

About the Artist:

David C. Roy

Mechanics and motion have always fascinated me. During college I studied physics, engineering and chemistry to further my understanding of how things worked. I graduated with a degree in physics from Boston University in 1974. This intuitive understanding of motion and mechanics combined with the artistic influences of my wife, Marji, led me to the creation of kinetic sculptures. In 1975 we started "Wood That Works" and I became a full time sculptor. Since then I have designed and handcrafted over 150 different limited edition and one-of-a-kind kinetic sculptures. I have exhibited in numerous juried, invitational and group events. My work is displayed in galleries and private collections around the world. I currently maintain a studio in rural northeastern Connecticut.

Wood 
that Works

Vice Versa • Directions

Kinetic Sculpture by David C. Roy
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To the Owner...

Hello,

Welcome to the world of Wood That Works. This Vice Versa is number _____ out of a possible 95 pieces. It was made by me during the month of _____ in 2021. I build, test and pack each sculpture myself, doing 6 pieces of an edition per month. Designing and building kinetic sculptures like Vice Versa has been my full time occupation since 1975. I hope Vice Versa brings you and other viewers as much enjoyment as I've found in making it.

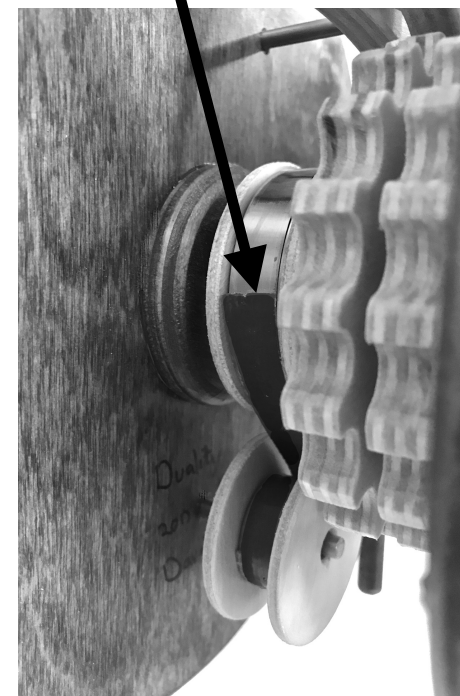
Vice Versa has been mounted on a wall in my shop and running for at least 2 complete windings (many hours) before I pack it. I make every effort in design, construction and packing to make sure the piece will perform problem free for years to come. I use only the finest materials. Of course, problems can still occur no matter how hard I try to prevent them. My answer to this is a warranty to the original owner against defects in materials and workmanship for three years. See the guarantee section of this booklet for details.

It leaves me happy and satisfied to find that my work has made its way into new lives. I hope it brings you years of enjoyment.

David C. Roy

Red Tape

- It is easy to wind the sculpture too quickly. If you wind beyond the red warning tape you will reach the end of the spring and may cause possible damage.
- CAUTION: Over-winding the sculpture can break the spring. Make sure you turn the back wheel slowly enough so you can stop its motion before you reach the red tape at the end of the string.
- Never manually release any of the levers on the sculpture when it is wound. Doing so will release the spring and definitely cause damage.



To Start

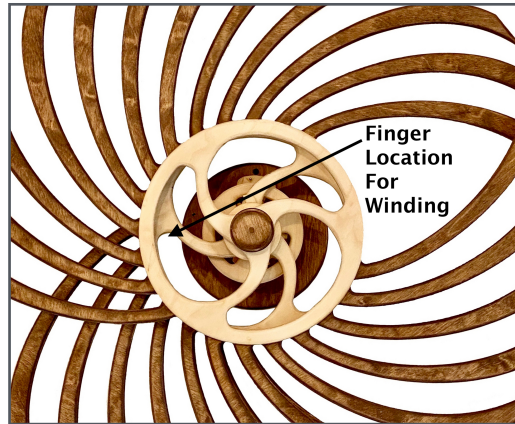
- If the sculpture doesn't start moving on its own when you finish winding, gently push both wheels clockwise until you hear a click from the mechanism.
- The sculpture will make 1 soft click per revolution and a somewhat louder click periodically when the mechanism pushes the wheels.

Directions:

To Wind

Important First Time winding instructions:

- The first time you wind up this sculpture after unpacking requires special attention. Shipping may have caused parts to move unexpectedly.
- First look for obvious things that might have come out of alignment in shipping.
- Only wind the spring **TWO** turns for the first run.



Winding First Time:

- The technique for winding Vice Versa requires that both of the patterning wheels are turned clockwise to wind the spring.
- Place your index finger through the front hub of the indicated notch (diagram above) into the back hub. Start turning the back wheel. Slowly wind just two turns. The front wheel will bump against your hand as you stop winding. This is normal.
- Make sure the metal band is winding inside the larger spool walls. If it isn't, shift it so that it does. It should be fine for all future windings. A short run will show you if parts slid out of alignment during shipping.
- If it doesn't run as expected email David at david@woodthatworks.com.

Subsequent windings:

- Repeat the winding directions above for a full winding of about 23 turns in a clockwise direction.
- After about 15 turns you will see the first set of colored warning tapes. SLOW DOWN the winding pace. After another 5 or so turns you will see red warning tapes. STOP WINDING. As you are slowing down and stopping the front wheel will keep rotating and bump against your hand so be prepared. This is normal.

About Vice Versa:

It often happens that one sculpture starts the idea for another. This is especially true at this late stage of my career where I have explored and given up on many ideas. In 2016 I explored a new concept in a one-of-a-kind sculpture called Blink. I explored what would happen if I reversed the normal order of fans in a patterning wheel and had them point in opposite directions. Of course this created a significantly off-balanced wheel but I compensated using a large outside frame ring that varied in width. This was a difficult sculpture to make because even with the outside ring, balance was still hard to achieve. I did enjoy the “blink” effect and the varied patterns but thought it too challenging to produce in an edition.

These are the types of challenges I've been enjoying revisiting now that I'm “retired”. Last year I decided to explore whether this really was an impossible wheel to balance. Using my ancient copy of Working Model software along with my favorite drawing program Illustrator and a spreadsheet I ran numerous simulations looking for a design with the center of mass at the center of the wheel. I played with the number of spokes, their thickness and their angle relative to each other. Eventually I found a design that I thought would work both visually and dynamically. I tested the patterning by generating an animation of the design in motion. Of course the real test was to actually make the design. My first attempt wasn't quite right. It was still too off balance. I tweaked the design and refined my center of mass calculation to more precisely locate the exact point. The second attempt worked as I had hoped.

I love the mix of 3 different patterns during each rotation. Half of the pattern shows as collapsing fans while the opposite half is expanding. Just as that becomes recognizable everything is wiped away in a blink pattern. The constantly shifting rotation rates combined with this pattern creates a piece I find hard to stop watching.



Specifications:

Size: 34" diameter x 6"d

Power Source: negator spring

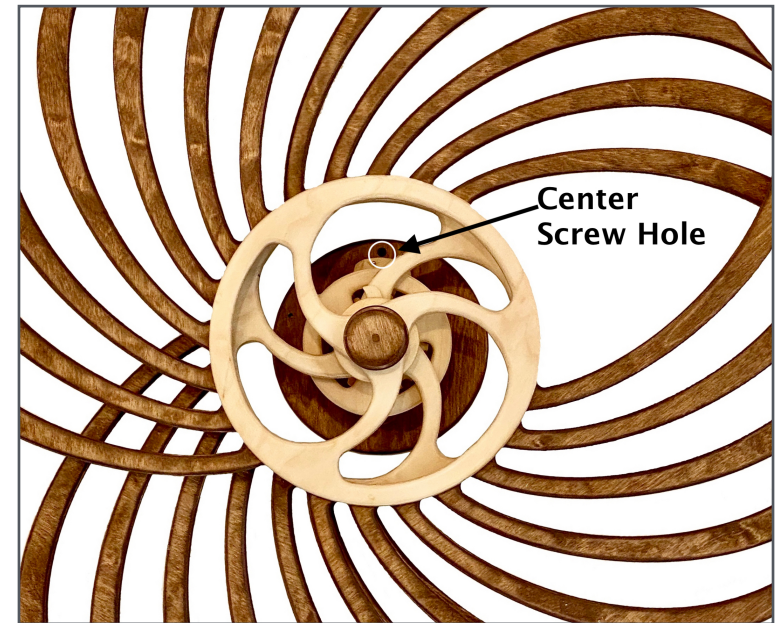
Approximate Run Time: 6.5 hours

Materials: hardwood plywood, bearings,

Vice Versa ©2021

Guarantee:

- My kinetic sculptures are guaranteed to the original owner for a period of three years. All warranties expire with transfer of ownership from the original owner. Damage of the sculpture from exposure to extremes of high or low humidity, or to adverse hot or cold temperatures, or damage caused by normal wear and tear, accidents, misuse, or modification will not be covered by the warranty. Shipping and insurance to and from Wood That Works is the responsibility of the purchaser.
- I will charge a reasonable repair fee if the sculpture was damaged by misuse or needs refurbishment from normal wear and tear.



Directions:

To Mount on Wall:

- Vice Versa does not need a template to set up.
- Locate the top center mounting hole. It is directly above the light colored wood bracket behind the wheels as indicated by the arrow in the photo above. Place this screw hole at the top and center in location.
- Hold the sculpture in the desired location and screw the top center screw in place temporarily securing the sculpture to the wall. Shift the dark base so that the screw is top center and the left and right screw holes are level with each other. Partially screw those screws in place.
- Now take the sculpture down by removing the screws. Gently hammer the provided plastic anchors into the screw holes making sure the top collars are flush with the wall. Screw the sculpture back into position again starting with the top center screw.