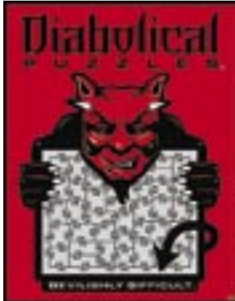


# Diabolical PUZZLES™

The "Diabolical Puzzler"

Newsletter - Issue No. 1



## Greetings from New Orleans

Welcome to Diabolical Puzzles LLC and to the first issue of the "Diabolical Puzzler" newsletter. This issue will feature some of our new designs, current press, and a little about us. Thanks for checking us out.

## Metal Jigsaw Puzzles

### Diabolical Puzzles LLC

We are a small firm that designs metal jigsaw puzzles. Our puzzles are designed using computer aided design (CAD) and are manufactured using state-of-the-art laser cutting, welding, and fabrication technology. Our puzzles are cut to tolerances of .004" from solid metal using one of the most powerful lasers in the country and are then welded or fastened and hand polished to create a look and feel that is stunning to see and amazing to touch. They are packaged in custom cases that compliment the unique nature of each item.

### "Devilishly Difficult"

Diabolical Puzzles are difficult to design and reproduced. They are works of art that are wonderful to see and touch. All of our puzzles are designed and produced in New Orleans and come in varying sizes and levels of difficulty.

(see "About Us" - page 2)



Stainless steel puzzle trio

## Diabolical Puzzles Profiled At VectorWorks



**FIRM PROFILE**  
Diabolical Puzzles LLC  
New Orleans, Louisiana

*Fine artist and entrepreneur  
designs high-precision  
stainless steel puzzles with  
VectorWorks.*

When New Orleans artist Scott Fredrickson, principal of Diabolical Puzzles, devised an idea to create highly complex puzzles made of stainless steel and presented a wood prototype to a machine shop, he was told the only way he could produce designs of such high precision was using computer-aided design. The puzzles would then be manufactured to use computer-aided manufacturing with state-of-the-art laser cutting technology and fabrication.

(see "VectorWorks" - page 2)

**DiabolicalPuzzles.com**

*("VectorWorks" - cont.)*

But first, Fredrickson had to learn a CAD program. After doing some research and speaking with other CAD users, he decided to purchase VectorWorks.

### AutoCAD was out of the question

"I talked to several AutoCAD users who told me it was very expensive, had a steep learning curve and was not user friendly," Fredrickson explains. "I read several reviews of CAD programs for the Mac, all of which rated VectorWorks the best. And I also spoke with VectorWorks sales and technical support representatives, explaining what I wanted to do."



*Original wood prototype*

While there were no guarantees that VectorWorks could do what he wanted, Fredrickson was offered a money-back guarantee if he couldn't achieve the precise results he needed after completing the VectorWorks training CDs and an Introduction to VectorWorks Professional Learning Series seminar.

"As an artist with no experience with CAD, I was pleasantly surprised at how easy it was to learn VectorWorks," he notes. "I was able to spend my time creating rather than fighting a software learning curve. The VectorWorks tutorials were presented well and were a great introduction to CAD. But attending the learning seminar enabled me to learn techniques I wouldn't have picked up, which, in turn, helped me increase the complexities of the puzzles without investing a lot of time."

### Creating art with VectorWorks

"VectorWorks has allowed me, as an artist, to import 2D shapes and designs directly from Adobe Illustrator and other vectored programs, then cut and trim them into surfaces with extreme precision," he says.

Fredrickson needed surfaces that were completely independent of each other, yet shared the identical edge line. He accomplished this using the Convert to Line, Convert to Polygons, and Surface Add and Clip tools, along with Smart Points, among other 2D tools.

Fredrickson also used a different angle on the Rotate tool for each puzzle piece, so when all the pieces were polished, each piece had a unique directional grain to its surface.

"The guys at the machine shop thought I was nuts for rotating each individual puzzle piece," he explains. "But when they eventually saw how intricate the finished product looked, they understood." Fredrickson adds, "The precision of VectorWorks to the laser has been amazing. Using VectorWorks, I was able to get tolerances ten times greater than the state-of-the-art laser-cutting equipment can deliver," he confirms.

### VectorWorks pieces the puzzle together

The puzzles are cut to tolerances of .004" from solid metal using one of the most powerful lasers in the country, the 5000 watt laser. They are then welded, surfaced and polished by hand, then packaged in custom cases Fredrickson also designed. These unique, hands-on works of art are designed to challenge the most analytical of minds while pleasing the most aesthetic of sensibilities.

### 3D puzzles for the future

Next up on Fredrickson's drawing board are stainless steel 3D puzzles cut on a five-axis laser robot. "I plan to take advantage of the extensive 3D rendering capabilities VectorWorks 11.5 provides to design my next line of puzzles. They will be pieces of art you can touch."

*("About Us" - cont.)*

### Level of difficulty

Our puzzles are rated on a 1-5 scale of difficulty. Most puzzles have a unique solution. Each puzzle has no visual design on the surface of each piece. Each puzzle piece has an identical polished finish on each side so that each piece may be used on either side to complete the finished design. Many of the puzzles have identical interlocking pieces so that each piece may interlock with any other piece. All of this is to increase the level of difficulty.

*(see "About Us" - page 3)*



*A-001 Synaptic Overload  
8" x 10" stainless steel puzzle*

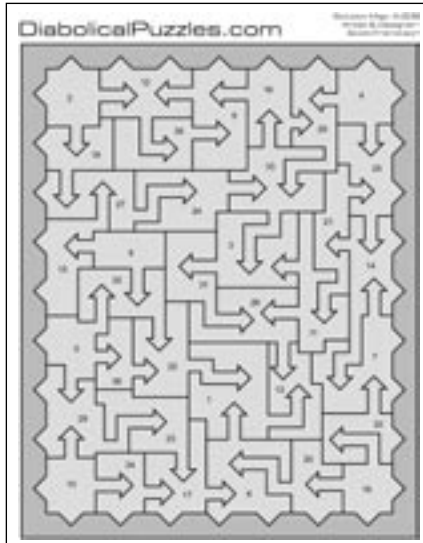
*("About Us" - cont.)*

**Serial Numbers**

Each puzzle has a laser etched serial number. Either that number is the puzzle series, or in the case of the one-of-a-kind puzzles, a unique number. This is to aid you in replacing puzzle pieces or solution maps.

**Solution Maps**

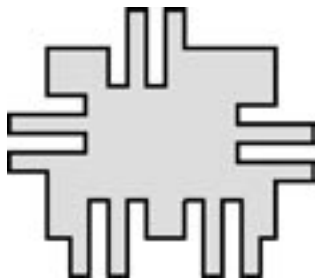
Each puzzle comes with a solution map to help you correctly assemble the puzzle. Each puzzle piece on the solution map is numbered. The puzzle pieces of the larger and more difficult Series "A" have been engraved on the edge with the corresponding solution map number. The other puzzles are either too thin for edge engraving or only have a few pieces. If you lose your solution map, you can go to our web site and download a replacement by selecting your puzzle serial number.



*Puzzle solution map*

**Replacement Pieces**

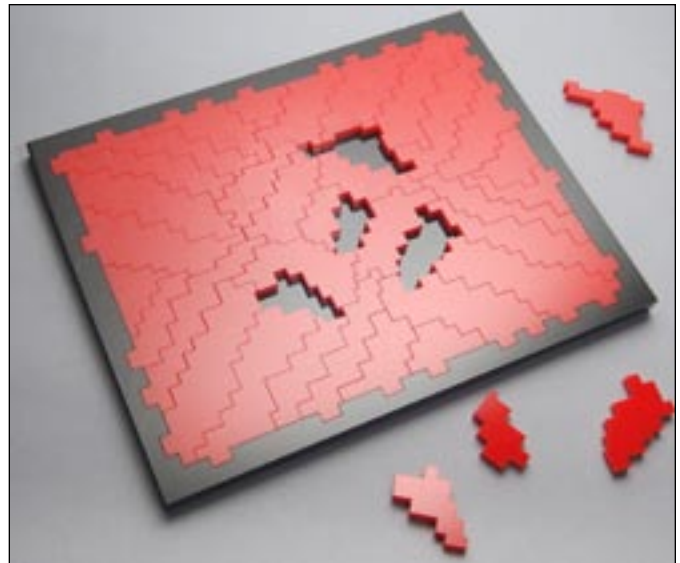
If you happen to misplace a puzzle piece don't worry. Replacement pieces are available. Provide us your puzzle serial number along with the piece number and we will manufacture a replacement piece for a reasonable fee.



*Puzzle piece*

**New  
Acrylic Puzzle Series**

All of our 8" x 10" designs are also available in cast acrylic. These puzzles are individually laser cut and hand assembled and polished. They come in two color choices: red frame and black pieces or black frame and red pieces. All of the puzzle pieces are hand numbered on the edge to correspond to the solution map. The 8" x 10" acrylic puzzles are packaged in clear plastic retail packaging with promotional wrapper. All of the acrylic puzzles are designed and signed by puzzle artist Scott Fredrickson.

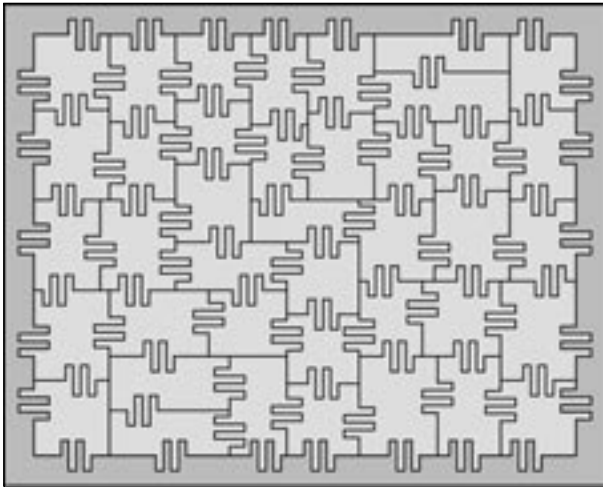


*E-025 Teotihuacan  
8" x 10" acrylic puzzle*

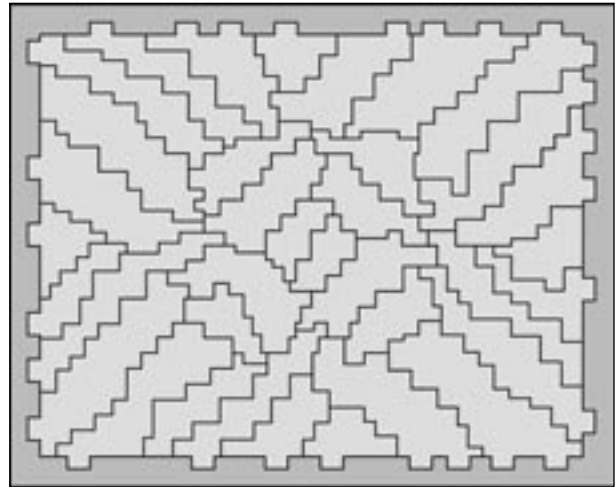


*Acrylic puzzle packaging*

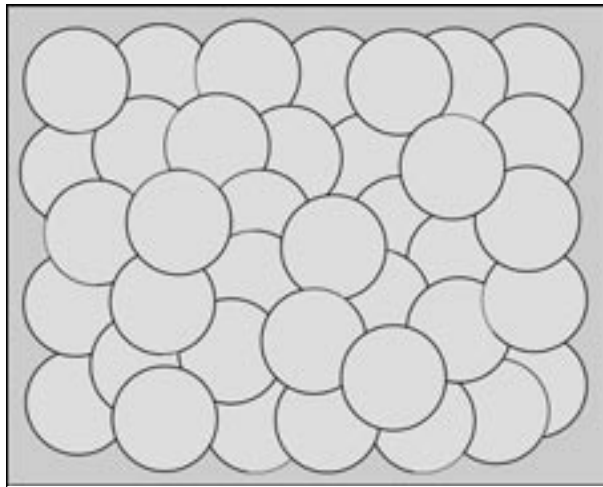
### New Puzzle Designs - 8" x 10"



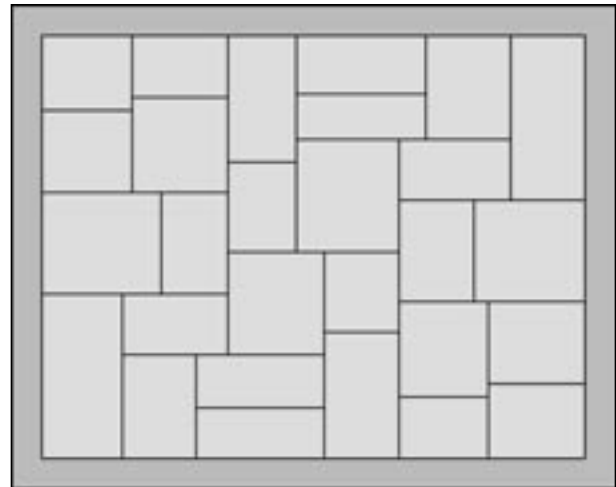
Synaptic Overload - Level 4



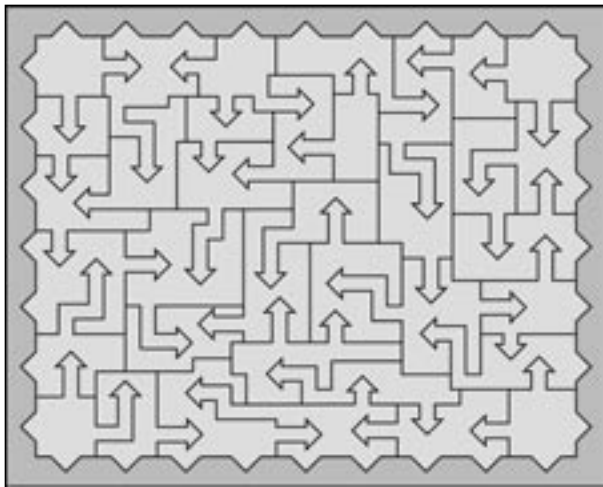
Teotihuacan - Level 3



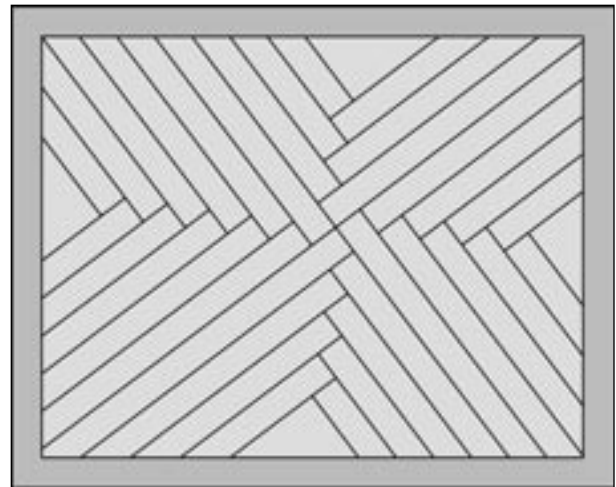
Bubble Theory - Level 5



Macho Picchu - Level 5



Queequeg - Level 2



Grid Lock - Level 2

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