

Kodak 9500 Scanning Protocol



Scanning Protocol for the Kodak 9500

For Use with iDent

General

This protocol is written specifically for users of Kodak 9500 cone beam CT scanner.

- Patient Scan – with the appliance firmly fixed in the patient’s mouth, as instructed by the dentist.
- Dual Jaw Scans (where necessary): mandible and maxilla must be scanned separately.
- Radiographic Appliance Scan – appliance alone in the Styrofoam holder provided by iDent.
- Remove metallic objects such as jewelry and metal prostheses.

iDent Scan Parameters

Use the following machine settings:

Settings for Patient with Appliance:

- Voxel : 0.3
- Scan Height: MFOV Setting 9 cm X 16 cm
- Scan Parameters: Select Settings appropriate for patient size
- Ensure the full appliance and appropriate arch are within the FOV using the upper/lower laser reference lines

Settings for Appliance scan:

- Voxel: 0.3
- Scan Height: MFOV Setting 9 cm X 16 cm
- Scan Parameter: 90 kVp/ 2 mA
- Ensure the full appliance is within the FOV using the upper/lower laser references

Patient Preparation, Positioning and Scanning

- a) **Appliance Positioning:** Ensure that the appliance is fixed and stable in the patient's mouth. The technologist should not perform the scan if the appliance does not fit easily and soundly in the patient's jaw – contact the dentist.
- b) **Patient Positioning:** The patient and the appliance should be motionless during the scanning procedure. In order to ensure this, the patient's head should be firmly attached to the Head Holder. If the lower jaw (mandible) is to be scanned, instruct the patient to bite an object such as a gauze pad.

The patient's head should be tilted so as to minimize the interference of the jaw and teeth images with artifacts stemming from metal fillings. A first positioning (before the Pilot scan) should be with the occlusal plane parallel to the scanner light marker. If the pilot scan reveals that the angulation is wrong, then further head tilting should be carried out. Each time that the patient's head is re-positioned, attachment to the head holder should be checked.

Any metal object such as jewelry should be removed from the scanned region.

- c) **Patient Scanning:** The region to be scanned should include all the relevant jaw volume, the appliance and the teeth. The horizontal marker line should be in center of the region of interest, in order not to miss relevant volume due to accidental patient motion.

Prior to the scan, the patient should be instructed not to swallow. The CT Technologist may wish to instruct the patient to swallow several times before starting the CT scan.

The Appliance Positioning and Scanning

- a) **Positioning:** The appliance should be placed in the Styrofoam (Polystyrene) box supplied by iDent (or use a Styrofoam block from any crafts store), in the same orientation as scanned in the patient's mouth. The appliance should be positioned similarly to the patient's head position during the patient scan, including the distance to the center of the FOV, the angle and the orientation.

- b) **Appliance Stability:** Ensure the stability of the appliance, using either the wide or the narrow slot in the Styrofoam box.



Never place the appliance in a vertical position.

Data Export

Use the export volume feature in Imaging to export to the corresponding folders as described below. Export the volume outside of the 3D Viewer.

Contact Kodak Imaging support for further export instructions if needed.

Data Saving

- a) Data for each jaw to be saved in **separate data sets (see below)**. The data for each diagnostic appliance should correspond to the data of the jaw.

Maxilla



Patient scan data



Appliance scan data

Mandible



Patient scan data



Appliance scan data

- b) Output: copy each corresponding Patient and Appliance scan files to a single 'Patient Name' folder (one for maxilla and one for mandible), zip and send using the internet.