IMPROVER METHOD – PT. 1

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CFOP – BEGINNER TO EXPERT

1. **The Cross** – 4 edges

2. **First Two Layers (F2L)**

3. **Orientation of the Last Layer (OLL)**

4. **Permutation of the Last Layer (PLL)**

BEGINNER METHOD - SUMMARY

- Massively simplified version of the **CFOP** method
- Each of the 4 steps were split into 2 sub-steps
  - **Cross** – "**Daisy**" + "**Cross**"
  - **F2L** – Corners + Edges
  - **OLL** – Edge Orientation (**EOLL**) + Corner Orientation (**OCLL**)
  - **PLL** – Corner Permutation (**CPLL**) + Edge Permutation (**EPLL**)
- Each sub-step was simplified to a single trigger / algorithm
  - The **OLL** algorithms were simple but near-optimal – **F (U R U' R') F'** and beginner **Anti-Sune**
  - The **PLL** algorithms were simple but rather long – **Anti-Sune** and **Niklas** combinations
- The simplicity of the "**beginner**" method makes it analogous to the "**Bubble Sort**" in computing
  - Do yourself a favor and upgrade it to the "**improver**" method!

IMPROVER METHOD - SUMMARY

Efficiency

- Solve the cross directly, skipping the "**Daisy**" step which is only for beginners
- Reduce the number of **y** / **y'** rotations during **F2L** with 2 additional triggers
- Reduce the number of moves and "**looks**" during **OLL** with 2 additional algorithms
- Reduce the number of moves and "**looks**" during **PLL** with 2 additional algorithms

Tips

- "**Cross on bottom**" gives the best visibility of unsolved pieces and helps with "**look ahead**"
- "**Finger tricks**" is the term given to fast, ergonomic turns. They look cool and speed up your solves
- Excessive "**rotations**" should be avoided because they waste time and affect spatial awareness
- "**Colour neutrality**" helps to ensure a good start to your solves and is best learnt from the day one

CROSS - BASICS

Methodical approach for cross pieces in the U-layer

1. Locate a cross piece in the U-layer
2. Place the cross piece above its centre
3. Solve the cross piece as shown

Note: Use y and y’ rotations to maximise L and R moves

L2

R2

U L F’ L’

U’ R’ F R

CROSS – TRAPPED EDGES

Methodical approach for trapped cross pieces

1. Locate a trapped cross piece
2. Liberate the cross piece as shown
3. Solve the cross piece as shown on the previous page

Note: Use y and y’ rotations to maximise L and R moves

L2

R2

L’ U’ L

R U R’

IMPROVING YOUR CROSS

Solving the cross is an “**intuitive**” process and there are no algorithms as such. Advanced solvers will typically solve the cross in 6 moves or less but this requires a great deal of practice and experience!

Tips

- Solve the cross directly without using the “**Daisy**” step
- Always “**Cross on Bottom**” for increased visibility of cross pieces and **F2L** pairs
- Try to adopt “**Colour Neutrality**” for easier starts to your solves
- Try to influence tricky / unsolved cross edges whilst solving the current edge
- Avoid unnecessary setup / restoration moves
- Minimise cube rotations, especially **y2** through the use of ”mirroring”, etc.

HOMEWORK