

# Orbik



*Patented by S-H Juang, 1988.  
(plastic, 2.8 by 11/16 inches)*

Each of the 12 windows is positioned over a little drum that can be rotated to show one of the four patterns *red square*, *green circle*, *blue triangle*, or *yellow squiggle*. Three of the windows are marked with four dots on the outer edge (in the photo above, going clockwise from the top, the marked windows are at positions 2, 5, and 9). Rotating the front face clockwise one position causes the drums in each of the three marked windows to cycle by one pattern. Rotating the front face counter-clockwise repositions the windows without rotating any drums.

For example, if **R** denotes a clockwise rotation and **C** a counter-clockwise rotation, then repeating the two moves **RC** four times cycles the drums of the three marked windows four times (causing each to show the other three patterns and return to the pattern in which it started), and leaves the state of the puzzle unchanged.

The goal is to make all the windows show the same color. *Jaap's Page* gives a solution that can be used to solve for any of the four colors.

## **Further Reading**

*Jaap's Page*, from: <http://www.geocities.com/jaapsch/puzzles/orbik.htm>

*Juang Patent*, from: [www.uspto.gov](http://www.uspto.gov) - patent no. 4,752,074