

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

Monarch • Directions

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

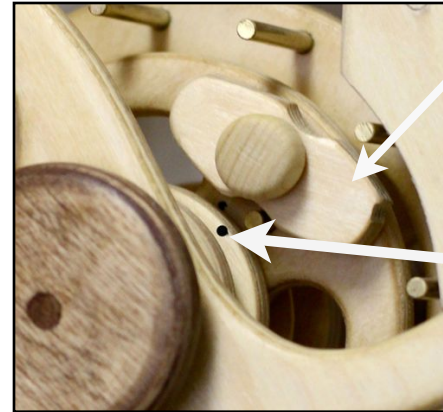
Hello,

Welcome to the world of Wood That Works. This Monarch is number _____ out of a possible 95 pieces. It was made by me during the month of _____ in 2012. I build, test and pack each sculpture myself, doing 6-12 pieces of an edition per month. It takes several years for me to complete an edition and some are never finished as I move on to new designs. Designing and building kinetic sculptures like Monarch has been my full time occupation for more than 30 years. I hope Monarch brings you and other viewers as much enjoyment as I've found in making it.

Monarch has been mounted on a wall in my shop and running for at least 2 complete windings (several 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 five years. See the guarantee section of this booklet for details.

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

David C. Roy



Go Ratchet Lever

If the over-wind protection activates, move the inner wheel so the ratchet lever aligns with the tiny black dot on the center hub. Locate the black dot first because it can be at any point on the circumference of the wood collar.



Stop Ratchet lever
Do not push.

Move this inner wheel, not the one
with all the brass pins.

Directions:

Over Wind Protection:

- When winding Monarch it is best not to wind the spring all the way until the end but instead to stop when the red warning tape appears on the spring. If you do inadvertently overwind the sculpture, an overwind protection activates and the center wheel with the smaller ratchet lever unlocks from the large wheel. You will feel the change.
- To reengage this ring you can very slowly continue winding another revolution until you feel it click back into place. There is a definite magnetic pull when the wheel is again properly aligned.
- If you don't feel it reengage, you can manually line up the small Go ratchet lever by reaching in and moving the small ratchet lever and the wheel it is attached to. It is in the correct orientation when the knob on the small ratchet lever aligns with a small black dot mark on the center hub. Use the photographs to the right as a guide. CAUTION: Be careful not to touch the "stop lever" while doing this. See the previous warning.

Guarantee:

- My kinetic sculptures are guaranteed to the original owner for a period of five 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.

About Monarch:

When I design a new sculpture my goal is a motion or a pattern created by the motion. It is never an identifiable theme or object. When a design comes together I study it in depth considering things like pace, rhythm, sound, excitement. Yet most others immediately identify what it "looks like". It might be a crab, Chinese calligraphy, or a butterfly. That is why this piece is titled "Monarch".

I've designed a completely new mechanism for this sculpture. It is a direct drive mechanism with the spring connected directly to the drive wheel of the sculpture. Years ago I designed another direct drive mechanism that I've explored in several sculptures including Evolution and Focus. It is a simple and very effective mechanism but is also limiting. My goal in designing this mechanism was to have more options in the frequency, power and randomness of each push.

For this design I wanted to use very short impulse bursts of energy at seemingly random intervals to create a slow chaos of motion. The many-veined construction of the large wheels were designed to create striking cascading patterns when counter rotated for even a short period of time.

At the center of this slow patterning chaos is the seemingly simple 2 pawl mechanism that controls it. The mechanisms in my sculptures are always visible but sometimes you have to look in from the side to view all the moving parts. In Monarch all the key parts of the mechanism are front and center, clearly visible. Now people who want a clear view of the workings can see it all, maybe or maybe not understand it, but certainly see it and study it.

Specifications:

Size: 34"h x 4"w x 7"d

Power Source: negator spring

Approximate Run Time: 6 hours

Materials: hardwood plywood, bearings, string

Monarch ©2012

Directions:

To Mount on Wall:

- Monarch does not need a template for wall mounting. The orientation of the circular base is not important. Clearance of 18 inches is needed from the center of the sculpture out in all directions.
- Hold the sculpture in the desired location against the wall.
- Place a sharp instrument through the screw holes, marking their positions on the wall.
- If the wall is sheetrock or plaster use plastic anchors. Drill 1/8" pilot holes for the anchors provided.
- Screw the sculpture to the wall.

To Wind

- **IMPORTANT NOTE :** As you wind the sculpture you will notice a small double "Y" lever rotating back and forth. I call this the stop ratchet lever because it stops the sculpture from unwinding. **NEVER** push this lever after the sculpture has been wound. The sculpture will rapidly unwind, spinning the pin wheel and possibly damaging the spring or sculpture.
- Rotate the back wheel so you can see the flat brass spring spool. Rotating the wheel about 90 degrees in either direction is about right. The spring spool is easier to see if you shift your view a little to the side. Hold the back wheel lightly in one hand. Insert your pointer finger in the nook on the front light wheel (see diagram). Gently and slowly turn it 21 turns clockwise. Release the back wheel when you stop winding the front wheel.
- As you wind the sculpture watch the flat brass spring. I have placed a red warning tape about 2 turns from the end of the spring. Stop winding when you see it.
- **CAUTION:** It is very easy to over wind this sculpture and break the spring. Make sure you turn the front wheel slowly and stop its motion before you reach the tape at the end of the spring. See overwind directions on next page.

To Start

- If Monarch doesn't start moving on its own when you finish winding, turn the front wheel counter-clockwise.

Lightly hold the back wheel here with your other hand while winding. You may do so on either the right or left side.

To wind the sculpture insert your pointer finger here and turn the front wheel 21 turns clockwise.



Stop Ratchet lever
Do not push!