Rubik's Clock

Nine clocks are on each side (the reverse side is shown on the right above) are arranged in a 3 by 3 array with a yellow button and a knob at each corner. Each of the four yellow buttons can be up or down. Turning each of the four knobs on the side of the clock spins some subset of the clocks that depends on the buttons (all turn clockwise or counter clockwise depending on the direction the knob is turned), according to the following rules:

Adjacent to a down button: Turns all corner clocks adjacent to a down button.

Adjacent to an up button: Turns all corner clocks adjacent to an up button and for each of these corner clocks, the three clocks closest to them also turn.

The goal is to mix up the puzzle and then restore both sides to have all hands pointing up. Jaap's Page presents a solution that essentially solves one side at a time as follows:

1. Make all non-corners point the same way: Put the top two buttons up, the bottom two down, and turn a top knob until the center clock matches the bottom middle clock (note that the bottom middle does not move and only the corners on the reverse side move); repeat three more time on successive 90 degree rotations of the puzzle.

2. Make all non-corners point up: Put all buttons up and rotate all non-corners to point up.

3. Repeat step 1 on the reverse side.

4. Synchronize the corners on the reverse side: Since the corners are always the same on both sides, this step will synchronize corners on both sides, but be sure to do this from the perspective of the reverse side. Put the top left button down, the other three buttons up, and turn the top right knob until the center clock matches the upper left clock (note that the upper left clock does not move and the others all move together); repeat three more time on successive 90 degree rotations of the puzzle.

5. Repeat Step 2 on the reverse side.
Directions That Were Sold With Rubik's Clock

1. The CHALLENGE is to get all the hands to point to 12 at the same time
2. You move the hands by turning the wheels.
3. Pushing a button makes different hands turn.
4. And every time you move hands on this side
5. Different hands on the other side move at the same time.
6. It takes time to beat Rubik's Clock™, but you'll have the time of your life solving it!
7. GOOD LUCK
8. Congratulations for attempting Professor Rubik's latest mind bender.
9. NOW PLEASE READ THIS
10. STOP

Further Reading
Dry Erase Board Page, http://www.stefan-pochmann.de/spocc/speedsolving/clock
Christian Eggermont's Page, http://web.inter.nl.net/users/C.Eggermont/Puzzels/Clock.html
Wiggs Patent, from: www.uspto.gov - patent no. 4,869,506

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