Rubik's 2x2x2 Pocket Cube

First patented by Rubik 1983, other patents cover different internal mechanisms.
(plastic, 1.5 inches)

Rubik 2x2x2 Three Step Solution

Notation: L (left), R (right), F (front), B (back), U (up), and D (down) for 90 degree clockwise rotations of that face; - means counterclockwise.

1. Solve the down layer.
   *** No need to remember sequences; after playing with the puzzle it becomes easy. Get three corners correct, move two of the correct ones 90 degrees, move the fourth into position, and move the two back. If the 4th is rotated so it won't position correctly, do a 180 degree turn of that side and then you can reposition it to try again.

2. Put up the layer corners in correct locations (but possibly rotated incorrectly):
   Use the following sequence exchange two corners:
   
   UFL <-> UFR:  
   \[
   (F \ U) \ (F- \ U-) \ (L- \ U- \ L)
   \]
   
   Note: A quick way to do UBL <-> UFR is to precede this by L and skip the final L.

3. Fix the up layer so all corners are rotated correctly:
   Position the cube so the up front right corner is not correct and repeat these two steps until all up corners are correct:
   
   A. Repeat until the up front right corner is correct:
   
   \[
   (R- \ D-) \ (R \ D)
   \]
   *** The down layer will be mixed up, but it will become correct again at the end; don't forget the final D of this sequence.
   
   B. Rotate the up layer so the up front right corner is not correct.

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