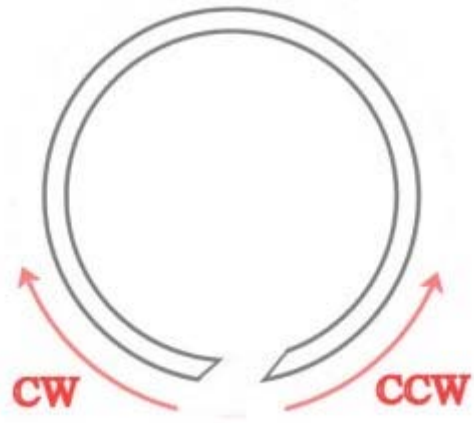
Question #321

A beautiful top, shown in the photograph at the left below, will be started into motion and left to balance itself on its tip as it spins.



Near the center of one side of the top is a cut-out, shown in detail in the photograph at the center and in a sketch of the cross section (viewed from above) at the right.

This top makes sound as it spins; the nature of the sound is this week's question.

Part 1. To make a sound, the top must be spinning:

- (a) clockwise as viewed from above (arrow at the left in the sketch).
- (b) counterclockwise as viewed from above (arrow at the right in the sketch).

Part 2. The sound will be heard:

- (a) at the beginning of the spin.
- (b) around the middle of the spin.
- (c) near the end of the spin, just before it falls over.

Part 3. The sound will be:

- (a) a rushing air sound.
- (b) a variable-frequency high-pitched squeak.
- (c) a single-frequency "humming" sound.

Click here for Answer #321 after September 29, 2008.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact Dr. Richard E. Berg by e-mail or using phone number or regular mail address given on the Lecture-Demonstration Home Page.