



## Tailored Post Processors

There are now 2 post processors available for use with no modification, each having an inch and millimeter mode:

- CNCShark-USB\_3dContour\_
- CNCShark-USB\_NewArcs\_

The difference between the 2 is the Set Path Control Mode G64 Px.x (Continuous Mode Best Possible Speed with Motion Blending Tolerance) setting. The 'Contour' inches post processor uses G64 P0.1 (2.54 mm), and the 'NewArcs' inches uses G64 P0.01 (0.254 mm). Previous versions of the CNC Shark Post Processor inches used G64 P0.1.

The G64 Px.x is a way to fine tune the Shark system "for best compromise between speed and accuracy. The Px.x tolerance means that the actual path will be no more than Px.x away from the programmed endpoint. The velocity will be reduced if needed to maintain the path within the tolerance. In continuous mode, sharp corners of the path may be rounded slightly so that the feed rate may be kept up (but by no more than the tolerance)."<sup>1</sup>

You can edit this setting in either post processor file using Notepad or any text editor. A smaller tolerance will result in a more accurate cut to the design. Using a smaller tolerance can also dramatically increase the machining time. A smaller tolerance may be required or desired if you need sharp inside corners for example. For projects involving 3D elements, a larger tolerance will often produce excellent results, as well as resulting in a reasonable machining time.

You also influence the outcome with the feed rate of the tool you are using. You will get a slightly different outcome for a profile toolpath for example with the same end mill when using a feed rate of 100 ipm and then a second time using a feed rate of 60 ipm.

For toolpaths involving pockets, corners and lettering, using the CNCShark-USB\_NewArcs\_ post processor is recommended as a starting point. For toolpaths involving 3D components, or where a faster machining still provides results that meet your requirements, the CNCShark-USB\_3dContour\_ post processor is recommended as a starting point.

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<sup>1</sup> Common Machining Center, LinuxCNC.org, URL: [linuxcnc.org/docs/html/gcode.html](http://linuxcnc.org/docs/html/gcode.html)