

Mastercam Rocks!

What do fine guitars have in common? Great design, quality wood and Mastercam software. YCA Timber was already in the music business buying tone wood for pianos...



Adding guitars made sense. Owner J.C. Kim brought in luthiers--strung and fretted instrument designers--from Martin, Gibson, Guild and Washburn. It was guitar guru George Gruhn, however, who came up with Tacoma Guitar's signature paisley hole in the top corner and their small, high-pitched signature instrument, the Papoose.



Gruhn knew Michael Dresdner had left Martin to become plant manager for Tacoma. Why not design a guitar that would make Tacoma stand out from the

others? The paisley hole in the corner of the guitar allows the entire top to vibrate," explains Gruhn from his office in Nashville, Tennessee. "A

traditional round hole in the middle pulls the neck forward and puts 210 pounds or more of pressure on the top. It's like putting braces on a kid's teeth.

Something has to give. The Papoose has just one brace instead of as many as ten." It's also small, about half the size the standard guitar, and tuned to A. Tacoma used the paisley hole

for their standard-sized Chief model too. While Tacoma Guitar's design is unique, one thing it shares with a host of other guitar manufacturers is Mastercam Software. "We can make design changes quickly with Mastercam," says Jim Walz, Tacoma's plant manager. "It's the consistency in tolerances that's key," he adds. "We get all the support we need from Mastercam's Washington dealer, Steve Kidd at Cimtech."

That consistency means quality in every instrument, from modestly priced instruments to higher-end models made in at the company's plant in Tacoma, Washington. "We do a little more by hand with the higher-end guitars," says Julian Henslee, sales manager. They also

continue to innovate, with a curved top mandolin in development, along with an electric guitar.

Just as important as the design and the CAM software, says Gruhn, is the wood: "The biggest problem with guitars are the materials. So many are made from kiln-dried wood and inferior glues." Spruce is the primary tone wood used by Tacoma. "It's the strongest," explains Henslee.

Gruhn's design made a big splash, propelling the young company to third largest. Eric Clapton, Bob Dylan, Jackson Brown, Dixie Chicks, Peter Frampton and Dave Matthews have used Tacoma guitars. "We've never done a signature series," says Henslee. "I'd rather be one among many of the guitars used by musicians."

Not far from Tacoma Guitar, another Northwest company is also in the guitar business.

Warmoth Guitar Products started making guitar components in 1980. Like Tacoma, they use Mastercam software to design and cut parts.

A tour through Warmoth finds shelves filled with guitar necks and guitar bodies, all sold individually for guitar projects around the world.

They began making components by hand. As CNC became available, they moved into automation. Warmoth currently has a complement of five CNC machines including a 5-axis model, all programmed using Mastercam. Right and left-handed parts are found in all stages of production, coursing through the machines. The vast majority of their business is in custom, made to order parts,



many licensed in Fender shapes. Customers can view necks and bodies on the Warmoth website, www.warmoth.com.



Rod Rood designs the guitar components in Mastercam. "We've been using it since Version 4," says Rood. "Other software isn't as well suited to what we do. I don't think there's anything we can't do with Mastercam," he adds. "Mastercam is continually innovative. I've even made some suggestions they've incorporated. The actually listen to their customers! And we get tremendous support from Cimtech, our local Mastercam dealer."

From Tacoma to other guitar capitals, Mastercam rocks.