Octahedron

a.k.a. Magic Octahedron
(plastic, 1.8 inches between faces, 3 inches point to point,
opposite faces are green / white, yellow / blue, red / orange, magenta / gold)

This puzzle has the look and feel of a generalized Pyraminx. The rotating tips have no effect on solving (the Flowered Jewel is the same puzzle without the tips); each pyramid formed by a tip and the layer below it can rotate (this is a different puzzle than the Super Skewb Diamond). However, mechanically, the Octahedron is equivalent to a Rubik's 3x3x3 Cube without corners (or a Rubik 3x3x3 Edges Only Cube with centers) where there is one tip for each face and one face for each corner. The square on which each tip sits is the center of each face of the Rubik 3x3x3 cube and the center point of each face corresponds to a (missing) corner. The correspondence between the Octahedron and the Rubik 3x3x3 Cube may be easier to visualize by looking at the Full Octahedron which includes the centers on each face. Jaaps Page gives a direct solution.

Further reading:
Jaap's Page, from: http://www.jaapsch.net/puzzles/octahed.htm
Hewlett Patent, from: www.uspto.gov - patent no. 4,451,039
Ibrahim Patent, from: www.uspto.gov - patent no. 4,593,908
Abu-Shumays Patent, from: www.uspto.gov - patent no. 4,706,956

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