

# MecSoft Corporation

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## Jammin' with VisualMill

### Only the best

Todd Reith, a well-known luthier builds only the best; his guitars are unique in design, uncompromising in detail and quality. The instruments are hand made with only the best tone woods, the best finishes, the best electronics and the best construction methods. Todd Reith received his training as a luthier in Boston under master builder, Thomas Knatt. Combining this training with his experience as a computer engineer, Todd builds his guitars with new and exciting materials along with high-tech electronics. Each Reith Guitar is made by hand with custom parts and is classically styled for unparalleled clarity, versatility, expressive tonality and smooth playing action. Details like the precision custom-made solid aluminum Reith Sonic-Block™ bridge, custom headless tuners, graphite neck, AAAAA (5A) rated top plates, and quality tone woods allow for uncompromising silky smooth tones and ever lasting sustain. Reith Guitars/Custom Luthier is based in Castle Rock, Colorado.

In addition to guitars, Reith Guitars/Custom Luthier provides custom built products and services to music retailers and instrument manufacturers. He offers assistance in the conceptual development, prototyping, and full production and fabrication of instrument parts or completed instruments.



Reith Guitars' Alien Cross Bones™ Mini-HT™ theme guitar landed at the Winter NAMM show in Anaheim, CA.

### State of the art technology

Custom Luthier is a well-equipped modern shop with all the necessary tooling to take rough material to the final product. "We use the latest state-of-the-art software for 2D/3D modeling (CAD), computer aided machining (CAM), and computer numerically controlled (CNC) milling." Todd Reith has been a VisualMill user for the past 4 years. He evaluated MasterCam, but found integration with Rhino, and other CAD software too troublesome, and the cost of upgrades and plug-ins were cost prohibitive. In his words, "We chose VisualMill due to its seamless integration with Rhino, and lower overall cost. We also liked the ability of VM's quick setup of MOPs (Machining Operations), and the ability to quickly change MOP parameters, and regenerate a tool path. Another main selling point was the real-time simulation of milling. We use this to determine conflicts with toolpaths, and to insure minimal materials waste."

### Combination Raster and Vector Geometry Modeling

Illustrator CS2 is used for initially working with client scans of artwork. After getting the initial artwork to vector line art, it is imported to Rhino to refine, and then off to VisualMill to create tool-paths.

### 2-1/2 thru 4 Axis Machining in VisualMill

Todd uses the 2D machining operations for cutting mother of pearl inlay pieces, acrylic templates, jigs, cover plates, and

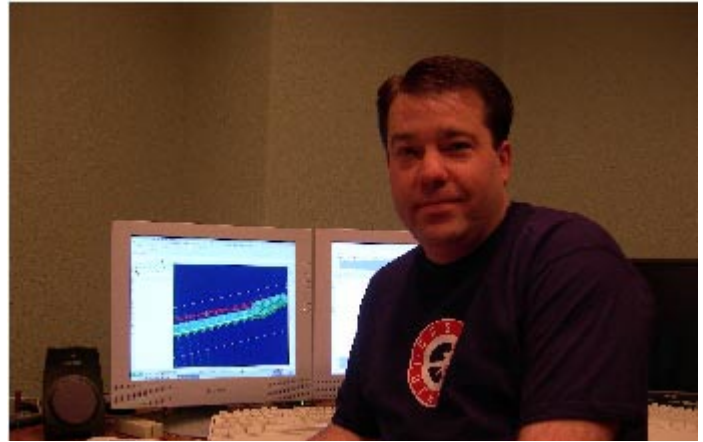
other custom guitar parts and 3D machining operations for cutting guitar necks, and contour bodies. He also uses a special technique with the 4<sup>th</sup> axis rotate table when cutting guitar bodies - cut the bottom surfaces of the guitar, and then flip the body to cut the top surfaces. Using a vacuum fixture with indexing pins allows him to flip the part, while keeping it aligned.



### Power to Rock

"The well thought out explorer like interface helps a great deal in quick setting up of the Machining operations. The stock cut simulation – very helpful to determine tool path conflicts, helps reduce material waste, and wasted machine time. We are able to run more efficient and successful jobs. Post processor – easy to use, and the editor allow fine adjustment to machine our different machine requirements. When we ran into a challenge, help was only a phone call away. MecSoft' tech support was very helpful understanding our problem, and quickly got us back on track."

Todd has made great success of his dreams with VisualMill. We at MecSoft are all only too glad to rock & roll with [Reith Guitars](http://www.reithguitars.com).



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Todd Reith at his VisualMill work bench  
[www.customluthier.com](http://www.customluthier.com)