviation is indicated by the following signals

Value above standard: +
Value below standard: -
Value within the standard: (empty field)

6

SOFTWARE SETTINGS

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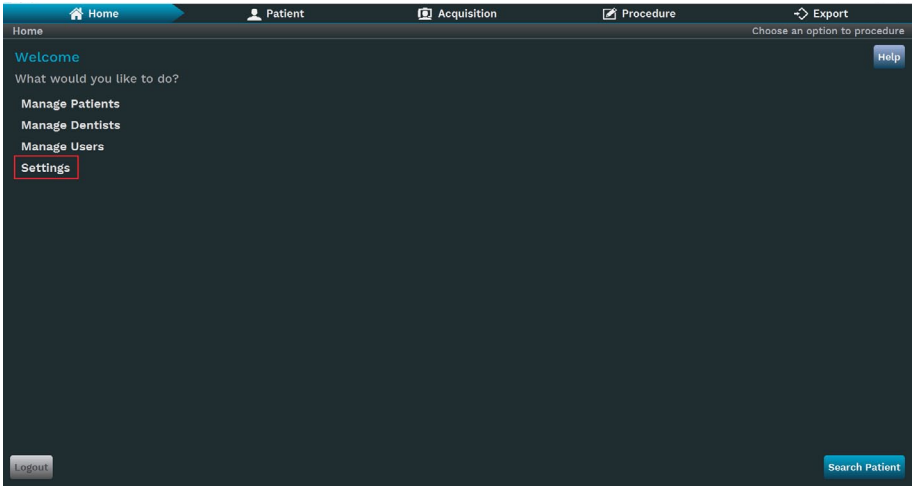
Rodovia Abrão Assed, Km 53 – CEP 14097-500 –Ribeirão Preto – SP –Brasil

6. SOFTWARE SETTINGS

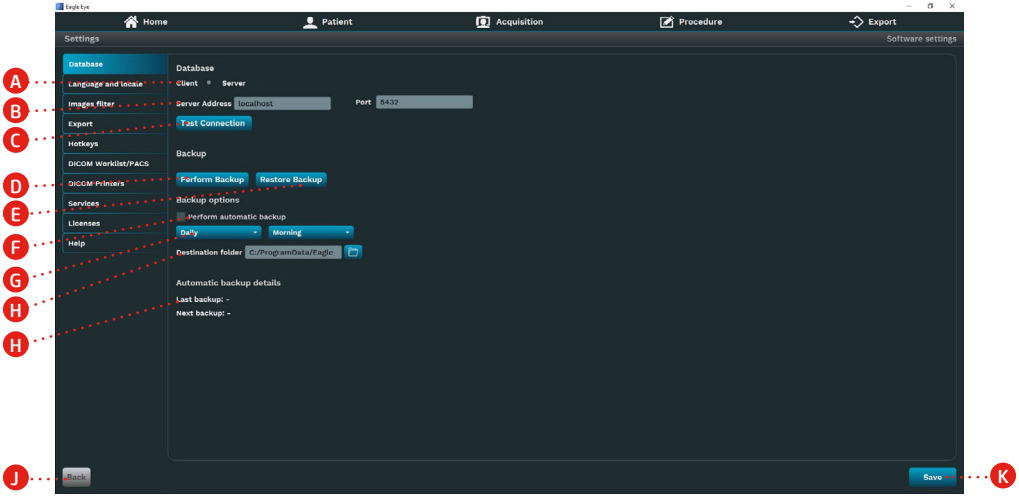
In the Home stage, click the Settings option.



The software will display the Settings menu.

6.1. DATABASE

The user can change database options and make/restore backup of the software



Description

A. Client/Server: Click to configure the software between Client or Server.

B. Server Address: Insert IP and server port from the software

C. Test Connection: Click to test the connection to the server according to the IP and door set

D. Perform Backup: Click to back up the database.

E. Restore Backup: Click to restore the database backup

F. Backup options: Enable automatic backup

G. Backup periodicity: Determine the periodicity of automatic backup (daily, weekly, or monthly) and the period to be performed (morning, afternoon, or evening)

H. Destination Folder: Determine the path of the destination folder to be backed up

I. Backup details: Date of last backup performed and date of next backup.

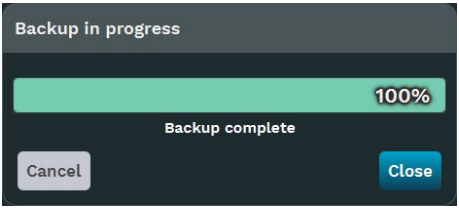
J. Back: Click to go back to the home screen.

K. Save: Click to save the changes you made.

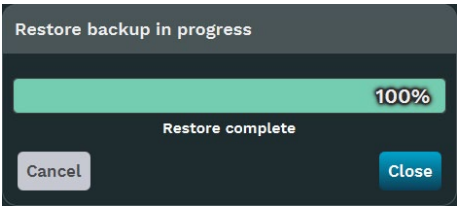
6.2. BACKUP

	Alliage is not responsible for data loss due to accidental deletion, data corruption, hardware failure or any other reason. It is the user's full responsibility to perform regular backup.

If your computerized system experiences a system defect, it can be restored at any time using security or backup devices, so the database must be backedup at regular intervals and preferably on external devices.
To perform a backup of the software database, click the button **Perform Backup**. The software will display a screen that will show when the backup is complete. Click the button **Close** at the end of the backup.



The user can restore an existing backup to their computer. To do this, click the butoon Restore Backup and choose a file .bak. The software will display a screen that will show when the restore is complete. Click the button Close at the end of the backup.



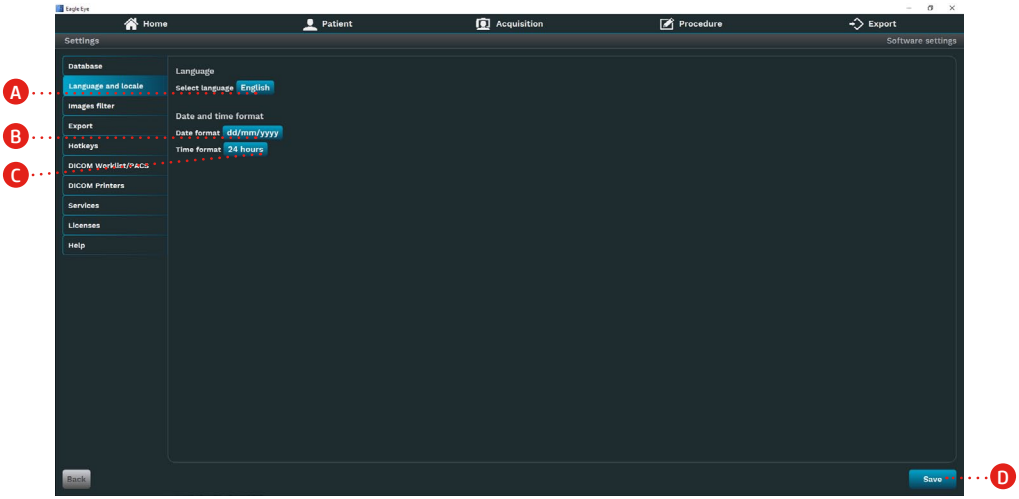
The software can automatically backup. To do this, you must select this option in settings and determined the frequency/execution period of the backup.

Frequency (daily, weekly, or monthly) and period (morning, afternoon, or evening) options can be selected.

To change the backup destination folder, click the icon and select the auto-backup destination folder.

6.3. LANGUAGE AND REGION

The user can change the language and make/restore backup of the software.



Description

A. Select the Language: Click to change the language of the software: English, Portuguese and Spanish

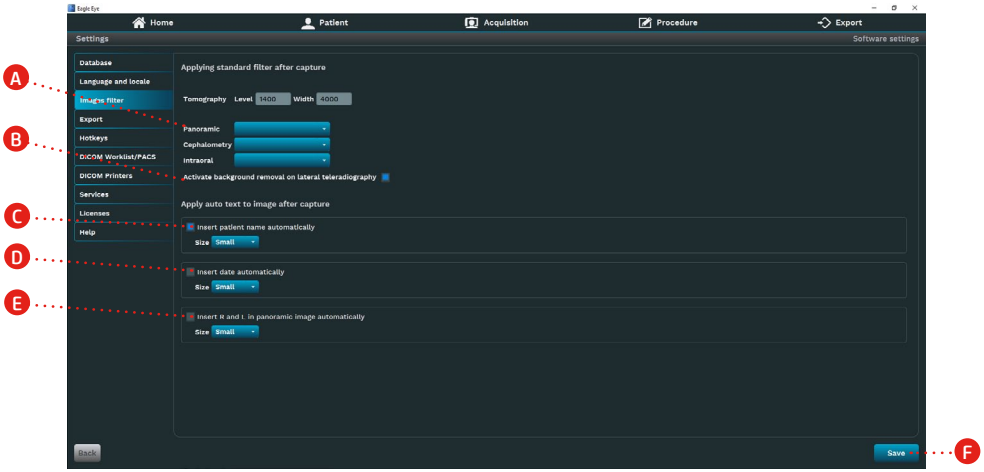
B. Date format: Click to switch date format: day/month/year, month/day/year, and year/month/day

C. Time format: Click to switch the format of the hours: 12 hours or 24 hours

D. Save: Click to save the changes you made.

6.4. IMAGE FILTER

The user can choose the application of filters after capturing and the automatic text settings in the image after the capture.



Description

A. Predefined filters: Choose the application of predefined filters in the tomography, panoramic, cephalometric and intraoral exams.

B. Background removal: Click to remove the background of the lateral cephalometric images

C. Patient Name: Patient name settings

D. Date: Date settings

E. R and L: R and L settings

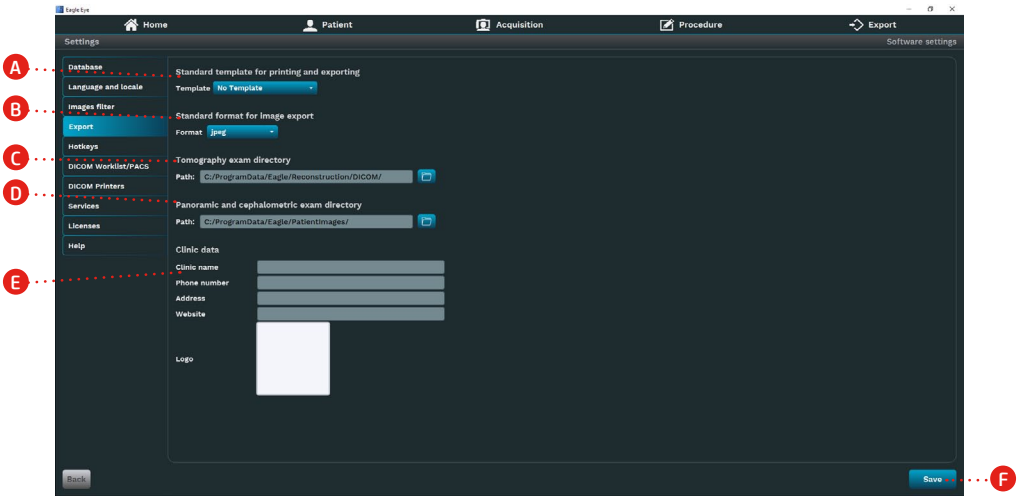
F. Save: Click to save the changes you made.

For tomographic examinations it is possible to adjust the gray level mapping (Windowing). The brightness of the image is adjusted through the window level. The contrast is adjusted through the width of the window.
The software allows the application of predefined values of level (-10000 to 10000) and width (1 to 20000).

The software sllows the application of preset filters on images of each exam (For filter creation see the Image Editing).To do this, simply apply the predefined filter listed to the exam by clicking on the selection list.

You can also choose that some texts are automatically applied in exams. These texts can be: Patient name, Exam date and insert R and L into the panoramic image. To do this, select the check box next to the text you want to insert. The user can choose the text size between: small, medium and large.

6.5. EXPORT CONFIGURATION



Description

A. Template: Click to choose a default template for printing.

B. Format: Choose a default format for image export (png, jpeg, tiff, raw, bmp, DICOM).

C. Tomographic examination directory: Set the path where CT scans will be saved

D. Exam Directory panoramic and cephalometric: Define the path where panoramic and cephalometric scans will be saved

E. Clinic data: Click to add clinic data:

- Name of the clinic
- Telephone
- Address
- Web site
- Logo

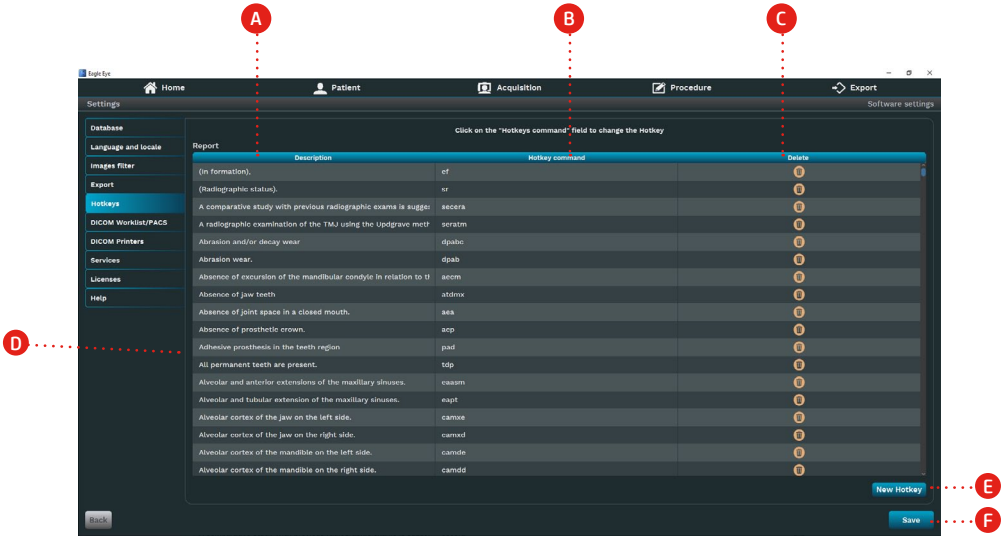
F. Save: Click to save the changes you made.

The user can choose a default template, just click 

to view the options for saved template templates.

6.6. HOT KEYS

The user can add hotkeys to be used in the annotations in the report



Description

A. Description: Type the text that will be written when the shortcut is applied.

B. Shortcut Command: Type a string to associate with the Description.

C. Delete: Click to delete the shortcut.

D. Shortcut area: Area that displays all shortcuts added

E. New Shortcut: Click to add a shortcut.

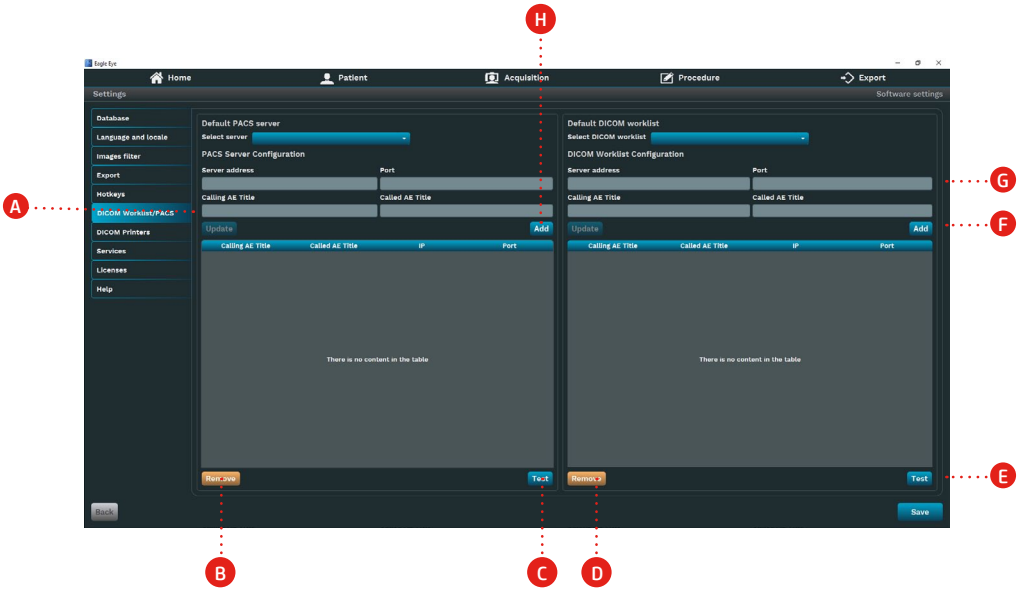
F. Save: Click to save the changes you made.

To create a shortcut, click **New Hotkey**. The software will allow the creation of a new shortcut. To use the shortcut you created, go to the report screen and type the shortcut command in the description part. Press the key Enter on the keyboard and the software will display the description on this screen.

The user can delete the shortcut created by clicking  .

6.7. DICOM Worklist/PACS

The user can configure the PACS servers and the DICOM Worklist.



Description

A. PACS Server Data: Enter PACS server data (Server Address, Title AE Calling, Title AE Called, and Door)

B. Remove: Click to remove PACS server

C. Test: Click to test your connection to the PACS server

D. Remove: Click to remove the DICOM Worklist server

E. Test: Click to test your connection to the DICOM Worklist server

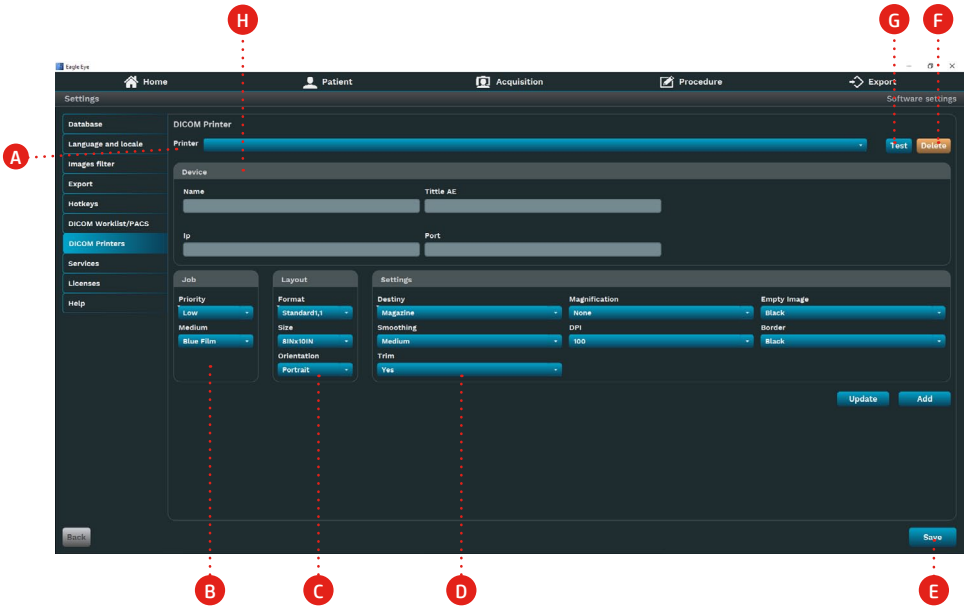
F. Add: Click to add DICOM Worklist server

G. DICOM Worklist data: Enter DICOM worklist data (Server Address, Title AE Calling, Title AE Called, and Port)

H. Add: Click to add PACS server

6.8. DICOM Printers

The user can configure and add DICOM printers in the software.



Description

A. Printer: Displays the saved printers in the database.

B. Work: Choose priority (low, medium, or high) and media type (Blue Movie, Light Film, or Paper).

C. Layout: Choose the shape, size, and orientation of the print sheet.

D. Settings: Choose movie target, smoothing, trim, magnification, DPI, Empty image, and border

E. Save: Click to save changes made to the DICOM printer

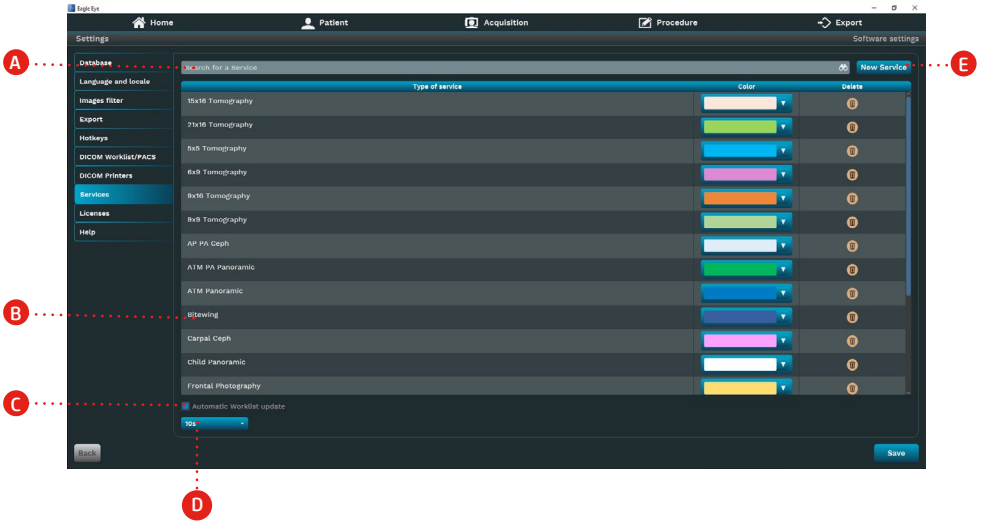
F. Delete: Click to delete the selected DICOM printer

G. Test: Click to test communication with the DICOM printer

H. Device: Click to set up your device: Name, IP, AE Title and Door

6.9. SERVICES

The user can configure and add services in the software



Description

A. Search for a service: Click to find a registered service.

B. List of Services: Displays the list of existing services in the software.

C. Automatic Update: Click to select or unselect the Automatic Update Worklist.

D. Update time: Click to choose the automatic refresh time between 10, 20 or 30 seconds, 1, 10 or 60 minutes

E. New Service: Click to add a new service.

The software already has a list of services included by default:

- AP PA Ceph;
- Lateral Ceph;
- Carpal;
- Oblique Ceph;
- Tomography 5x5;
- Tomography 6x9;
- Tomography 9x9;
- Tomography 9x12;
- Tomography 9x15;
- Tomography 15x15;
- Tomography 21x15;
- Periapical Bitewing;
- Periapical Complete Mouth;
- Complete Photography;

- Profile Photography;
- Frontal Photography;
- Smile Photography;
- Superior Occlusal Photography;
- Lower Occlusal Photography;
- Standard Panoramic;
- Panoramic TMJ;
- Panoramic TMJ PA;
- Panoramic Child;
- Maxillary sinuses;
- Improved panoramic orthogonality;
- Bitewing;

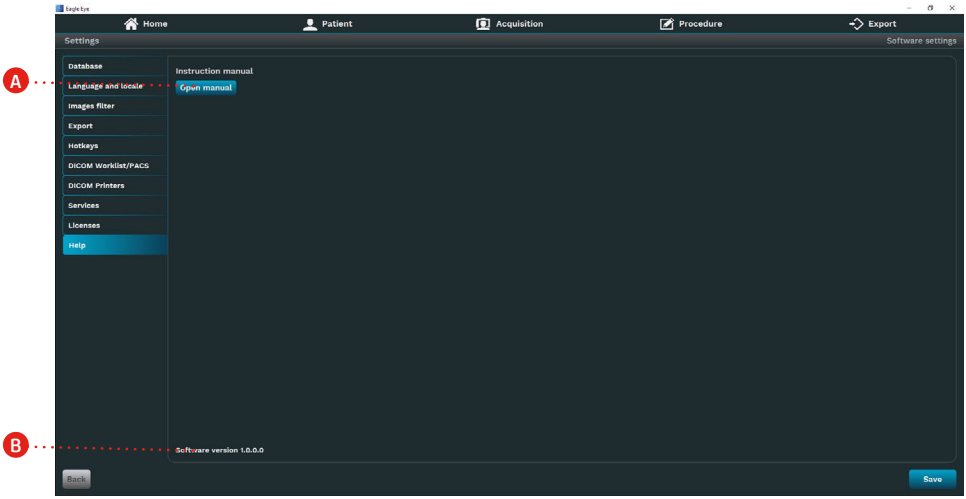
The user can add a new service. To do this, click **New Service**. Click the color field to set or change a color for the service. The user can delete the shortcut created by clicking .

6.10. LICENSES

The license area manages the software licenses. This tab is for exclusive use of Alliage Technical Support.

6.11. HELP

The user can open the manual and view the version of the software.



Description

A. Open Manual: Click to open the manual of the software

B. Software version: Area that displays the version of the software that the user is using

7

WARRANTY

Alliage S/A Industrias Médico Odontológica
Telephone: +55 (16) 3512-1212
Rodovia Abrão Assed, Km 53 – CEP 14097-500 –Ribeirão Preto – SP –Brasil

7. WARRANTY

This equipment is covered by the warranty periods, terms and conditions contained in the Warranty Certificate that comes with the product.

8

ALLIAGE AUTHORIZED SERVICE

Alliage S/A Industrias Médico Odontológica
Telephone: +55 (16) 3512-1212
Rodovia Abrão Assed, Km 53 – CEP 14097-500 –Ribeirão Preto – SP –Brasil

8. AUTHORIZED SERVICES ALLIAGE

All services performed in the Dental Imaging Software must be performed by an Authorized Technical Assistant, as otherwise they will not be covered by the warranty.

If you need to request electrical schematics and or specification of components that are not stated in the user manual use Alliage Customer Service to make the request.

Telephone: +55 (16) 3512-1212
Address: Rodovia Abrão Assed, Km 53 - Recreio Anhanguera - Ribeirão Preto-SP/ Brazil CEP 14097-500

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