

**CT Protocol for the NobelGuide Concept
with NobelClinician™ software**

and

**Planmeca Promax® 3D Plus
Planmeca Promax® 3D Mid**

1 Planmeca scanner instructions

1.1 Image Acquisition

Version Planmeca software: Planmeca Romexis version 2.7.0.R or newer

Sensor serial number starting with letters TDV / TFM / TDMP / TFMP / TDVP / TFPP

NOTE! Planmeca ProMax[®] 3D Plus requires Planmeca Romexis 3.3.0.R or newer.

1.1.1 Calibration scan

| Sensor serial number | TDV / TFM / TDVP / TFPP | TDMP / TFMP |
|---------------------------|-------------------------|-------------------------|
| Normal resolution | 0.2 mm | 0.2 mm |
| kV, (adult, medium size) | 80 kV | 80 kV |
| mA, (adult, medium size) | 14 mA | 14 mA |
| Field Of View | 90mm Ø x 50 mm (Lower) | 100mm Ø x 50 mm (Lower) |
| Scan time | 18s | 18s |
| Slice Thickness | 0.2 mm | 0.2 mm |
| Imaging program | Teeth | Teeth |
| Artefact removal setting | Low (default) | Low (default) |
| HU correction | Off | Off |

The phantoms/objects should be placed on top of Planmeca CBCT guide holder (part number 10030330) provided with the Planmeca ProMax[®] 3D Plus and Planmeca ProMax[®] 3D Mid.

NOTE! Bring the imaging arm as far to the front as possible, using the Positioning joystick on the Planmeca ProMax[®] 3D Mid, to be sure to get the whole object into the image.

For more information on the NobelGuide calibration object, please consult following sections of the NobelClinician Help Files in the software: My Office Module > Scanner Calibration.



1.1.2 Radiographic guide scan

| Sensor serial number | TDV / TFM / TDVP / TFPP | TDMP / TFMP |
|---------------------------|-------------------------|-------------------------|
| Normal resolution | 0.2 mm | 0.2 mm |
| kV, (adult, medium size) | 80 kV | 80 kV |
| mA, (adult, medium size) | 14 mA | 14 mA |
| Field Of View | 90mm Ø x 50 mm (Lower) | 100mm Ø x 50 mm (Lower) |
| Scan time | 18s | 18s |
| Slice Thickness | 0.2 mm | 0.2 mm |
| Imaging program | Teeth | Teeth |
| Artefact removal setting | Low (default) | Low (default) |
| HU correction | Off | Off |

The phantoms/objects should be placed on top of Planmeca CBCT guide holder (part number 10030330) provided with the Planmeca ProMax 3D Mid.

It is important to position the object in the middle of the FOV.

1.1.3 Patient scan

| | | |
|---------------------------|-------------------------|-----------------|
| Sensor serial number | TDV / TFM / TDVP / TFPP | TDMP / TFMP |
| Normal resolution | 0.2 mm | 0.2 mm |
| kV, (adult, medium size) | 90 kV | 90 kV |
| mA, (adult, medium size) | 12 mA | 12 mA |
| Field Of View | 90mm Ø x 90 mm | 100mm Ø x 90 mm |
| Scan time | 18s | 18s |
| Slice Thickness | 0.2 mm | 0.2 mm |
| Imaging program | Teeth | Teeth |
| Artefact removal setting | Low (default) | Low (default) |

1.2 Export image from Planmeca Romexis

In Romexis 3D Module click the Export button in the Output group of the Main Toolbar.



Export the image with original resolution, 15bit Bit Depth and as a Set of Single Frame DICOM Files.

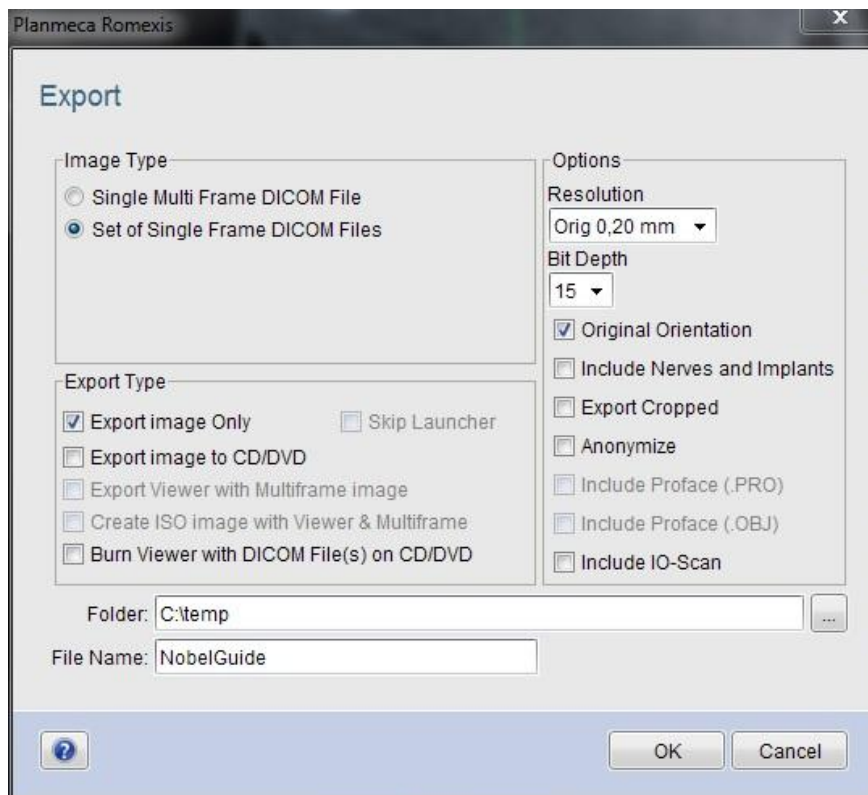


Figure 1:Export settings for Romexis. Set the resolution according to the specifications in section 1.1.

2 Import the scan in NobelClinician

To create a 3D model of the patient and the radiographic guide, it is important to select the appropriate DICOM files, to set the most appropriate volume of interest and to indicate the optimal isovalue. The system will guide you through these steps in the Create Bone Wizard and the Create Guide Wizard.

For more information and guidance, please consult following sections of the NobelClinician Help Files in the software:

- Planning a patient > Bone model > Create a 3D bone model
- Planning a patient > Radiographic Guide model > Create a 3D radiographic guide model

3 Alignment of radiographic guide and patient bone

The patient bone model and the radiographic guide model will be aligned automatically.

If problems occur during the automatic alignment or when automatic alignment fails, this can be rectified by doing a manual alignment.

The Manual Alignment wizard is for advanced users only! Please first check that there are no artifacts, for example motion artifacts in the CT images, and that the NobelGuide protocol has been followed meticulously.

For more information and guidance, please consult following section of the NobelClinician Help Files in the software:

- Planning a patient > Radiographic guide model > Explaining the radiographic guide wizard