### 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 80 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.



# Spectrum • Directions

Kinetic Sculpture by David C. Roy © 2005



### To the Owner...

#### Hello,

Welcome to the world of Wood That Works. This Spectrum is number \_\_\_\_\_\_ out of a possible 150 pieces. It was made by me during the month of \_\_\_\_\_\_\_ in 2006. 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 Spectrum has been my full time occupation for more than 30 years. I hope Spectrum brings you and other viewers as much enjoyment as I've found in making it.

Spectrum 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.

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.

Patterning wheels Arms Winding Wheel Tape locations when relocating

David C. Roy

### Directions:

#### To Wind:

- Turn the winding wheel clockwise 25 turns.
- Pay close attention to the top of the light colored wood spool directly behind the winding wheel. Stop winding as soon as you see the red tape appear on the metal band. This is placed about 1 turn from the end.

Winding beyond this point may damage the sculpture.

#### To Start:

• If the sculpture does not start by itself after winding, gently push left on the front arm. Do not push so far that the back arm interferes with the patterning wheels.

#### String placement:

- It is possible to dislodge the string from the slot on the center reversing pulley if the wheels are spun by hand or the arms are pushed in the wrong direction.
- The string is a single loop going from the back arm, over the back patterning wheel pulley, around the reversing wheel, up and over the front patterning wheel pulley and to the front arm. The correct path can be seen in the drawing on the front cover.
- If the string becomes tangled. Release the tension in the drive spring by popping the black drive belt off the winding wheels and slowly unwind the spring by letting the winding wheel slide through your fingers. Unhook the ends of the drive belt and remove it. Untangle the string and set it on the pulleys. Do not cut or untie the string. Reinstall the drive belt.

#### **Before Moving Sculpture:**

- Always tape the spring-belt and strings in place before moving the sculpture. This will save a lot of aggravation when it is time to set the piece up again.
- See the diagram for the best tape locations.

# About Spectrum:

I've been designing and building kinetic sculptures for the past 30 years. During that time I've found inspiration from a number of different sources but one that has stood out is the kaleidoscope. The continually shifting forms fascinate me. (The colors are nice but I'm more excited by forms!) I've built a number of sculptures that create striking patterns and most of them shift through at least 2 phases, but none have been able to replicate the variety of forms shown by a kaleidoscope. Spectrum is my first sculpture that begins to give me the true "kaleidoscope" feel.

I built Spectrum using 4 matching patterning wheels. The two outside wheels move at the same speed but in opposite directions. They reverse direction after about 2 revolutions. The center wheels move in opposite directions but at varying speeds. The net effect is a continually changing set of patterns that become quite dramatic at the point the outside wheels change direction.

I found that the wheels had to move quite slowly for the patterns to develop. This necessitated some study and the redesign of my basic "2 arm" mechanism. I was somewhat surprised and quite pleased that this also resulted in an extended run time of more than12 hours. Thirty years and I'm still learning!

# Specifications:

Limited Edition of 150 Size: 36"h x 40"w 8"d Power Source: negator spring Approximate Run Time: 15 hours Materials: hardwood plywood, bearings, string Spectrum ©2005 Patent No. 4637152

# Directions:

#### To Mount on Wall:

- **DO NOT** remove the tape holding the spring-belts in place.
- Hold the mounting template in the desired location against a wall. The visual center line is marked on the template 12.25 inches from the left edge. Please note the minimum clearance dimensions are shown at the edges of the template.
- Level the bottom edge of the template.
- Place a sharp instrument through the screw holes, marking their positions on the wall. Remove and save the template.
- Drill pilot holes. If the wall is sheetrock or plaster use plastic anchors.
- Screw the sculpture to the wall using 3 screws
- Remove the tape holding the spring-belts and strings in place.

