



## RhinoCAM allows Burton to Hear Praise Better than Before

### History

[Burton Technologies](#) is a specialty product development business with the focus of adding value to component parts located in Northwest Michigan – on the shore of beautiful Lake Michigan. It was created in 1994 and was founded upon the idea of developing products for manufacturers positioned in specialized sectors. Burton's proprietary solutions evolved in cooperation with alliance manufacturers in the automotive industry and then spread into other industries as well. Today, their solutions are used by manufacturers across the globe, with over 50 patents and patent applications, and tens of millions of units produced to date.



In December 2008, Burton Technologies' [Acoustibuds™](#) Earphone Adapters were selected as winners of the prestigious CES Innovations 2009 Design and Engineering Award. This award recognizes achievements in product design and engineering, and is sponsored by the [Consumer Electronics Association \(CEA\)®](#), the producer of the International CES consumer technology tradeshow. It is also endorsed by the [Industrial Designers Society of America \(IDSA\)](#).

### Application

Acoustibuds™ are premium earphone adapters that slip over iPod® and iPhone earphones, as well as many other popular Bluetooth™ and earphone models to provide a host of improvements. The proprietary fin geometry prevents the earbuds from falling out of the ear during activity, the soft silicone material conforms to the ear for improved comfort and along with internal cone shaped sound port combine to **dramatically** improve the overall sound quality and sound isolation. Burton required a CAM software program that could create machine code for these Acoustibuds™ prototype molds.



speeds a breeze.”

However, because of the intricate nature of the parts, Burton discovered there were some challenges utilizing their existing equipment. “We use a PCNC1100 machine that has a max spindle speed of 4500 rpm and rapid traverse of 60 ipm. This caused us some problems when machining the Acoustibuds™ with ball nose end mills down to 0.010” detailed Chris Bennett, a CAD user for over 10 years and main user of [RhinoCAM](#) at Burton Technologies. Bennett continued “We found air turbine tools to be the solution to this problem. Using this air driven spindle at 50000 rpm reduced our machining time from over 8 hours per part to just over 2 hours per part. RhinoCAM's embedded federate tables made calculating the feeds and

## Benefits

While Burton Technologies acknowledges numerous benefits to RhinoCAM, their top ones included:

1. Ease of use – RhinoCAM is intuitive and simple to learn, which allowed new users to get up to speed quickly,
2. “Tremendous” reduction in the amount of machine time, and
3. Reduction in tool breakage.

## Additional Tools

Burton Technologies uses SolidWorks 2007 and RhinoCAM exclusively. They also took advantage of 3 different forms of training, and had great success with all of them including:

1. Books and help documents (Good),
2. Online training sessions (Very Good), and
3. Onsite training (Best)

## Summary

Chris Bennett stated it best himself, “RhinoCAM is an easy to learn; cost effective solution for machining highly precise products. The return on investment was almost instant.”

