

The Roux Method

The Steps in Roux:

[Step 1](#) - Build a 1x2x3 Block on the left side of the cube

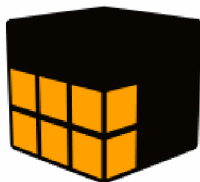
[Step 2](#) - Build another 1x2x3 on the right side of the cube

[Step 3](#) - Permute and Orient the U layer Corners

[Step 4](#) - L6E or last 6 edges of the M-Slice needs to be solved this is divided into 3 sub-steps.

- [a\) Orientation](#)
- [b\) Permutation of UL and UR](#)
- [c\) Permutation of the Rest](#)

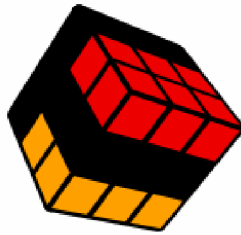
Step One - The First Block



The first step is creating a 1x2x3 block. Generally this step should take between than 9-12 moves in real speedsolves. The Fridrich users can consider to place the **BL** edge as one would do in the first step, while building the cross, and then insert the corner and the other edges. A good compromise is to insert directly corner-edge pairs. When you have done some solves try to use **M** layer to hide edges, position the corner you want to insert on the top layer and then compose the corner edge pair. Then insert. You can also use **F'** and **B** moves to insert pairs since you don't have to care about nothing else than your left 1x2x3 block.

The color scheme used in this pdf is: yellow on top, white on bottom, green on left, blue on right, orange facig to you and red on the back side of the cube.

Step Two - The Second Block

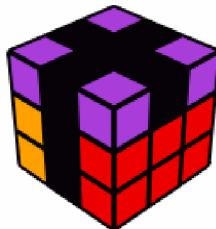


The second step is creating the 1x2x3 block on the right side. In the diagrams above the second block is shown as **red** and the **orange** is the first block.

When building this block, the first block restricts you from using certain moves. Usually, the moves that are used are <r, R, M>.

The Roux user can consider to put the Bottom edge in place and then insert the two pairs. In some cases you can conveniently use **B'** and **F** moves to insert pairs but you have to make **L'** or **L** to avoid to break the left block.

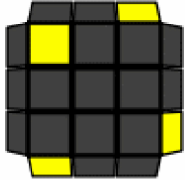
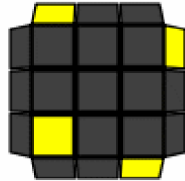
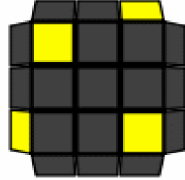
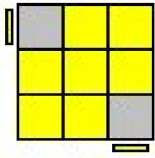
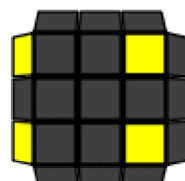
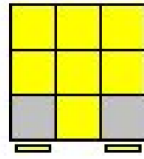
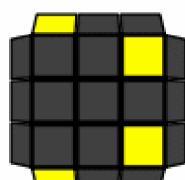
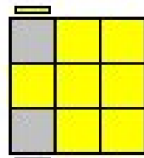
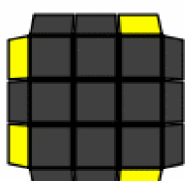
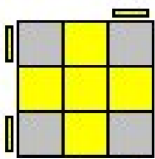
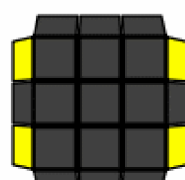
Step 3 - The Upper Layer Corners



In this step, you want to orient and permute the U-layer Corners (shown in purple). Roux Method uses a set of algorithms called CMLL which will orient and permute the U layer corners in one algorithm. If you are approaching this method for the first time you can use some of the CFOP algs and use a 2 look approach following the table below. Remember that one of the advantages using Roux is the opportunity to avoid cube rotations. It is preferable to switch soon to CMLL and use the better algs and avoid cube rotations.

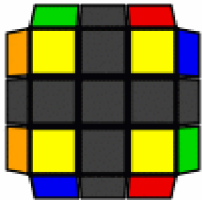
Step three - First look - Orientation

Picture of case. Names of the Case. Alg for that case. Initial Orientation follows the Roux Table. [The Blue Letters](#) correspond the orientation on Roux table. On the right columns you can find the similar cases in CFOP and the respective algs.

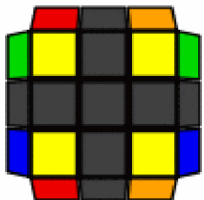
Picture	Roux name	Picture	CFOP SIMILAR
	Anti-Sune / B $R' U' R U' R' U^2 R$		same as CFOP "Anti sune"
	Sune / C $R U R' U R U^2 R'$		same as CFOP "Sune"
	L / Bowtie / D $R U^2 R' U' R U R' U' R U R' U' R U' R'$		$F' (r U R' U') (r' F R)$
	U / Headlights / E $F R U R' U' F'$		$R^2 [D (R' U^2) R] [D' (R' U^2) R]$
	T / Blinker / F $R U R' U' R' F R F'$		$(r U R' U') (r' F R F')$
	Pi / Dead Guy / Bruno / G $F R U R' U' R U R' U' F'$		$[F (R U R' U') F'] [F (R U R' U') F']$ or $R U^2 R^2 U' R^2 U' R^2 U^2 R$
	H / Double HeadLights / H $F R U R' U' R U R' U' R U R' U' F'$		same as CFOP "Car"

Step three - Second look - Permutation

Two cases can be distinguished: the one with headlights and the one without.

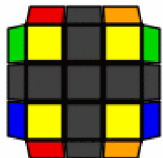


Adj Swap / J-Perm / $A2 - R U R' F' R U R' U' R' F R^2 U' R'$

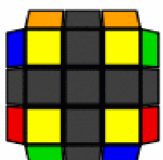


Y-Perm/ $A6 - F R U' R' U' R U R' F' R U R' U' R' F R F'$

If you are a Fridrich user you already know algs to solve these cases. You can use for example



E-Perm - $x' [(R U' R') D (R U R') D' (R U R') D (R U' R') D']$



CW Corner 3-Cycle - $x [(R' U R') D^2 (R U' R') D^2] R^2$

Step four - The Last Six Edges (LSE)

This step is where you solve the last 6 edges (**L6E**) of the cube. This step can be divided into 3 sub-steps.

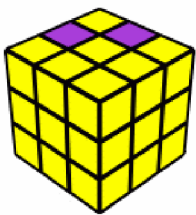
These are

1. Orientation - Where you orient the Last 6 Edges.
2. Permutation of UL and UR Pieces - This Step Solves the L and R layer leaving only the M layer unsolved.
3. Permutation of the Rest - Finishing of the Rest of the Cube

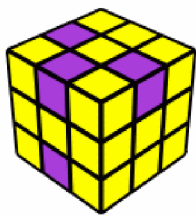
Remember that you can only have 2, 4 or 6 bad edges to orient.

orientation

All cases can be reduced to this situation:



from this you want to cycle edges to get:

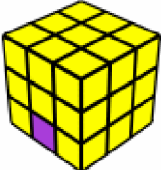
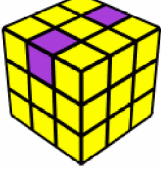
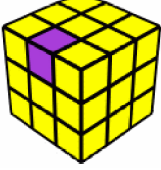
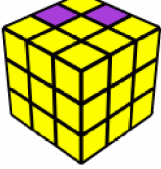
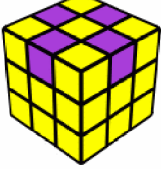
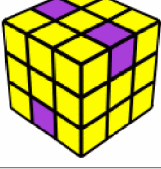
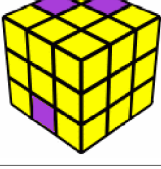
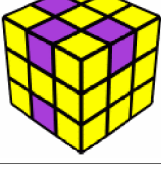
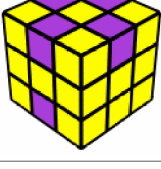


by using $M' U M$

to solve, bring the bad piece towards the aero, turn the top layer in any direction and then turn the middle layer in any direction.

If you want, you can learn all 9 cases from the table below. They are not hard to memorize.

Cases for Edge orientation

	<p>2 edges on bottom</p> <p>$M' U M' U' M U M'$</p>
	<p>2 edges on top</p> <p>$R U R' U' M' U R U' R w'$</p>
	<p>2 edges different layers</p> <p>$M' U M' U M U M'$</p>
	<p>2 edges - "L"</p> <p>$U^2 R w U R' U M U' R U' R'$</p>
	<p>4 edges on top</p> <p>$(M' U^2 M') U^2 (M U M')$</p>
	<p>2 on top 2 on bottom – "Plus"</p> <p>$M U^2 M' U^2 M' U M'$</p>
	<p>2 on top 2 on bottom – "1"</p> <p>$M^2 U' M' U M'$</p>
	<p>3 on top 1 on bottom – "Aero"</p> <p>$M' U M'$</p>
	<p>6 edges</p> <p>$M' U M' U^2 M U M U M' U M'$</p>

Step 4b - UL/UR Permutation

This step is where you solve UL and UR edges. You should do using intuition. If you want to solve by algs below you can find some cases. At this point you have headlights on each of the four sides of the top layer. What you want is to have green headlights facing to you, blue edge on DF and green edge on DB. Or, alternatively blue headlights with blue on DF and green on DB. All you have to do to solve the UL/UR is [M2](#). In the images below purple stickers can be either blue or green, The *adjust UL* move is required to position on front the headlights of the opposite colour respect the edge on DF.

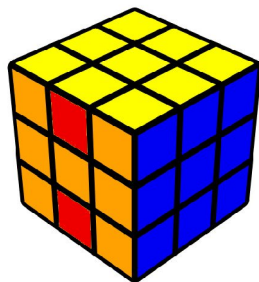
General Rules for UL and UR Permutation.

- 1) To preserve the EO, you can do M2 moves and U moves to permute stuff into place
- 2) It's okay to just use an M' or M move as long as you follow up with a U2 and another M' or M

	<p>Diag</p> <p>M' U2 M <i>adjust UL</i> M2</p>
	<p>Diag inversed</p> <p>M' U2 M' <i>adjust UL</i> M2</p>
	<p>Front</p> <p>U2 M' U2 M' <i>adjust UL</i> M2</p>
	<p>L</p> <p>M2 U' M' U2 M <i>adjust UL</i> M2</p>
	<p>Opposite</p> <p>M2 <i>adjust UL</i> M2</p>

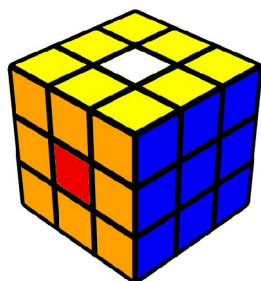
Step Five - Permutation of the Rest

As a general rule remember that, in this step you can perform only double turn on the **U** layer
I use **U**, **I**, **M** and **K** to names these cases because the morse code letter **U**, **I**, **M** and **K** are respectively *dot dot line*, *dot dot*, *line line* and *line dot line*. Works just for me.



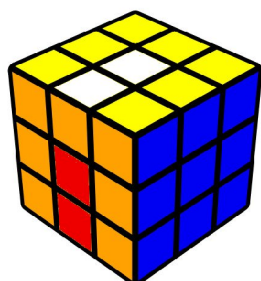
- U -

U2 M2 U2 M2



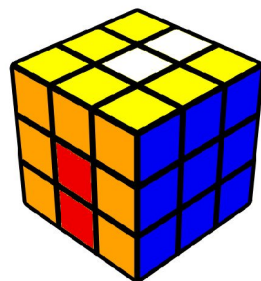
- I -

E2 M' E2 M



- M -

U2 M' U2 M'



- K -

U2 M U2 M

thanks to Waffo - <http://wafflelikes cubes.webs.com/>