

# Phantom

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Directions

Kinetic Sculpture by  
David C. Roy  
© 1994



## To the Owner:

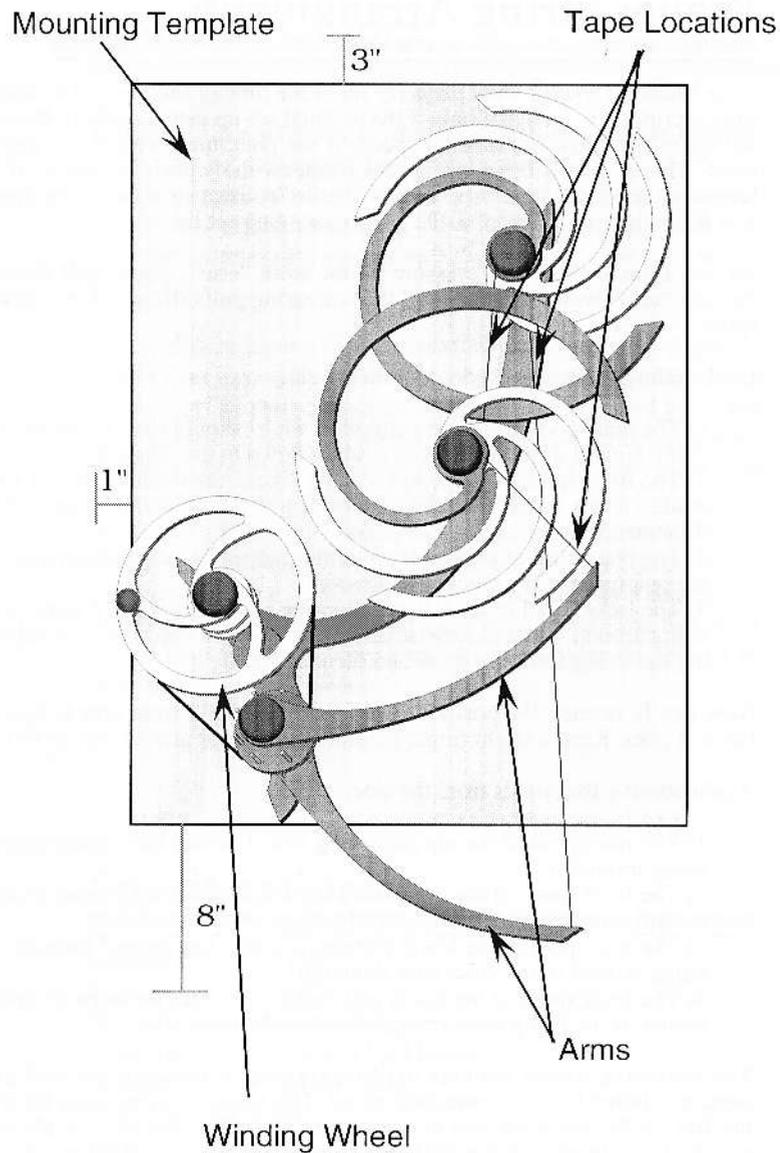
Hello,

Welcome to the world of Wood That Works. This Phantom is number \_\_\_\_\_ out of a possible 150 pieces. It was made by me during the month of \_\_\_\_\_ in 1995. 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 Phantom has been my full time occupation for more than 18 years. I hope Phantom brings you and other viewers as much enjoyment as I've found in making it.

Phantom 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.

David C. Roy



## Proper String Arrangement:

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*Your Phantom strings were properly set at the time of shipping.* The following description is included only if the original set-up gets disturbed. Phantom strings might come out of their spools if the patterning wheels are spun by hand. This may cause the string that connects the wheels to tangle. If this happens the string should be returned to its correct location in the spools. The following steps describe the proper stringing set-up.

As you keep slight finger pressure on the front "arm", gently pull down on the rear "arm" with one hand until the rear string pulls straight down from its spool.

Look at the pattern wheel spools from the side.

- 1) The rear spool of the top patterning wheel should have no loops of string around it. Its string goes straight down to the rear arm.
- 2) The front spool of the top patterning wheel has about 7 turns of string around it in a counter-clockwise direction. You can add or remove loops if incorrect.
- 3) The rear spool of the lower patterning wheel has about 2 turns of string around it in a clockwise direction.
- 4) The front spool of the lower patterning wheel has about 5 turns of string around it in a clockwise direction. You can verify this by unlooping the string from the spool and then rewinding it.

Now gently reverse the position of the arms until the front arm is down as far as it goes. Keep a slight finger pressure on the rear arm as you do this.

Again observe the spools from the side.

- 1) The rear spool of the top patterning wheel should have many loops of string around it.
- 2) The front spool of the top patterning wheel has about 2 turns of string around it in a counter-clockwise direction.
- 3) The rear spool of the lower patterning wheel has about 7 turns of string around it in a clockwise direction.
- 4) The front spool of the lower patterning wheel has no loops of string around it. Its string goes straight down to the front arm.

The patterning wheels are kept in phase (turning at the same rate and in the same positions) by the connecting string. The loops of string must be winding flat on the spool for this to work correctly. They can become disturbed and start overlapping if the sculpture is wound while it is still running or if the patterning wheels are turned by hand. This condition is usually self-correcting after several minutes of running. If the wheels stay out of phase the strings can be reset using the procedure described above.

## About Phantom:

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**P**hantom, like so many of my sculptures has hidden elements which can be discovered by studying the positive and negative spaces. Its name alludes to the perception of elusive aquatic creatures which are hidden in the positive and negative spaces. It is always fun to note what other people "see" in my work. It is seldom what I see.

This sculpture departs from my normal patterning type of motion. Rather than having the patterning wheels directly overlap, I have them set off by their diameters. The problem presented by this orientation was to keep the wheels synchronized. I'd found through various motion tests on the computer, that the patterns were much more interesting if the wheels stayed in phase all the time. In order to accomplish this I had to use a fixed stringing method rather than simple pulleys. To my surprise the new stringing worked quite well the first time I tried it. After a little experimentation I found that it was also a very efficient arrangement and had an extended run time. I was very pleased and consider this one of my most successful new pieces.

## Specifications:

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Limited Edition of 150

Size: 39"h x 26"w x 6"d

Power Source: negator spring

Approximate Run Time: 3 1/2-4 hours

Materials: hardwood plywood,  
brass, bearings, string

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## Directions:

### To Mount on Wall:

- DO NOT remove the tape holding the strings in place.
- Hold the mounting template in the desired location against a wall. The diagram shows the relationship of the template to the sculpture to guide you in positioning the sculpture on the wall. 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.
- Drill pilot holes. If the wall is sheetrock or plaster use plastic anchors.
- Screw the sculpture to the wall.
- Remove the tape holding the strings in place. DO NOT remove the colored tape on the drive spring.

### To Wind

- Turn the winding wheel counter-clockwise 20 turns.

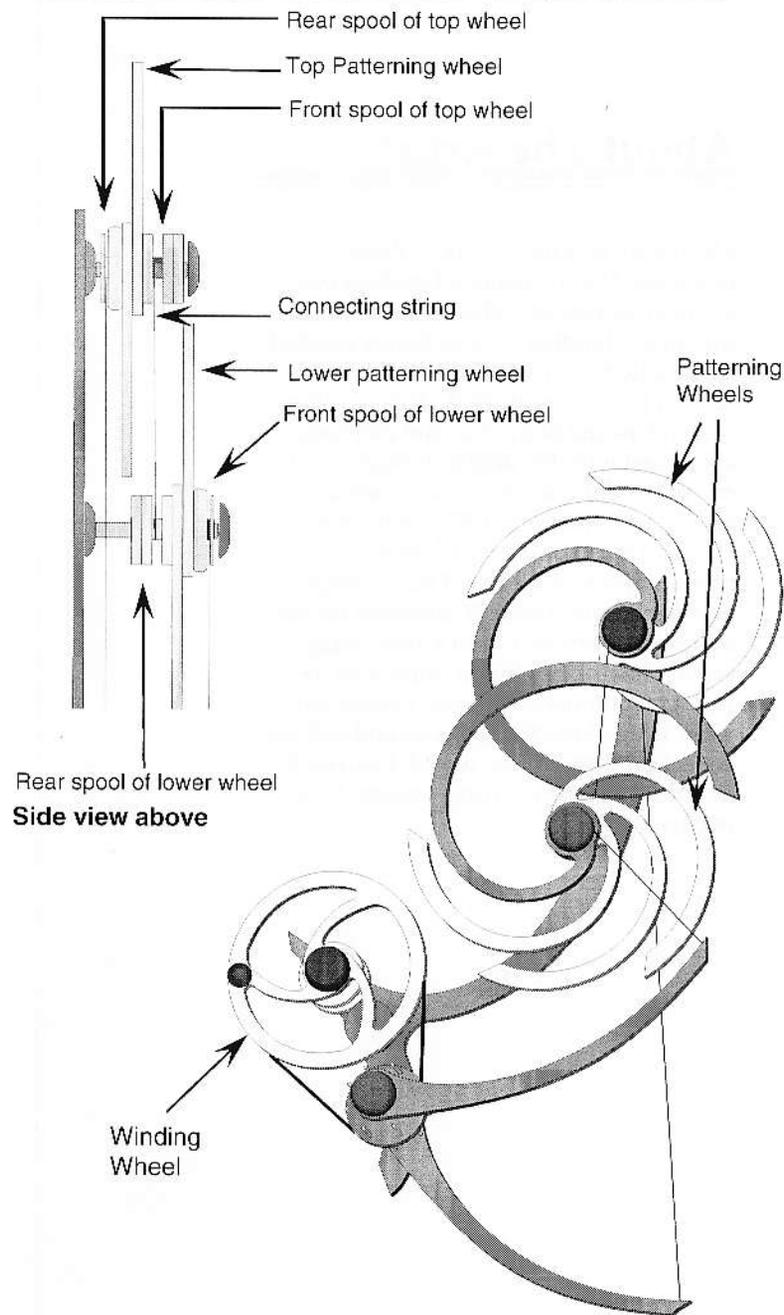
### To Start

- If Phantom does not start immediately after winding, gently push down on one of the arms until the patterning wheels start moving.

**NOTE:** Do not start the sculpture by spinning the patterning wheels. This can cause the strings to come out of their spools and get tangled.

### To Move:

Tape the strings in place before repacking or 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 The Artist:**

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 eastern Connecticut.