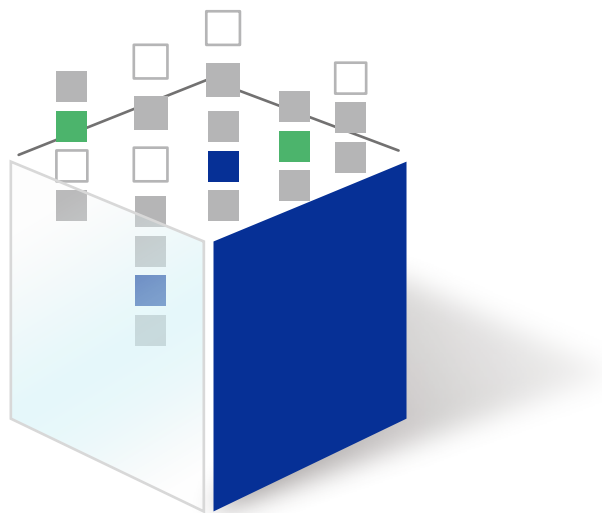


# Panda Center Software Operation Manual

Revision 1 (August 2023)



*Panda* 🐾  
*Scanner*

# Contents

- 1. General Introduction ..... 1**
  - 1.1 Component Overview ..... 2
  - 1.2 Basic Connection ..... 3
  - 1.3 Recommended Computer Configuration ..... 4
  
- 2. Guide for New Users ..... 5**
  - 2.1 Installation ..... 6
  - 2.2 Registration ..... 8
  - 2.3 Activation ..... 9
  - 2.4 Adding Data Transfer ..... 10
  - 2.5 Login ..... 11
  - 2.6 Calibration ..... 13
  
- 3. Start Scanning ..... 16**
  - 3.1 Preparation before Scanning ..... 17
  - 3.2 Creating a New Case ..... 18
  - 3.3 Steps of Orthodontics ..... 20
    - 3.3.1 Upper Jaw ..... 20
    - 3.3.2 Lower Jaw ..... 22
    - 3.3.3 Occlusion ..... 22
  - 3.4 Steps of Restoration ..... 23
    - 3.4.1 Upper Jaw ..... 23
    - 3.4.2 Lower Jaw ..... 24
    - 3.4.3 Occlusion ..... 25
  - 3.5 Steps of Implant ..... 25
    - 3.5.1 Upper Jaw ..... 25
    - 3.5.2 Lower Jaw ..... 25
    - 3.5.3 Occlusion ..... 26
    - 3.5.4 Scanning Rod ..... 26

<b>4. Model Processing and Data Check</b> .....	<b>29</b>
4.1 Align .....	30
4.2 Distance .....	32
4.3 Measure .....	34
4.4 Undercut .....	35
4.5 Margin .....	36
<b>5. Data Transmission</b> .....	<b>37</b>
<b>6. Precautions for Device Maintenance</b> .....	<b>39</b>
6.1 How to Keep the Tips .....	40
6.2 How to Place the Device .....	40
6.3 How to Calibrate the Device .....	40
6.4 How to Clean the Device .....	41
<b>7. Others</b> .....	<b>42</b>
7.1 Shortcut keys .....	43
7.2 Settings .....	44
7.2.1 General Settings .....	45
7.2.2 Scanning Settings .....	46
7.3 Regular Problems and the Solutions .....	47
7.3.1 The Software Cannot Be Opened Properly .....	47
7.3.2 The Software Cannot Be Opened Smoothly .....	47
7.3.3 The Desktop Shortcut Icon Changes to White .....	48
7.3.4 Fail to Connect the Camera .....	48
7.3.5 There Is No Image at the Bottom Left Frame .....	49
7.3.6 Flicker Appears in Image .....	49
7.3.7 Unsmooth Scanning .....	49
7.3.8 Lagging During Scanning .....	50
7.3.9 Hard to Re-locate .....	50
7.3.10 Unable to Scan Any Data .....	50
7.3.11 Accidental Interrupt during Scanning .....	50
7.3.12 Calibration Problems .....	51
7.3.13 Repeated Shutdown and Restart of the Computer .....	51
7.3.14 The Device Cannot Be Powered on Properly .....	51
7.4 Support .....	52

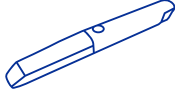






# 1. Software overview

Panda Smart is a high-precision medical device that uses optical scanning methods to directly obtain three-dimensional geometric data of dentition and provides a digital 3D model for CAD/CAM denture design and processing. It can be used in fields such as oral restoration, orthodontics, and implantation.



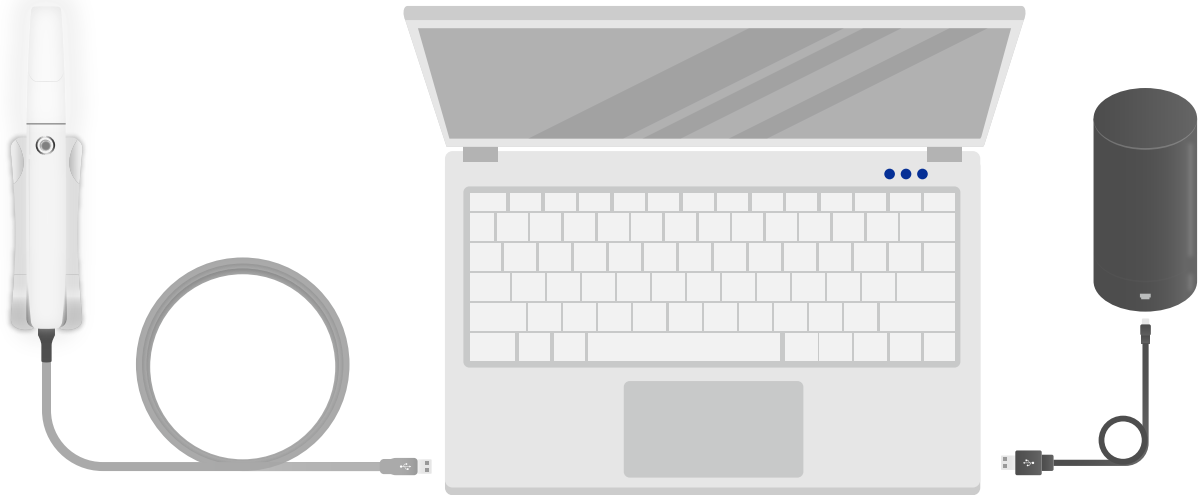
## 1.1 Component Overview

When you unbox for the first time, there will be these following component:

Name	Quantity	Notes
Panda Smart	1	
Tip	6	
Calibrator	1	
Calibrator-wire	1	
Bracket	1	
USB drive	1	
Product Manual	1	

## 1.2 Basic Connection

We recommend to connect your scanner to your laptop in the same way as the picture below.



1. Please make sure to connect the Panda Smart to the USB3.0 interface of the computer, otherwise it may not function properly.
2. Please note that the computer needs to be connected to power.
3. The calibration is only necessary when you first use the scanner or do the maintenance.

## 1.3 Recommended Computer Configuration

Please upgrade the graphics card driver version to 512.96 or higher to ensure the software runs properly.

<b>CPU</b>	Intel i7-12700H/Intel i7-11800H or above
<b>Graphics Card</b>	RTX2060/3060 or above
<b>RAM</b>	16G or above
<b>HD</b>	512G or above
<b>Display</b>	Resolution of 1920*1080 or above

- The [NVIDIA](#) Graphics Card is recommended with [VRAM 6 GB](#) or above. [AMD Graphic Card](#) is unavailable. Common unqualified Graphics Card: [GTX1650/ GTX1650Ti/ RTX3050/ RTX 3050Ti](#).
- The CPU for Intel is recommended, but the [AMD](#) is unavailable.
- [Asus](#) and [HP](#) are not recommended. [Lenovo Legion](#) and [Dell G15 Series](#) are recommended.






















# 2. Guide for New Users

You will follow this guide to start using Panda Smart.

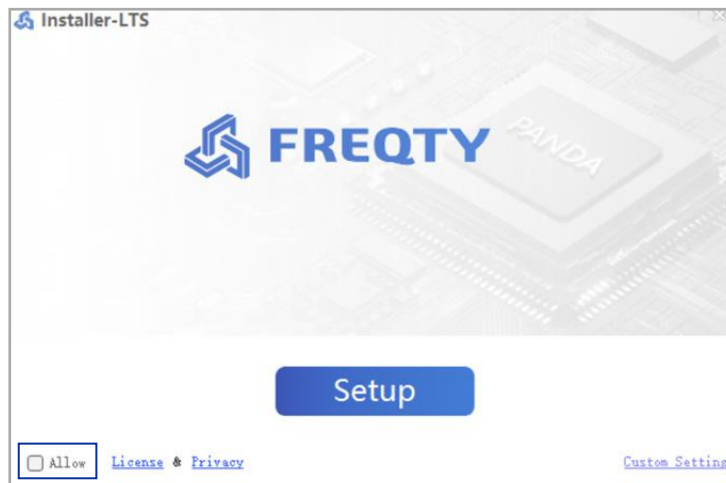


## 2.1 Installation

After you have a computer that meets the configuration requirements (see 1.3 for details), you can insert the USB drive included in the device box to install the software and open the file name "LtsENXXXXXP5. iso" (different regions may have some slight differences)

 apps	2023/7/31 16:45
 deps	2023/7/31 16:32
 en	2023/7/31 15:34
 pt	2023/7/31 15:34
 Resources	2023/7/31 15:34
 zh	2023/7/31 15:34
 autorun.inf	2023/5/27 19:47
 favicon.ico	2023/5/27 19:47
 <b>Installer.exe</b>	2023/7/18 21:37
 Installer.exe.config	2023/7/31 16:33
 manifest.json	2023/8/1 10:22
 Newtonsoft.Json.dll	2021/3/18 4:03
 Npgsql.dll	2018/2/28 4:36
 SharpCompress.dll	2022/7/29 17:47
 System.Buffers.dll	2020/2/19 18:05
 System.Memory.dll	2020/2/19 18:05
 System.Numerics.Vectors.dll	2018/5/15 21:29
 System.Runtime.CompilerServices.U...	2021/10/23 7:40
 System.Text.Encoding.CodePages.dll	2021/10/23 7:45

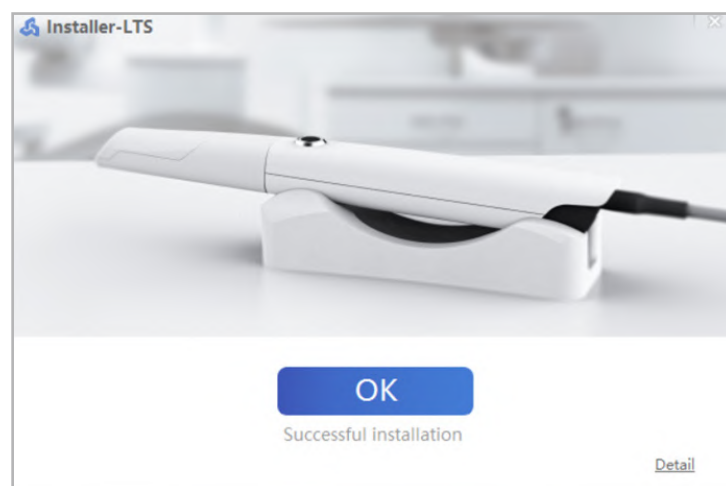
Double Click "Installer.exe" to Start the Installation Program.



Click "Allow", then click the "Custom Setting".



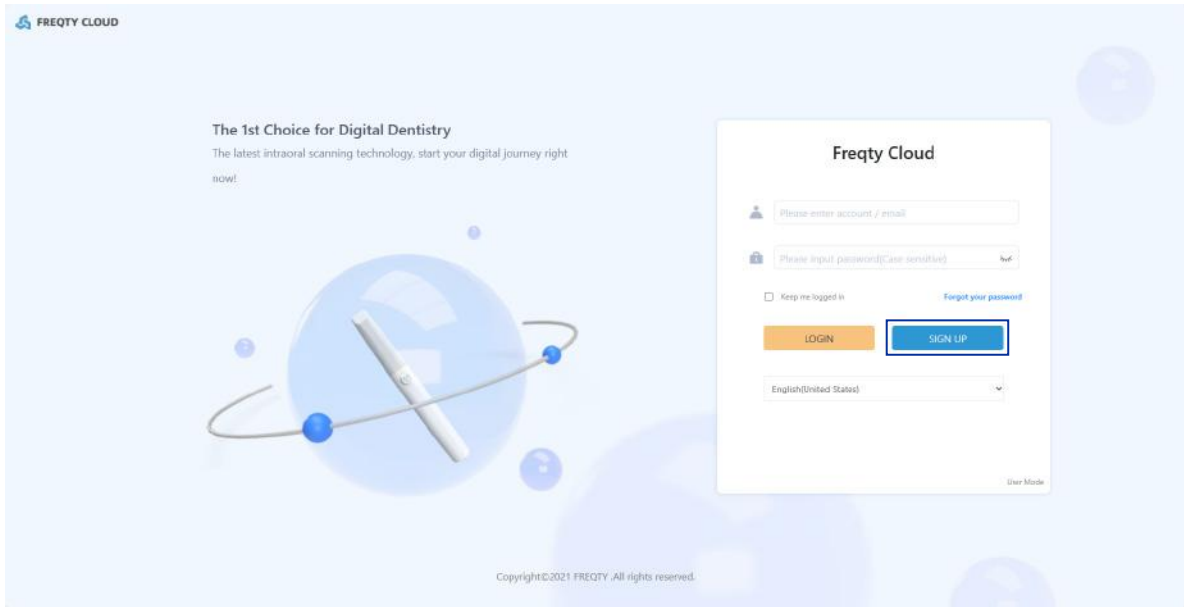
After checking the corresponding "PandaCenter" and "PANDASmart" options, click "Setup" to start the installation. The installation will take some time, please be patient.



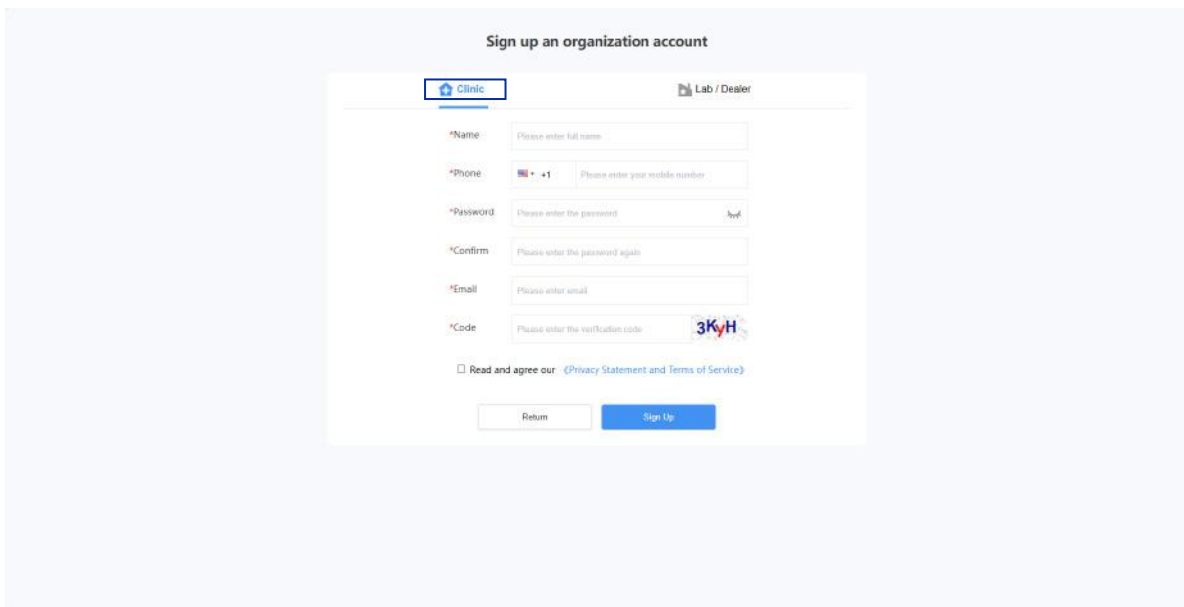
Please restart your computer after installation is complete.

## 2.2 Registration

After completing the installation, you need a cloud platform account to store case data, share case information, and manage your device. You can log in <https://en.freqtek.com> to register.



Click "SIGN UP".

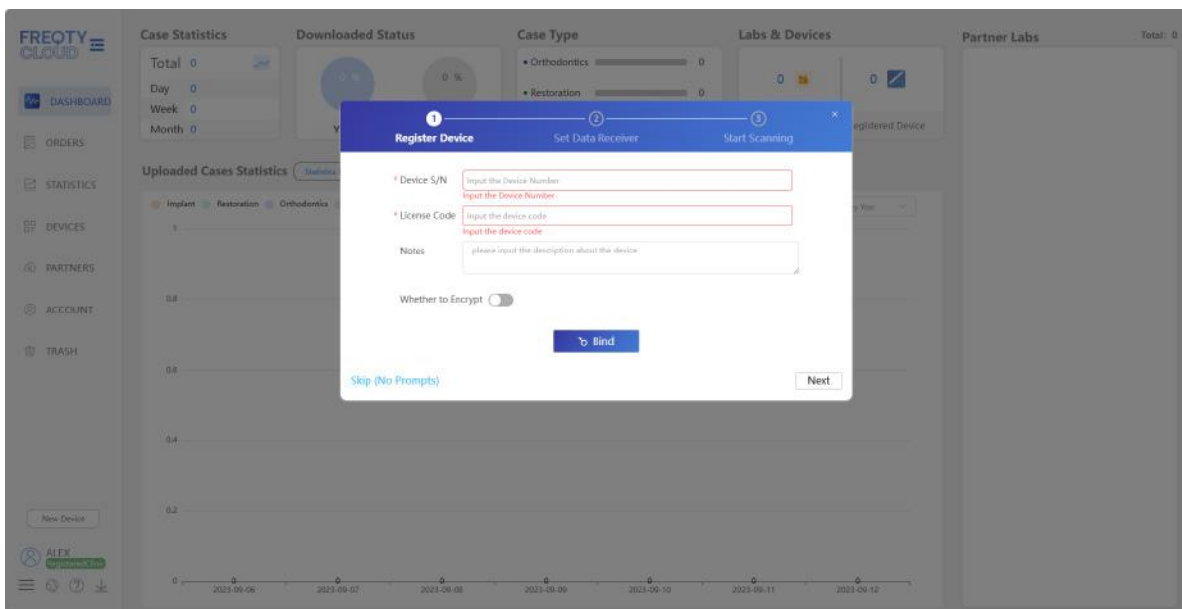


Choose "Clinic" or "Lab" according to your actual situation, and then fill in the columns below carefully.

- Please do not tell your account and password to others without authorization for the security of your account!
- Please remember the password you set. For the sake of your privacy and information security, the cloud platform will not save your password. If you accidentally forget your password, you can retrieve it yourself through the preset email.

## 2.3 Activation

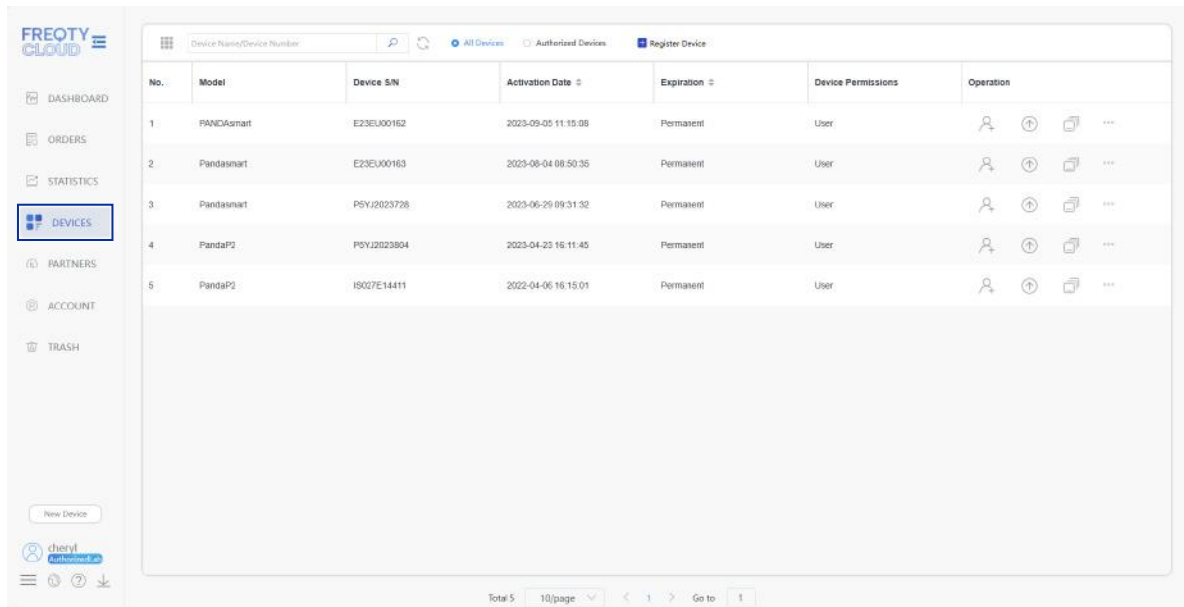
After completing the registration (see 2.2 for details), use the email you filled in during registration and the password you set to access the <https://en.freqtek.com>. When you login your account for the first time it will pop up a guide to help you bind your device.



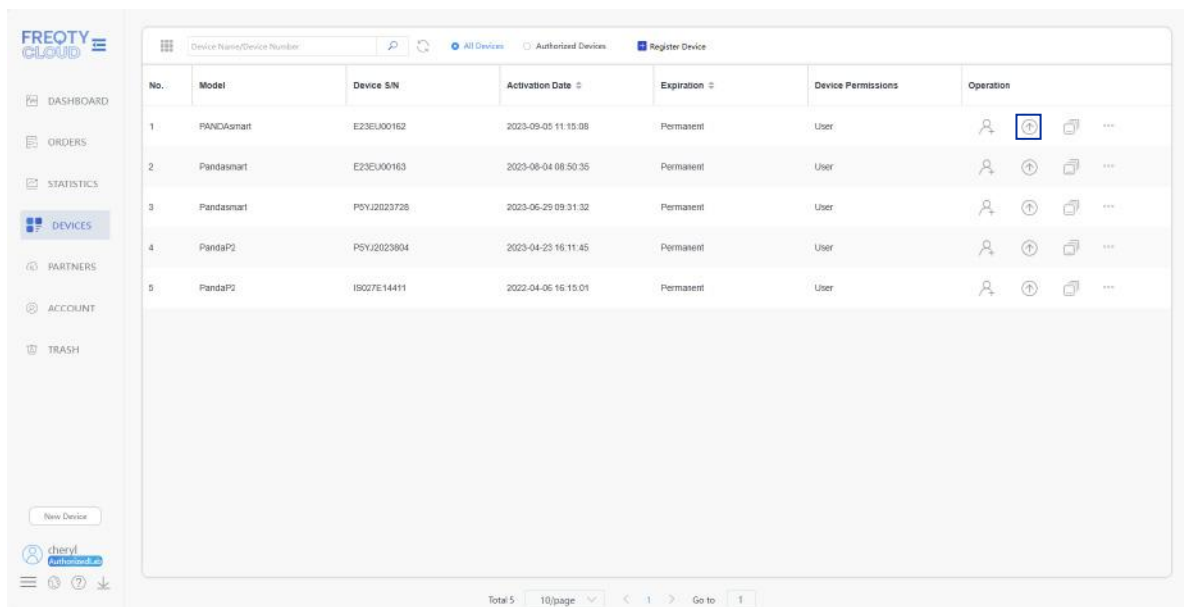
Please fill in the information of your device carefully, and Device S/N can be found at the bottom fan or the packaging box of your device. Please contact your purchaser to obtain your License Code.


## 2.4 Adding Transmission Relationships

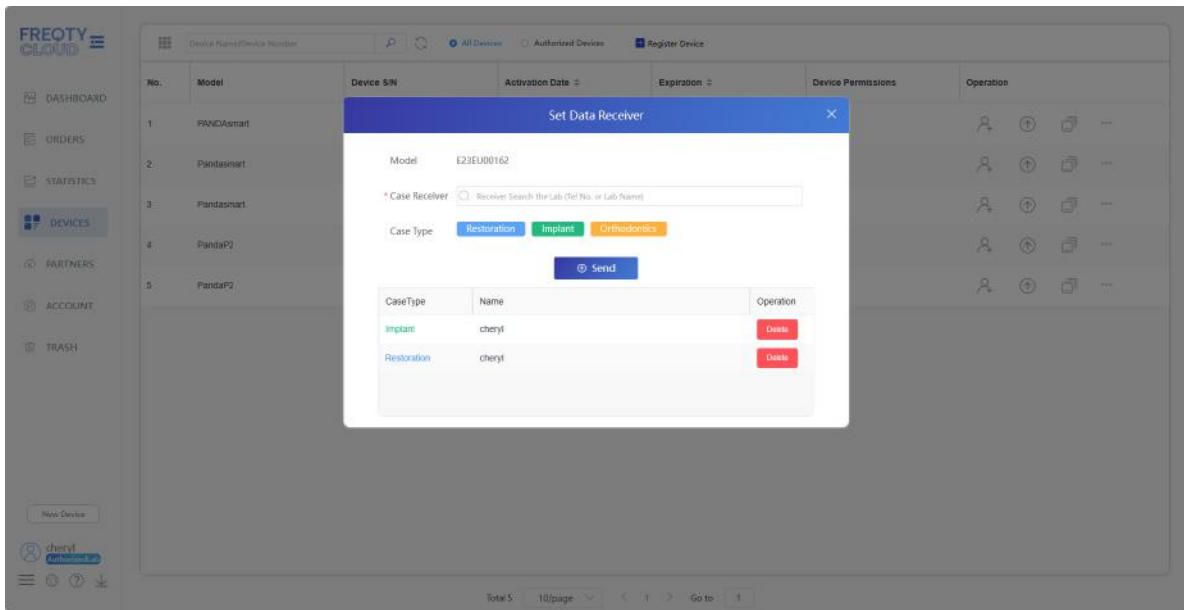
After completing the binding of devices (see 2.3 for details), you can add the lab or relevant organization that you want to build a relationship with.



Click “DEVICES” to see your devices.




Click  and you can enter the interface of adding transmission relationship.

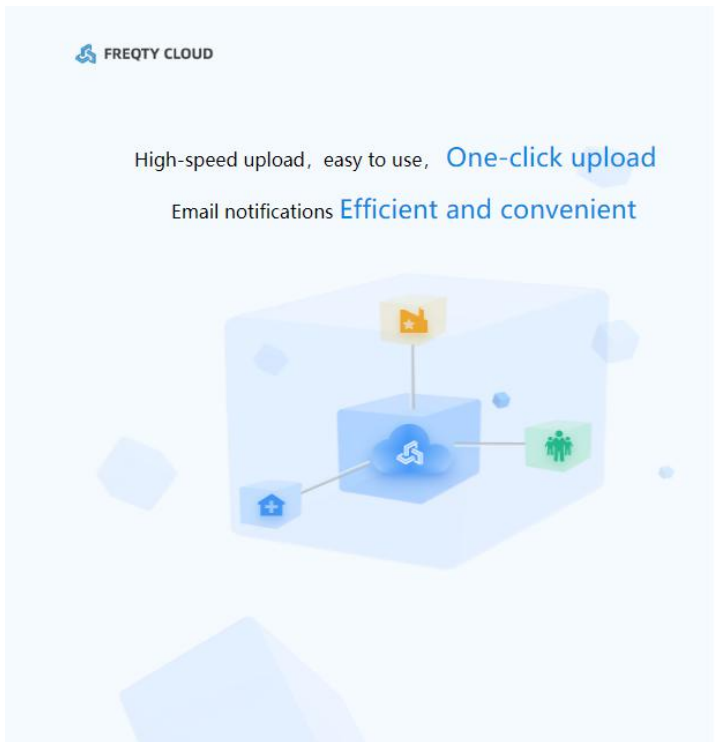


Enter the name or email address of the lab or other organizations you want to add in the "Case Receiver" (fuzzy search is not currently supported), select the lab or organization that you added, then select the "Case Type" according to your specific needs. After completing the steps above, click "Send".

- Please make sure to confirm that the lab you want to add has a Freqty Cloud account. If not, please invite them to register first (see 2.2 for more details).

## 2.5 Login

After completing the registration and device binding, please return to the desktop,, double click"PandaCenter.exe"  to open the software.



×

## Welcome to login

User Password

Username/Email

Password

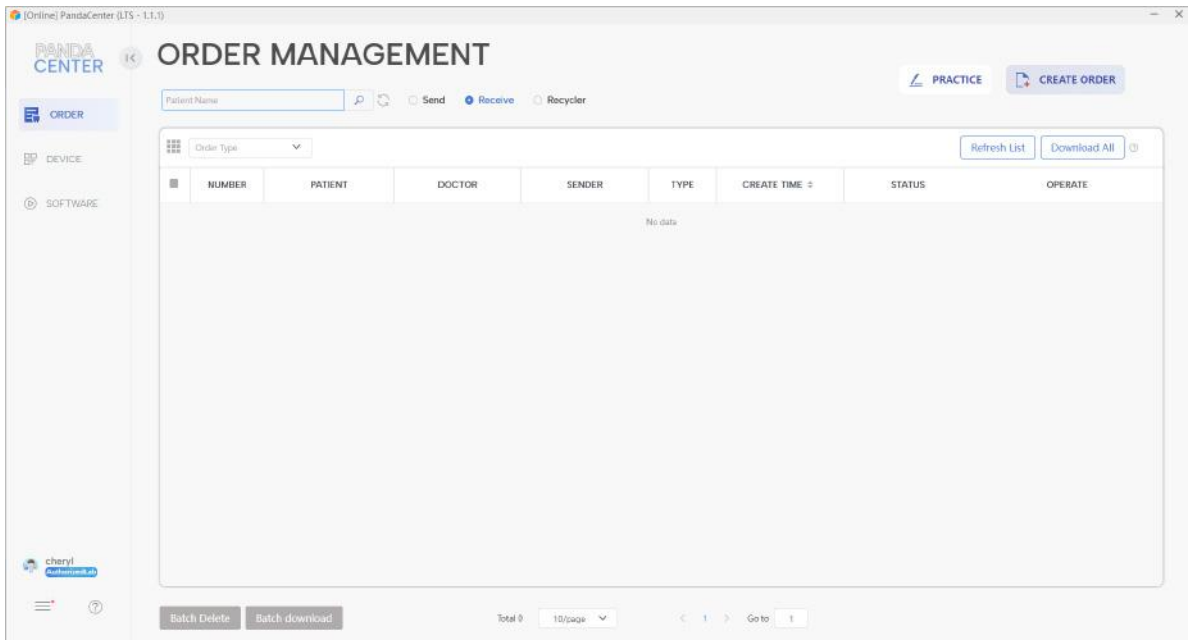
[Forget Password](#)

Login
Sign up

English(United States) ▼

freqty.com 1.1.1(en)

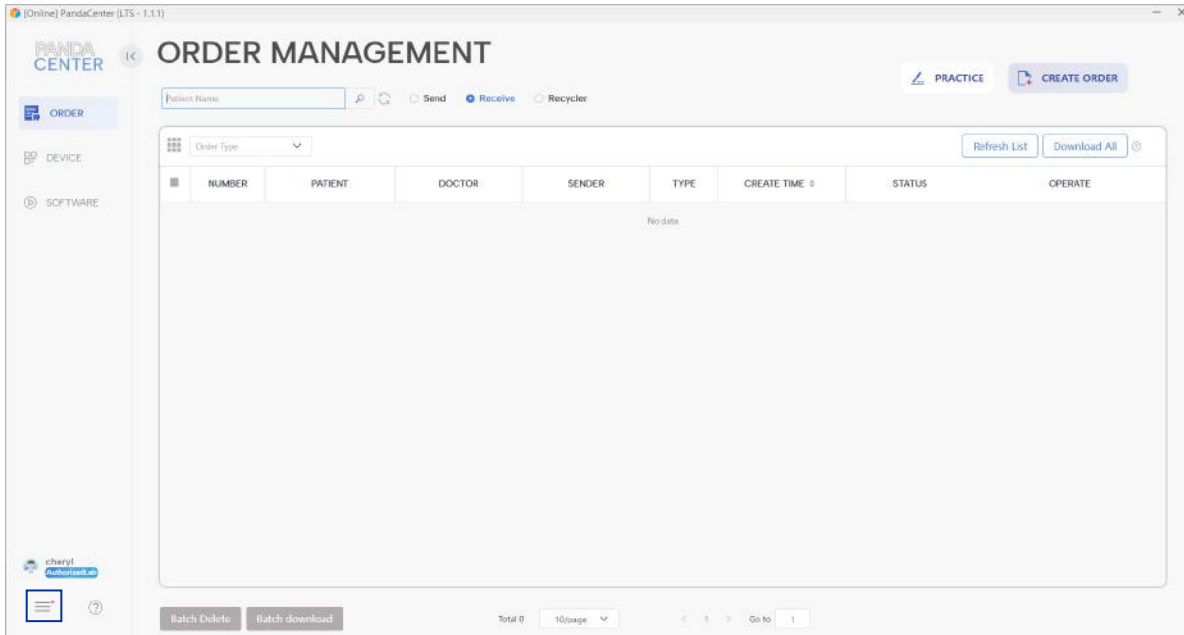
Please fill in your email address and password that you set when registration. Then, after the verification, you can enter the scanning software.




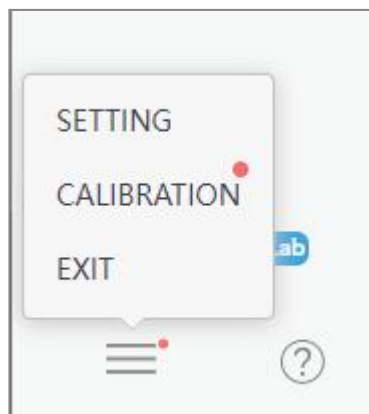


## 2.6 Calibration

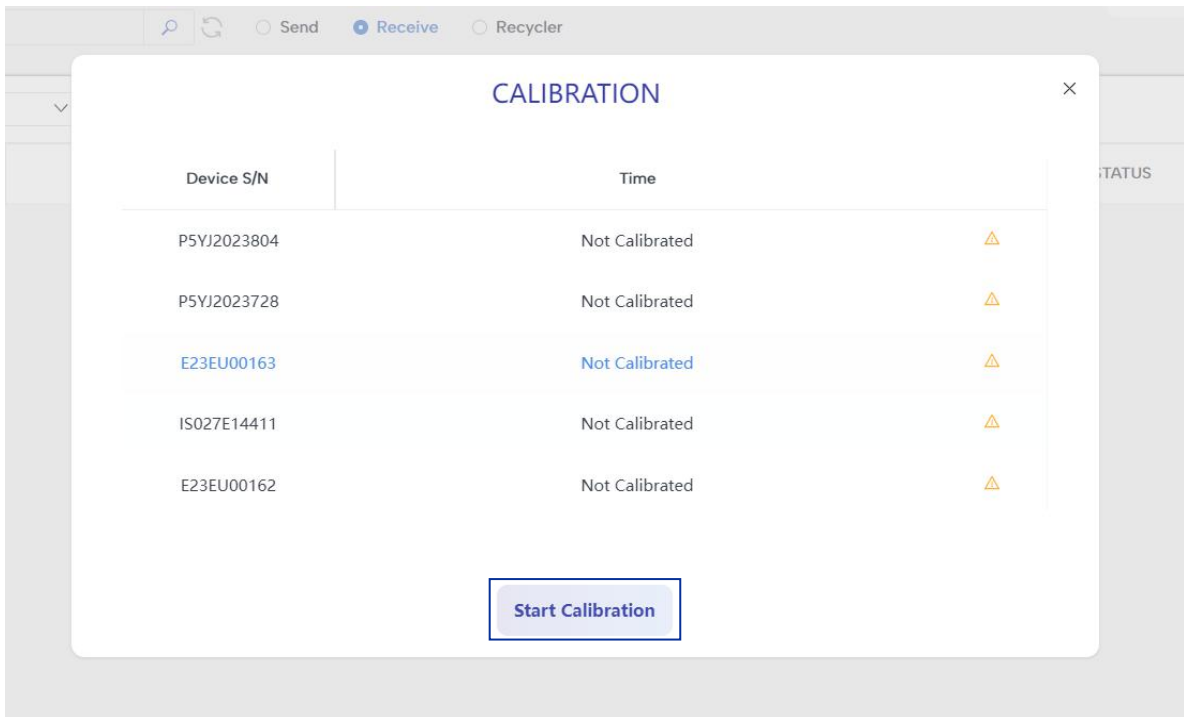
The new device requires calibration before it can be used normally after first activation, with the aim of ensuring that the device still has good accuracy after long-distance transportation. Next part is the specific process of calibration.



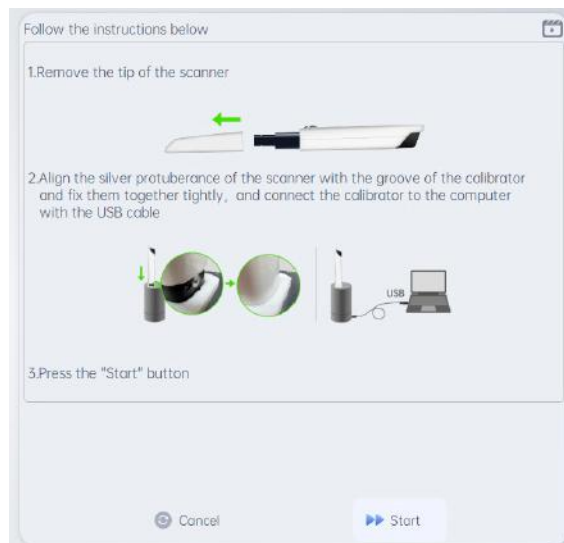
Click  (Usually, there is a red dot prompt for the initial device binding).



Click "CALIBRATION" to start calibration.

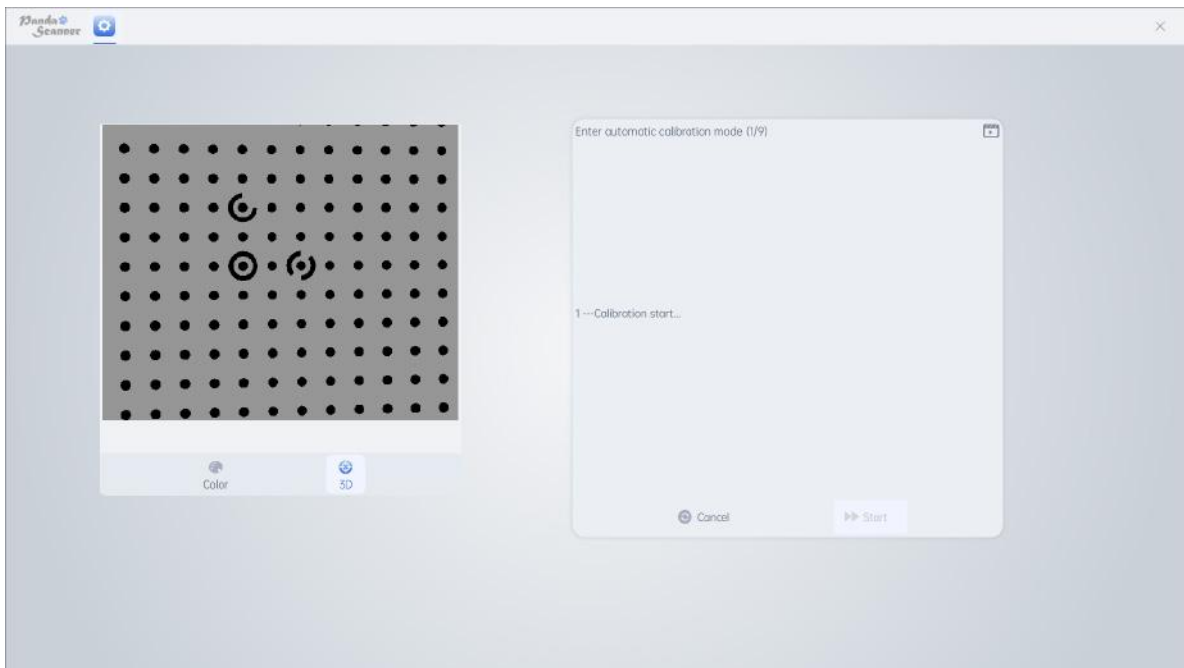


Click “Start Calibration”, then wait for the program to start.

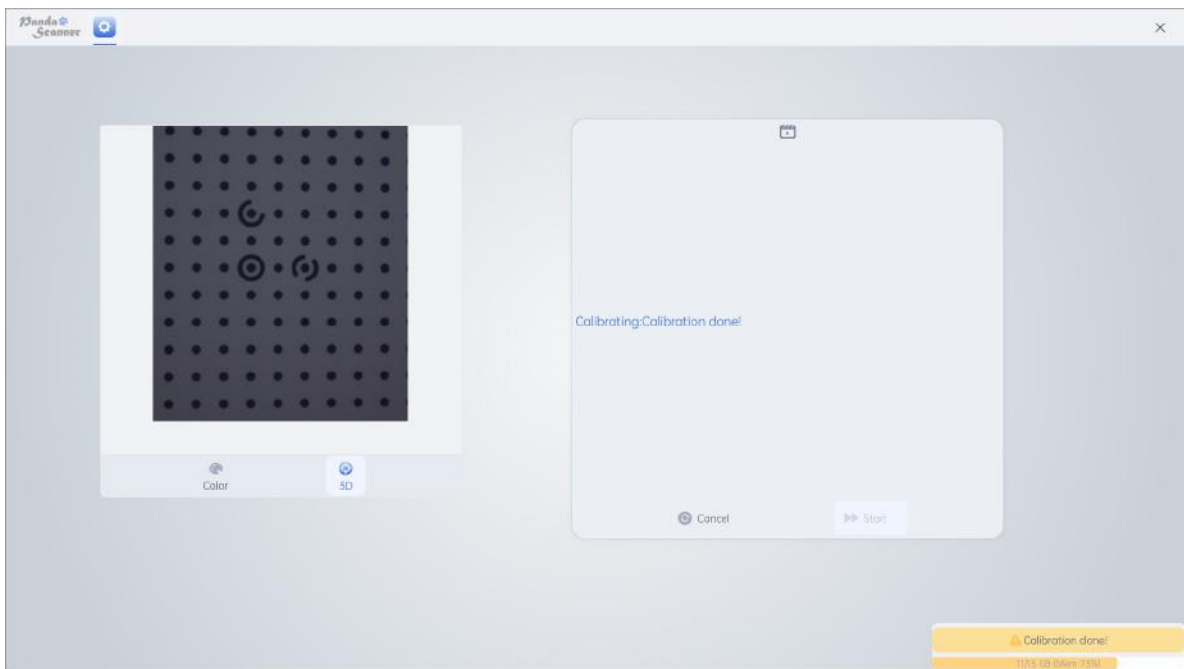


After connecting the device (see 1.2 for details), press the button to start the device, and follow the steps to operate:

1. Remove the scanner tip.
2. Align the protruding silver dots with the groove area of the calibrator and insert them tightly. Connect calibrator cable to the USB 3.0 port of the computer.
3. Click “START” to start the calibration.



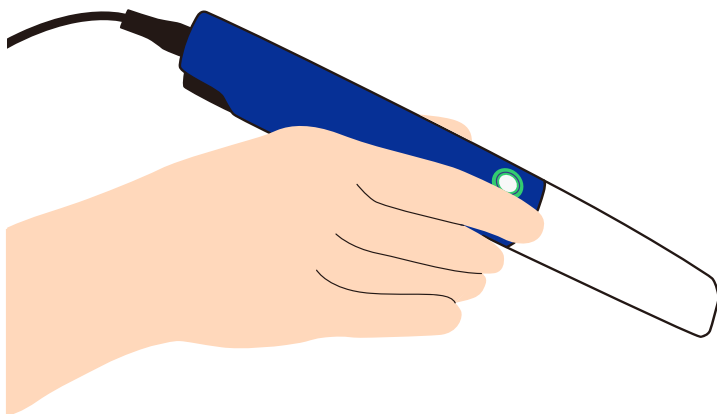
At this point, the calibration program will automatically proceed, taking approximately 1-2 minutes. Please be patient.



When you see "Calibration done!" it means the calibration program is done, then it will back to the homepage of PandaCenter.

### 3. Start Scanning

At this point, you will start your scanning journey. Please note that for the smoother use, please carefully read the following instructions.



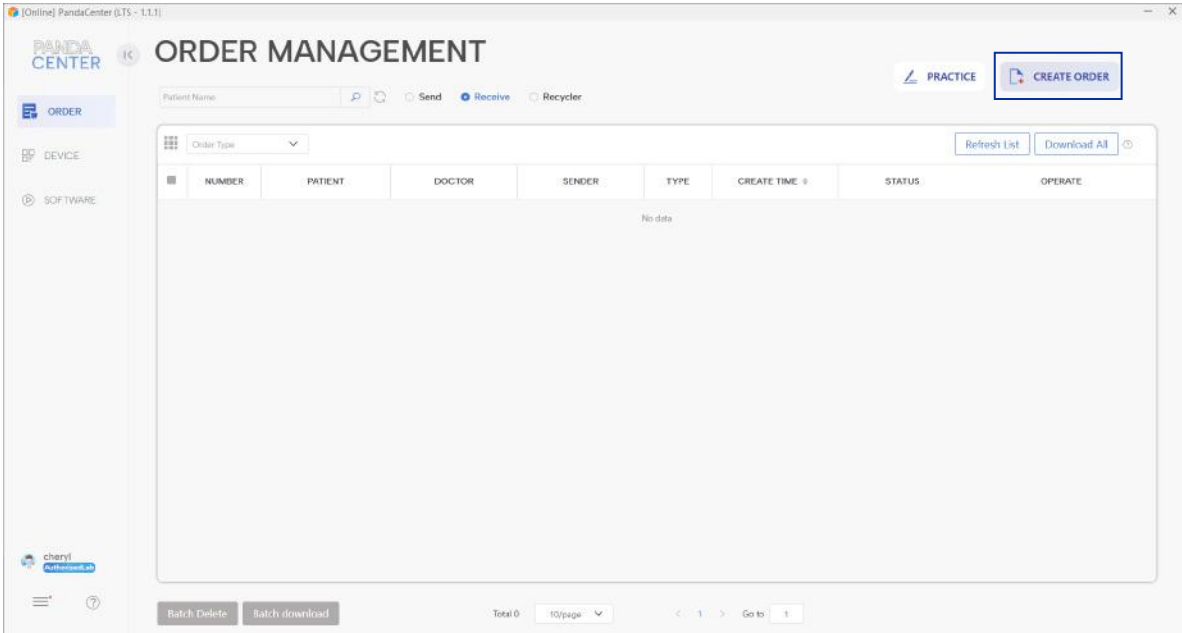
### 3.1 Preparation before scanning

Please prepare the following equipment based on the specific case: gloves, masks, three ways syringe, suction tubes, gingival discharge lines (gingival discharge cream), etc. After the preparation is completed, the operator should be located behind the patient's right shoulder, and the computer and Panda Smart should be located behind the patient's left side, facing operator for easy use.

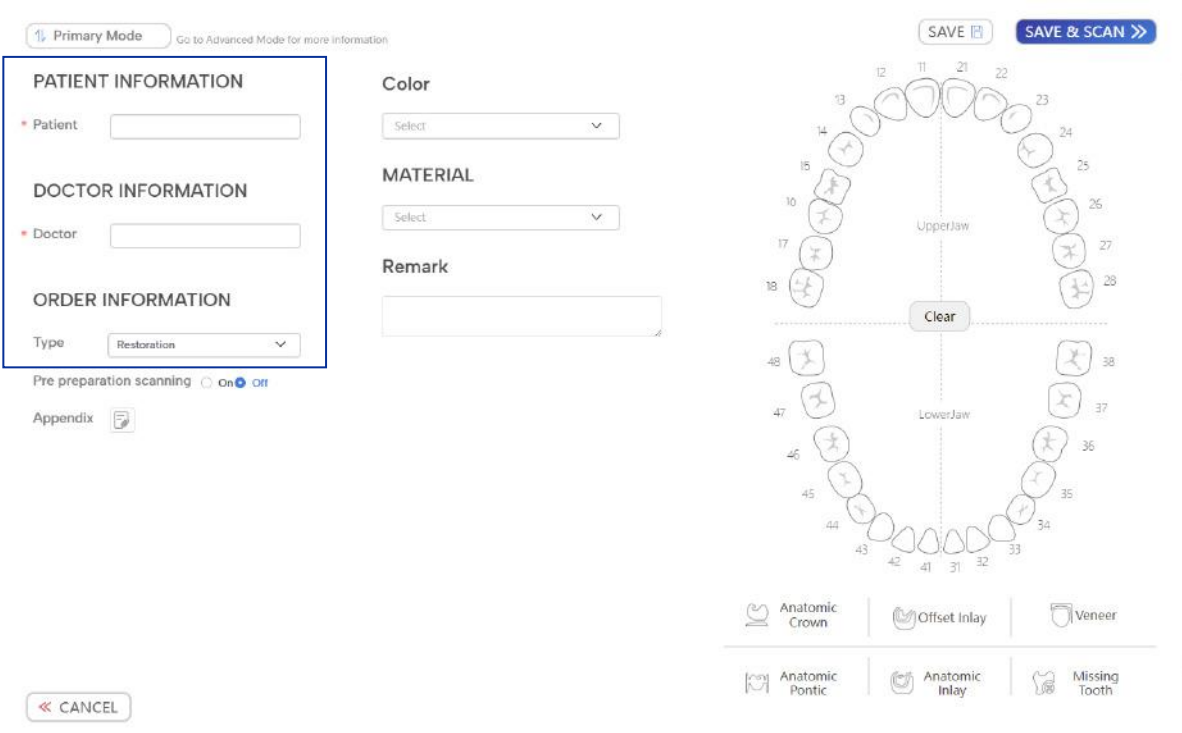


At the same time, the shadowless light on the dental chair should be turned off, and the angle between the back of the dental chair and the ground should be adjusted between about 30 ° and 45 °, with a height close to the operator's abdomen position.

# 3.2 Creating a New Case



Click "CREATE ORDER".



Then enter the homepage of case creating, not only the blank with a "\*" and the case type is required options, but also the tooth number (Except for orthodontic mode), Please fill in all information according to the actual situation.

Primary Mode Go to Advanced Mode for more information

**PATIENT INFORMATION**

\* Patient

**DOCTOR INFORMATION**

\* Doctor

**ORDER INFORMATION**

Type:

Pre preparation scanning  On  Off

Appendix

**Color**

Select

**MATERIAL**

Select

**Remark**

SAVE SAVE & SCAN >>

UpperJaw

LowerJaw

Clear

Anatomic Crown Offset Inlay Veneer

Anatomic Pontic Anatomic Inlay Missing Tooth

<< CANCEL

In the tooth position selection area, please select the corresponding restoration type according to the actual situation. Click on the corresponding restoration type and then select the corresponding tooth. After selecting, the corresponding tooth position will be colored. If the selection is incorrect, click on the corresponding tooth position again.

After completing the information filling and tooth selection, please click on "SAVE&SCAN" in the upper right corner to start scanning.

- If you need to record more detailed patient information, please click on the  in the upper right corner.
- After selecting the planting type, click  to select the tooth position, choose tooth position based on actual situation.
- If it is a composite case, such cases are mainly of complex types, such as implant&restoration, please choose the implant type.

## 3.3 Steps of Orthodontics

Next, we will explain the scanning steps for orthodontic cases. After creating a new case, click "SAVE&SCAN" to enter the scanning software.

Primary Mode Go to Advanced Mode for more information

**PATIENT INFORMATION**

\* Patient

**DOCTOR INFORMATION**

\* Doctor

**ORDER INFORMATION**

Type

Pre preparation scanning  On  Off

Appendix

Color

**MATERIAL**

**Remark**

SAVE

UpperJaw

LowerJaw

Clear

Anatomic Crown | Offset Inlay | Veneer

Anatomic Pontic | Anatomic Inlay | Missing Tooth

<< CANCEL

### 3.3.1 Upper Jaw

Recommended grip posture: pen style

Scanning distance: 2mm~5mm, make sure the 2D image on the left side is unexposed.

First, use a pre prepared three ways syringe to blow dry the upper jaw to be scanned, remove foreign objects from the mouth, and ensure that the upper jaw is dry and clear. Place equipment and chairs in appropriate positions (see 3.1 for details), then follow the steps of Occlusal surface, Lingual surface and Buccal surface.

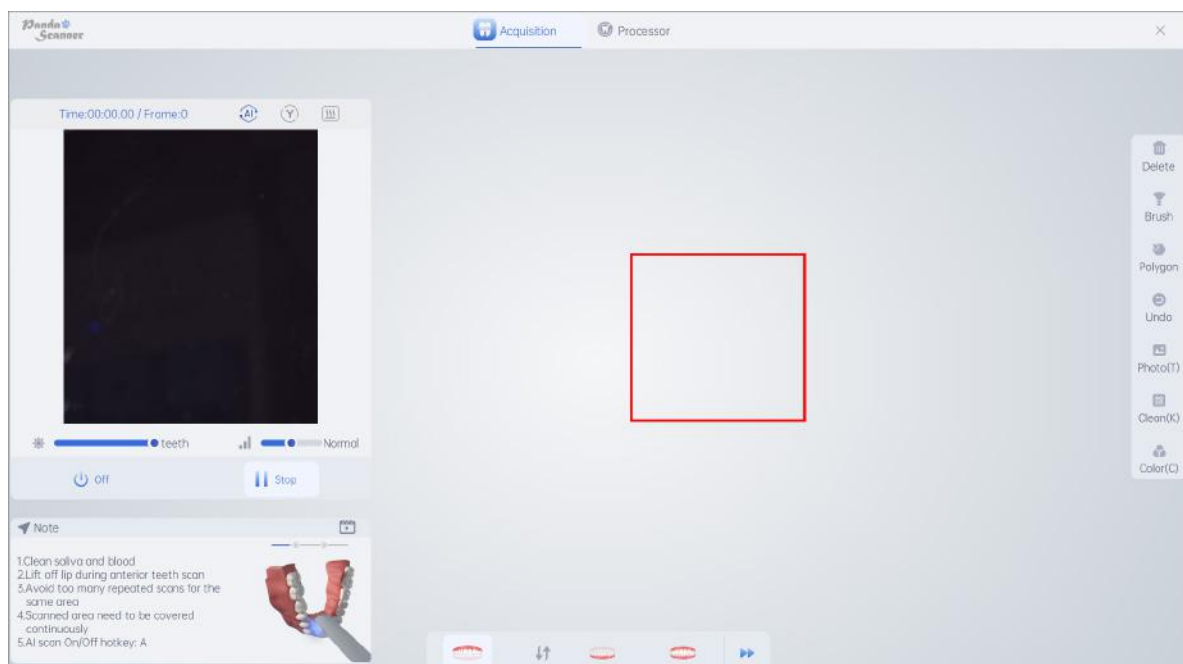


**Occlusal surface:** Starting from the last tooth on the left arch of the patient, scan parallel to the occlusal surface outward. When moving to the third tooth on the left side, use the left hand to assist in opening the lips to prevent interference. After flipping the scanner inside and outside the anterior teeth and to the third tooth on the right side, scan parallel to the occlusal surface along the arch to the last tooth on the right side.

**Lingual surface:** After the occlusal surface scan is completed, flip from the last molar on the right side to the lingual side, and scan along the lingual arch to the last tooth on the opposite side.

**Buccal surface:** After the lingual scan is completed, flip from the lingual side of the last left molar through the occlusion to the buccal side, along the buccal arch outward to the midline, and then place it directly to the right last molar after repositioning the occlusion, flip to the buccal side, scan along the buccal arch to the midline.

- When scanning, please be careful not to look directly at the light emitted by the probe. It is recommended that the operator should watch the image on the computer screen while operating. If necessary, the patient can wear sunglasses.
- Please be sure to control the distance to ensure that the 2D image on the left remains clear and bright without exposure, otherwise the data color may slightly differ from the reality.
- It is recommended to find a fulcrum to support during the scanning process, which can be done with a mouth Mirror or fingers, to improve scanning speed and patient experience.
- If a "red box" appears during the scanning process (as shown in the figure below), there are two ways to solve this problem:
  1. Return to the "red box area".
  2. Return to the recently scanned teeth and maxillofacial area. You can continue scanning



### 3.3.2 Lower Jaw

Recommended grip posture: pen style

Scanning distance: 2mm~5mm, make sure the 2D image on the left side is unexposed.

The scanning method is basically the same as the upper jaw scanning method, and be careful not to compress the root of the tongue too much, otherwise it may cause discomfort to the patient.

### 3.3.3 Occlusion

Recommended grip posture: pen style

Scanning distance: 2mm~5mm, make sure the 2D image on the left side is unexposed.

When scanning occlusion, it is necessary to scan 1-2 occlusion points to determine the occlusion relationship. When scanning the occlusion, if it is a full mouth scanning, one occlusion point can be scanned separately on the left and right buccal sides; If it is a half mouth scanning, one occlusion point can be directly scanned.

1. The patient clenches their upper and lower jaws (swallowing) and maintain.

2. Place the tip on the patient's buccal side and slowly move forward in an "S" shape path between the upper and lower jaws. Take 4 tooth positions and successfully match the upper and lower jaws; Then pause and switch to occlusion point 2. Slowly move forward in an "S" path between the upper and lower jaws, taking 4 consecutive tooth positions. After the upper and lower jaws match successfully, click "Enter" to end.

- Before the occlusion scan, the patient's swallowing action helps to return to the ICO (Intercuspal occlusion) and record the correct occlusion relationship.
- Please pay attention to scanning at least 4 consecutive tooth positions during occlusal scanning. If you encounter excessive hypodontia teeth, you can start from the nearest scanned tooth.
- After one occlusion scan on a side, be sure not to let the patient open their mouth when you are switching the occlusion. Please maintain the same teeth position until the scan is completed.
- The shortcut key for switching between bite 1 and bite 2 is the "P" key, or double-click the silver button on the device.

## 3.4 Steps of Restoration

At this part we will explain the scanning steps for restoration cases. After creating a new case, click "SAVE&SCAN" to enter the scanning software.

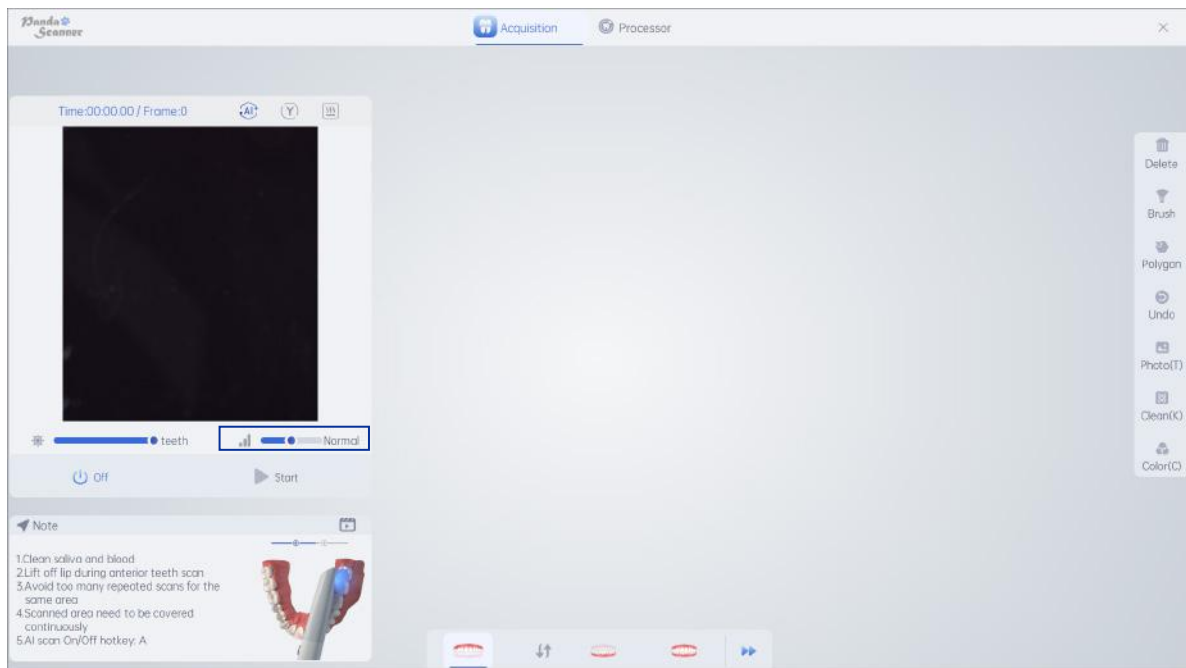
### 3.4.1 Upper Jaw

Recommended grip posture: pen style

Scanning distance: 2mm~5mm, make sure the 2D image on the left side is unexposed.

First, use a three ways syringe to blow and dry the jaw, If the shoulder above the gingiva can be clearly seen, there will be no need for a gingival scan. Both the gingival and subgingival shoulder require the use of a gingival line or gingival cream to ensure the shoulder is clear and dry, and gingival line does not affect the scanning.

The main scanning steps are no different from orthodontic scanning, and you should pay attention to the scanning of tooth preparation area and left and right adjacent areas.



If there is a deep proximity between the mesial and distal surfaces of teeth, the depth button in the marked area can be adjusted to "deep" while scanning from the buccal and lingual sides.

Please make sure to keep the dental preparation area dry and clean. If necessary, you can pause scanning and blow dry again before continuing scanning.

### 3.4.2 Lower Jaw

Recommended grip posture: pen style

Scanning distance: 2mm~5mm, make sure the 2D image on the left side is unexposed.

First, use a three ways syringe to blow and dry the jaw, If the shoulder above the gingiva can be clearly seen, there will be no need for a gingival scan. Both the gingival and subgingival shoulder require the use of a gingival line or gingival cream to ensure the shoulder is clear and dry, and gingival line does not affect the scanning.

The main scanning steps are no different from orthodontic scanning, and you should pay attention to the scanning of tooth preparation area and left and right adjacent areas.

- The lingual side of the lower jaw is not easy to blow dry. You can scan other areas first, and then pause using the three ways syringe to blow dry before scanning the lingual side area.

### 3.4.3 Occlusion

The occlusal scanning method and steps are no different from orthodontic scanning. (See 3.3.3 for details)

## 3.5 Steps of Implant

At this part we will explain the scanning steps for implant cases. After creating a new case, click "SAVE&SCAN" to enter the scanning software.

### 3.5.1 Upper Jaw

Slightly different from restoration and orthodontics, first remove the healing cap from the mouth, expose the cuffs, ensure that the cuffs are round and not collapsed, and blow dry the working area and cuffs inside the mouth. The scanning method and precautions are the same as those for restoration maxillary scans.

- If the cuff has collapsed and bleeding, it is recommended to bring it back into the healing cap and wait for the bleeding to stop before scanning.
- Please note that it is important to scan the adjacent and cuffed areas clearly.

### 3.5.2 Lower Jaw

The method and precautions for lower jaw scanning are the same as those for restoration scanning.

- If the lower jaw is a working area, also remove the healing cap from the mouth, expose the cuffs, ensure that the cuffs are round and not collapsed, and blow dry the working area and cuffs inside the mouth before scanning.

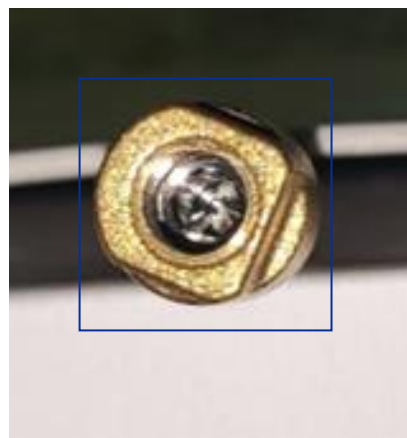
### 3.5.3 Occlusion


After completing the upper and lower jaw scanning, please scan the occlusion at this time. The occlusion scanning method and restoration are no different from restoration.

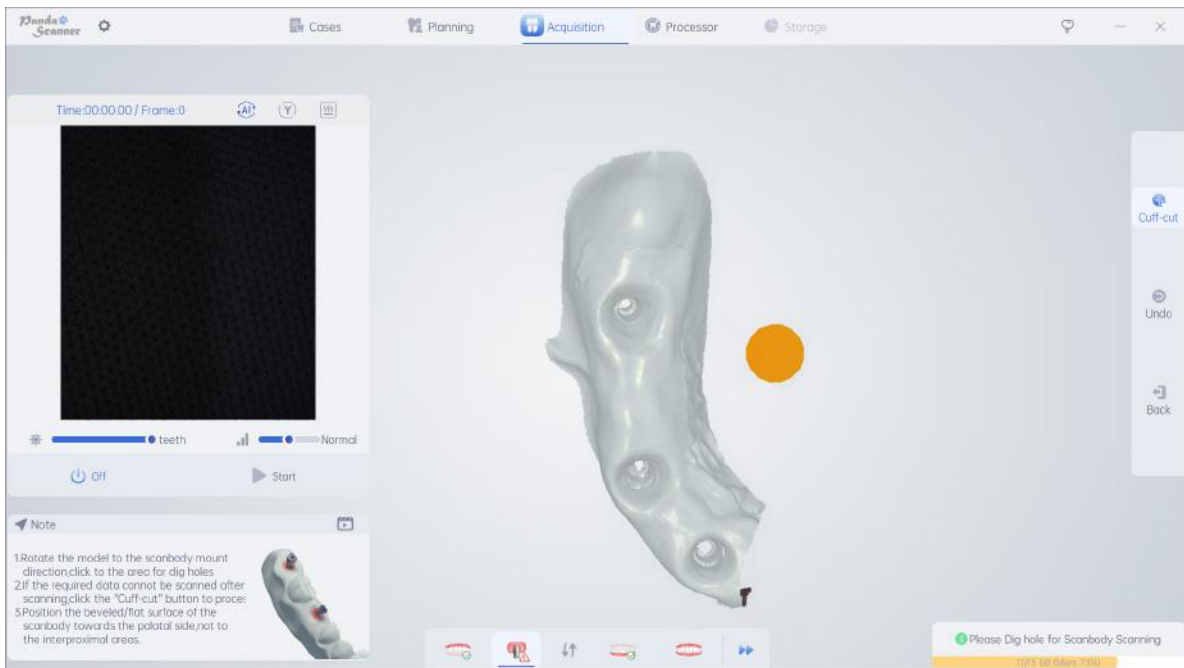
### 3.5.4 Scanning rod

After finishing the upper and lower jaw scanning, please notice that:

1. Choose the scanning rod according to the practical implant case.
2. Pay attention to the marking side of the scanning rod, When installing, please face towards the buccal or lingual side.



After installing the scanning rod as required, please click the  to enter the scanning process of scanning rod.



The page that pops up at this time is our "Cuff-cut" page. Please make sure to dig a hole according to the installation direction of the scanning rod. Hold down the right mouse button and drag to rotate the model to the installation direction. Use the mouse scroll wheel to adjust the size of the model until the excavation area is slightly larger than the installation area of the scanning rod. Click the left mouse button to dig a hole.

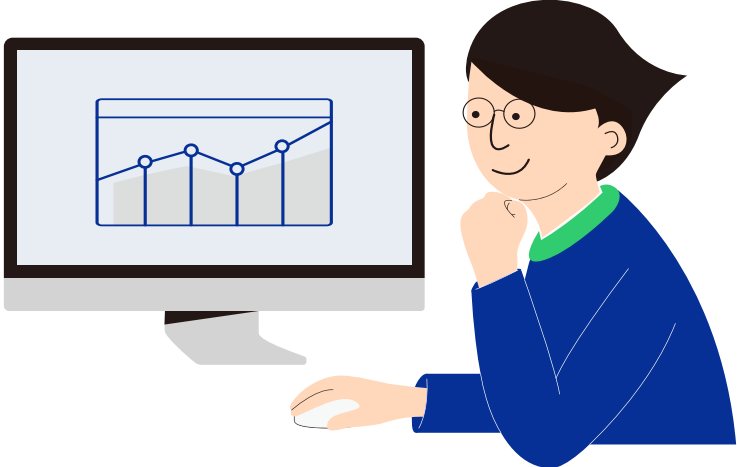


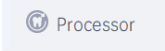

After completing the excavation, click the 'S' button or click the silver button on the body to start scanning.

- Note that the scanning rod must be fully seated, and if necessary, X-ray imaging equipment can be used to check if it is in place.
- Digging a hole too small or not following the installation direction can result in incomplete scanning of the scanning rod. At this point, you can pause and click the digging button on the right to re-dig a hole.
- The sign side and top of the scanning rod are two important parts. Please pay attention to these two areas during scanning to ensure clear and complete scanning.



# 4. Model Processing and Data Check



After you finishing the scanning, please click  or  to enter the step of model processing, and it will take about 1 minute.

After the model processing, please make sure:

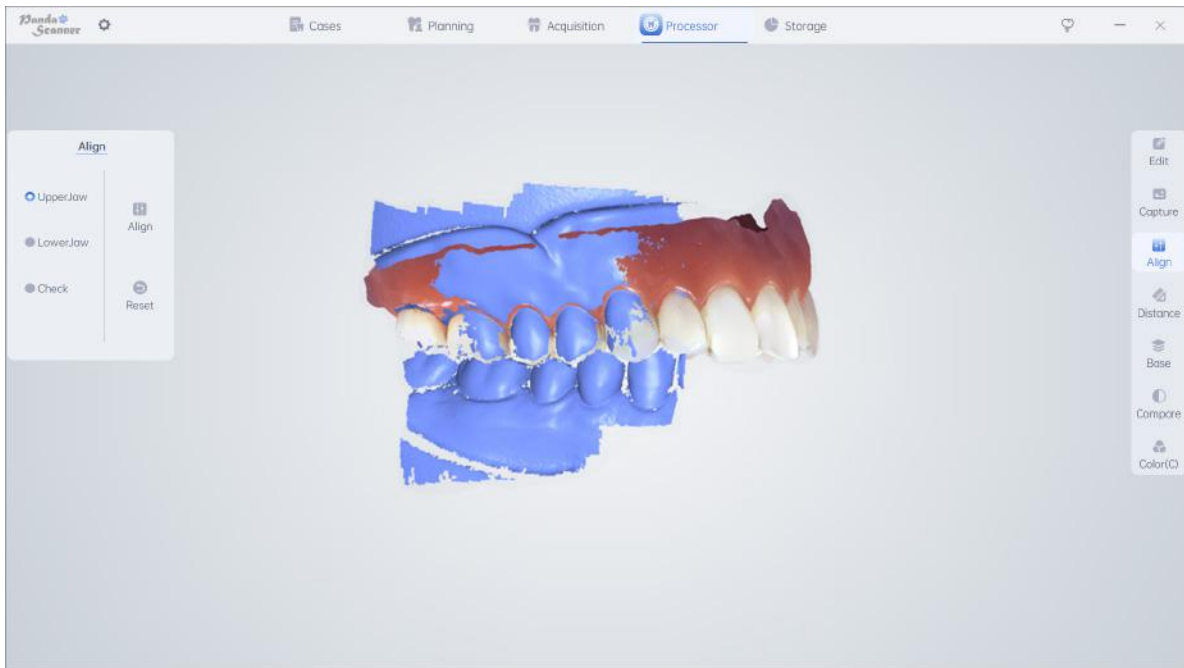
1. The occlusion data is the same as practical situation.
2. The working area is clear and complete.
3. The data of scanning rod is clear and complete.

## 4.1 Align

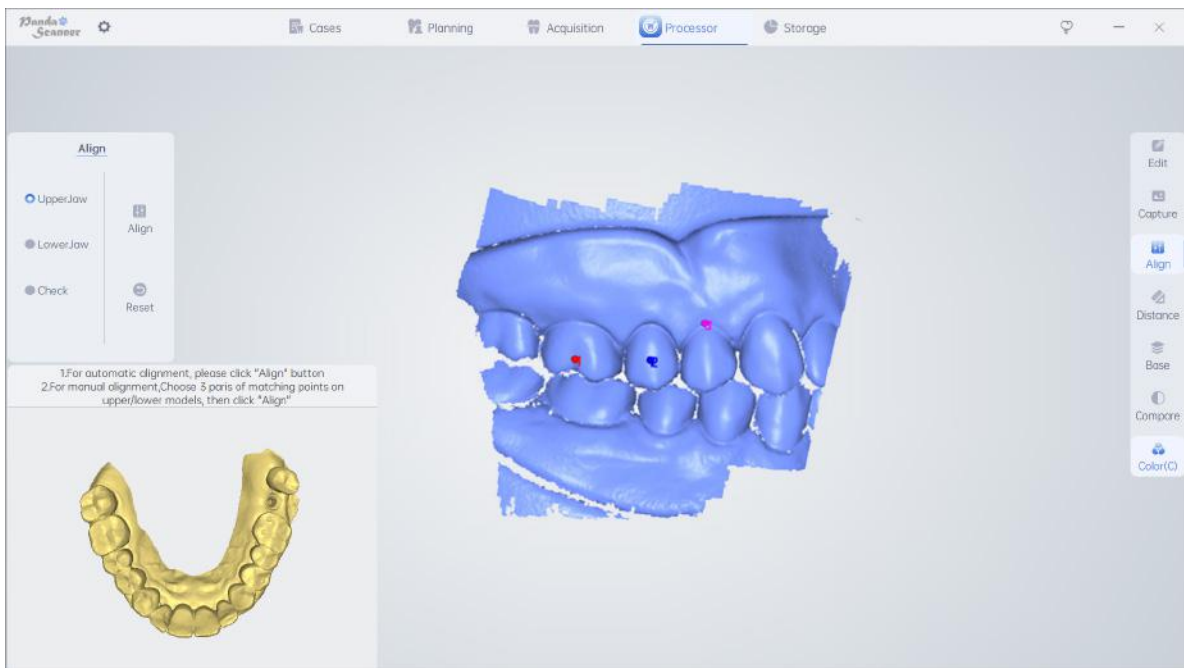
To be used when there is an occlusion cavity, tight occlusion, or inaccurate occlusion relationship after scanning, it is necessary to rematch the occlusion.

As shown in the following picture, after completing the selection, you can enter the align mode. The middle part is the display area for occlusal scanning data, the left is the upper and lower jaw selection area, and the lower left corner is the currently selected upper/lower jaw model data. Supports automatic registration and three-point registration.

Direct align: Select the upper/lower jaw, and then click on "Align" to automatically align the current jaw.



Three point align: Three point align refers to selecting three pairs of points with obvious features in the model of the current lower left corner of the jaw and the corresponding position of the occlusal data. After selecting them, click the "OK" button to align.



- Please note that if the occlusion recorded during scanning is incorrect, using the align function will not restore the correct bite. It is recommended to return to the scanning interface and rescan the bite.
- When using the three points method for align, do not select the three points on a straight line.

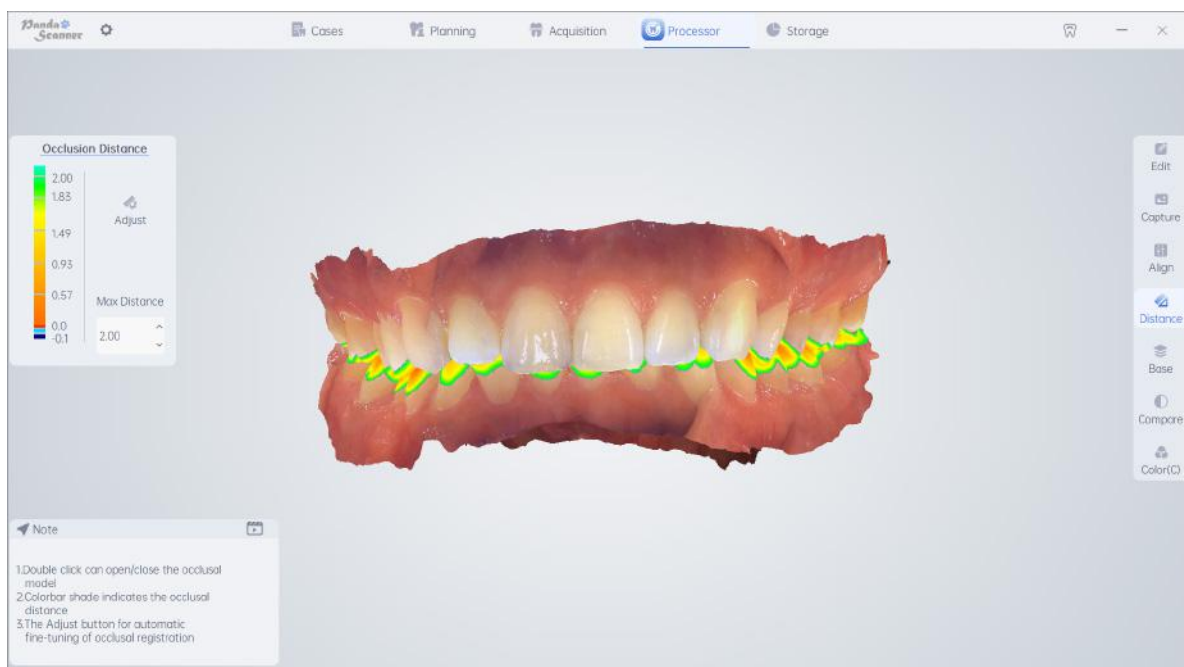
## 4.2 Distance

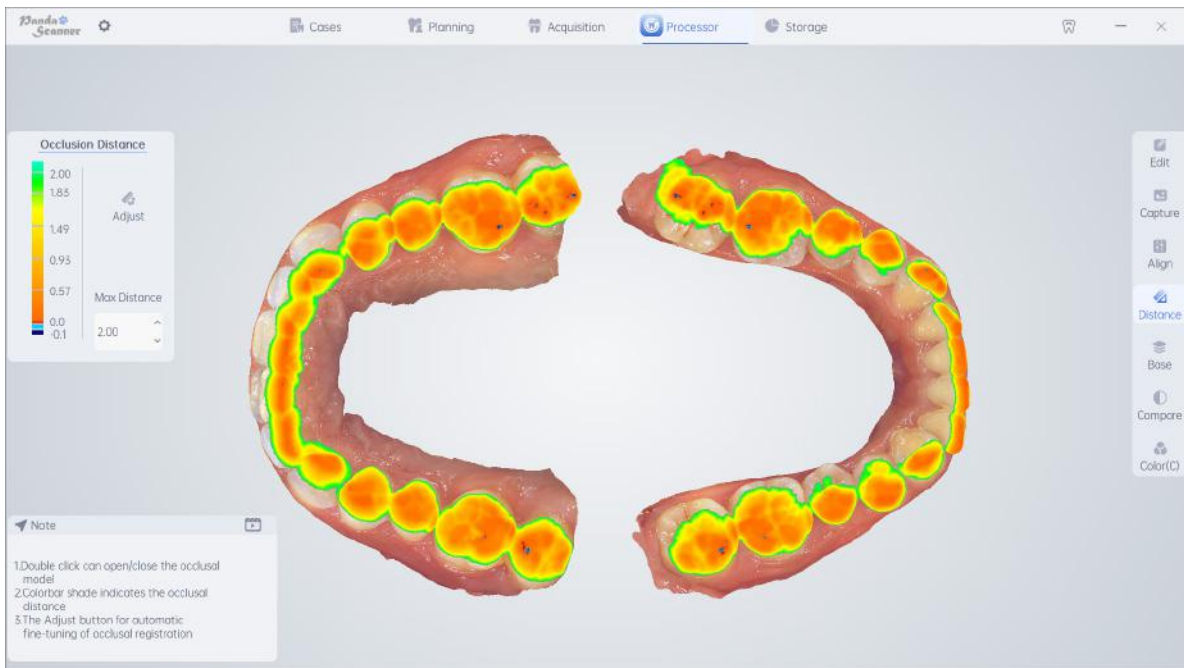
Mainly used to detect whether the occlusal space between the patient's working teeth and the opposing teeth is sufficient.

After completing the inspection, you can click the "Distance" button to calculate the bite distance and display the results. As shown in the following figure, the left side of the page is the distance reference map, and the middle area is the result of the upper and lower jaw calculation.

The darker the color of the occlusal area, the closer the occlusal distance is; The lighter the color, the farther the distance between the upper and lower bite points; When the color of the bite area is dark blue, it indicates that a bite has occurred. When there is no color distribution on the maxillofacial surface, it indicates that the occlusal distance between the upper and lower jaw in the area exceeds 2mm.

The occlusal relationship can be specifically checked by adjusting the value of the maximum distance.





Double click to separate the upper and lower jaw to check the distance, as shown in the following picture. Double click again to restore the occlusion state.

## 4.3 Measure

Mainly used to measure the distance between any two points on the teeth, and to obtain the actual values of these two points in the mouth.

At the Orthodontics Mode, Click the "Measure" button in the single jaw (upper or lower jaw) to enter measurement mode. Click to anchor the measurement site, and double-click to cancel all measurements.

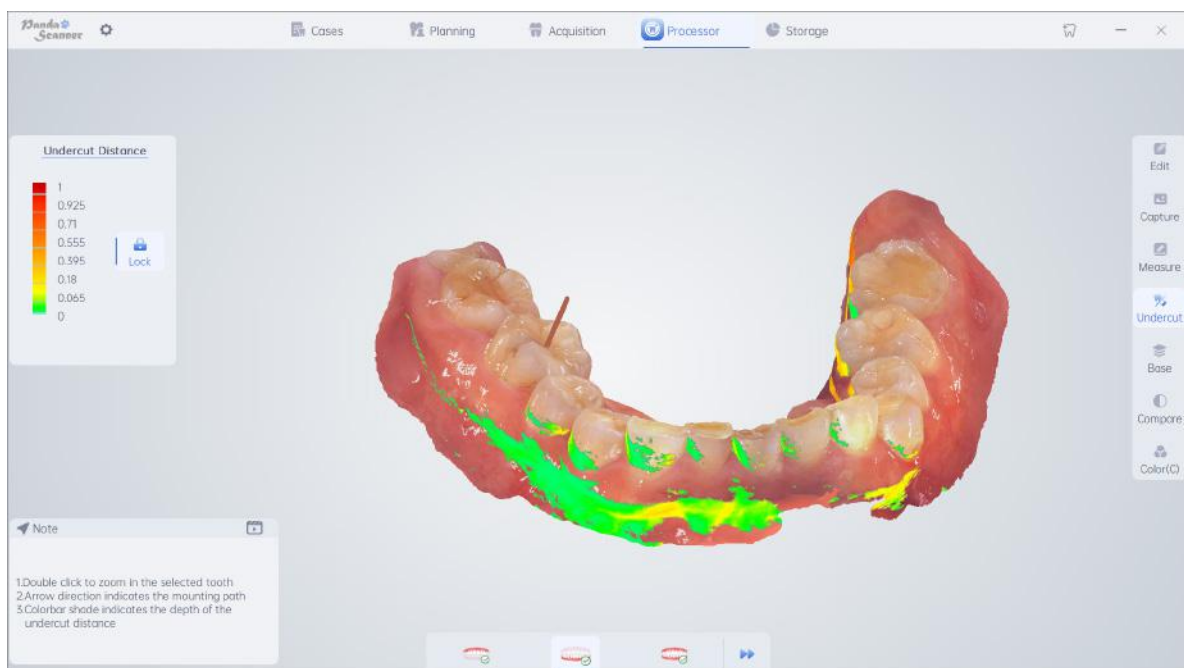


## 4.4 Undercut

Mainly used for checking if there is any undercut in the direction of the abutment after tooth preparation, and the depth of the undercut, and whether it is necessary to prepare the teeth again.

1. Adjust the data model to the perspective that needs to be observed.

2. Click on the "Undercut" button to view the undercut status. Hold down the left mouse button to rotate the model data. Release the mouse and click the left button again to rotate the data model to adjust the observation direction. Double click to zoom in and click on the tooth position, click on lock to lock the positioning perspective, and rotate the model without changing the observation direction. The arrow direction represents the perspective of insertion.



## 4.5 Margin

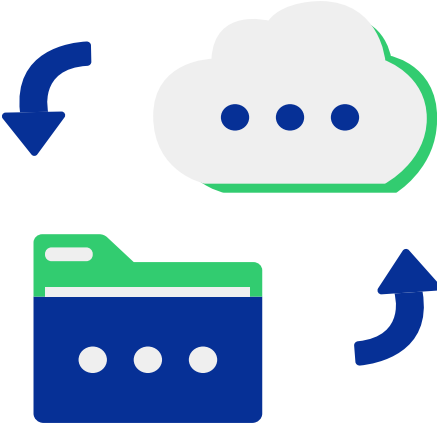



In resoration mode, click on "margin" and select the corresponding tooth position ID. Press and hold the right mouse button to rotate the model. Press and hold the left mouse button to draw the margin line at the position of the abutment shoulder. Only one margin line can be drawn at the same tooth position, and it supports redrawing and fine tuning on the drawn margin line.

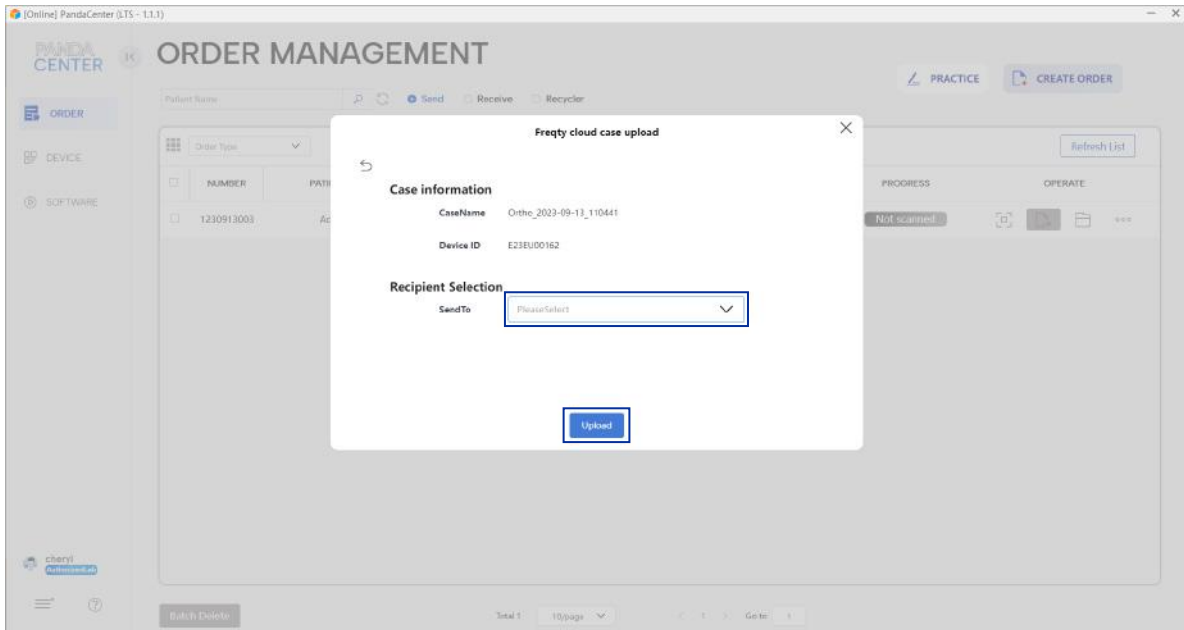
- Please note that the margin function is only effective for the selected tooth position during the case creation in restoration mode.
- If you encounter situations where the shoulder stand cannot be seen clearly in true color mode, please press "C" to switch to gypsum color to help confirm the edge of the shoulder.
- After depicting the margin line, the margin file will be stored in the folder where the case is located. When importing the CAD file at the same time, the depicted margin will be displayed.



# 5. Data Transmission



After completing the scan and checking without any errors, please click  , back to the “PandaCenter” ,and a pop-up window will pop up as shown in the following picture



1. First click on the dropdown menu corresponding to "SendTo" to select the lab that has already established a transmission relationship.
2. After your selection, please click “Upload” to upload.

- Please note that the dropdown menu currently only has labs that have already added transmission relationships as candidates. If you need to add other labs, please manually add them (see 2.4 for details).
- Uploading requires a network connection, and the upload time depends on your network speed. Please note that unstable network connections may cause upload failures. It is recommended to connect to a stable network before uploading.

# 6. Precautions for Device Maintenance

To ensure the correct operation of the scanner, please carefully read the following maintenance methods and relevant precautions.



## 6.1 How to Keep the Tips

It is prohibited to use a three ways syringe to blow inside the tip to prevent dust from being blown into the photoelectric system inside the device. If there are stains on the lens glass, please dip a small amount of anhydrous alcohol and shake it dry slightly before gently wiping the glass. During the wiping process, please pay attention to avoid damaging the glass and affecting the imaging.

## 6.2 How to Place the Device

Place the bracket on a stable desktop, and place the handle in the bracket of the bracket after use. Pay attention to protection and avoid unnecessary vibration or collision.

## 6.3 How to Calibrate the Device

Panda Smart does not require periodic calibration for use, but it is necessary to calibrate this product immediately before use when it undergoes severe collisions, significant temperature differences, long-distance transportation, or scanning stutters, sparse imaging, or significant accuracy degradation.

The specific process and method of calibration are detailed in (2.6 Calibration).

## 6.4 How to Clean the Device

**Device body:** Use alcohol with a concentration of 75% or more or other surface disinfection products to wipe and disinfect. Be careful not to soak in any liquid, otherwise it may cause damage.

**Tip:** The tip is designed to be reusable, and for hospital infection prevention and control, please be sure to disinfect and use it according to regulations.

1. Dip a gauze in clean water, clean the external saliva of the tip, and wipe dry, taking care not to scratch the lens.
2. When there are stains on the lens, use anhydrous alcohol to gently wipe them, do not use medical alcohol.
3. Insert absorbent gauze/balls into the glass lens, do not use rayon balls instead of absorbent gauze.

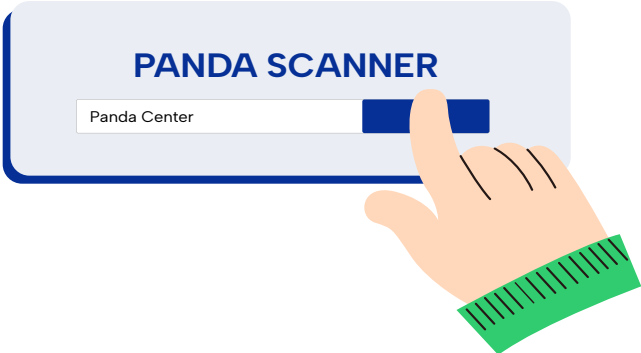


4. Insert the probe into the disinfection bag, seal it, and prepare for disinfection (with the lens facing downwards).



5. Put it into a high-temperature and high-pressure sterilization pot, and the recommended disinfection temperature is **134 °C for at least 6 minutes** (121 °C for at least 15 minutes).

# 7. Others



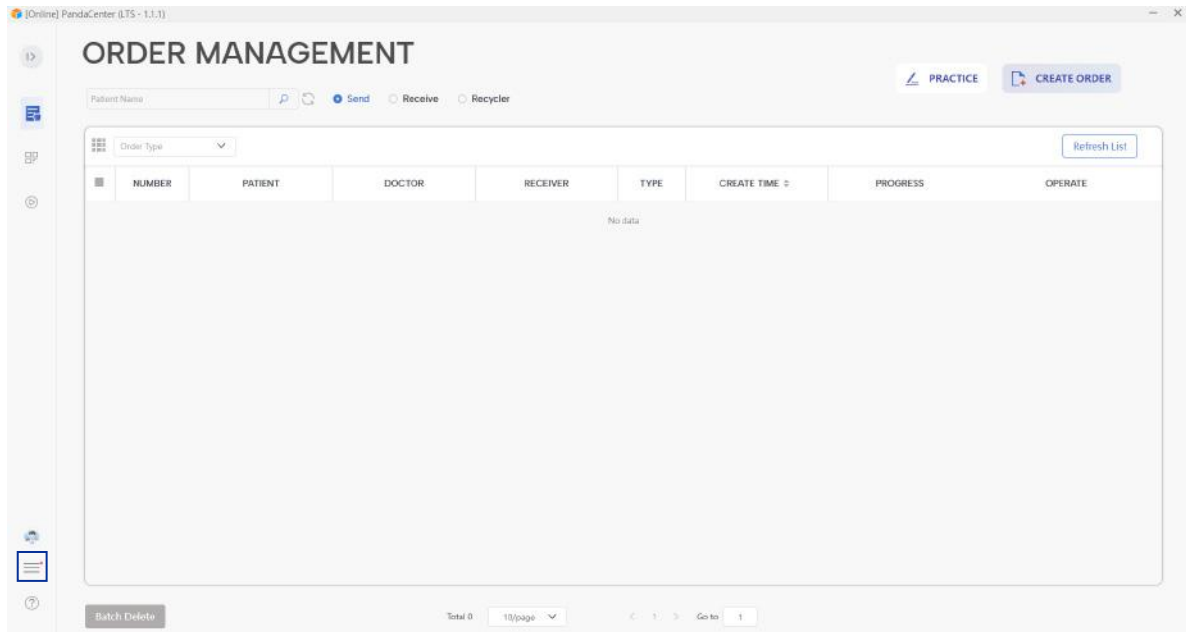
## 7.1 Shortcut keys

<b>Gypsum/TrueColor Switch</b>	C
<b>Start scanning</b>	S
<b>Switch occlusions</b>	P
<b>Intelligent cleaning (AI)</b>	A
<b>Heat before scanning</b>	Z
<b>Clean</b>	K
<b>Save pictures</b>	T
<b>Pause scanning</b>	S/Enter
<b>Switch Jaws</b>	E/R
<b>Enlarge scanning</b>	Y
<b>Enhanced gap scanning</b>	Ctrl+H
<b>Next</b>	Enter
<b>Rotate</b>	Up and Down I/O Left and Right: J Forward and backward: U

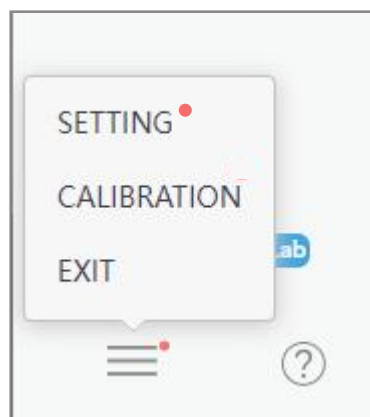
Device button function: Short press (start/pause), long press (next step), double click (switch color/switch occlusion).

## 7.2 Settings

The settings function is integrated into the “PandaCenter” and is divided into general settings and scanning settings.



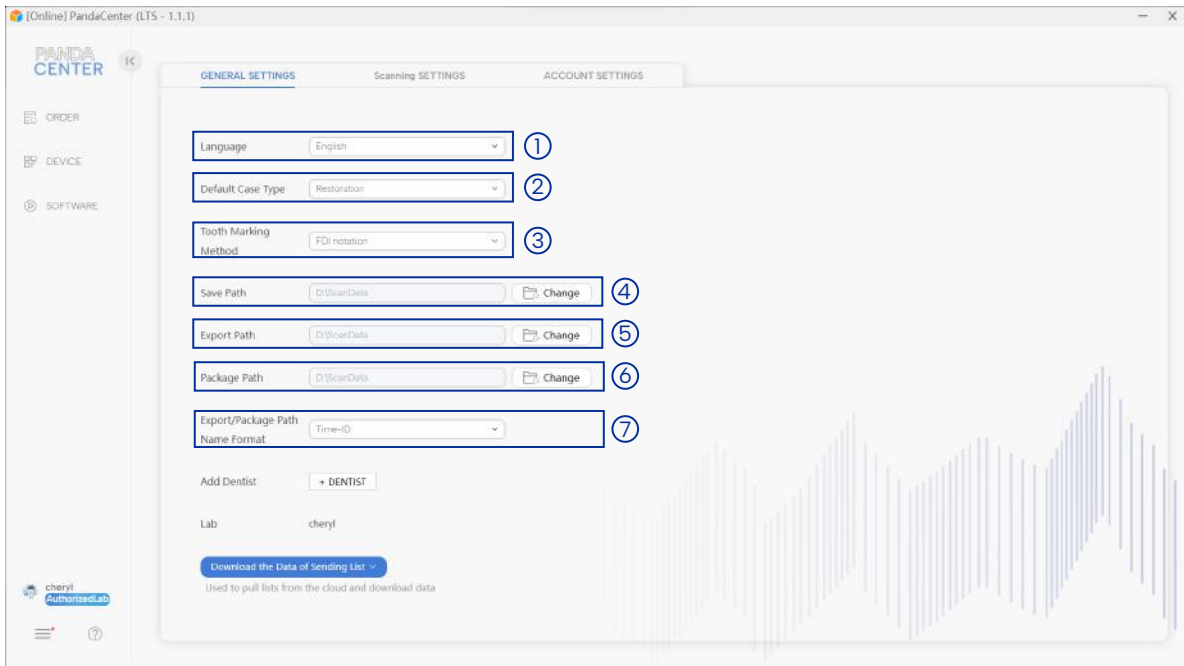
Click  .



Enter the SETTING.

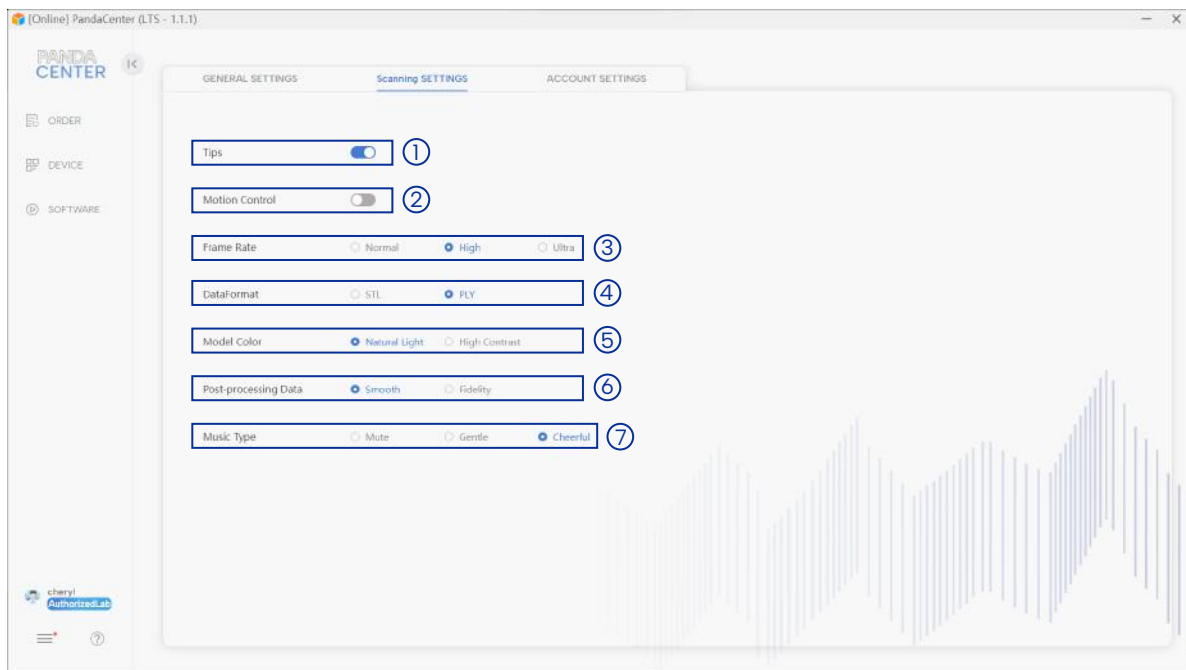


## 7.2.1 General Settings



- ① Change the language. Change the language.
- ② Change the default case type when creating a new case.
- ③ Change the tooth position representation.
- ④ Change the file save path.
- ⑤ Change the file export path.
- ⑥ Change the file package path.
- ⑦ Changing the file naming rules.

## 7.2.2 Scanning settings



- ① Tooltips ON/OFF.
  - ② Motion sensing control (default off).
  - ③ Frame rate switching (please note that higher frame rates require higher computer configuration and more resource usage, so please choose the appropriate rate based on your computer configuration)
  - ④ Change the dataformat type.
  - ⑤ Personalized selection button for data color (this option does not affect data quality).
  - ⑥ Post processing data type (this option will have a slight impact on the quality of data).
  - ⑦ Audio personalization during scanning.
- Due to the high integration of the software, it is not recommended for customers to modify the data storage path themselves.
  - For software post-processing types, the smooth mode of tooth surface and other tissues will be smoother, while the fidelity mode will more accurately reflect the real situation. There is a slight difference between the two, but the accuracy of the two will not have any impact on the production of dentures and other products.

## 7.3 Regular Problems and the Solutions

### 7.3.1 The Software Cannot Be Opened Properly

Confirm if the software is authorized and within its validity period.

- "Initialization failed" or "Unable to open target file", please reinstall the software.

- If the software exits abnormally, please manually end it in the Task Manager before opening it.

### 7.3.2 The Software Cannot Be Opened Smoothly

Confirm if the computer power supply is connected properly.

- Confirm whether the scanning software is running as an administrator.

- Check if the Windows system is being updated. If it is, please complete the update before using the software.

- Confirm if other computer softwares can work.

- Confirm if the PAServer program has not started (open the icon bar in the lower right corner of the taskbar to collapse and see if there are any icons).

### 7.3.3 The Desktop Shortcut Icon Changes to White

- Check if the computer is equipped with antivirus software, and if so, uninstall or add the software to the whitelist.

- After turning white, double clicking cannot run. Please reinstall the software.

### **7.3.4 Fail to Connect the Camera**

-Check whether the power is turned on normally, whether the computer power is tightly connected, and whether the USB interface is correctly connected to the USB 3.0 interface of the computer.

-Replace the USB interface connected to the computer.

-Try replacing the computer or device.

### **7.3.5 There Is No Image at the Bottom Left Frame**

-Confirm that the USB interface of the device is correctly connected to the USB 3.0 interface of the computer.

-Restart the software and device to check if the image can be displayed normally.

### **7.3.6 Flicker Appears in Image**

-Determine if the scanner cable is properly connected.

-Replace the USB connection port between the device and the computer.

### 7.3.7 Unsmooth Scanning

- Check if the brightness level is correct, scan the gypsum dental mold for 1 level, scan the resin dental mold for 2 levels, and scan the mouth for 3 levels.
- Check if the A above the two-dimensional image area is blue. If it is gray, press the A key on the keyboard to turn it on or click the 'A' icon with the mouse to turn it on.
- Standardize scanning skill to ensure that the scanning data overlaps with the scanned data.
- Check if the lens of the tip is foggy or dirty.
- Calibrate before scanning.

### 7.3.8 Lagging During Scanning

- Confirm if the computer configuration meets the requirements (higher than or equal to the recommended configuration).
- Excessive scanning data can cause delays (single jaw scanning should be completed within 3 minutes as much as possible).
- Uninstall antivirus software or add scanning software to the whitelist.
- Check the Windows update status. If there is an update in progress or any content that has failed, please restart the computer after the update is completed before using the scanning software.
- Check if the NVIDIA graphics card version is too low (512.96 or higher is required) and if high-performance settings have not been set.
- Check if the computer power is disconnected or low.
- Ensure that the scanner is connected to the USB 3.0 interface on the computer.

### **7.3.9 Hard to Re-locate**

-Ensure that during repositioning, the scanning posture is consistent with before the scanning interruption, and start repositioning from a place with more abundant data.

-Avoid taking too much time to scan.

-Check if the imaging is sparse. If the imaging is sparse, please calibrate before scanning.

### **7.3.10 Unable to Scan Any Data**

-Calibrate.

-Replace the USB interface between the computer and the device.

### **7.3.11 Accidental Interrupt during Scanning**

-Check the Windows update status. If there is an update in progress or any content that has failed, please restart the computer after the update is completed before using the scanning software.

-Check if there is insufficient memory left in the task manager, close unnecessary or unused applications, and close or reduce the number of open browser windows.

-Close the antivirus software.

-Add the software path and program files to the Windows exclusion.

### **7.3.12 Calibration Problems**

- Add position failure, calibration failure, image jitter.
- If there are obvious stains or debris on the calibration board in the left image display area of the software, please invert the calibrator first and remove the debris.
- Do not directly blow air into the calibrator with your mouth to prevent water vapor, saliva, and other contaminants from contaminating the calibration plate.
- Please place the calibrator on a stable desktop and do not shake the table where the calibrator is placed during the calibration process.

### **7.3.13 Repeated Shutdown and Restart of the Computer**

- Reinstall the graphics card driver.
- If there are still problems, please replace the computer or reinstall the system.

### **7.3.14 The Device Cannot Be Powered on Properly**

- Check if the current interface of the computer is damaged, replace the USB 3.0 interface of the computer and plug it in before trying again.
- Check if the current power outlet is powered on.

- If the above actions cannot solve your problem, please contact technical support as soon as possible.

## 7.4 Support

If there are any problems with the device that you cannot solve, please do not disassemble the device without permission.

If you have any questions or needs, please contact us through the following methods.

 [support@freqty.com](mailto:support@freqty.com)

 (+86) 400-999-6806 (Global)



**Panda**   
**Scanner**

🌐 [www.panda-scanner.com](http://www.panda-scanner.com)  
✉ [info@panda-scanner.com](mailto:info@panda-scanner.com)

Chengdu | Ziyang | Suzhou | Ningbo | Brazil | USA