■ SOLVING THE RUBIK'S CUBE ■ Daniel Alexandre ■ feedback@cubicpostcode.com ■ http://rubiks.cubicpostcode.com ■

Sequences are formulated with capital letters, each one corresponding to one rotation (turning one of the faces once).

R=RIGHT, L=LEFT, F=FRONT, B=BACK, U=UP and D=DOWN. Those are clockwise turns (imagining you are facing that face).

An anticlockwise turn (imagining you are facing that face) is indicated with an apostrophe following the letter (usually called 'prime' when it is mentioned). To create muscle and memory, call them: R'=REEP, L'=LEEP, F'=FEEP, B'=BEEP, U'=UEEP and D'=DEEP. (Resembling the sound of the words hip and flip)

Your ace of spades in a single (mnemonic) deck:

FU'RU R'D'RD URU'R'U'F'UF U'L'ULUFU'F' FRUR'U'F' FURU'R'F' RUR'URU2R'U URU'L'UR'U'L

Most simple method:

1. White Cross (1st Layer):

- o Make a white cross on the top layer with white center facing up.
- Fix any flipped white edges using the sequence: **FU'RU**.
- o Move misplaced white edges to the bottom layer if needed.

2. White Corners (1st Layer):

- To fix the corners with a white sticker, a white corner in the bottom layer is found (or brought down from the front-right-up corner with: <u>R'D'RD</u>) and put directly under where it should go (matching colors with corresponding faces).
- Move the cube around so that the piece to be moved on is put on the front-right-bottom corner and is put in its place following the sequence one, three or five times: R'D'RD. One time (if the white sticker is facing right), three times (if it is facing down) and five times (if it is facing forward). Making sure the same face is being faced in all those moves. (Four, twelve or twenty rotations!)

3. Edges (2nd Layer):

- Turn the cube with the yellow face up.
- Swap down an edge to the middle-layer (to the left or to the right) and placed correctly (with its colors correctly matching its corresponding faces).
- o Edge Swap Down to the Right: URU'R'U'F'UF
- Edge Swap Down to the Left: <u>U'L'ULUFU'F'</u>

4. Yellow Cross (3rd Layer):

- No Yellow Edges or Horizontal Line: If there are no yellow edge pieces on the top face, or if there are two yellow edges that form a horizontal line (with one yellow edge on the left and one on the right), use the following sequence: FRUR'U'F'.
- Exactly Two Adjacent Yellow Edges Facing Up: If you already have two yellow edge pieces facing up, position
 them so that one yellow edge is on the left face and the other is on the back face. Then, use the following
 sequence: <u>FURU'R'F'</u>.

5. Yellow Edges (3rd Layer):

- To make yellow edges match the corresponding faces you can swap the positions of two yellow edges on the top layer. Rotate the top layer (U rotation) until you find two edges positioned on the front and left faces on the top layer that need to be swapped with each other and use: RUR'URU2R'.
- If you cannot immediately identify two edges that need to be swapped, perform the sequence from the previous step as well, aiming to position two edges to be swapped on the front and left faces. In some cases, you may need to perform this sequence twice in a row to achieve the correct orientation for the edges.

6. Yellow Corners Positioning (3rd Layer):

- o To position the final yellow corners correctly, first find a yellow corner that is in the correct place, even if its orientation is wrong. Rotate the cube so that this correctly placed yellow corner is at the front-right-top position.
- If none of the yellow corners are in the correct place, perform the sequence on a random corner as well: URU'L'UR'U'L.
- Repeat the sequence until at least one yellow corner is in the correct place.
- Once one corner is correctly positioned, place it at the front-right-top position and repeat the sequence if necessary until all corners are correctly positioned, regardless of their orientation. The orientation of the corners will be fixed in the last step.

7. Yellow Corners Orientation (3rd Layer):

- Hold the cube with the yellow corner that needs to be oriented in the front-right-top position.
- Use the following sequence either two or four times until the yellow corner is properly oriented: R'D'RD.
- Without moving the cube around, rotate the top layer (U rotation) to bring another yellow corner that needs to be oriented to the front-right-top position.
- Repeat the sequence from the previous step until this corner is correctly oriented.
- Continue this process for each corner that needs to be oriented. The cube may look scrambled during this process, but it will return to a solved state once all the yellow corners are properly oriented. Be aware, since it can be a tricky finish-line, when solving it for the first time. That's it. Voilà!