3DISC

Heron IOS
Quick Start Guide
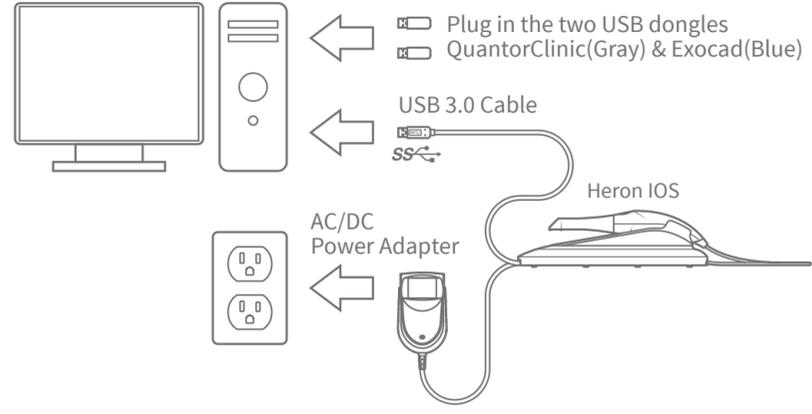

- Tip
- Scan Button
- Handpiece
- Docking Station

Installation Guide:

Prior to software installation ensure that the following criteria have been met:
- The person installing the software has administrative privileges on the PC
- The PC has an open USB 3.0 port (i.e. SuperSpeed, blue port)
- Make sure that apps are allowed to access the camera in Settings, Privacy, Camera, "Allow apps to access your camera".

Once the system has been carefully unpacked, install the system according to the following steps:

Step 1: Place the docking station on a flat, stable surface and place the Heron IOS hand-piece securely in its docking station

Step 2: Connect the AC/DC power adapter cable to the docking station; the connector socket is located underneath the docking station

Step 3: Connect the provided USB 3.0 cable to the docking station; the connector socket is located underneath the docking station

Step 4: Connect the other end of the USB 3.0 cable to the computer

Step 5: Connect the AC/DC power adapter to a power outlet

Step 6: Download and install the QuantorClinic software which is located at the following link: http://www.3disc.com/support/heron

Connection Guide:

- Plug in the two USB dongles QuantorClinic(Gray) & Exocad(Blue)
- USB 3.0 Cable
- Heron IOS
- AC/DC Power Adapter

* For PC system requirements please visit http://www.3disc.com/support/heron
** QuantorClinic is 3DISC software that has been bundled with Exocad

Attaching, Detaching & Rotating the Tip:
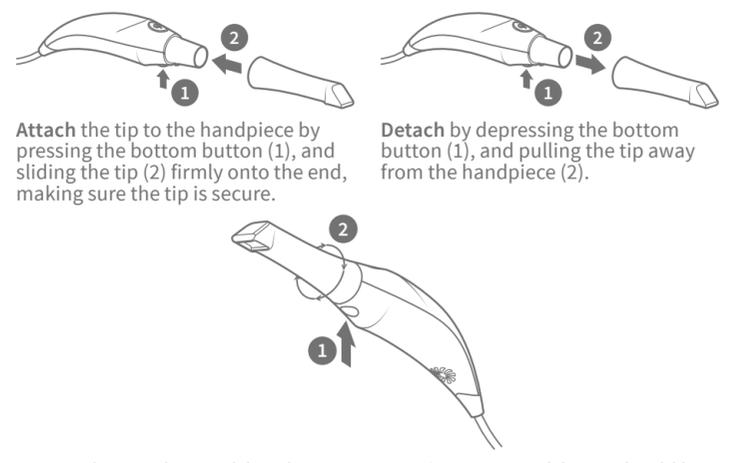
Attach the tip to the handpiece by pressing the bottom button (1), and sliding the tip (2) firmly onto the end, making sure the tip is secure.

Detach by depressing the bottom button (1), and pulling the tip away from the handpiece (2).

Depress bottom button (1) and rotate tip at 90° increments (2). Tip should be locked into position prior to scanning.

Patient Environment:
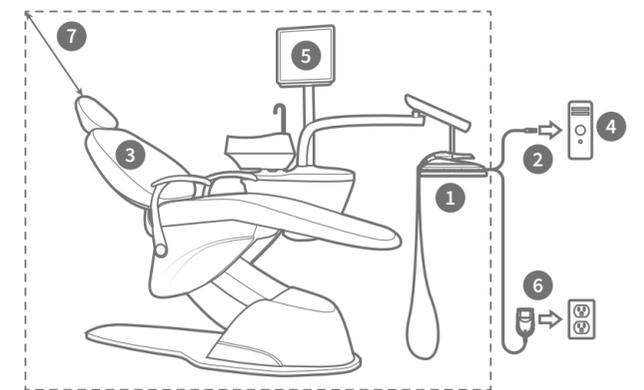
1. Heron IOS System
2. USB 3.0 Connector
3. Patient Chair
4. PC
5. Monitor
6. AC/DC Power Adapter
7. Environment represented by dotted line, extending 1.8 meter (6 feet) around patient and system

Packing List:

Name	Part Number
Heron IOS System (Includes 3 Tips)	IOS-FP-71-001
USB 3.0 Cable	IOS-CP-00-043
AC/DC Power Adapter	IOS-CP-00-088
Power Cable Extension	IOS-CP-00-084
Software Licensing Dongle, QuantorClinic	IOS-CE-71-013
Software Licensing Dongle, Exocad	IOS-CE-71-016
Quick Start Guide	IOS-FPM-71-002

Save the Box: It is highly recommended that you store the box in a safe place and do not throw it away. The box is optimal for any necessary transportation or shipping of the Heron IOS.

Contact:

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Note: Please refer to the user manual for important safety information.

Tip Cleaning & Sterilization:

The included tips have not been sterilized and must be sterilized prior to use.

The tip of the Heron IOS is inserted into the patient's mouth during operation. To prevent cross-contamination between patients the tip should be cleaned and sterilized according to the following procedure.

Step 1: Clean the tip with soap water ensuring that the mirror is clean and free of smudges, stains, or any milky haze. **Do not use an abrasive surface to clean the mirror.**
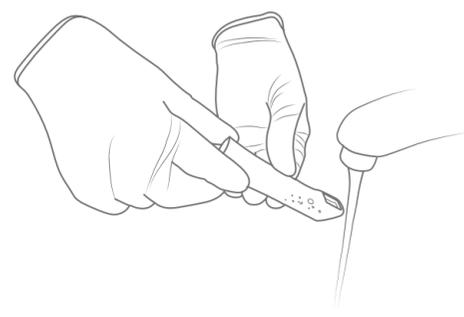

Be careful when cleaning the mirror, it is delicate and prone to scratching.

Step 2: After drying the tip exterior, carefully dry the interior and mirror with delicate task wipes (such as KimWipes®) ensuring you do not scratch the surface. **The mirror should be free of any noticeable blemishes prior to continuing.**

**Step 3:** Insert and seal the tip into a sterilization pouch
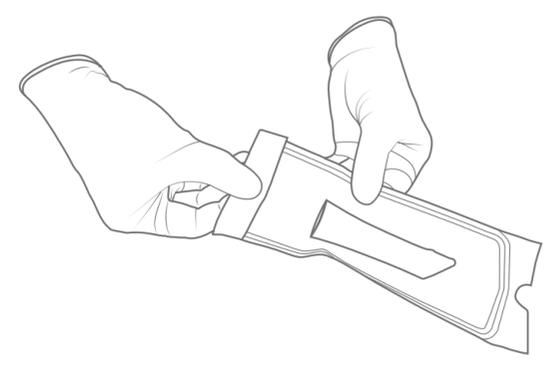
Step 4: Sterilize the wrapped tip in a steam autoclave at a temperature of **132°C (270°F) and 210kPa (30.46 psi) for 6 minutes**
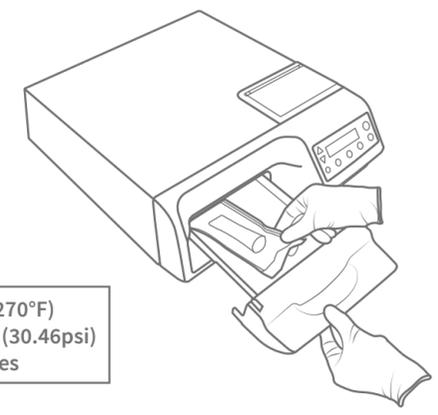
132°C (270°F)
210kPa (30.46psi)
6 Minutes

Scanning Step 1: Creating a Case

1. Launch QuantorClinic software
2. In the Project window select New **(A)**
3. In the Name window enter patient name **(B)**
4. In the Job Definition window select the tooth/teeth to be worked on **(C)**
5. Once you have selected all teeth click SAVE **(D)** at the top of the screen, you will notice all three ACTIONS (SCAN, dentalshare, PRINT) icons are now activated **(E)**
6. Click the yellow SCAN icon in top right corner of screen
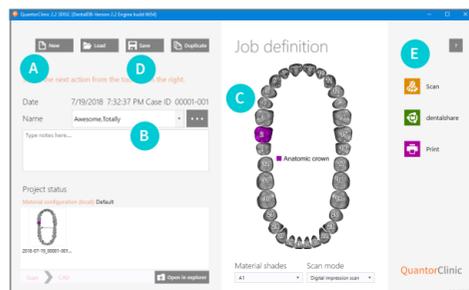
7. Quantor3D will auto launch taking you to the scan window

Scanning Step 2: Scanning Preparation

Prepare the patient for the scan by ensuring that their teeth are clean, as dry as possible, and void of any saliva bubbles, as they will show up on the scan. A cheek detractor may be utilized if necessary. It is also important to inform the patient about the procedure that is about to take place.

Equipment Check:

☑ Connect all of the equipment as indicated in this guide
☑ Ready indicated on screen
☑ Sterile tip installed
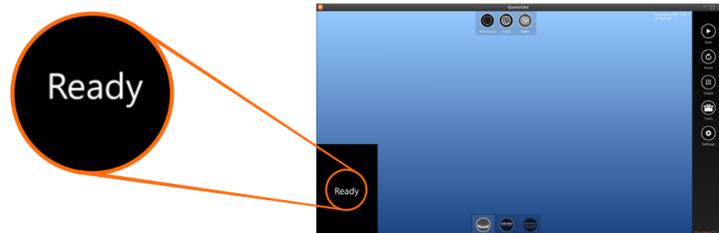
Scanning Strategy:

The most important part of acquiring a good scan is to be **slow and methodical**. Quick, jerky sensor movements will result in the target being outside of the supported field of view and/or in the loss of target tracking; both issues will be indicated by a red rectangle on the 3D model. Surfaces with distinctive 3D structures, such as the tops of the molars, provide an easy surface that can be used to restart target tracking. Flat surfaces, such as the incisors, are less reliable for restarting a scan.

Although we do have specific directions regarding how to scan – **scanning is a skill that requires practice.** Prior to use on a patient, practice should be conducted using a dental typodont model.

Lower & Upper Jaw Scans

1. Start the scan path on the working arch (jaw) that has the restoration of interest.
2. **Full Arch, O.L.B. (Occlusal, Lingual, Buccal)** – Start on the **occlusal** of the distal most tooth in the arch (right side or left side) and proceed across the arch, when you get to the canine area slide slightly towards the lingual surface until you reach the pre-molar where you will move back to the occlusal surface completing the occlusal scan to the distal most tooth. Reference the "live view" window to make sure the scan path is oriented correctly, and refer to the "main screen view" to observe "holes" being filled while traversing the scan path.
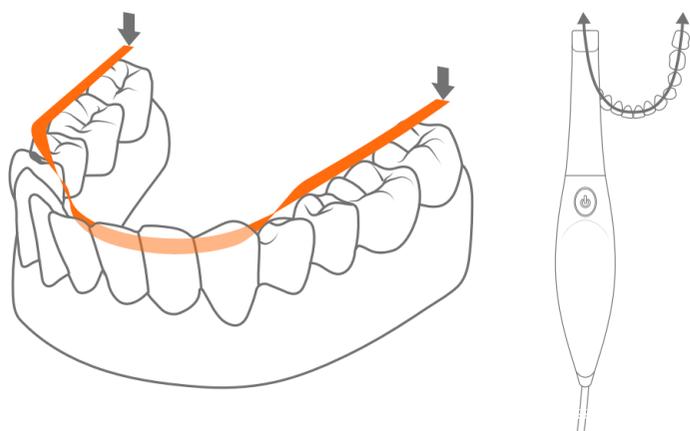

Scanning Step 3: Basic Scanning Procedure

1. Place the open end of the tip of the heron over the area of interest, and keep it stationary.
2. Click the scan button **(A)** once in QuantorClinic, or **press the main button on the handpiece**.
3. Keep the sensor stationary over the object of interest until you hear a clicking sound **(if there is no clicking, please adjust the sound settings on your computer)**. You should see a 3D surface in the model view window, with a green rectangle which indicates the last scanned position **(B)**.

4. Continue scanning by moving the scanner slowly over and around the area of interest. The Heron IOS can scan at a range of 0 to 12mm, however, better scans are obtained at a closer range**, and it is okay if the tip touches the teeth.** During scanning, you should continue to hear a rapid clicking sound and observe a green rectangle indicating the last scanned area.
5. **If the clicking sound stops** and a red rectangle is visible on the model, this indicates that data from the sensor is no longer being integrated into the model. **In order to continue scanning, place the sensor over any area that you have previously scanned.** When new data is being added to the model, the red rectangle will change to green, the clicking sound will resume, and you can continue scanning.

6. **The scan can be paused by pressing the scan button on the handpiece, or the scan button (A) in QuantorClinic.** It is recommended to inspect the 3D model, as it may be necessary to re-scan certain areas in order to fill in gaps, or improve the scan quality.

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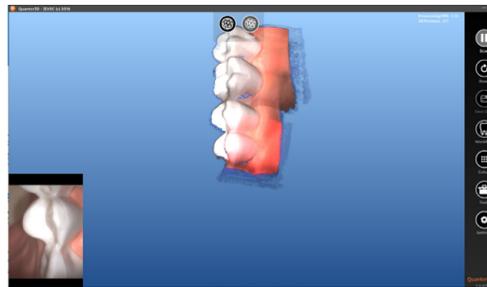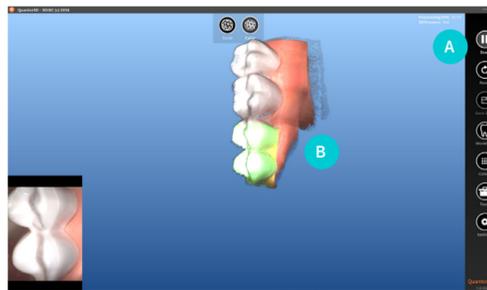
3. After you complete the occlusal scan drop down to the **lingual** surface and scan all the **lingual** surfaces of all the teeth
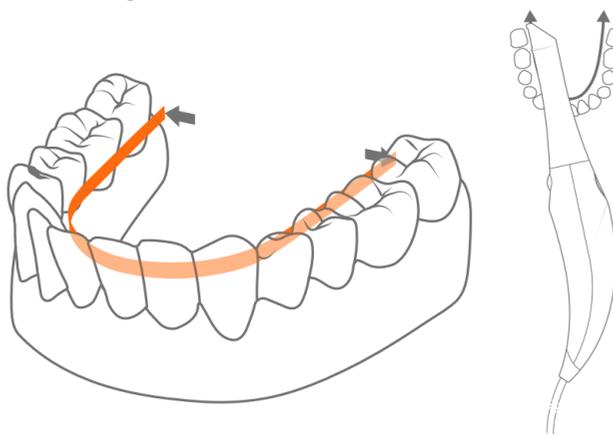
4. End your scan path by scanning the **buccal** surface of the posterior teeth and the facial surface of the anterior teeth to complete your scan strategy.
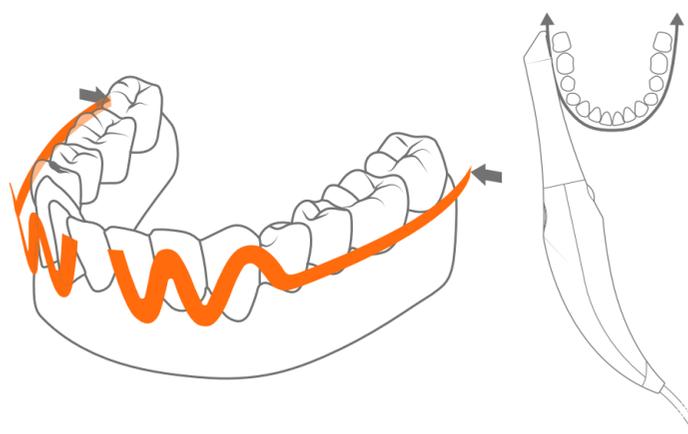
5. You can turn the scanner off at any point during the scan; **make sure you restart the scan on any occlusal surface** that you have already scanned to re-orientate the scanner
6. Use the same strategy for the top bridge, or to do a quadrant.

Scanning Step 4: Finalization (A.T.R.S)

7. The scan is saved automatically at each step in the workflow.
8. To restart the scan, press the reset button. This will delete the current scan and allow one to start a new scan.
9. After a scan step is complete you will see a green check mark in the workflow at the bottom of the screen beneath the appropriate icon

After the basic scan has been conducted, below are some tips that should be followed to finalize the scan.

☑ **Analyze** the scan for completeness and accuracy, make sure to rotate the scan image on the main view screen in order to obtain a complete view of the scan data
☑ **Trim** away excess information (tongue, cheek, vestibule, tissue, fingers, etc.) that may interfere with a successful bite alignment. (The Trim options are on the right side work-flow in the "TOOLS" icon)
☑ **Rescan** any area that is missing critical data for the success of the final restoration
☑ **Save** and proceed to the next step in the scan strategy

Scanning Step 5: Exporting Files with Dentalshare & STL

- After you have successfully scanned the upper and lower jaws and aligned the bite it is time to export the scan files to the dental laboratory for fabrication of the restoration
- Dentalshare is a built-in file sharing system, your dental laboratory needs to sign up for a dentalshare account in order to use the dentalshare network
- STL exporting (outside of dentalshare)

Keyboard Shortcuts

Use these keys anytime:
- {R} – reset entire scan
- {X} – re-center scan
- {Space} – start & stop scanning
- {Enter} – same as clicking OK
- {Escape} – same as clicking CANCEL

To use while navigating:
- {Ctrl + Z} – undo last step
- {Ctrl + Y} – redo last undo
- {+/=} – increase size of tool
- {-/_} – decrease size of tool
- {C/Insert} – Crop to current selection
- {D/Delete} – Delete selection
- Hold Ctrl while clicking a tooth to copy last selection
- Hold Shift to apply last setting to multiple teeth

Bite Alignment Procedure:

The bite alignment procedure will be necessary to align the upper and lower jaws. This process will only be allowed if lower and upper jaw scans have been previously conducted. Once the Bite button is pressed, it may take a few seconds to load the previous scans.

1. Start scanning from the back of the upper buccal area. Move forward and backwards along the molar and pre-molar area, making sure to scan some of the gingiva area and to tilt the sensor upward slightly. When an initial alignment is found the jaw will be transformed into alignment with the bite scan. When a final alignment is found the application will "ring" and a green check mark will appear on the upper jaw image in the upper right corner of the application.
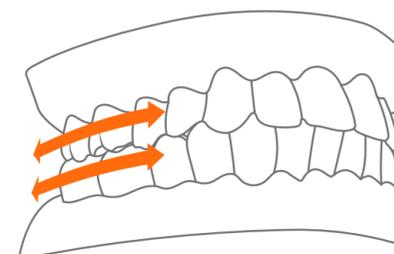
2. Once the upper jaw is aligned, move the sensor down to the lower jaw Again, move the sensor forward and backwards along the buccal of the molar and pre-molar areas, making sure to scan some of the gingiva area, and tilt the sensor downward slightly. The update process for the lower jaw is like that of the upper jaw, except when a final alignment is found a green check mark will appear on the lower jaw image in the upper right corner of the application.
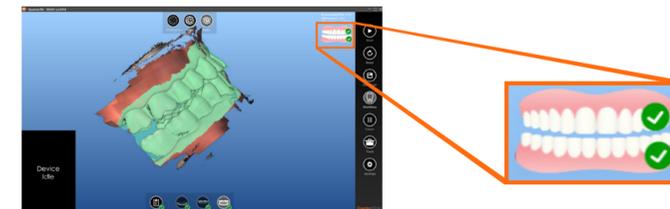
3. When both jaws have been aligned, pause the scan and review the alignment. If occlusal between the upper and lower scans is observed, you can choose to restart the bite alignment process or export the scans to fine tune the alignment in a third-party application.