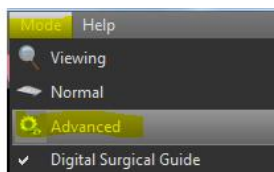# Fabricating a Surgical Guide

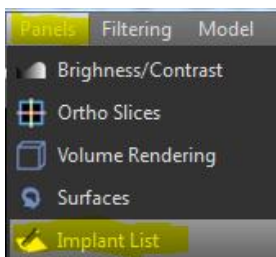**Using non-Blue Sky Bio drills**

When planning a case using non-Blue Sky Bio parts, other manufacturer's surgical kits, creating a surgical guide is a very simple procedure.

It is recommended that the Mode be set to Advanced, as only minimal modifications to the settings are necessary. Advanced Mode gives the added benefit of allowing the tweaking of all available settings within the software.
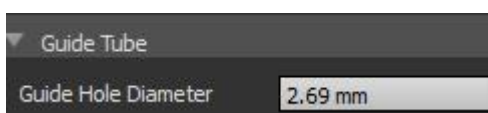
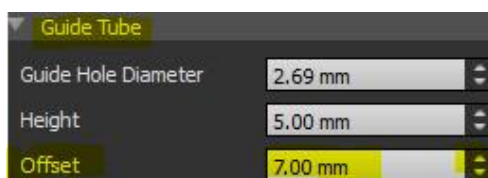**(1)**	Verify that the software is being used in "Advanced" Mode.

(2)	Open Implants List panel if not already open

Make the following changes to the Guide Tube

Guide Hole Diameter: Set this value to be 0.1mm greater than the outer diameter of the metal guide tube to be placed. Metal guide tubes, compatible with almost every guided surgical kit, can be found at: https://blueskybio.com/store/guide-tubes
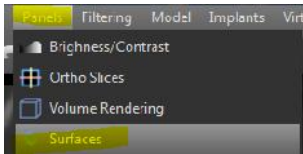
Offset: The offset should be set so that it is equal to the drill length, less the implant height, less the "lip" of the guide tube and keys.

Set this value to satisfy the following equation:

Drill length = Implant length + Offset + 1mm lip,

therefore **Offset = Drill length – Implant length – 1mm lip**.

Contact plan@blueskybio.com for assistance.

(3)   Click Panels > Surfaces to open the Surfaces Panel.

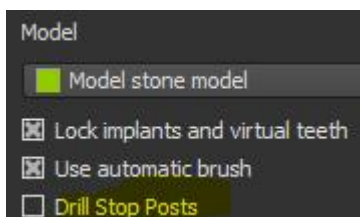Select the relevant model and click Visible to make sure that just that model is active and visible in the 3D view.

(4) Draw Curve

Use the maximize button to enlarge the 3D view for better visibility.
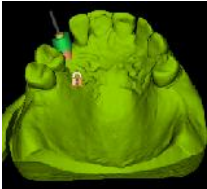
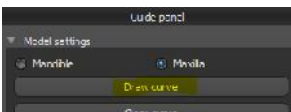Click the Guide Fabrication icon on the Toolbar

Use the Model dropdown to select the relevant model.

Uncheck to shut off Drill Stop Posts

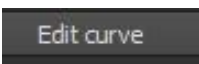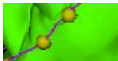 Rotate and move the model to position as needed.

 The Draw Curve button is used to trace the borders of the guide on the relevant model, in the form of a closed loop.

Click the Draw Curve button and hold the <Shift> key while also holding the left mouse button to drag and draw the curve on the model.

Release the <Shift> key and use standard mouse functionality to reposition the model as needed in order to complete the loop.
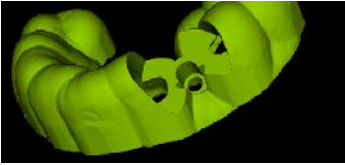
(5) Edit Curve

 Click the Edit Curve button to move control points to remove sharp edges and correct any crossed lines that can result in problematic guide design and fabrication.

(6) Create Guide

 Click Create Guide.

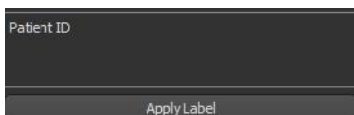 After a few moments, the completed surgical guide will appear in the 3D view.

Additional Functionality

 The Brush function can be used to smooth the outer surface of the surgical guide.

Hold the <Shift> key and left mouse button, and move the cursor over the parts of the guide to be modified.

The Brush tool should not be applied to the underside of the guide as this will affect its stability and accuracy.

 Text can be applied to the guide to facilitate identification.

(1)   A patient identifier, code or other text can be typed into the Apply Label text box.

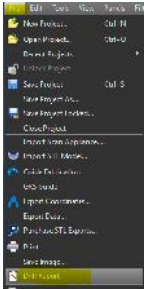 (2)   Position the guide behind the text as it appears in the 3D view.

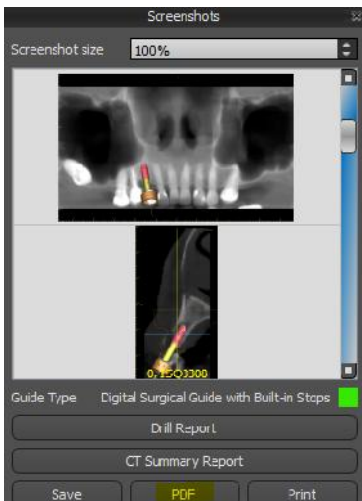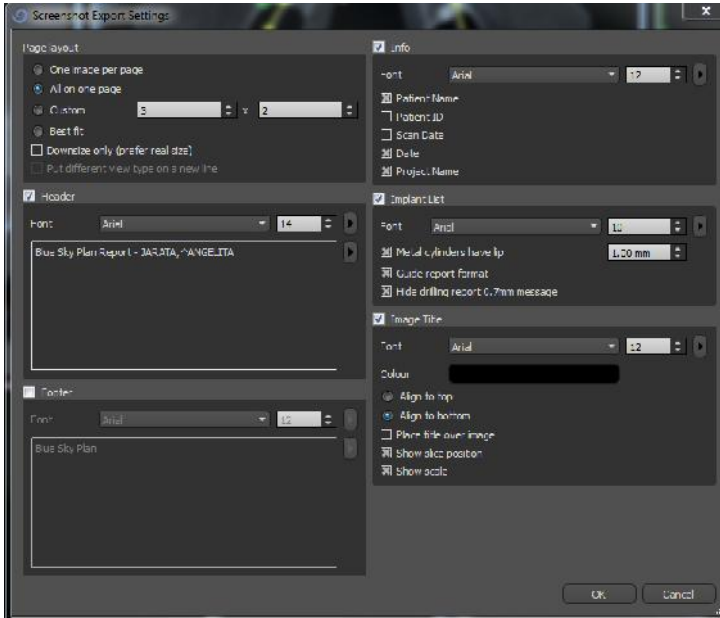 (3)   Click the Apply Label button to emboss the text on the guide.

Drill Report

A drill report can be generated by clicking File > Drill Report.
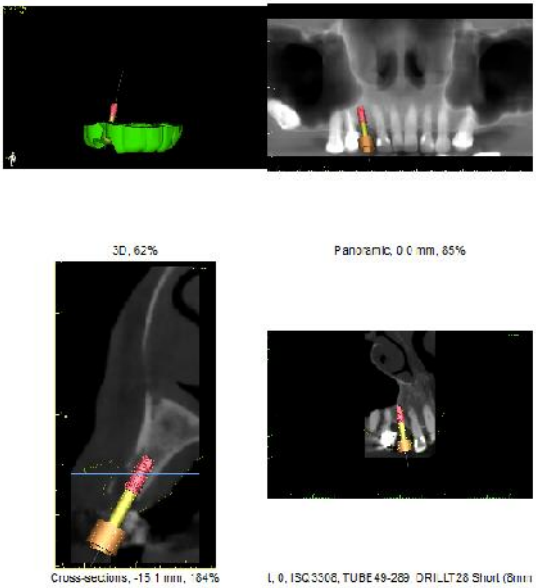

In the Screenshots Panel, click PDF.

Select parameters as needed, then click OK.

Note: Information generated by the "implant list" section of the report should not be relied upon when not using Blue Sky Bio drills.

Sample output showing patient, drill and implant details as well as required drill depth (for Blue Sky Bio drills).