Rhombi Diamond

(a.k.a. Diamond Style Puzzler)

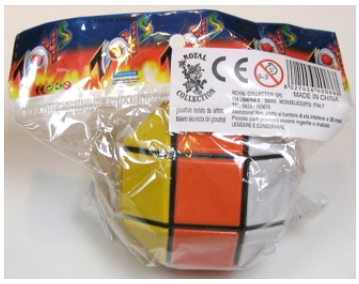
Rhombi Diamond, patented by D. Brooks, 2003.
(plastic with tiled plastic faces, 2.3 inches)

A *Rubik's 3x3x3 Cube* that has been beveled like the *Pillow Cube* and the *Hungarian Diamond*, but uses a simpler color scheme like the *Layered Rubik's 3x3x3 Cube*; same solution can be used.

This is a fun puzzle that is much easier than the standard Rubik's Cube. It has a nice feel and works very smoothly if lubricated when it is first received (in a few places use a small screwdriver in a crack to make a small opening to squirt in some silicone grease).

> ***Note:*** It works just like a Rubik's Cube; you must remember to rotate layers 90 degrees at a time, even though the puzzle may look ok after a some 45 degree rotations. If the puzzle seems to be jammed and cannot rotate along a particular axis, don't worry, it is probably because of 45 degree rotations (e.g., the right side will not turn because the top and the bottom layers have been turned 45 degrees); just try some 45 degree rotations until the puzzle works again.

This puzzle was made with any of the three colors in the middle. Below are two unopend ones in the other colors, and also on the right is an earlier version of this puzzle:



Rhombi Diamond, with orange middle.

Rhombi Diamond, with white middle.

Diamond Style Puzzler, circa 2000?
(plastic with stickers, 2.1")

Further Reading

Jaap's Page, from: http://www.jaapsch.net/puzzles/diamstyl.htm

Brooks Patent, from: www.uspto.gov - patent no. 6,644,665

Rhombi Diamond Solution

(This description is for top layer = *white*, middle layer = *yellow*, bottom layer = *orange*.)

1. *Solve the middle layer*.

   Easy if you don't care about the rest of the puzzle.

2. *Solve the top and bottom edges*.

   Easy by using 180 degree front rotations to exchange incorrect edges.

3. *Solve the bottom back right and bottom back left corners*.

   It is easy to play with top rotations and 180 degree front rotations to make at least one bottom corner *orange*; rotate this corner to the bottom back right. If the bottom back left corner is *white*, play some more with these rotations to make the top front left and top front middle *orange*, then rotate the front 180 degrees to bring these two down, and then rotate the bottom 90 degrees to bring the *orange* corner to the back right (and making the *orange* corner that was in the back right now in the back left).

4. *Solve the remaining incorrect corners*.

   This can be done with just 180 degree rotations of the front ($\mathbf{F^2}$) and clockwise or counter-clockwise rotations of the top (**U**, **U-**). If you want to memorize a simple transformation, this one exchanges the front top left corner with the front bottom left corner:

   $$\mathbf{F^2 \quad U \quad F^2 \quad U\text{-} \quad F^2}$$