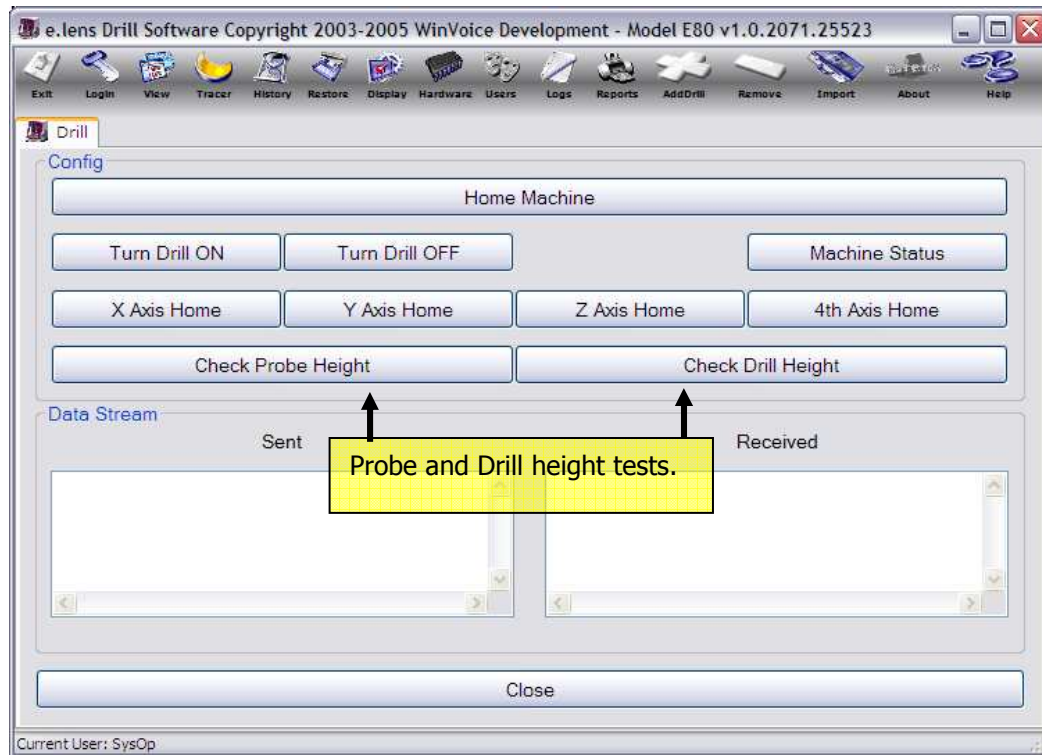
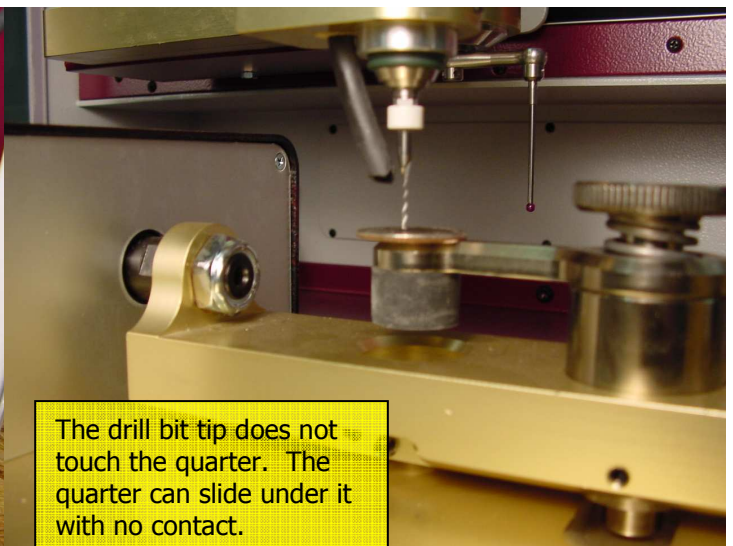
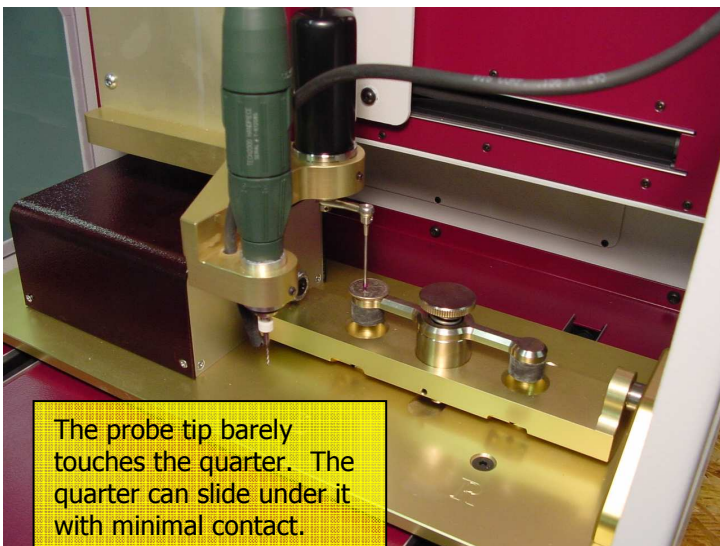


In the middle of the window are the **Check Probe Height** and **Check Drill Height** buttons.



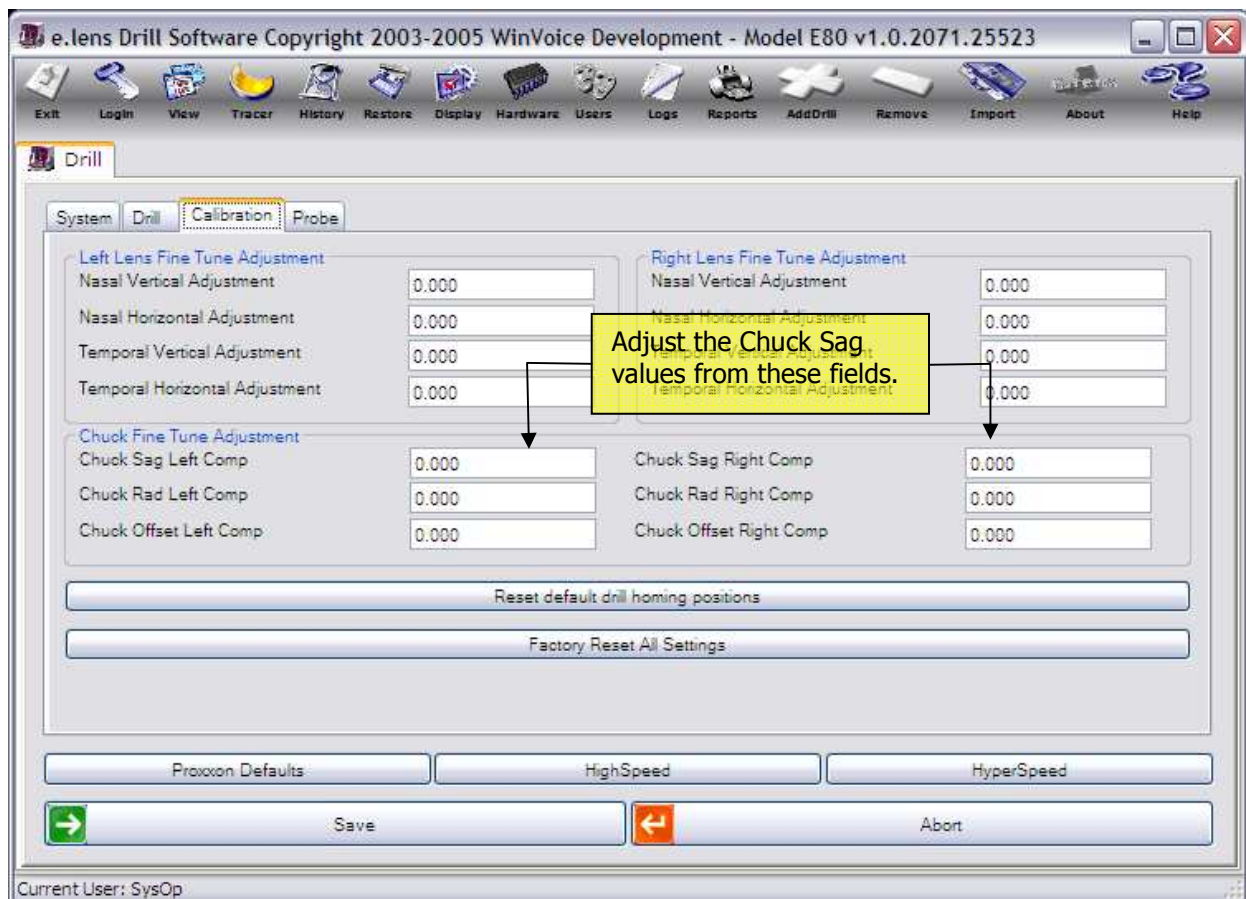
Click on the Check Probe Height button and follow the on-screen commands to set the probe to the correct height. After that is done, go through the same process with the Check Drill Height button.



Now that the probe and drill are set to the correct height, close the Test interface by clicking the Close button on the bottom of the screen.

Advanced Calibration

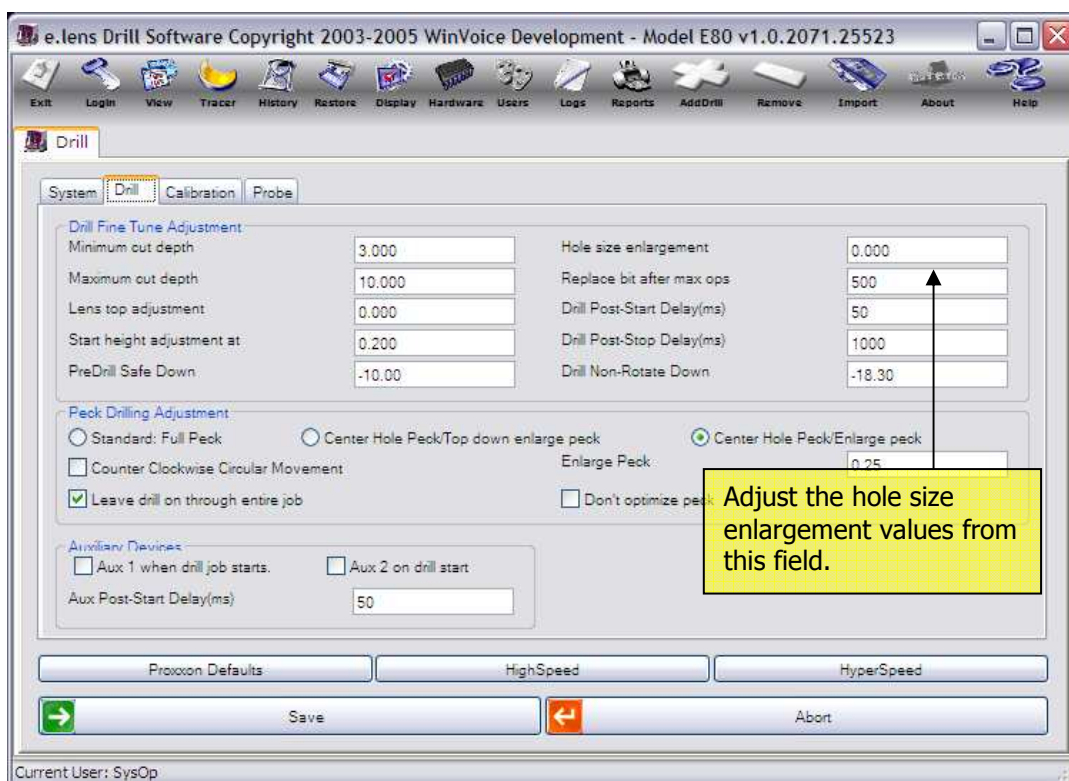
To make the e.lens Drill incredibly precise, the **Fine Tune Calibration** values may need to be set to compensate for variations in the hardware. The first adjustments that need to be made are the **Chuck Sag Compensation** and **Chuck Offset Compensation**. Testing to see if the chuck sag values need to be changed requires a 6-base and an 8-base lens cut to the 48x48 square calibration shape. Make sure to mark the exact base curve on the lens so they are distinguishable during the testing process. Open the manual job screen and select the Mfg as 'Calibration' and the Model as 'Chuck Height Compensation.' Select the size as 'Chuck Height Compensation Test' and drill the 8-base lens, making sure that the front curve is correctly set to exactly the curve of the lens. Use a Silhouette insert and check to see if the top of the insert fits flush with the lens without bending. If it does not sit on the lens flush with the curve, open the Fine Tune settings by clicking on the Settings button from the main screen, then selecting the Fine Tune button near the top right side of the screen. Enter the password and click on the Calibration tab.



In the middle of the screen are the fields for entering the Chuck Sag and Chuck Offset values. Change the Chuck Sag Left and Chuck Sag Right by adding 0.5,

moving the holes 3mm up and re-drilling the Chuck Height Compensation Test to check it again. Repeat this process until the insert sits flush with the curve of the lens without bending. If there is no more material on the lens to move the holes up, use negative values to go below the axis line. Next, drill the job again with the 6-base lens to check if the insert sits flat. When the Chuck Sag Left and Chuck Sag Right values are correct, the insert will sit flush on both the 6 and 8-base lens.

Another thing that needs to be set during this test is the Hole Size Enlargement value. If the inserts are not fitting in the holes, use a dial caliper to make sure they are 1.4mm. If they are not, find an insert that is. If they are 1.4mm and do not fit, open the Fine Tune Settings and click on the drill tab. In the top right corner is the field for adjusting the Hole Size Enlargement.



Start by setting the value to 0.01 and re-drilling the job. Continue increasing the value in increments of 0.01 and re-drilling until the fit is perfect.

Now that the Chuck Sag values are set, we need to set the chuck height offset values. The Chuck Offset compensation makes the notches and holes cut the correct depth into the lens. To run the offset compensation test, use the 6-base 48x48 square calibration lens and drill the Chuck Offset Test size under the Chuck Height Compensation model. After the job is complete, measure the depth of the notch along the front edge of the lens. Adjust the Chuck Offset Left and Chuck Offset Right values to match the notch. For example, if the notch is measured to be 3.86mm, add the remaining 0.14 to the chuck offset value and

cut the job again. The new notch should be very near 4mm. Continue adjusting the offset value until the measured value is within 0.05mm from 4.

Another adjustment that may need to be made is the position adjustments for the events. The fields to edit these values are directly above the chuck sag and offset values. To set these values correctly, we need to drill the 'Axis Alignment Test' size under the model 'Manual Axis Adjustment.' The holes should lie perfectly on the axis line and the centers of the holes should be exactly 3mm in from the edge. If they are not, use a digital caliper or other precision measuring device to find out the exact amount the holes are off. Adjust the values for each side of the lens on both the left and right lenses until they are in the correct position. These values should remain 0 unless there is a drastic problem in the positioning of the holes after a regular calibration.