Troubleshooting the Zing Engraver

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Please be sure that the engraver is powered OFF before performing any of the procedures outlined in this document.

Y Axis Too Far Forward on Boot

If the Y Axis of the Engraver begins too far forward, or does not go all the way to the back of the engraver during the boot process, it is likely that the Home Position Sensor is blocked by debris. To clear the debris, locate the sensor unit on the Right hand side of the Rail and direct Compressed Air into the Y-Axis position sensor slot.

X Axis Makes Grinding Noise on Boot

If the X-Axis of the Engraver reaches the left hand side of the Rail and makes a grinding noise, or does not go all the way to the right hand side of the engraver during the boot process, it is likely that the Home Position Sensor is blocked by debris. To clear the debris, locate the sensor unit on the Right hand side of the Rail and direct Compressed Air into the X-Axis position sensor slot.

X Axis Skewing and Slanting

If the user is experiencing 'Slanting', 'Skewing', 'Waviness', 'Stair Stepping' or 'Losing Home' during an engraving operation, it is likely that the belt has lost tension. Remove the Left hand side cover of the engraver and activate the Automatic Belt Tensioner on the right hand end of the Rail.

If the belt tension does not completely address the issue, the belt may be worn and will require replacement.

Double Image

Horizontal

If the user is experiencing 'Double Image' or 'Ghost Images' where the images are directly horizontal from each other, it is likely that the belt has lost tension. Remove the Left hand side cover of the engraver and activate the Automatic Belt Tensioner on the right hand end of the Rail.

If the belt tension does not completely address the issue, the belt may be worn and will require replacement.

Vertical

Vertical double imaging can come from lens carriage not rolling straight in the track on the rail. Attempt to re-seat the lens carriage rollers back into the roller tracks. If that does not fix the issue, remove the Lens Carriage from the engraver and inspect each of the carriage roller bearings for flat spots. Replace any suspect rollers.

Diagonal

If the images positioned are diagonally from each other it is likely a problem with one of the engravers Optics. Start by checking for Scratches or Cracks in any of the optics. If Optic damage can be eliminated, check for Optic Stability. Make sure that all of the optic bezels for the Lens and Carriage Mirror are threaded properly and screwed in tight. Check for any excess vibration in the movement of the Rail, lens carriage or belts and be sure that the Mirrors on the Left side of the engraver are mounted properly and are not loose.

Laser Cuts Out

The most likely cause for a laser to cut out is a loose or vibrating interlock. Begin checking the interlocks by opening the top door of the engraver and checking to be sure that both of the silver Interlock Magnets are still in place and are not loose. Next check the interlock sensors under the edge of the door opening of the engraver. Make sure that both sensors are screwed in place and stable. Check Interlock LED on the Right side of the engraver, it should illuminate when the door is closed.

The next likely reason for laser fire to cut out during operation is Overheating. Start by ensuring that the left side of the engraver is clear of obstructions. The Zing engraver exhausts hot air from the laser tube out of the bottom of the left side panel. In order to cool properly there must be no obstructions on the left side of the engraver for 12 to 24 inches.

After insuring that the engraver can exhaust hot air, check that the Heat Sinks on the Laser Tube are not clogged with debris. Open the left side panel and direct air at the Heat Sinks (‘fins’) on the laser tube until they are clear of debris.

If after clearing the side and heat sinks of debris and obstructions the laser is still cutting out, remove the rear panel on the engraver and locate the Fan Control Board. Flip the switch on the fan control board to “Override”. Power on the engraver and allow sitting for 15 minutes. If the laser no longer cuts out, the fan control board may be malfunctioning and should be replaced.

Fuzzy Engraving

Horizontal

The engraver is comes calibrated from the factory for resolutions of 500 DPI. If the user is using a lower resolution, try the engraving again at 500 DPI. If changing the DPI does not fix the issue engrave a 1” x 1” filled raster square. Measure the width of the square (fuzzy area included). Increase the Laser Match

setting in the Configuration menu by 1. Resend and measure the square again. If the square has increased in width, laser match must be decreased. If the square has increased in width the laser match must be increased. Repeat until the fuzziness has gone away and the square is exactly at 1”.

If you are unable to eliminate fuzziness with the laser match setting, the laser tube may need to be replaced.

General

General fuzziness comes from vibration. Make sure that all of the optic bezels for the Lens and Carriage Mirror are threaded properly and screwed in tight. Check for any excess vibration in the movement of the Rail, lens carriage or belts and be sure that the Mirrors on the Left side of the engraver are mounted properly and are not loose.