

# NewTom 3G & VG Scanning Protocol



# Scanning Protocol for the NewTom 3G & VG Scanner

## For Use with iDent

### General

This protocol is written specifically for users of NewTom 3G & VG machines.

- Patient Scan - with the template 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 Template Scan - template alone in the Styrofoam holder.
- Remove metallic objects such as jewelry and metal prostheses.

## Patient Preparation, Positioning and Scanning

- a) **Template Placement:** Ensure that the template is fixed and stable in the patient's mouth. The technologist should not perform the scan if the template does not fit easily and soundly in the patient's jaw - contact the dentist.
- b) **Patient Positioning:** The patient should be motionless during the scanning procedure. 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 (figure 1).

Ensure the table brake is unlocked by turning the table lock knob counterclockwise and move the patient's head inside the gantry by sliding the table forward.

Remember to lock the table after every time you move it in or out.



Ask the patient to close his or her eyes during the centering process.

Center the patient so that the upper laser divides the face into two symmetrical halves (midline).

The position of the side (lateral) laser depends on the region of interest (i.e. mandible or maxilla)


The scout view will help you to make more precise adjustments.


Scout views are acquired at 0 degrees and 90 degrees. These are used to precisely position the patient for your region of interest.



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

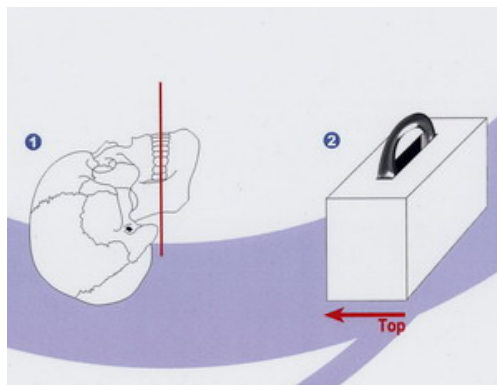
- c) **Patient Scanning:** After finalizing the positioning process using the scout view, continue to perform the scan.

 Prior to the scan, the patient should be instructed not to swallow.

 For further details, refer to the chapter of Centering the Patient and Running the Scan in the NewTom User Manual.

## Template Positioning and Scanning

- a) **Positioning:** The template should be placed in the Styrofoam (Polystyrene) box, in the same orientation as scanned in the patient's mouth (figure 1).
- b) **Template Stability:** Ensure template stability while maintaining the same orientation as in patient's mouth, using either the wide or narrow slot as needed.

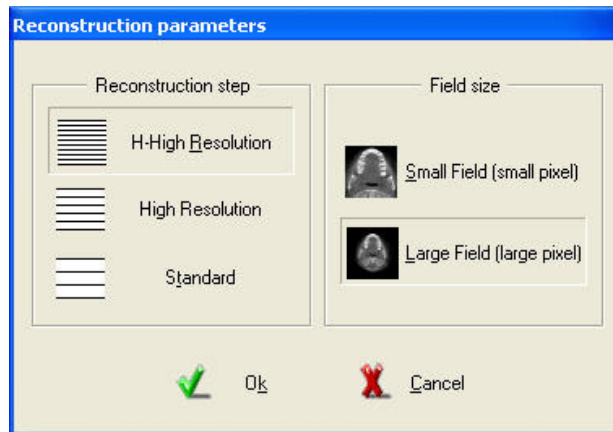


**Figure 1: Patient and Template Scanning Orientation**

## Data Reconstruction and Export

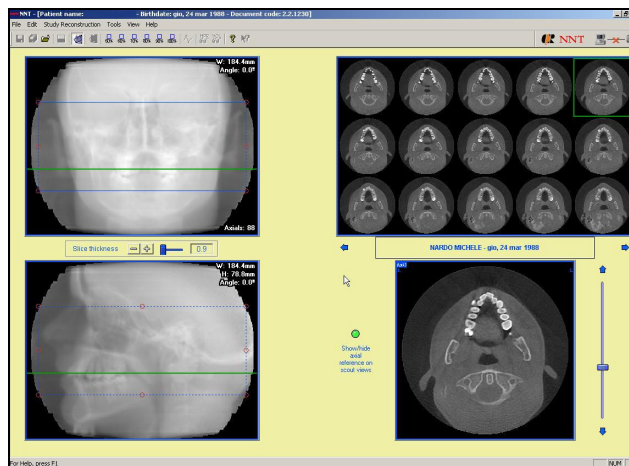
After the scan, perform Primary Reconstruction as follows:

- a) Choose H-High Resolution and Large Field



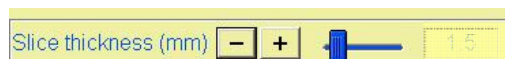
"H-High Resolution" and "Large Field" options

- b) No inclination (0°)



The "Blue" ROIs must NOT be tilted (0°)

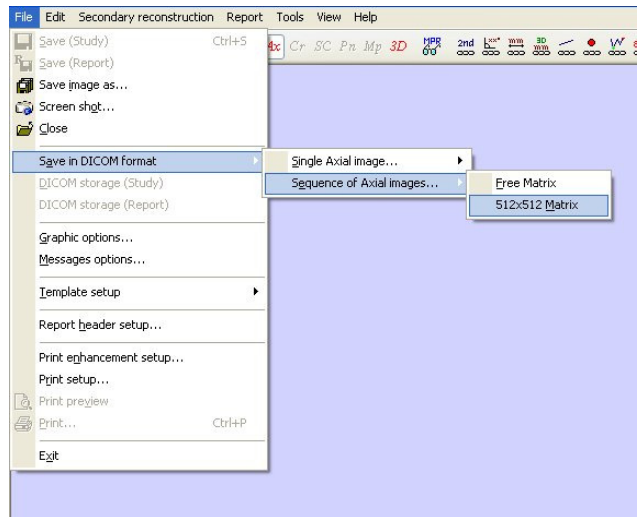
- c) Slice thickness - 0.4 mm



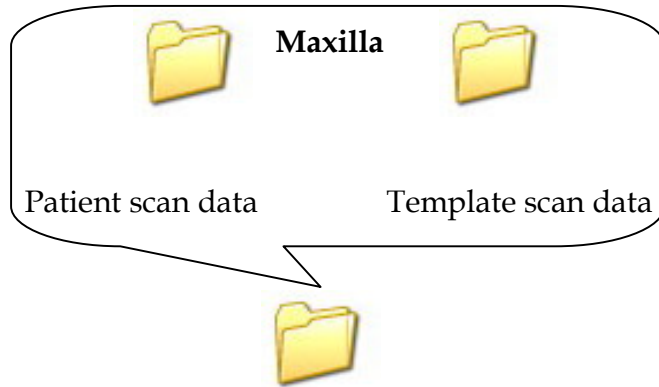
## Data Saving

After creating the studies, **export** data as follow:

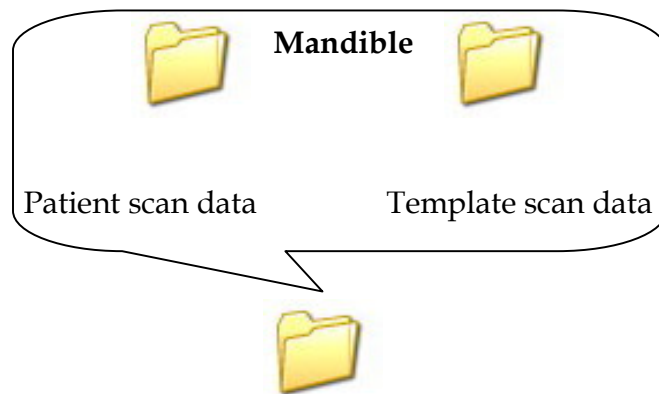
- a) Save data in DICOM format - Sequence of axial images (matrix 512x512)



- b) Data for each jaw should be saved in **separate datasets (see below)**. The data for each template should correspond to the data of the patient.
- c) Each patient and template datasets should be copied to separate folder, compressed (right click on folder > send to compressed zipped folder).
- d) Send zipped file(s) to iDent partner via the internet (contact your iDent partner for upload information).



**[Patient Name] Maxilla**



**[Patient Name] Mandible**