Rubik 3x3x3 Six Step Solution

Notation: L (left), **R** (right), **F** (front), **B** (back), **U** (up), **D** (down) for 90 degree clockwise rotation of that face; **-** means counterclockwise and a 2 means do it twice. Corners are named with three letters and edges are named with two letters (e.g., FR means looking at the front, it is the edge on the right).

1. Solve the top layer (including its sides) and turn the cube over so now it becomes the solved bottom layer (easy with a little practice).

2. Solve the middle layer:

Rotate the middle so centers are correct, and then move edges between the up and middle layers until the middle is solved. If an edge first needs to be flipped, move it be FU and do the edge flipper of Step 3 (the edge gets flipped, and now rotate the top to move it back to be FU). Parentheses are just to make the sequence easier to read.

> *edge mover*, FU -> FR: **(U R) (U- R-) (U- F-) (U F)**

3. Flip the up edges so they all have the correct color on top:

If no up edges have correct top color, first do the edge flipper. Now position the cube so UL has correct top color and UF does not, and do the edge flipper once or twice.

> *edge flipper*: **F   (R U) (R- U-)   F-**

4. Move the up layer edges to their correct positions:

As needed, re-position the cube and do the edge swapper.

> *edge swapper*, UF<->UL: **(R U) (R- U) (R U^2) (R- U)**

5. Position the up layer corners:

The corner cycle leaves UFR alone and cycles the other three counterclockwise. Identify one corner that is correct (but may be rotated), or if there is not one, do the corner cycle. Then re-position the cube so UFR is correct, and then corner cycle once or twice:

> *corner cycle:* **(U R) (U- L-) (U R-) (U- L)**

6. Rotate the up layer corners (read this whole step before starting it):

*** *Don't worry that the bottom is mixed up as you do this, it will be ok in the end.*

Position the cube so UFR is not correct and repeat steps A and B until all corners correct:

> A. Repeat the corner rotator until the UFR corner is correct:
>
> > *corner rotator:* **R- D- R D**
>
> B. Rotate the up layer (*not the whole cube*) so that UFR is incorrect.

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