
AR600 Belt Adjustment Procedures

Gerber FastFact # 2017

Supplied by: Gerber Service

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Summary: The following procedure explains how to adjust the Y-Axis Belt tension and square the beam on the AR600 Router.

Adjusting the belt tension

1. In the OMEGA Composer program, draw a 60" (1524mm) line and a 36" x 48" (914.4mm x 1219.2mm) box. Save these files as LINETEST.PLT and BOXTEST.PLT.
2. Open the test files in ART Path™ and apply an engrave tool path to them so they are able to be plotted on the system.
3. Locate a piece of sacrificial paper material on the left side of the system. Initialize the pen tool in the spindle motor and output the LINETEST.PLT job as a plot job. Pen plot the job along the Y-Axis next to the left limit of the system. Carefully measure the length of the line. The line should measure 60" +/- 1/64" (1524mm +/- 0.4mm).
4. If the line is longer than 60" +/- 1/64" (1524mm +/- 0.4mm) then the belt on that side of the system is tensioned too high. Locate the belt tension adjusting screws on the front of the Y-Axis belt clamp and equally turn the screws one turn counter clockwise.
5. If the line is shorter than 60" +/- 1/64" (1524mm +/- 0.4mm) then the belt on that side of the system is tensioned too low. Locate the belt tension adjusting screws on the front of the Y-Axis belt clamp and equally turn the screws one turn clockwise.
6. Repeat the test until the line length measures 60" +/- 1/64" (1524mm +/- 0.4mm).
7. Repeat this test on the other side of the

Beam Squaring Test

1. Locate the sacrificial paper material in the center of the systems table. Output the BOXTEST.PLT job.
2. Pen plot the BOXTEST.PLT job on the sacrificial paper. Measure the diagonals of the box. Compare the two measurements. If the diagonal measurements are equal distant +/- 1/64" (0.4mm) then the test procedure is finished.
3. If the diagonal measurements are not equal then perform the following squaring procedure.

Beam Squaring Procedure

1. Locate the two holes on the top of the right side end housing. Using the long handled 5mm T-wrench, locate the torque tube clamp nuts which are accessible through those two access holes.

Note: You must position the beam assembly in such a manner to allow proper access to those nuts. Using a flashlight will aid in the positioning of the clamp nuts.

2. Gently loosen the clamp nuts evenly. Do not use too much down pressure as the clamp will rotate on the torque tube and require repositioning the beam assembly.
3. If the measurement of the upper right to lower left diagonal is longer, then gently move the beam toward the front of the system. If the measurement of the upper right to lower left diagonal is shorter, then gently move the beam toward the rear of the system. Only move the beam half the distance of the diagonal error as it will effect the measurements of both diagonals.
4. Retighten the clamp nuts through the access holes on the right side end housing.
5. Redraw the box and repeat the steps 1 through 4 until the diagonal measurements are within +/- 1/64"(0.4mm)