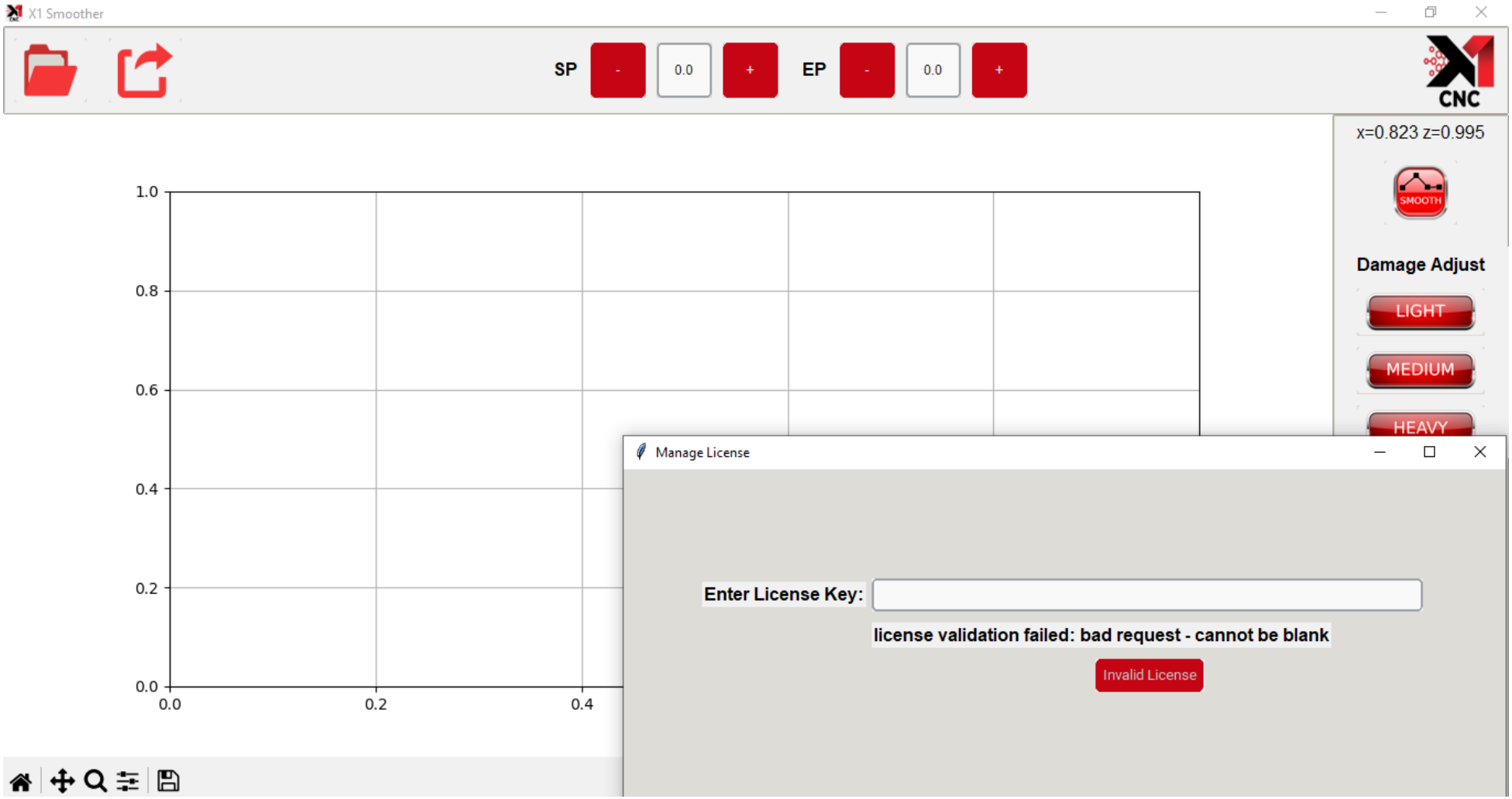
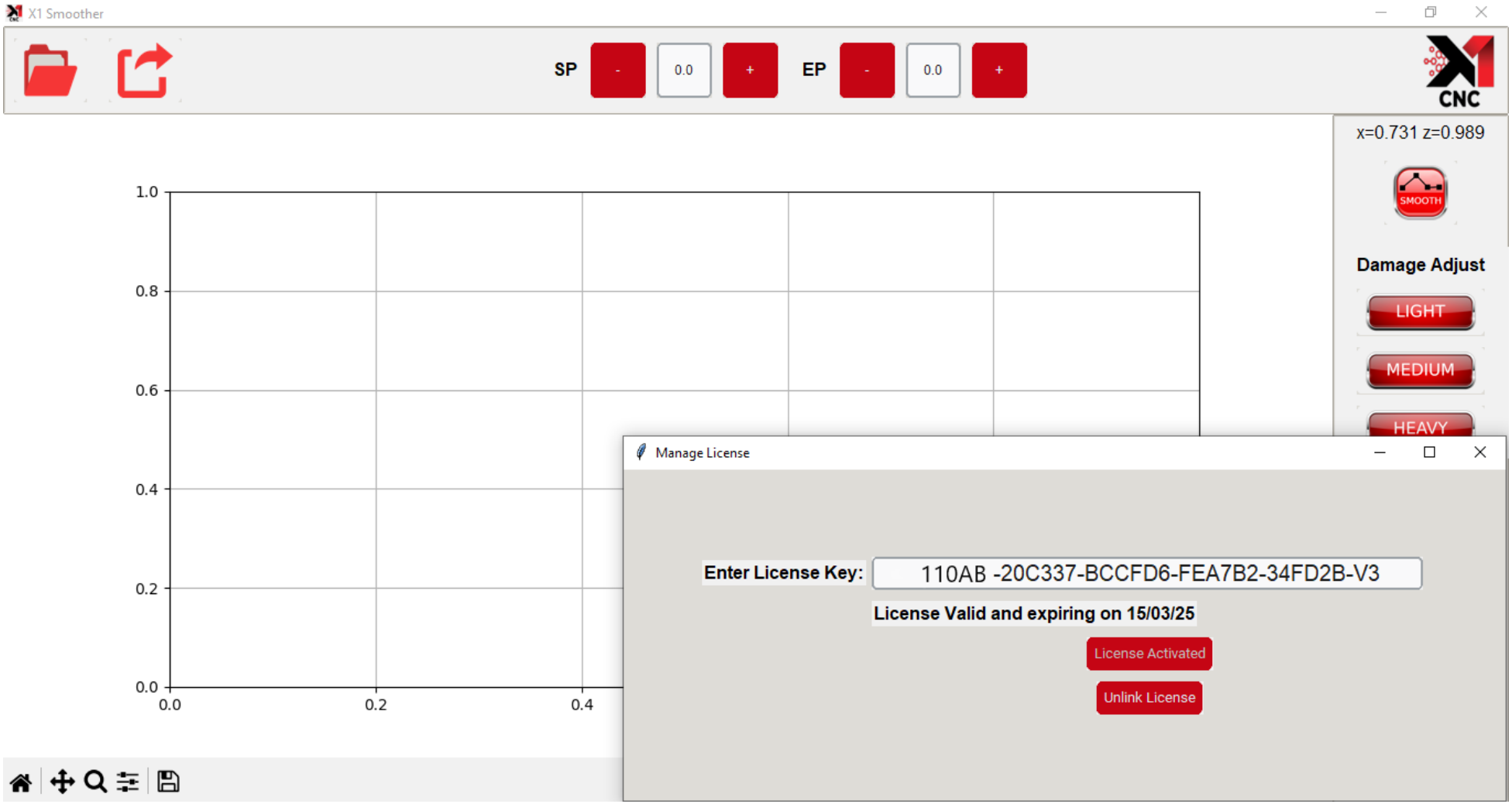
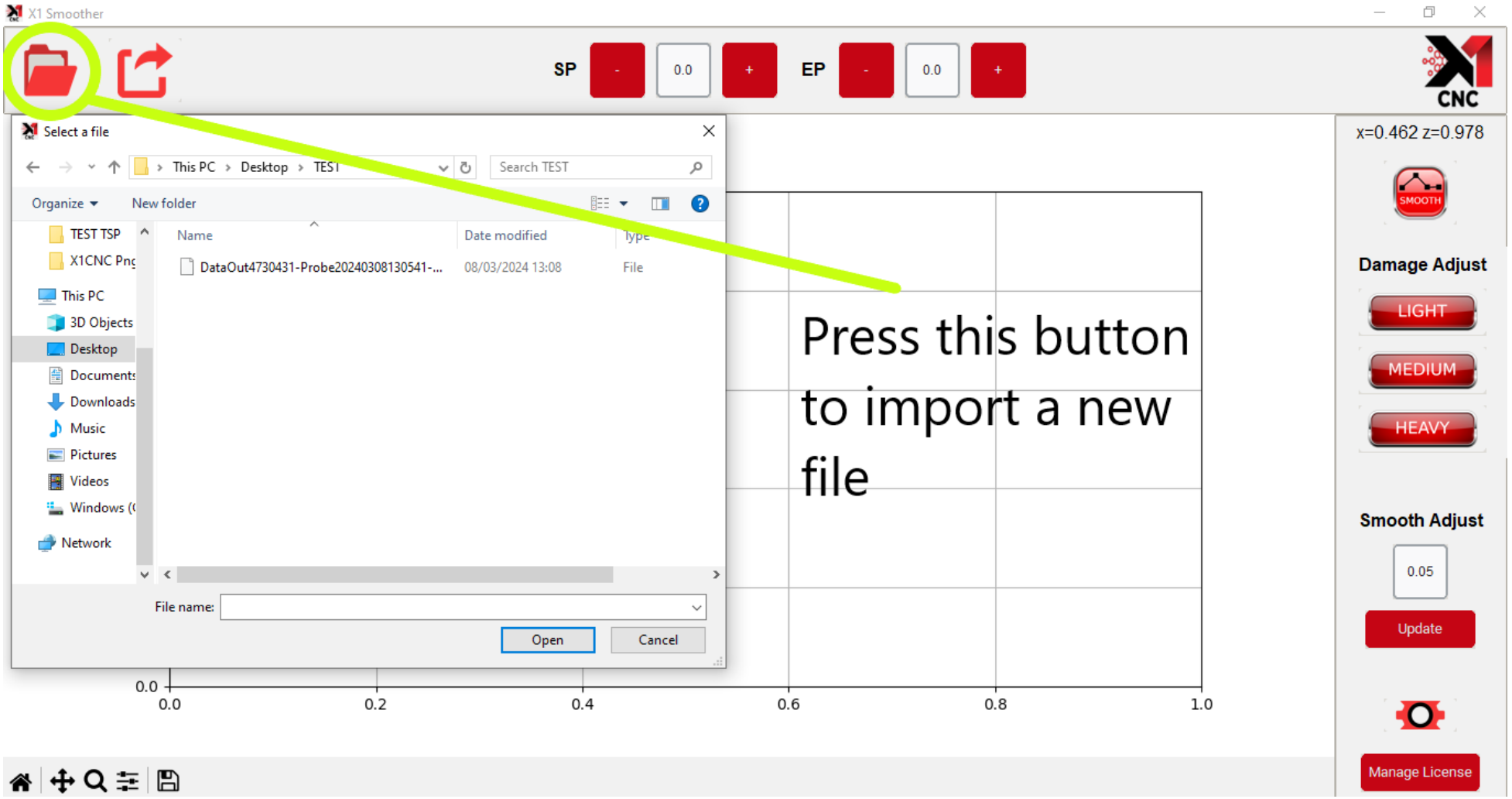
X1 Smoother User Manual



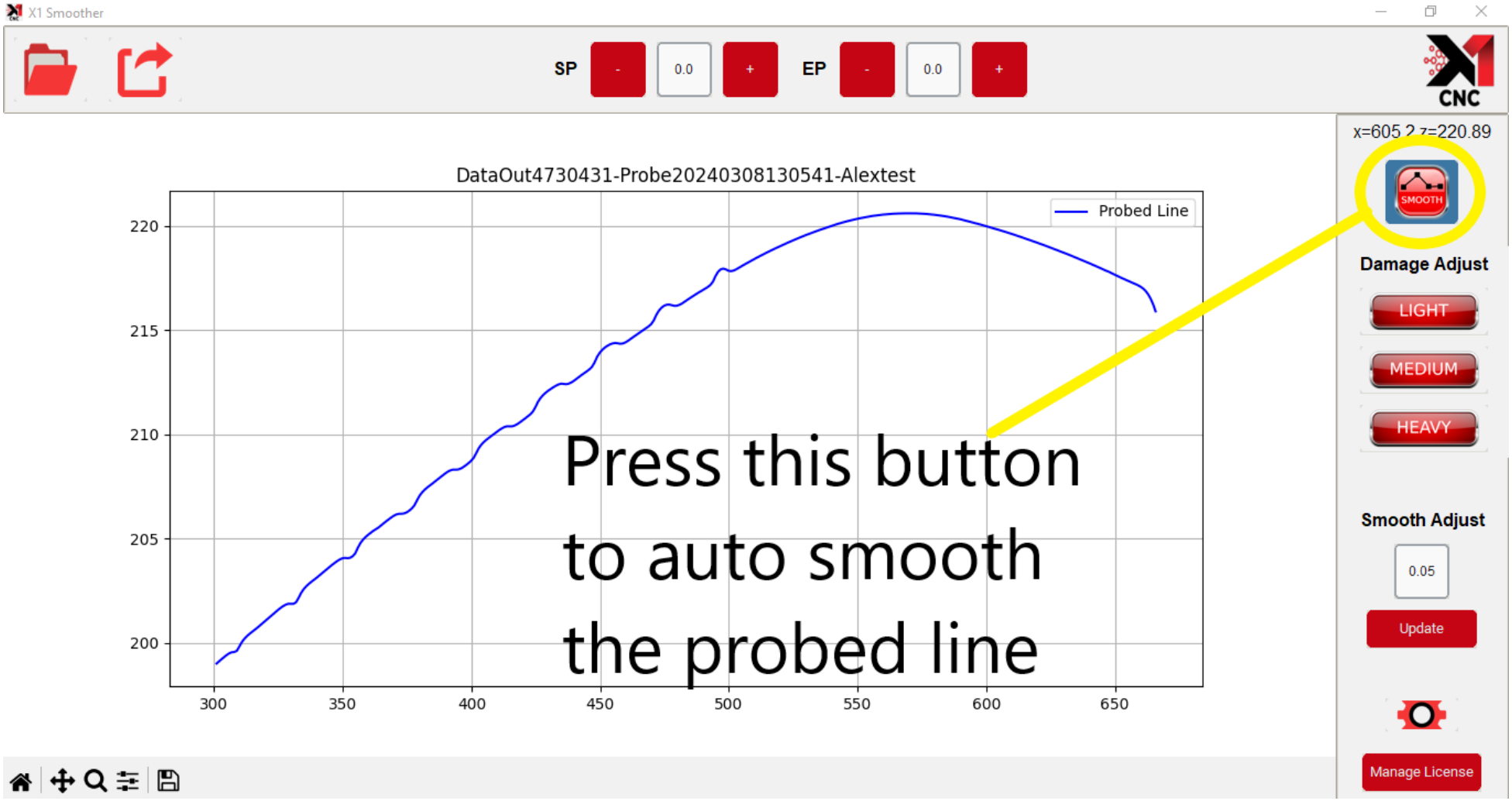
Once you open the software for the first time, you will be prompted to enter the license key which you should receive within 24 hours by email.



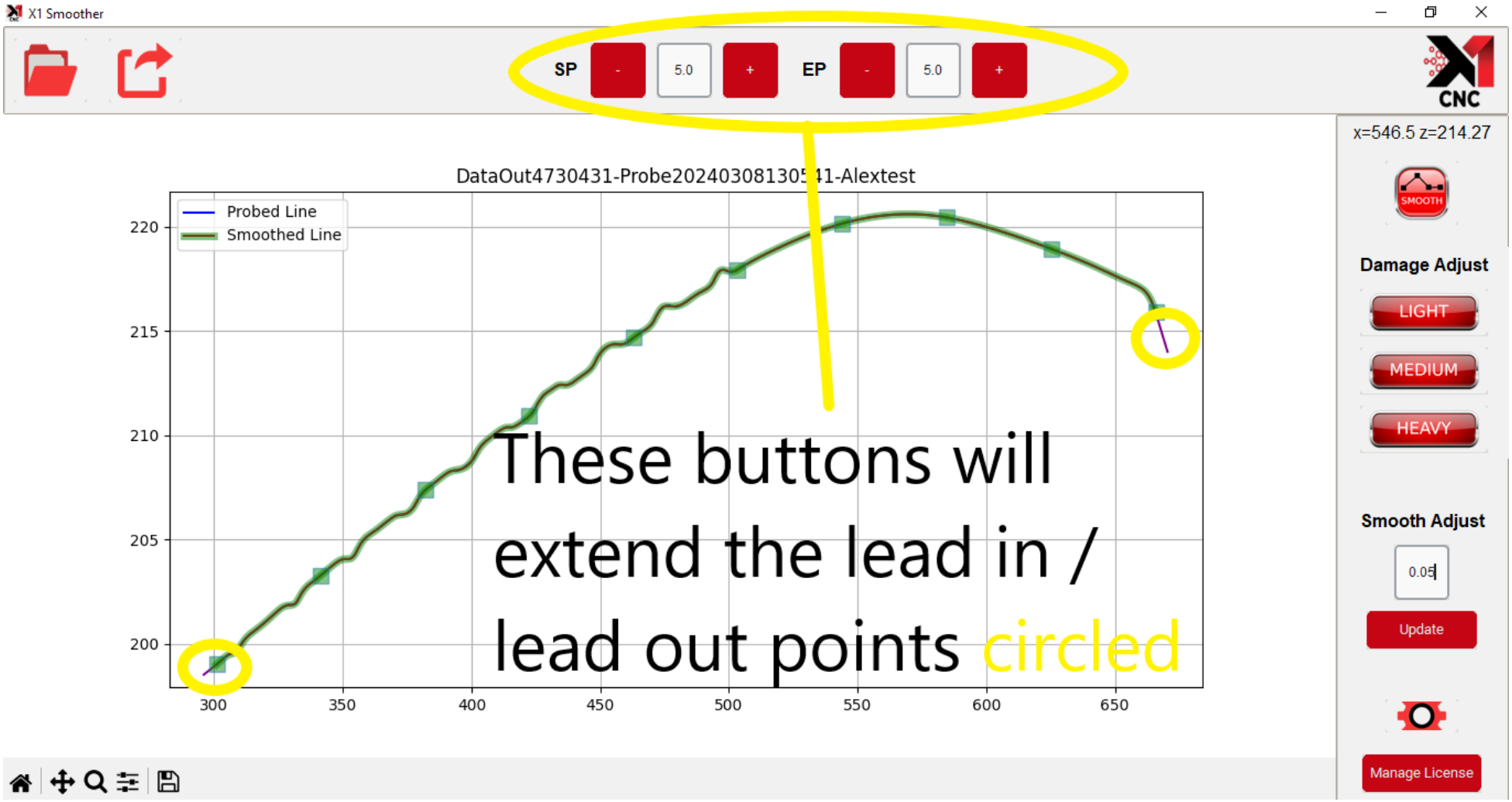
It should then say that the license has been accepted and show you the expiry date.



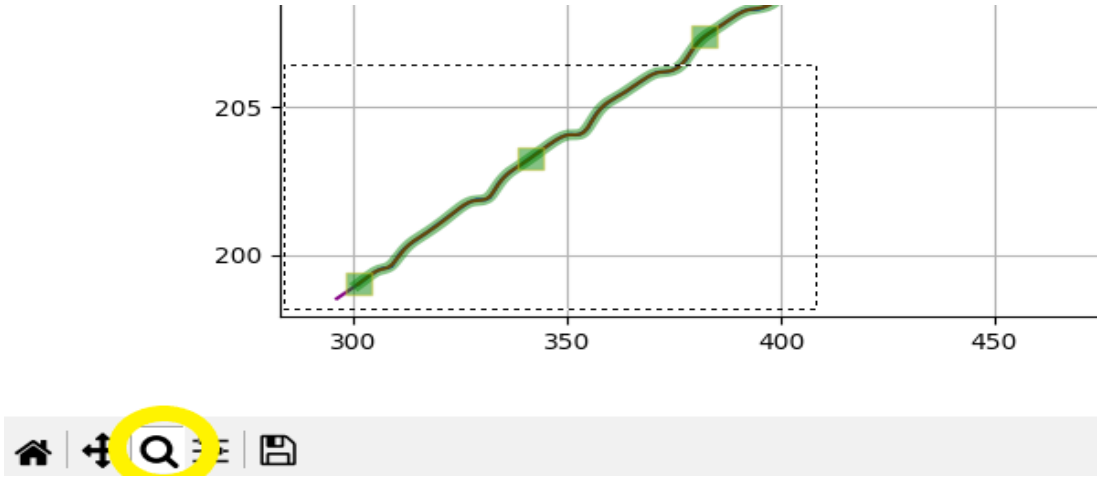
Click the open file icon in the top left and find the probed file you are trying to smooth and press “Open”. If you are struggling to find your file, click “Date Modified” to display the files in chronological order, so your latest one should appear at the top.



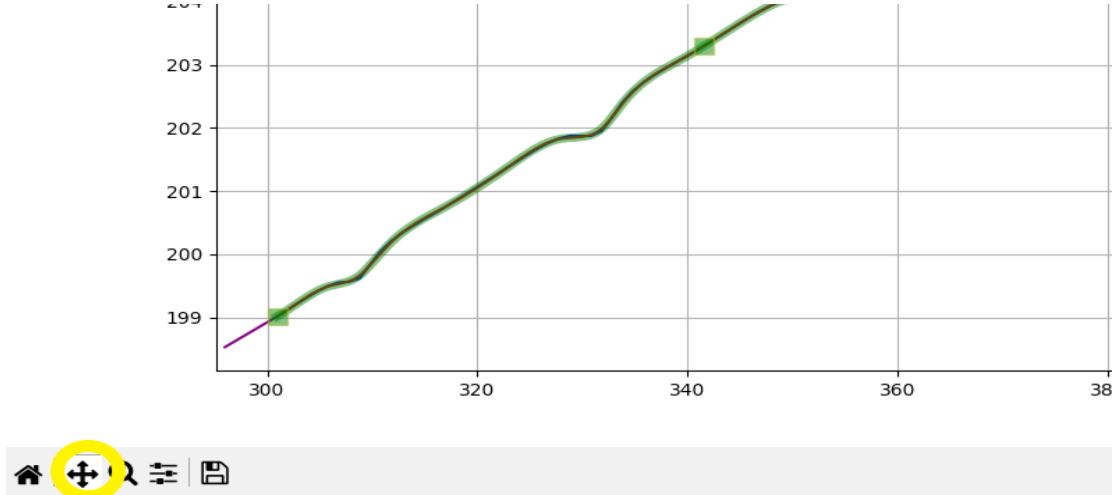
Press the smooth button to overlay your probed line with a green smooth line. The green line is what we are programming the cnc to follow.



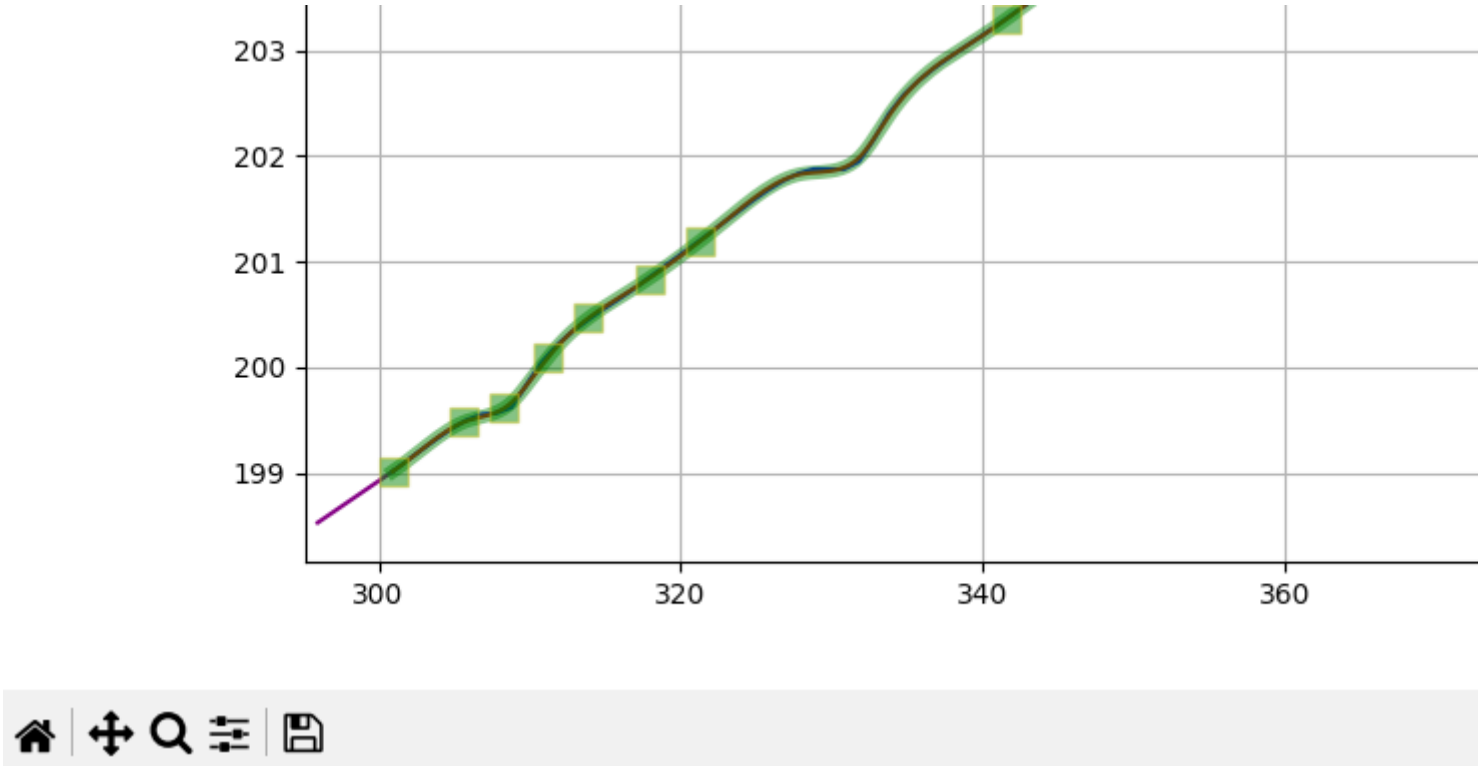
It is advisable on every wheel, to extend your lead in and lead out points. This prevents hard edges or lips at the beginning and end of the wheel by telling the cnc to start cutting earlier and finishing later, in this case, 5mm each way.



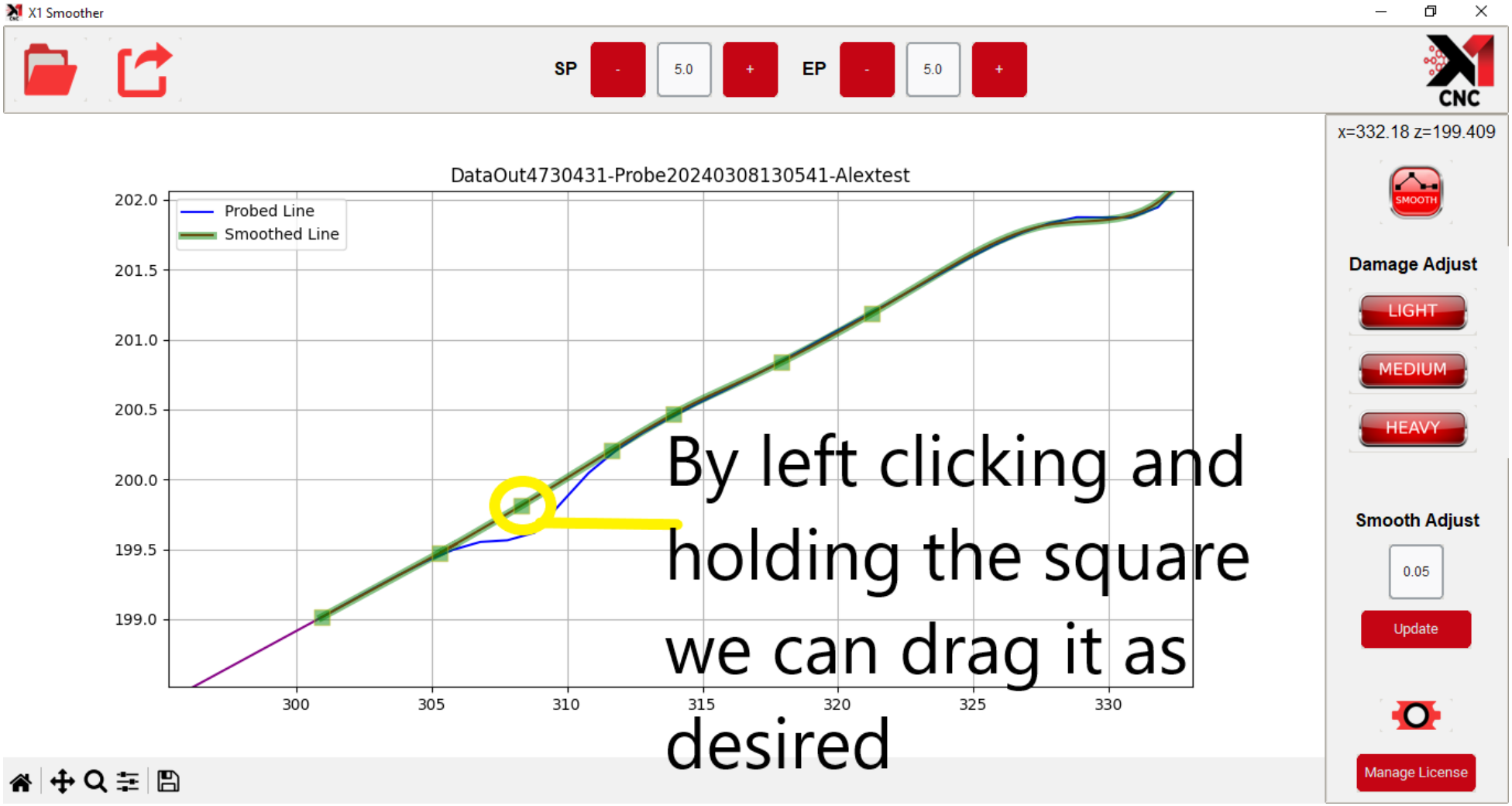
To zoom into any areas of the wheel, select the magnifying glass in the bottom left corner. Drag an area which you would like to fill the screen and then release. Once you are satisfied, press the magnifying fglass again to select the cursor. You can also press the home button on the very left to zoom back to the original state.



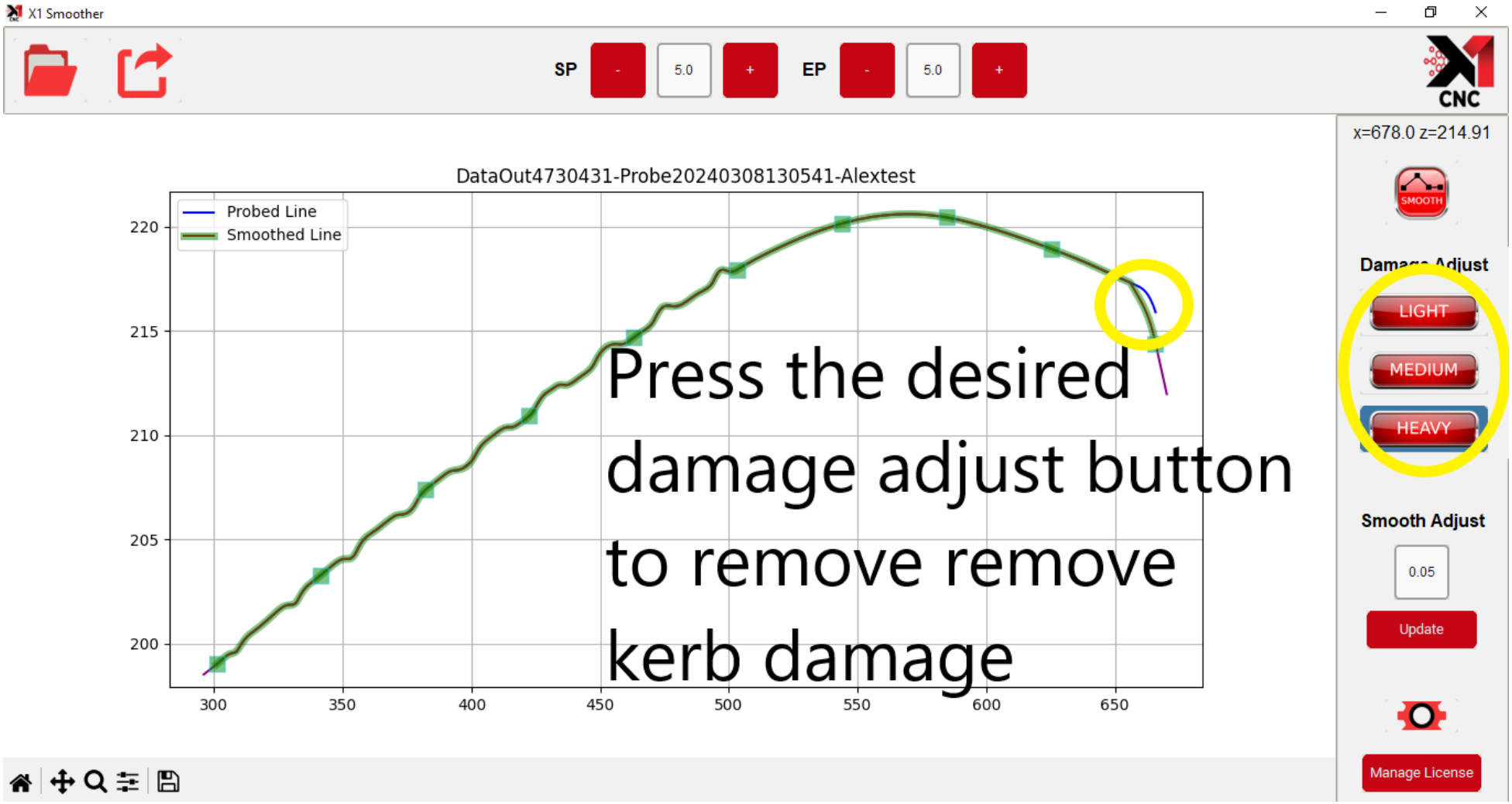
By pressing the arrow button, it will allow you to pan by clicking and holding the left cursor. Again once finished, press the arrow button to bring back the cursor.



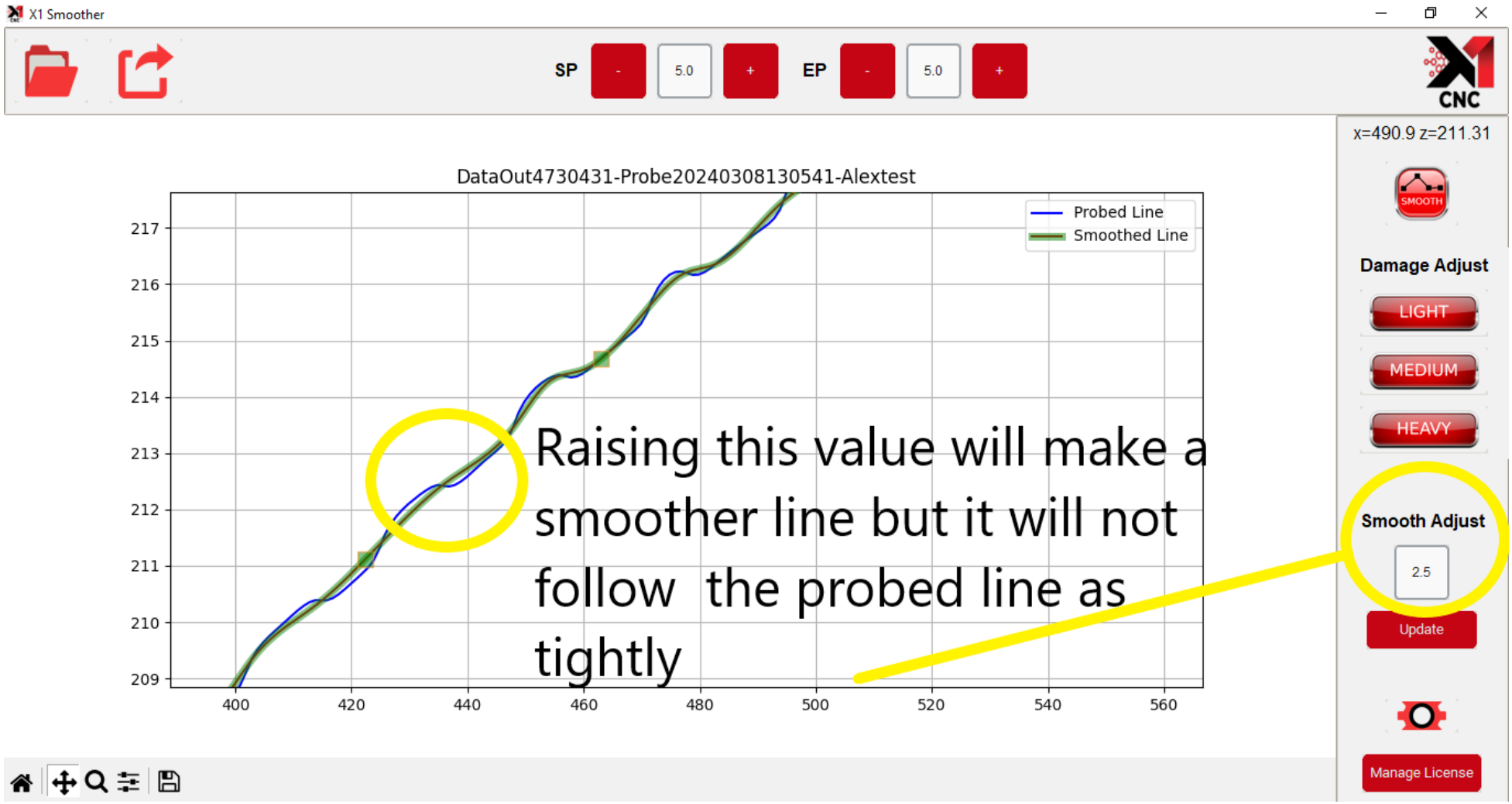
By hovering the cursor over any point of the green line and pressing “I” on the keypad, we can insert a point. Hovering over an existing point (green square) and pressing “D” will delete the point. Pressing “U” will also undo the last change.
In this case, we are wanting to raise the low point at the bottom so the cnc cuts over the top of it in a straight line. We have added a point just before the dip, in the middle of the dip and just after.



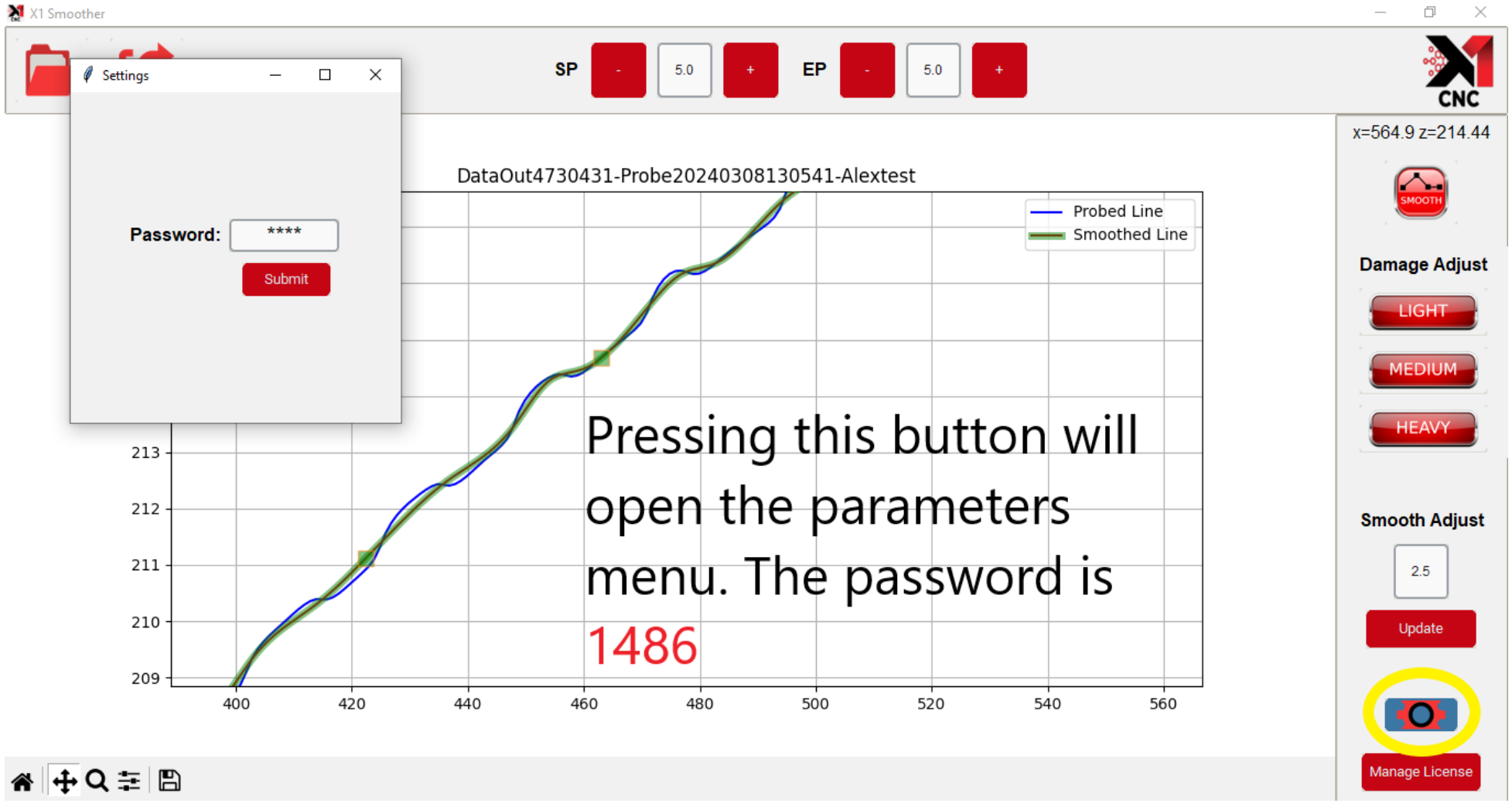
By left clicking and holding the mouse button over the point, we can now drag it upward to form a straight line. This will now prevent the cnc from cutting into this area and instead follow a straight line path over the top exactly as the green line shows.



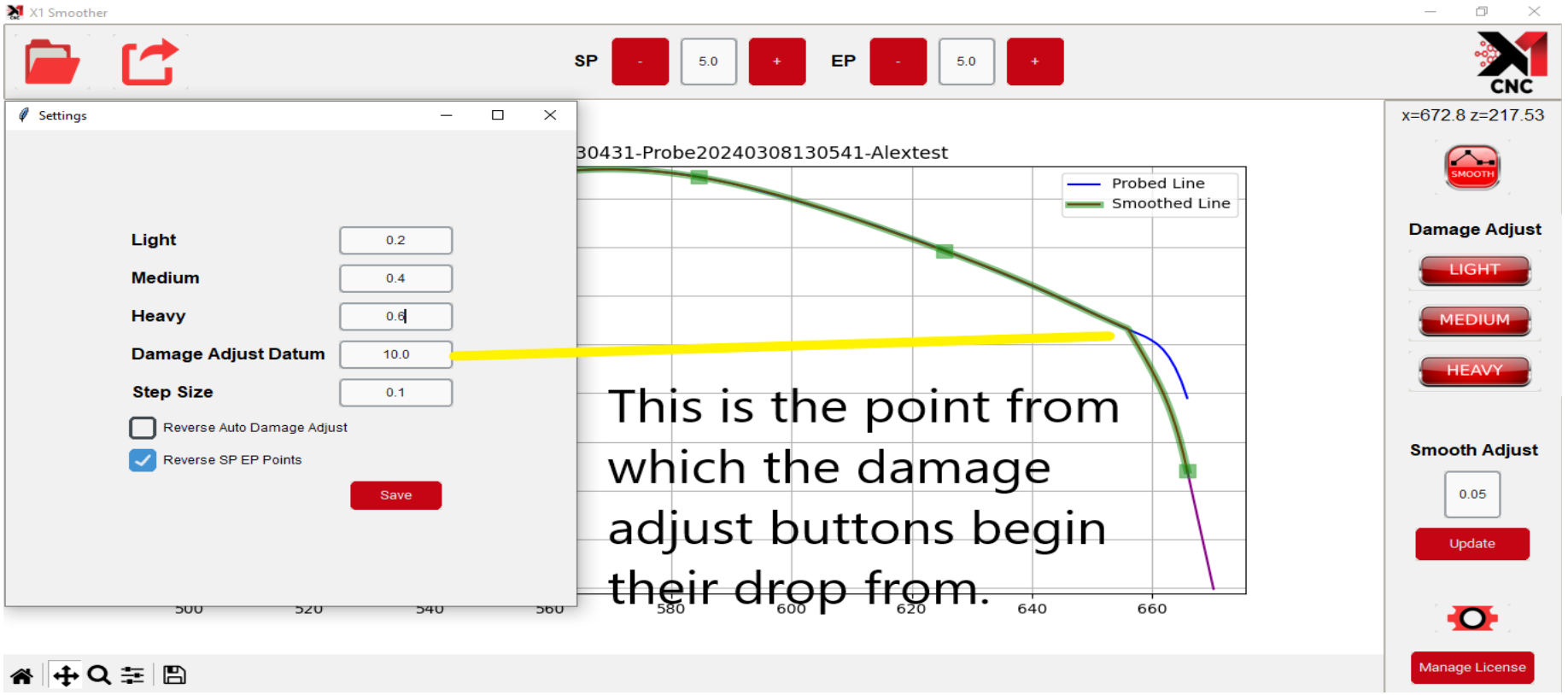
If there is any significant kerb damage in the wheel, you can press any of the 3 damage adjust buttons to drop the edge of the wheel down for you. These three will all drop the edge of the wheel down by their own respective amount which is set in the parameter menu. We can also change the datum point from where the kerb damage drop begins. It is pre set here to 10mm from the edge of the wheel. This is explained further down the manual.



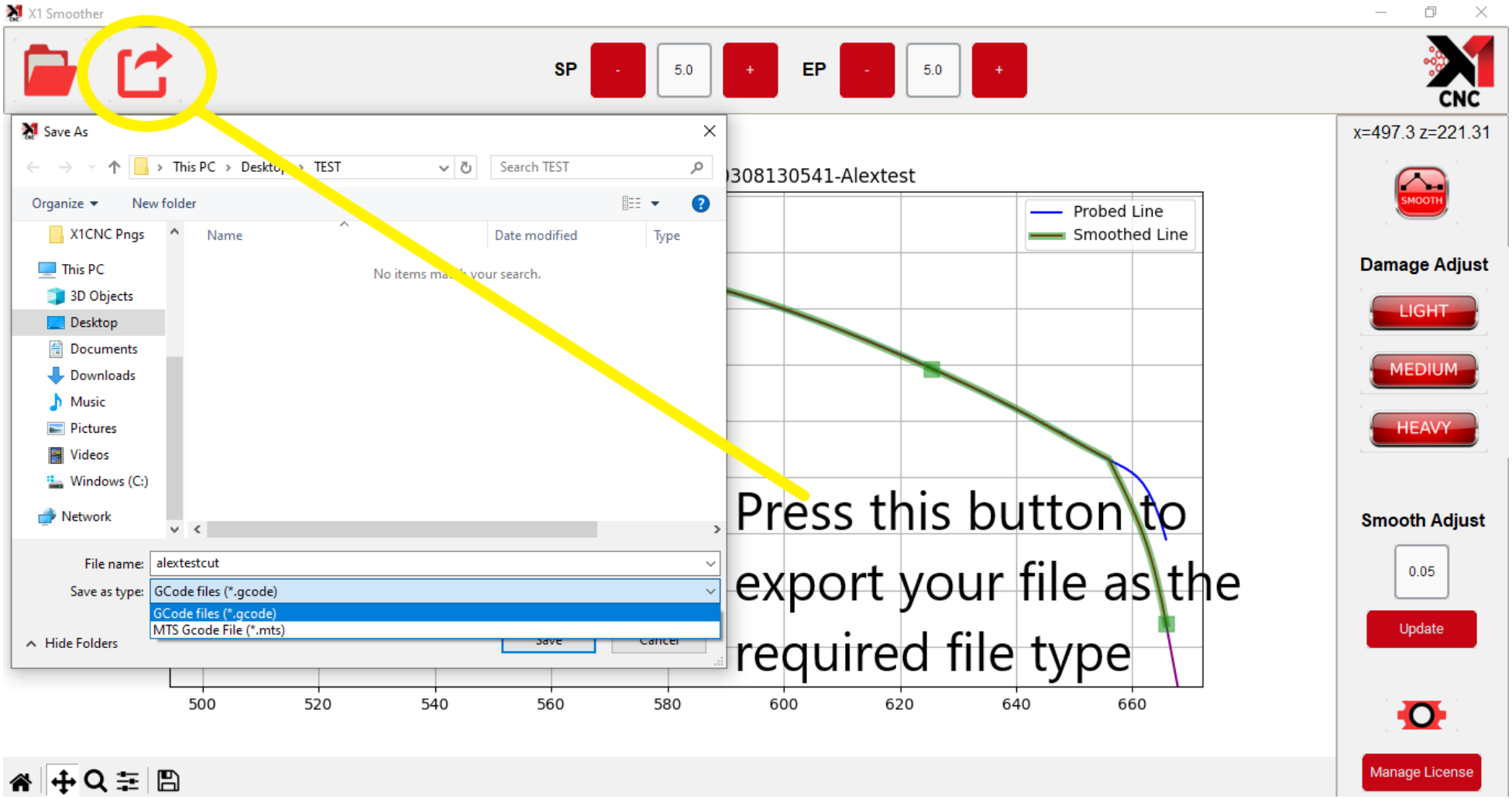
Depending on the type of CNC you're using, you may want to change the smooth adjust. The purpose of this is to change the smoothing tolerance. The lower the number, the tighter the green line is going to hug the blue line. The higher the number, the less the green line is going to hug the blue line (as seen in the above photo). You are encouraged to zoom in a tightly curved area and change smooth adjust from 0.05 to 2.5 and press update to better understand how and when this should be used.



To edit any of the parameters, click on the parameters button in the bottom right. Then enter the password 1486 to gain access.



Light, medium and heavy values are setting what each press of the damage adjust buttons will drop the edge of the wheel by, in mm. The damage adjust datum is the point from where the drop begins, and in this case is set to 10mm from the edge of the wheel.
Step size is for if you want to use the keyboard to lift a point of the wheel up or down (by left clicking on the point and using the up or down arrows). It is telling the machine how many mm each press of the arrow should move it. In this case, every time we click the up arrow it will raise the area by 0.1mm.
Reverse SP and EP Points is just for visual reference when adding LI LO points. If you have probed a wheel from outside to inside, then the lead in will be on the right hand side but if you probed inside to outside it would be on the left (incorrect ticking of this box will NOT lead to the machine to start cutting from the opposite side or any other issues). Reverse damage adjust is to swap which side of the wheel the damage adjust buttons work from. Again, only requiring change if you have probed from the opposite side.



Once you are happy with the smoothed file you can click the export button in the top left hand corner. Export the file as per your required file type. There are various options due to this smoother being able to work with various cnc's.

If you have any questions or issues with the software, please email support@x1cnc.com