

Designed by Oskar van Deventer, made by Witeden, purchased from Amazon.com 2014. (plastic, $2+9 / 16^{\prime \prime}$ square)
A Rubik $3 x 3 x 3$ cube generalized so that the middle section can turned by 45 degrees. The designer says this on the Shapeways Page:
"Mixup Cube is like a Rubik's Cube, but with an unexpected twist. When a mid plane is turned by 45 degrees, other turns are possible. This way of turning mixes up the center and edge pieces. Although the concept has already been patented in 1985 by Sergey Makarov, this version has an internal $2 \times 2 \times 2$ "cube" for extra stability."

Here is a 45 degree turn of the middle followed by a 90 degree turn of the front followed by a 90 degree turn of the left side:


## Further Reading

Shapeways's Page, from: http://www.shapeways.com/model/31732/mixup-cube.html

