## Spectra



Copyright Eng's I.Q. Company Ltd. 1987. (metal, 15 inches)

Each of 12 discs is colored with the same eight colors, but in different orders. The two discs on the left and right sides are attached to an arm (that rotates). In the center is a long arm, on its ends two shorter arms, and on their ends arms with pairs of discs. The discs themselves can all rotate. The task is to rotate the arms to place the discs in a straight line and then rotate the discs in such a way that colors match between adjacent discs and also between the left and right ends. The analysis on *Jaap's Page* shows that there are 12 ways to do this, but only one of them uses all eight colors:



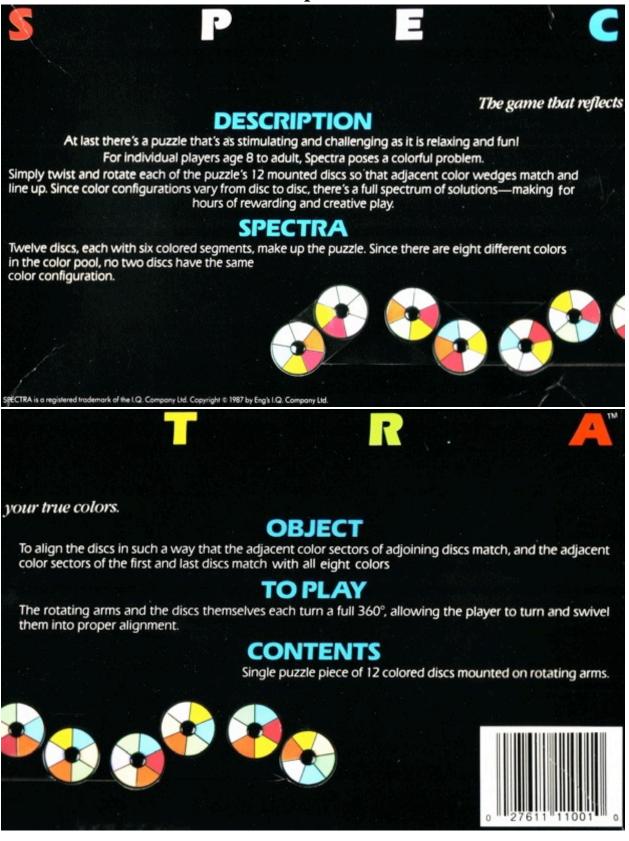
Here is a side view of the arms when the discs are lined up in a straight line (as with a solved position):



## **Further reading:**

*Jaap's Page*, from: http://www.geocities.com/jaapsch/puzzles/spectra.htm *Lamphere's Article*, from: http://portal.acm.org/portal.cfm

## Directions from the Back of the Spectra Box



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