YUCERA

Scanner User Manual

Contents

1、Scanner installation

1.1 Equipment Installation

(1) Connect the scanner adapter cable;

(2) Please connect the USB cable of the scanner to the 3.0 USB port of the computer;

Note: Desktop computers must be connected to the USB 3.0 interface on the back of the host.

(3) Please connect the power cord to the scanner power interface;

(4) Please turn on the scanner switch;

1.2 Software Installation

1.2.1 Configuration requirements

	minimum configuration	Recommended configuration
CPU	Intel Core i5-12400 or i7-10700 (Minimum 4 cores and 8 threads)	Intel Core i7-12700o r i5-13600KF
Graphics card	NVIDIA GeForce GTX1660Ti 4GB (Latest available driver version)	NVIDIA GeForce RTX2060S 6GB (Latest available driver version)
system	Windows 10 system 64 bit and above	
internal storage	16G	32G

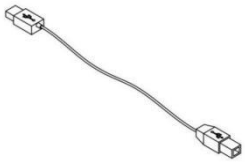
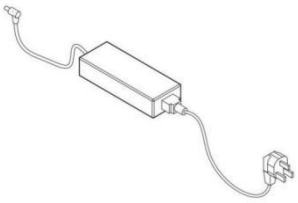
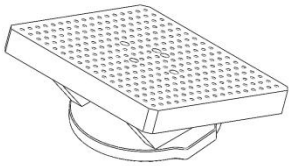
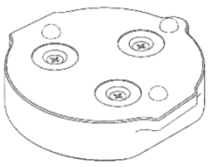
***Attention:** Please be sure to follow the above requirements, otherwise if there are any problems during the installation and use of the scanner, the technical personnel have the right not to provide after-sales service.

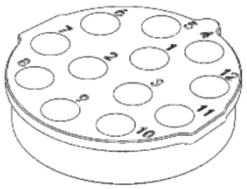
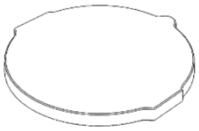
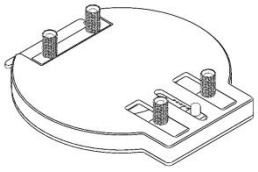
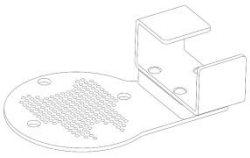
1.2.2 Work environment

(1) Please avoid other strong light sources directly shining on the inside of the scanning chamber

(2) Please ensure that the scanner is placed smoothly without vibration interference

1.3 Accessory Information

Accessories list	Unit	Picture	main application
USB cable	1		Insert USB 3.0
Power cable	1		24V DC voltage is available
Marble calibration board	1		For calibration of calibration scanners
Heel block	1		It is used for calibration, scanning of common teeth and jaws, impressions and die-model

12-hole-dies plate	1		Fill the hole with Latin glue and use it to insert die-model
scan plate	2		Place the Latin glue on the surface, and then place the model
Blu Tack	2		Used to bond models and fixtures
Fixed plate	1		Used to fix the scan model
Impression fixture	1		Used for fixed impression scanning
3-hole-die disc	1		Used for three in one scanning fixed agent

1.4 Software Installation

1. Precautions before installation

(1) The software supports languages such as Chinese, English, Russian, and other multiple languages

(2) Please confirm that the computer configuration is sufficient, the monitor is inserted into a separate graphics card, and then the computer and scanner are connected. The scanner is in a power on state

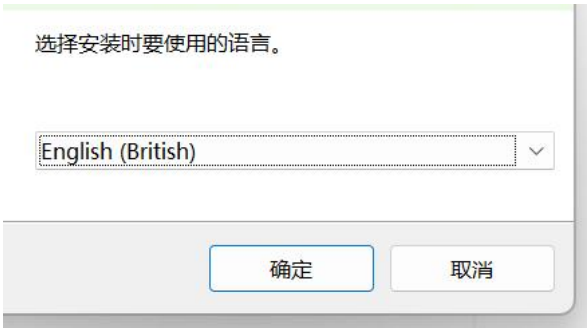
(3) Please close the computer firewall and exit the antivirus software

2. SHTC-DentalOrderSystem Installation Tutorial

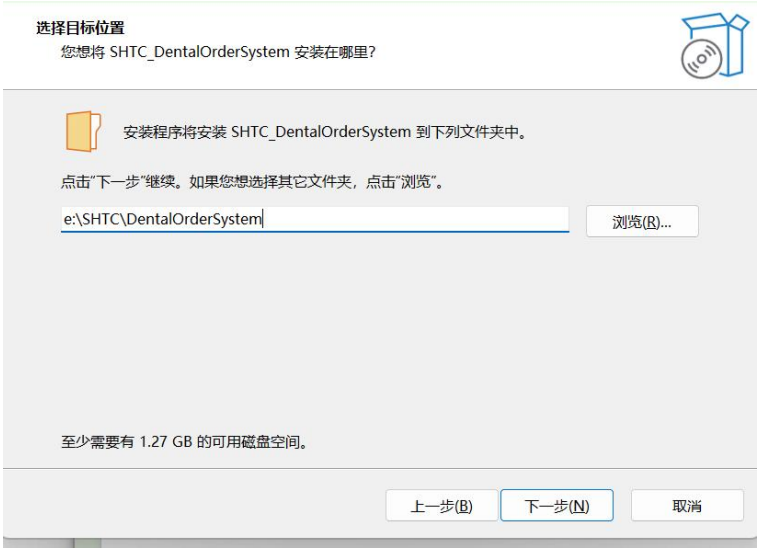
(1) Extract installation package: Please contact your dealer or technical personnel

(2) Run the installation package and double-click on the DentalOrderSystem 2.0.0.0 XXXX. exe file

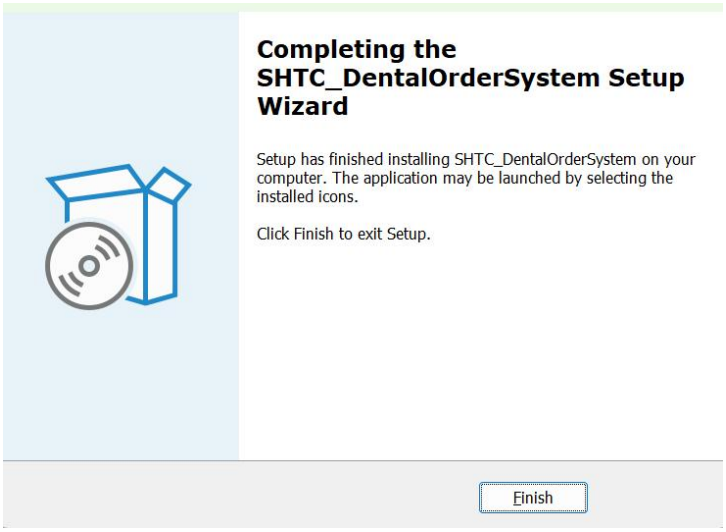
(3) Follow the wizard to install the software, as shown in Figures (1) and (2)



(1) Select a language



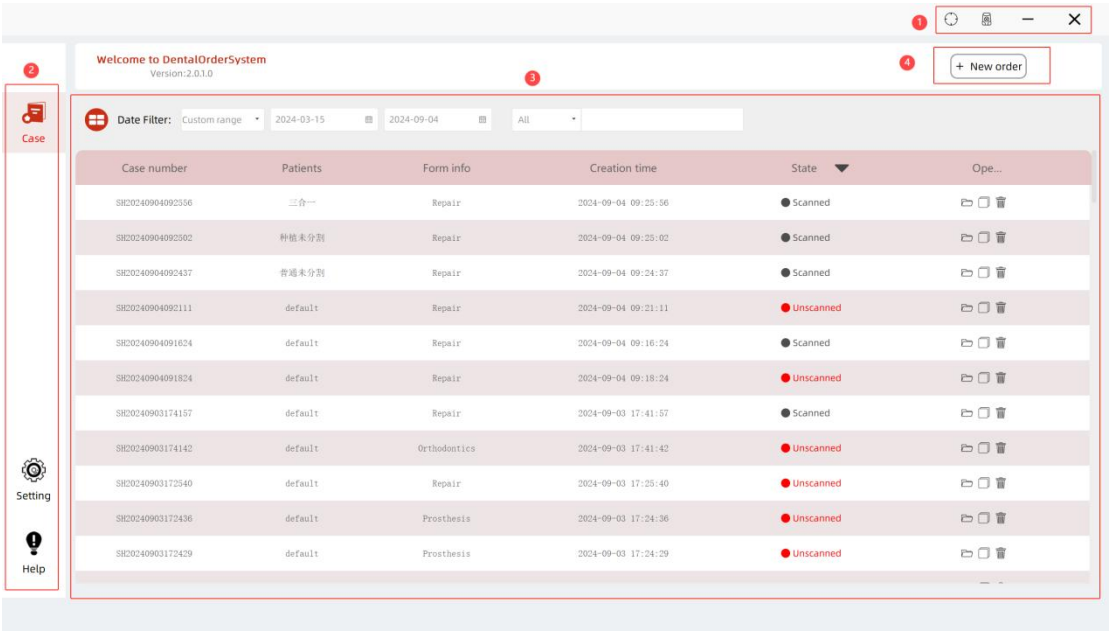
(2) Select the installation location



The installation is complete

2、DentalOrderSystem

DentalOrderSystem Interface



① Navigation bar ② Menu bar ③ List bar ④ New order

2.1 Navigation bar

Calibration button: Click to enter the calibration interface

Virtual articulator:Click to enter the calibration of the occlusion rack base

Zoom out button: Click to zoom out the order creation platform to the taskbar

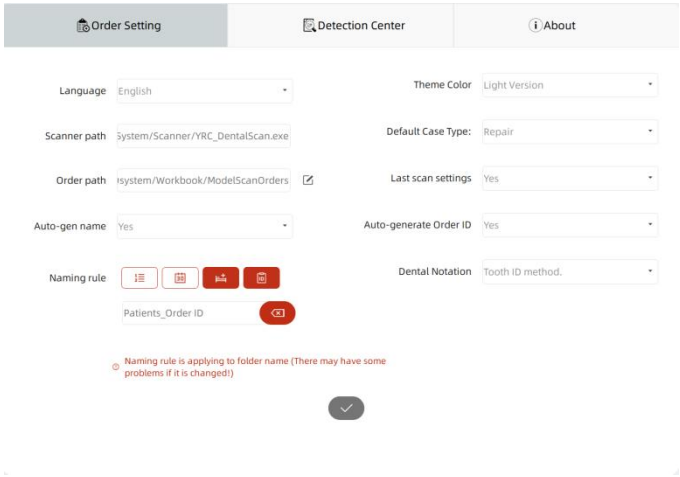
Close button: Click to exit the order creation platform

2.2 Menu bar

Case: Display an order list, where you can search for orders, create new orders, and more.

Settings: The settings interface includes Order Setting,Detection Center,About.

- Order Setting: Includes language modification, theme color switching, scanning program configuration, order saving path configuration, tooth marking method selection, and order folder naming rule settings.

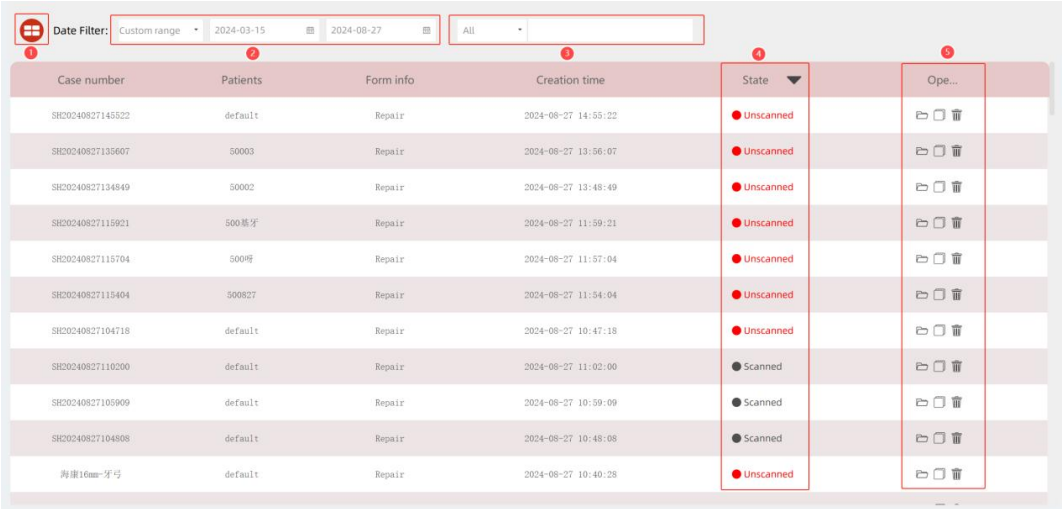


- Detection Center: Supports testing computer configuration.
- About: Display the software version information

Help：Display the user manual.

2.3 List bar

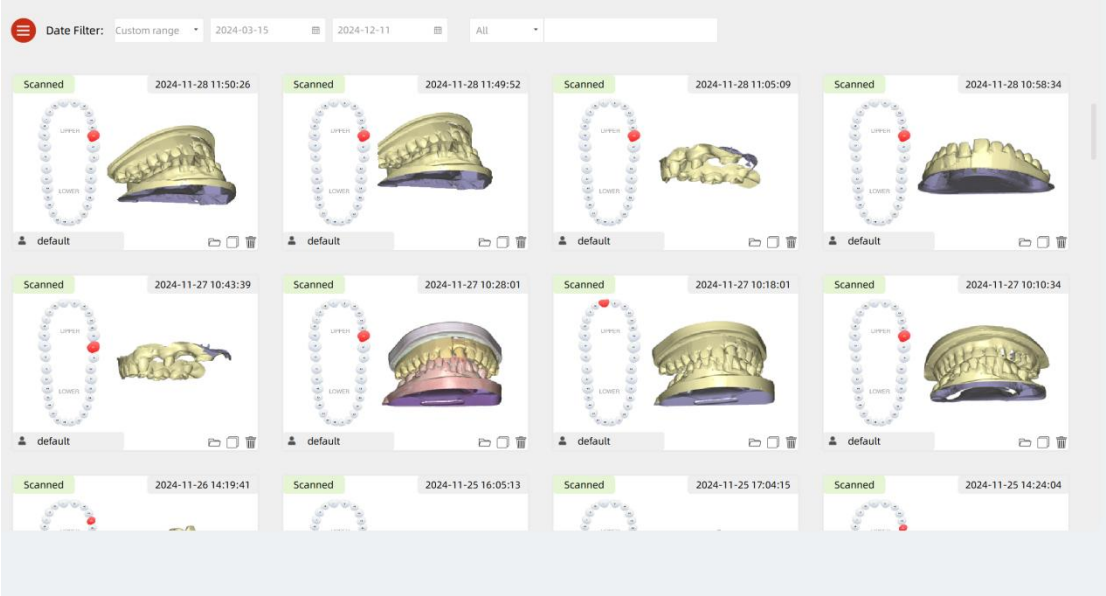
Contains all completed orders, with detailed records of Case number, patients, Form info, creation time, and order completion status.



① List switching ② Date Filter ③ All item filtering ④ Scan status filtering ⑤ Operation

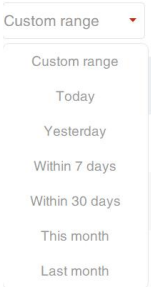
2.3.1 List switching

List switching: Click to switch between a list and a card.



2.3.2 Date Filter

- Time period filtering can search for all orders from today, yesterday, the last 7 days, the last 30 days, this month, and the previous month
- Click on the corresponding option, and the order interface will display orders for the corresponding time period



- Custom scope can search for all orders within a defined time frame

2.3.3 All item filtering

- Search can also be done by all, order number, case name, patient name, case information, clinic name, modification date, delivery date

2.3.4 Scan status filtering

Filter scan status, including Unscanned and Scanned.

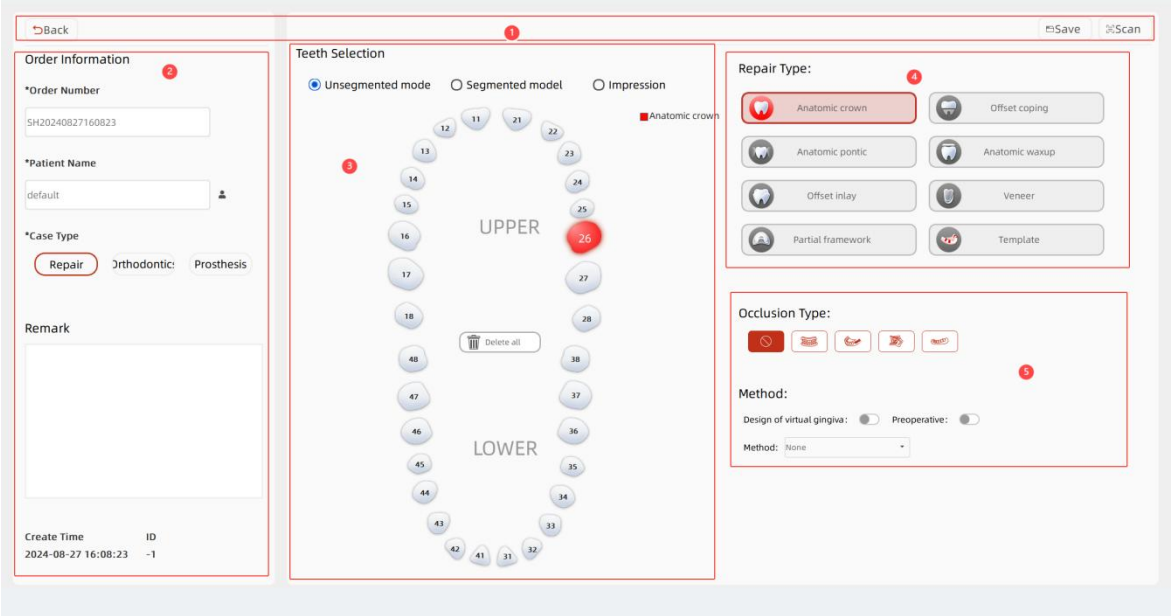
2.3.5 Operation

Browse: Click to open the order folder to view the output data.

Copy: Click to copy an identical order.

Delete: Clicking on confirm means deleting the order containing the folder.

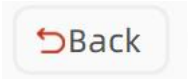
2.4 New order



① Navigation ② Order information ③ Tooth position selection ④ Repair type

⑤ Occlusion type and method

2.4.1 Navigation



Back: Click on the icon to return to the main interface. After selecting the order information, click Return directly to not save the order.

Save: After selecting the order information, clicking Save means saving the order. The order will still be saved without entering the scanning interface.

Scan: After completing the order creation, click the scan button to enter the scanning interface.

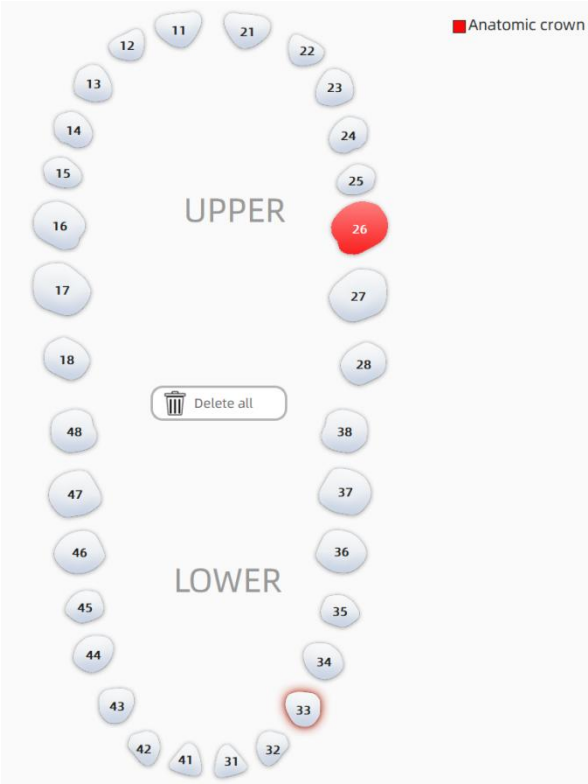
2.4.2 Order information

After clicking on "New Order", enter the order creation page, and the left side will display the order information that needs to be entered. Fill in and select by the customer based on the actual order information. Includes order number, patient name, and case type.

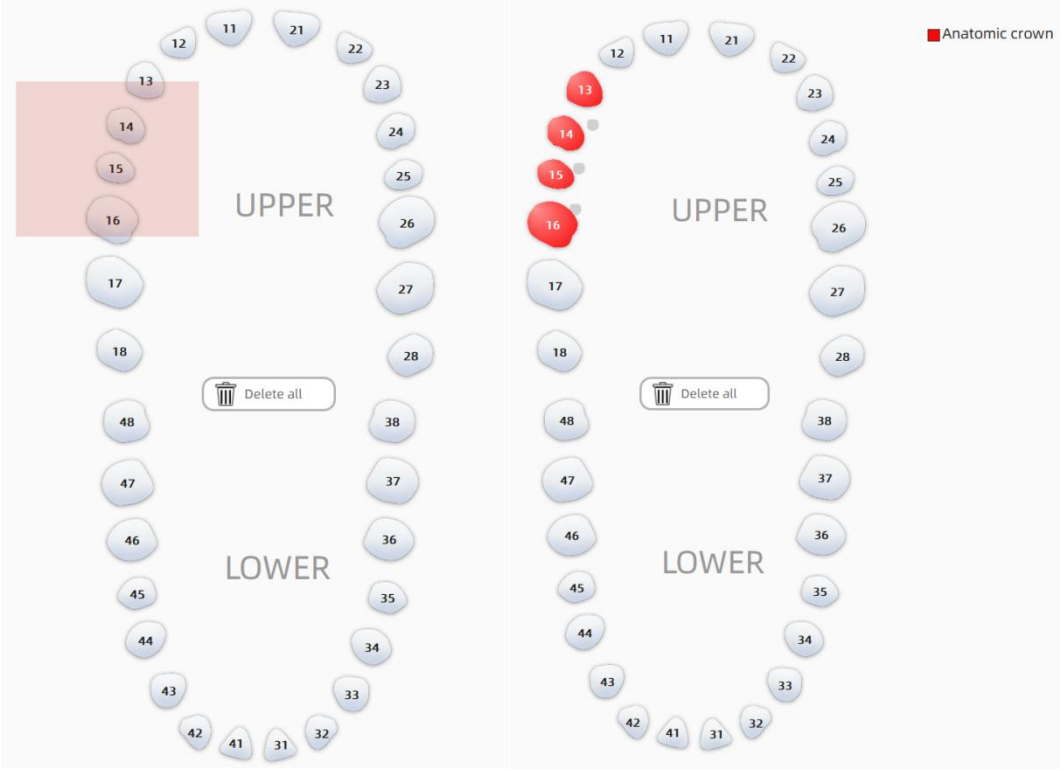
2.4.3 Tooth position selection

- Including unsegmented, segmented, and impressions

- In the dental position map, click to specify the tooth position. The default restoration type is full crown, and if you need to modify it, simply click on the correct restoration type.



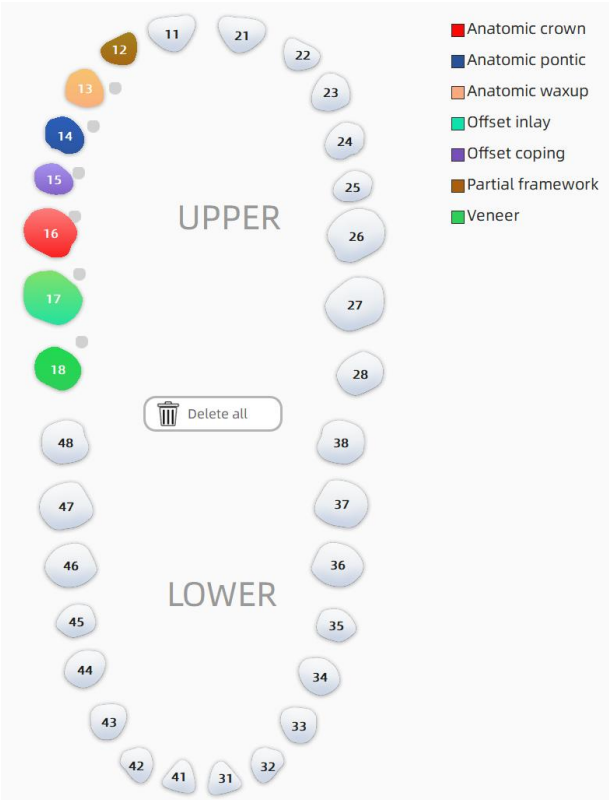
- When deleting a tooth position, simply right-click with the mouse
- Press and hold the left mouse button, slide the mouse, and use a rectangle to quickly select multiple tooth positions



- Define the type of restoration, and different types of corresponding colors will be displayed on the tooth map.
- The blue dot on the inner side of the tooth position represents the bridge body. If it is not a

bridge , you can click on the blue dot to cancel the connection.

- The selected restoration type will be displayed on the right side of the tooth position.



2.4.4 Repair type

- The types of restorations include full crown, internal crown, missing teeth, wax type, inlay, veneer, removable bracket, and template.
- When selecting a wax type, the corresponding scanning method can be chosen: scanning the bottom of the wax type

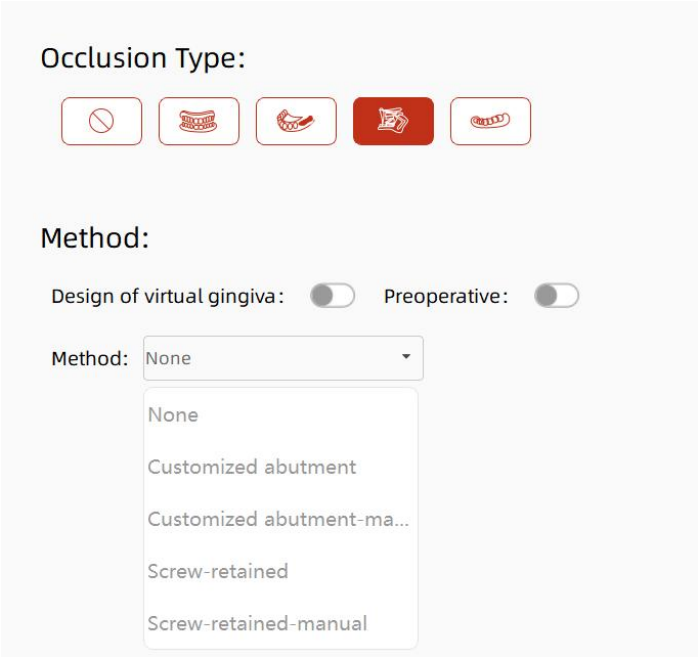
- When choosing inlay or veneer, the corresponding scanning method can be selected: post core impression.

2.4.5 Occlusion type and method

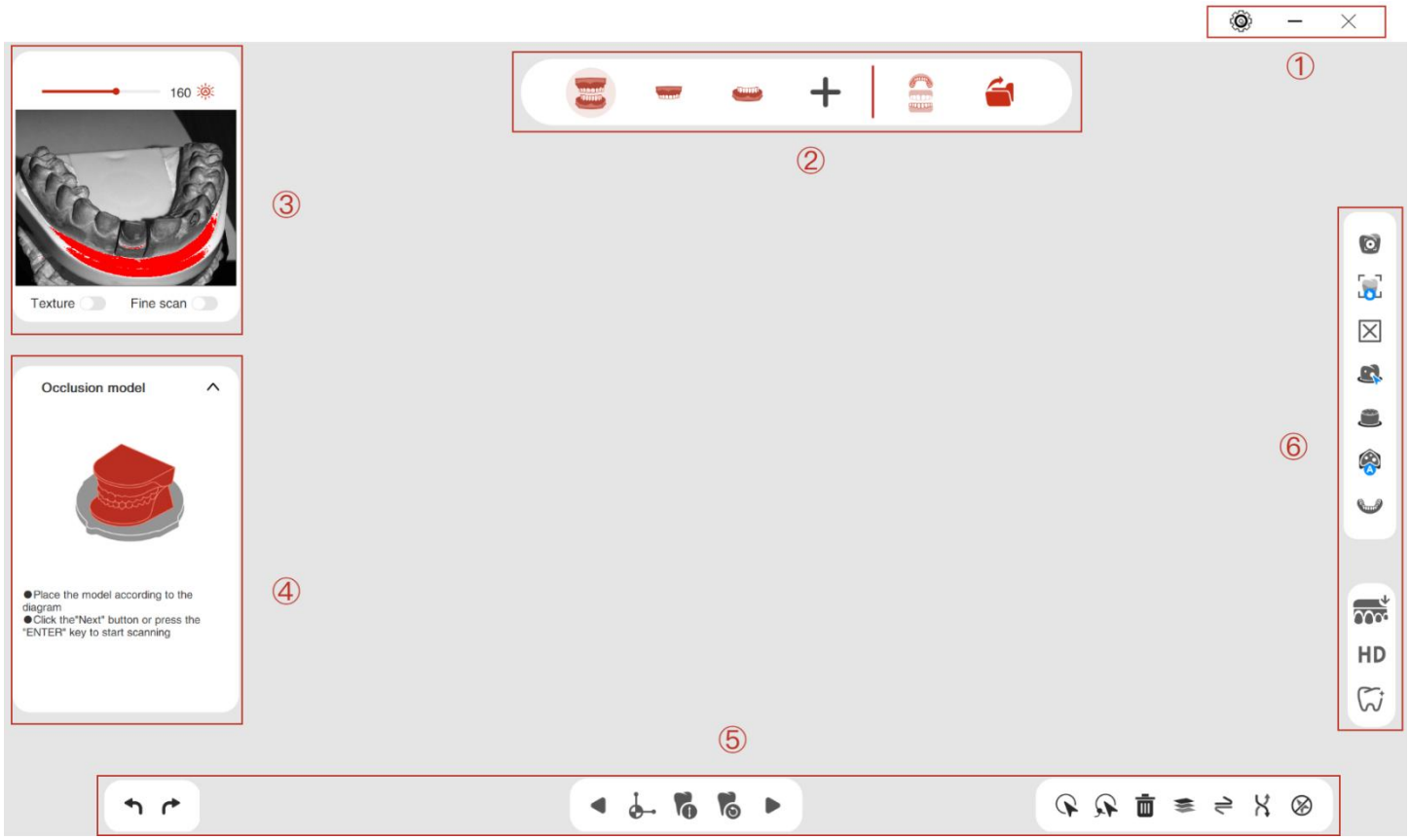
- Occlusion types include: no occlusion, Antagonist, jaw biting wax, Articulator-side lay,

quarter model.

- According to different types of repairs, different method choices, implant types, and bite types will be displayed.



3、Scanning software



① menu bar ② camera adjustment area ③ model diagram
④ scan process display area ⑤ Scan operation area ⑥ Edit tool area

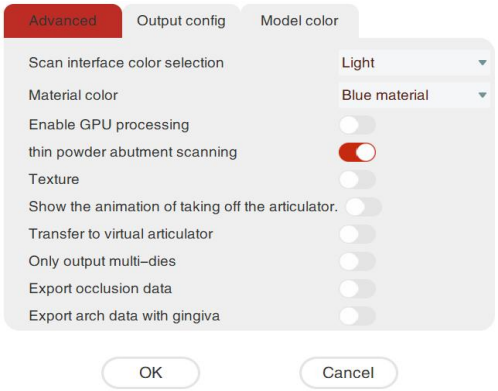
3.1 Menu bar

— Zoom out button: Click to zoom out the order creation platform to the taskbar

✕ Close button: Click to exit the order creation platform

setting：

3.1.1 Advanced Settings

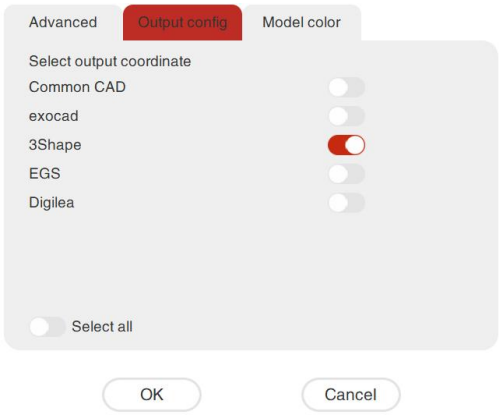


a. Scan interface color selection, supporting real-time switching between light and dark modes.
b. Material color .to select the actual color of the model
c. Enable GPU processing . GPU processing to save post-processing time
d. Thin powder abutment scanning:After activation, the effect of scanning implant data will be optimized.
e. Enable texture.After opening, the model data will show its true color
f. Show the animation of taking off the articulator:
g. Transfer to virtual articulator. After opening, the EXO design is started after exporting the occlusal rack order, and the occlusal frame model is in the correct position.
h. Only output multi-dies.When it turn on, the model data is output when the scan of the split pattern order is completed when the model is exported.
i. Scan occlusion first:When it is turned on, the occlusal scanning step in the posterior region will be brought forward, and when it is turned off, the occlusal scanning step in the posterior region will be put backward. It is turned on by default.
j. Export occlusion data. After it is turns on, the data of occlusal model is included in the exported data.
k. Export arch data with gingiva. After it is turns on, the exported arch data contains gingiva data.
l. Auto split(gingiva / scan body/wax-up/wax-bite). After it is turns on, the data of the gingiva/scan body/wax-up/wax-bite attached to the model will be displayed in the form of independent data after the registration is completed, and the model data will be deleted.
m. Automatically obtain scan height. When turned on, the scanning or re-sweeping arch automatically acquires the scanning height.
n. Add scanning angles. When it turns on, the unsegmented dental arch scan will increase the scanning angle.
o. More editing tools show. After opening, it will provide more types of model selection tools.
p. Intelligent add-scan threshold. You can select the intelligent add-scan threshold according to your needs, and the system default threshold is ten.

q. Calibrate texture white balance：Perform color calibration on the device.

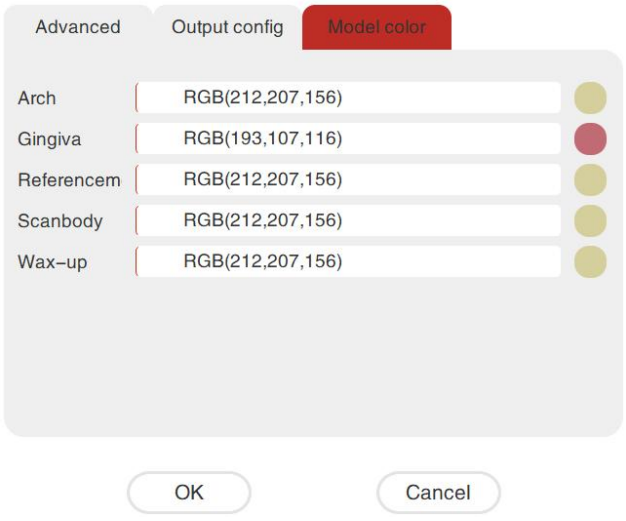
3.1.2Output settings

According to the design software, select the corresponding output format, users can open different output formats at the same time, and the software will output different format files.

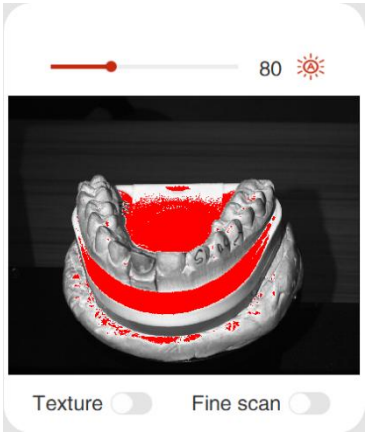


3.1.3Model color settings

Users can set the model color according to their own preferences, click the small color block on the model color setting page to set. The setting will take effect immediately after the model is scanned and applied, and the export page will show the effect.



3.2 Camera adjustment area

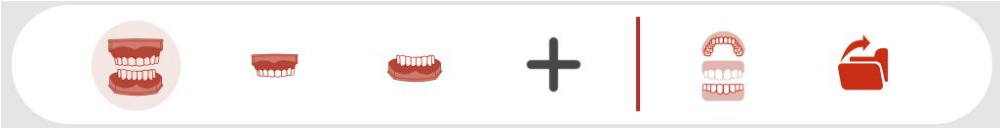


Icon	Icon name	Icon function
	Brightness adjust	Drag left and right to modify the camera brightness
	Automatic adjustment	Automatically adjust the brightness of the camera's field of view
Texture	/	Scanning presents true color mode
Fine scan	/	Increase scanning steps when scanning unsegmented models

3.3 Model diagram

This area displays a schematic picture of the model placed during scanning.

3.4 Scanning process display area



3.5 Scanning operation area

Icon	Icon name	Icon function
	Axis initialization	Perform axis initialization
	Last step	Jump to the previous scanning process
	Next step	Jump to the next scanning process
	Scan range	Adjust scan height
	Stop scanning	Stop the current scanning
	Re-scan	Re-scan the model
	Preview	Perform post - processing on the data.
	Finish	End all scanning process

3.6 Edit tool area

Icon	Icon name	Icon function
	add scan	Click auto add scan ,Select the required area and only scan the selected area.
	Manual add scan	After manually adjusting the model angle, click

		manual scan to perform the scan.
	Delete add scan	Delete the last add scan data
	Manually fill	After clicking 【Manual hole】 button, Detection of holes automatically and shown in blue lines, Holhole can be manually clicked to fill
	Auto fill	Click the 【Auto fill】 button, Show the corresponding operation box, After adjusting the hole filling threshold, all the holes are completed.
	Abutments fill	click【abutment fill】button, Left click surrounds the hole area on the model that needs to be filled. Click【Apply】Complete the hole fill Click【Clear】Clear the already selected points Click【Reset】Reset the completed hole
	Plane	Select the flat tool, so that you can freely drag and rotate the plane to select the desired data area.
	Lasso	Select the Lasso tool, hold down the left mouse button and drag freely to select the desired data area。
	Sphere	press the left mouse button to apply, and select the desired data area.
	Penetrate	The selection tool will turn off penetration selection.
	Inverse	Reverse selection area
	Cancel	Cancel all selected areas
	Delete	Remove the selected data

	Undo	Undo the previous operation
	Redo	Restore the previous operation
	Import model	Import existing model data
	Fine processing	When turned on, the model will display more details.
	thin powder abutment	Optimize the scanning effect of the metal after opening.

3.7 Scan shortcut keys

Shortcut keys	functions
CTRL +T	Lasso
CTRL +C	Cancel all selected areas
CTRL +R	Inverse
CTRL +Z	Undo
CTRL +Y	Redo
CTRL +choose	Reduce the selection range
CTRL +X	Select scanning area
CTRL +mouse wheel	Overall translation of the plane up/down
Delete	Delete area
ENTER	Next

4、Calibration Guide

4.1 Precautions for calibration

1.When using the calibration plate, please be careful not to touch and damage the surface of the calibration plate to keep the calibration surface clean and complete

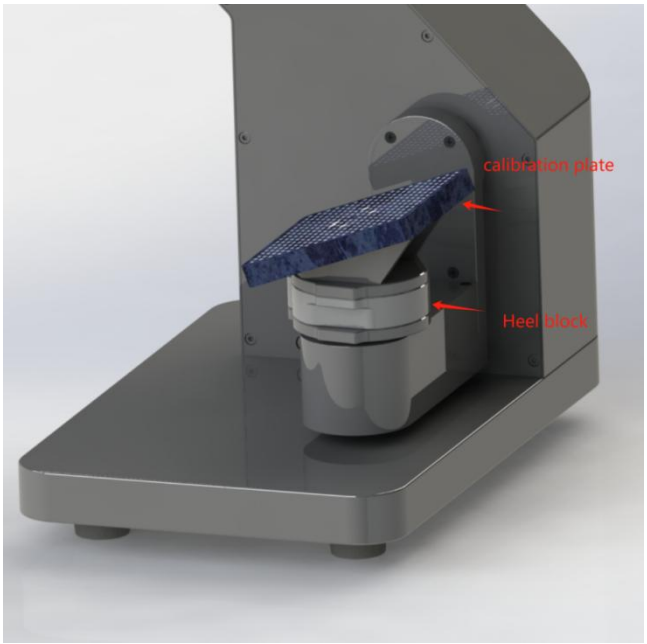
2. Calibration is required in the following situations:

① The scanner is used for the first time or after a long period of storage

② The scanner vibrates severely during transportation

③ When the surface of the scanned data is rough or even abnormal during the scanning process

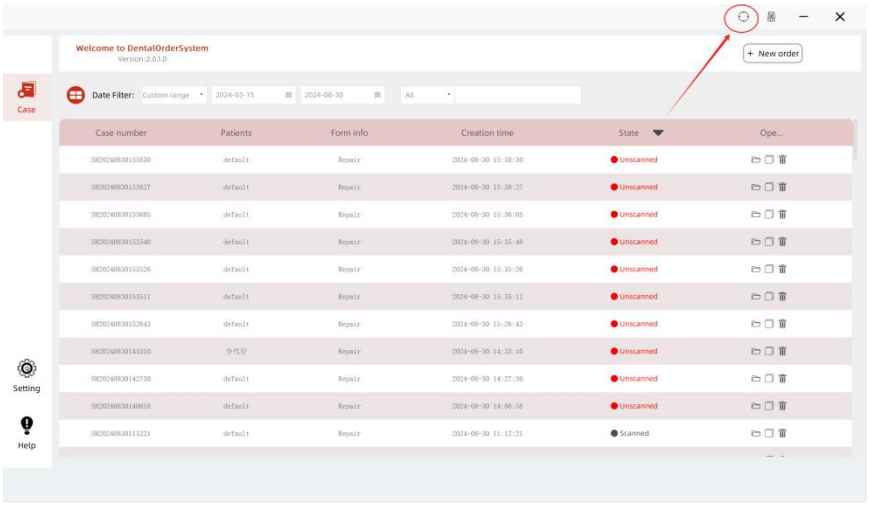
4.2 Calibration plate placement



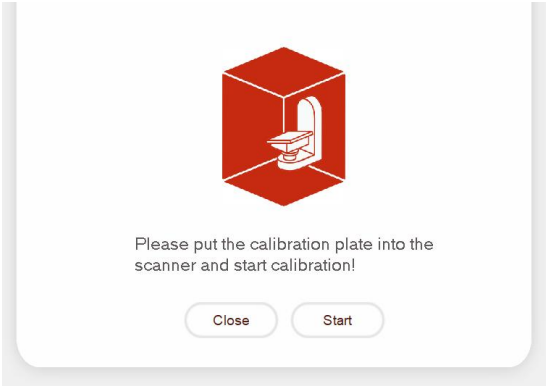
4.3 Calibration process

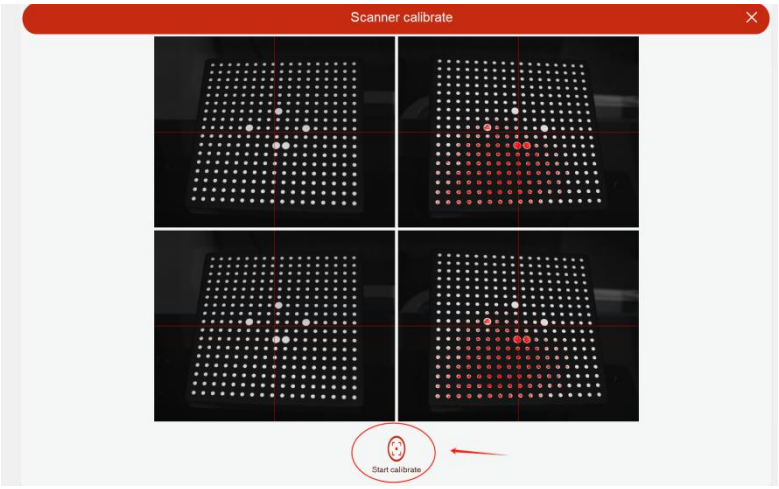
1. Double-click the desktop icon SHTC_DentalOrderSystem to enter the calibration interface

2. Click the calibration button in the upper right corner of the software

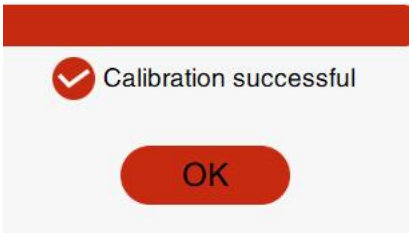


3. After entering the calibration interface, click the "Start" button，Then click "Start calibration"





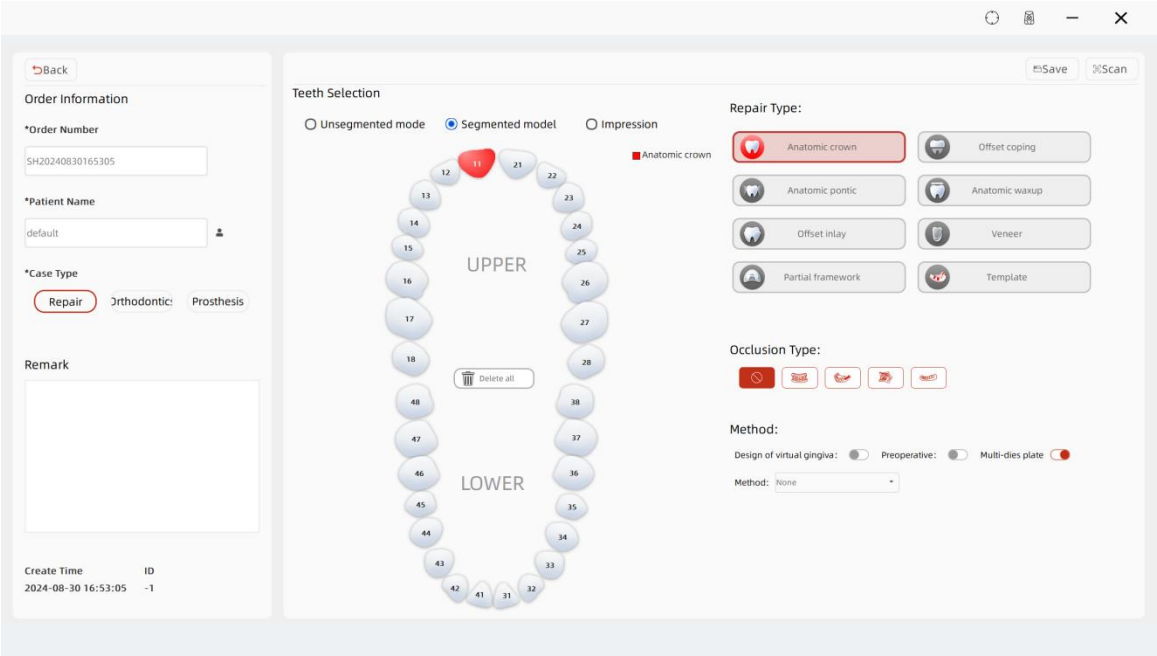
4. After the calibration successful appears, click "OK" to end the calibration



5、Case presentations

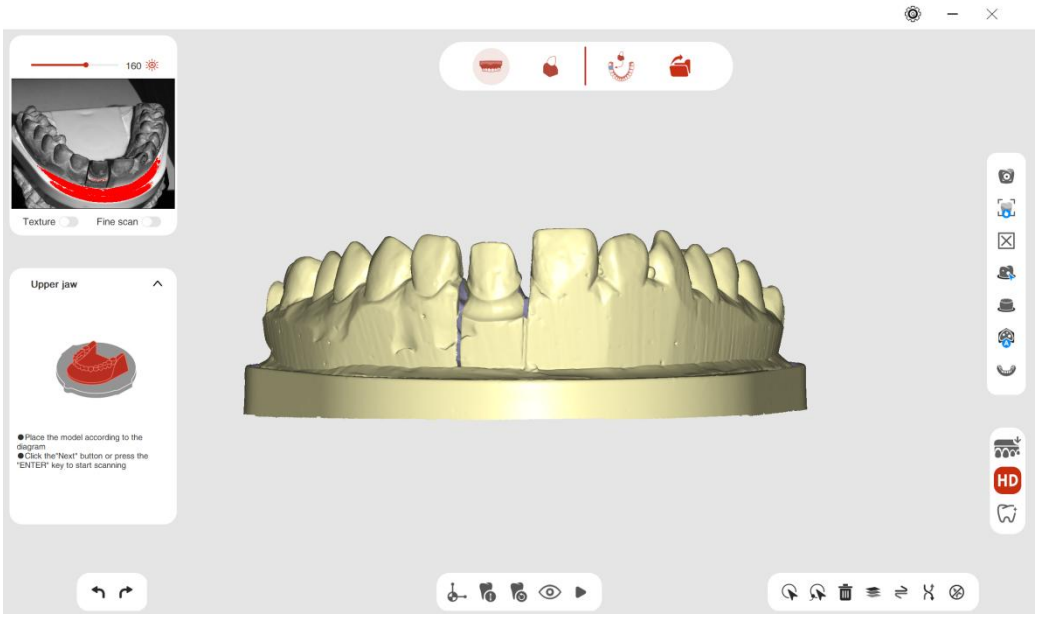
The split mode is used as a demonstration case showing the entire process from order creation to scanning.

5.1 Create the new order

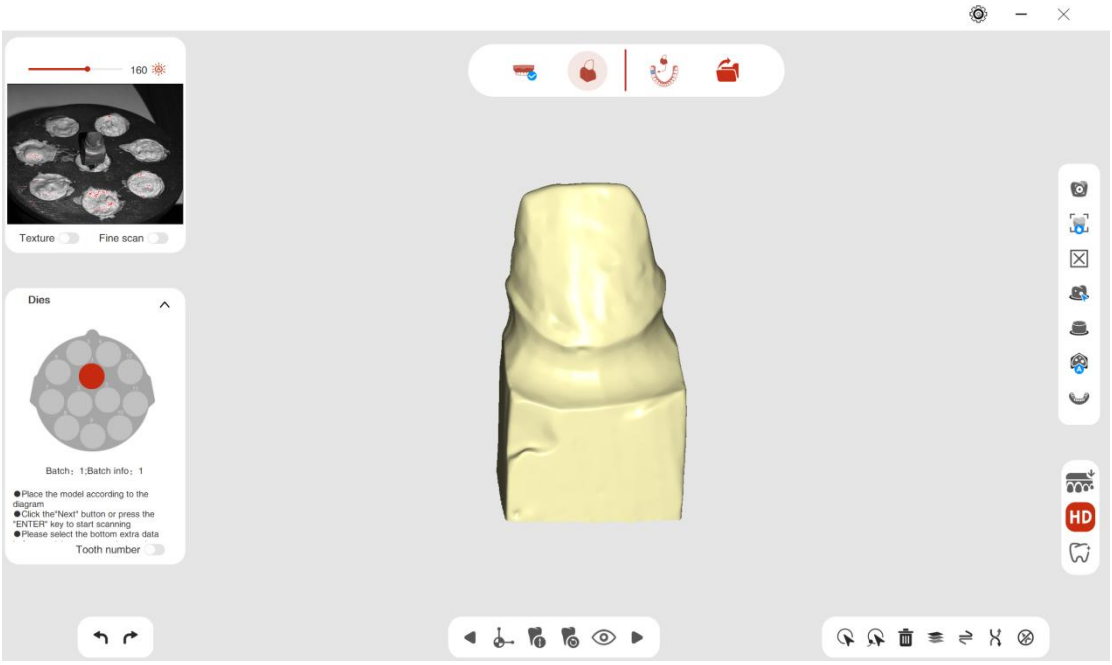


5.2 Scan

The scanning process of this order is maxillary scanning, type scanning, type registration and export.



Scan the maxilla

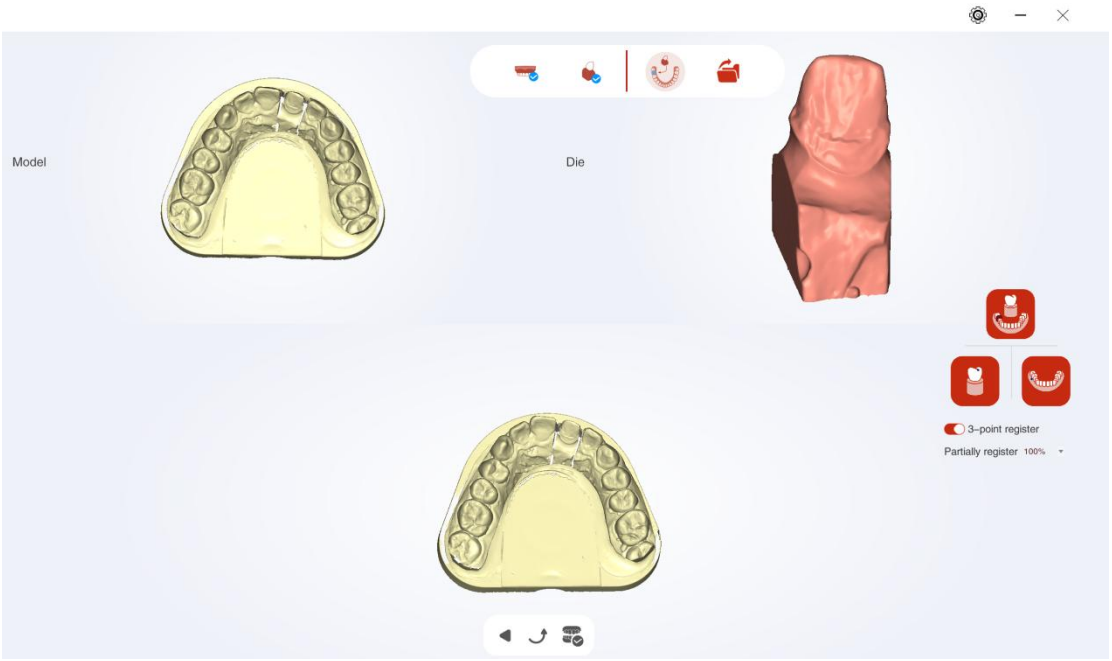


Die model scanning

4.3 Registration

After entering the registration step, the software will automatically perform the registration. If you feel that the registration effect is not satisfactory, you can enter the manual registration interface to complete the registration operation.

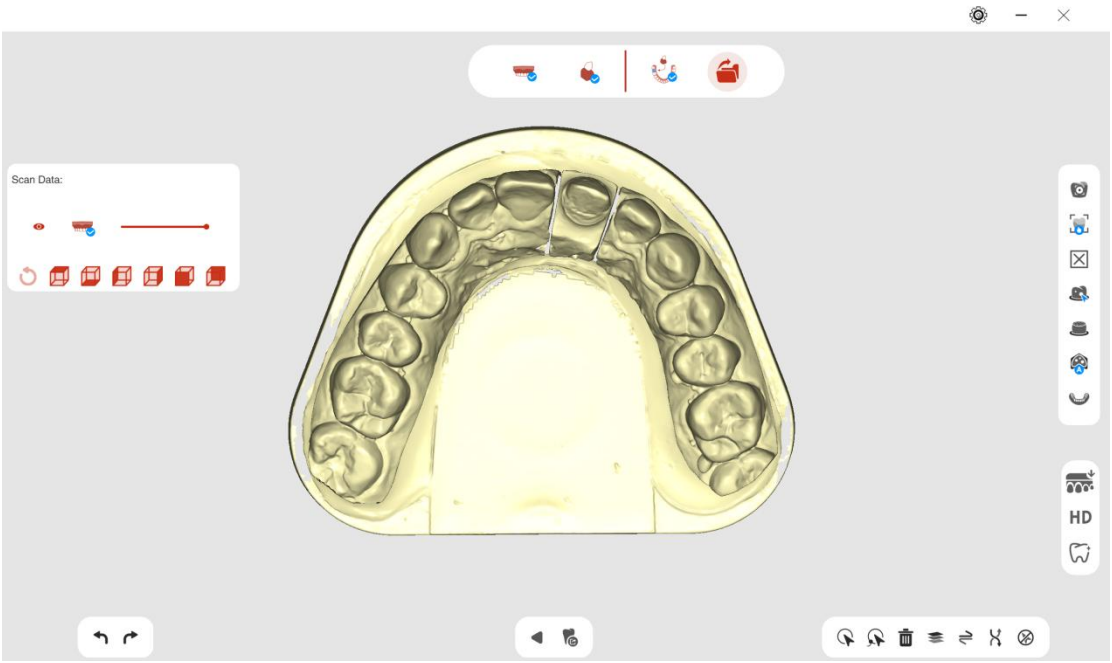
Automatic registration



Manual registration

4.4 4 Export

The export page can view and edit the data in the model list, and click Export to complete the scan.



Export interface