Expanding Center Edges

A Guide to Edges for Big Cubes – Short Version

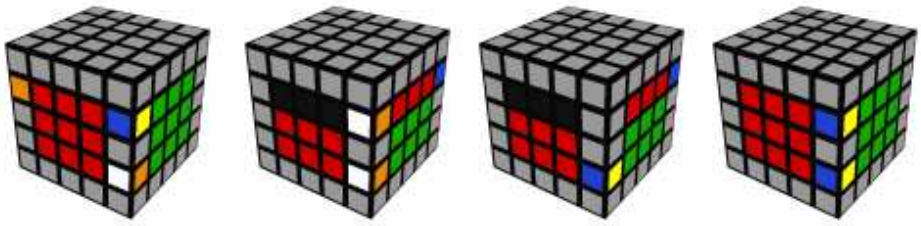
by ch_ts

Introduction

This is a guide to solving edges on big cubes nxnxn (n>4) with centers solved first. You should already know how to solve 4x4x4 and 3x3x3 cubes for this to be useful. I show a 5x5x5 in the example, but you can see how it can easily be extended to do edges on larger cubes.

Step 0: Solve centers.

Step 1: Match wing edges with their corresponding wings.



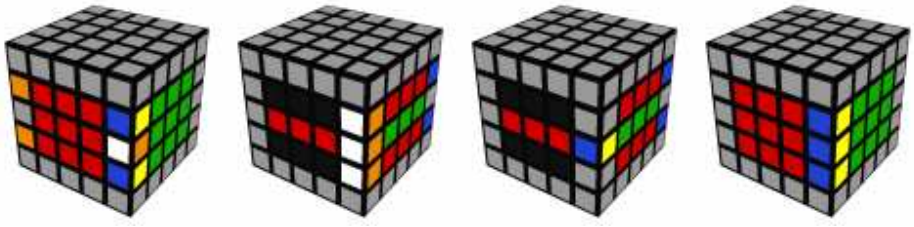
Chain together to do 4 or 6 at a time.

Special case:

Uw′ (R′ F R F′ R U′ R′) Uw

Many people use the inverse R U R′ F R′ F′ R, but you can use pretty much anything here like R U2 R′ F′ U′ F or R F′ U R′ F (this one will mess up your cross if you have done it in a previous step). The idea is to knock out the FR edge to the U layer and then bring it back in the other orientation.

Step 2: Match wing edge pairs with center edges.



Again, chain to do 4 or 6 at a time.

Special cases:

(Uw' Dw) (R' F R F' R U' R') (Dw' Uw)

This flips the FL wings and the FR center edge.

(Uw2 Rw2 F2) u2 (F2 Rw2 Uw2)

This[1] is like PLL parity on 4x4x4.

Rw U2 Rw U2 r' U2 r U2 l' U2 l F2 r' F2 Rw' U2 Rw'

This[2] is like OLL parity on 4x4x4. Make sure you only have 1 edge like this, if you have 2, you should use the first case above.

Extension to Larger Cubes

Start with the innermost wing edges, match them to the center edges. Repeat using this cluster as the center edge in the next step. For nxnxn cubes where n is even and there is no center edge, first make one from the innermost wings.

You can continue to use the algorithms above, you just need to use the appropriate number of layers for the wide turns.

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[1] From bigcubes.com
[2] Called "lucasparity" by Lucas Garron and Stefan Pochmann. From speedsolving.com wiki.