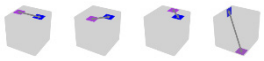


3BLD OP Method (Old Pochmann)

OP/OP is a 2-cycle BLD method invented by Stefan Pochmann. It solves one piece at a time, using PLL algorithms (T), (Ja) and (Jb) for edges as well as (Y) for corners with appropriate setup moves.

Notation

A goes to B = the correct position of sticker A is sticker B, in the sense of solved cube;
Old piece = piece shown before; New piece = piece not shown before; A: B = A B A'.

Memorize Corners

Stickers **A**, **E**, **R** of corner buffer UBL should never be memorized. Start first cycle with corner buffer **E**, start subsequent cycles with any sticker of any new unsolved corner, and stop cycle when old piece appears. Scramble: U2 B D' U' L2 R2 U2 R F R' L U' B' L' B2 F2 L' F2 B2 D' R2 U2 D2 R2 L. Do x2 y to make yellow on top and red on front.

First cycle: **E** goes to **N**, which goes to **E** (old), then cycle is over and we get **N**;
Next cycle: **D** goes to **O**, which goes to **G**, which goes to **X**, which goes to **J**, which goes to **I** (old), then cycle is over and we get **ND OG XJ I**;
Next cycle: **V** goes to **P** (old) (actually this corner twists clockwise), then cycle is over and we get **ND OG XJ IV P**. Since all the corner pieces are covered, corner memorization is over. The number of corner letters is odd.

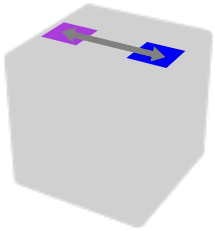
Memorize Edges

Stickers **B**, **M** of edge buffer UR should never be memorized, and stop cycle when old piece appears. Start first cycle with edge buffer **B**, start subsequent cycles with any sticker of any new unsolved edge, and stop cycle when old piece appears. Notes: The number of corners and the number of edges should always be both even or both odd.

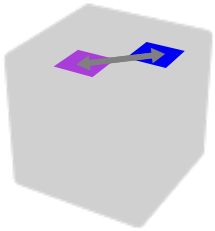
First cycle: **B** goes to **M** (old), then this cycle is over, and we get nothing;
Next cycle: **C** goes to **E**, which goes to **W**, which goes to **U**, which goes to **G**, which goes to **T**, which goes to **P**, which goes to **Q**, which goes to **C** (old), then cycle is over and we get **CE WU GT PQ C**;
Next cycle: **L** goes to **H**, which goes to **V**, which goes to **F** (old), then cycle is over and we get **CE WU GT PQ CL HV F**. Since all the edge pieces are covered, edge memorization is over.

Solve Edges

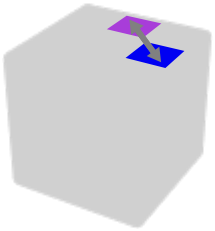
Setup moves of edge swap should never touch UR side (UFR, UR, UBR pieces). There are three ways to swap one edge and the buffer **B**. Pick the shortest setup move:



(T)
= (R U R' U') (R' F R2 U' R' U') (R U R' F')
Setup edge to swapping spot **D**, do (T) and undo setup moves



(Jb)
= (R U R' F') (R U R' U') (R' F R2 U' R' U')
Setup edge to swapping spot **C**, do (Jb) and undo setup moves



(Ja)
= U' (R' U L' U2) (R U' R' U2 R) L
Setup edge to swapping spot **A**, do (Ja) and undo setup moves

Edge Swap Algorithms

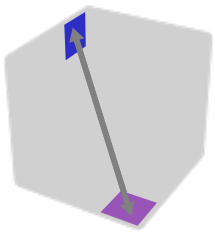
A	**(Ja)**	**B**	**buffer**	**C**	**(Jb)**	**D**	**(T)**
E	**L d' L: (T)**	**F**	**d' L: (T)**	**G**	**D l': (Jb)**	**H**	**d L': (T)**
I	**l': (Ja)**	**J**	**d2 L: (T)**	**K**	**l': (Jb)**	**L**	**L': (T)**
M	**buffer**	**N**	**d L: (T)**	**O**	**D' l': (Jb)**	**P**	**d' L': (T)**
Q	**l: (Jb)**	**R**	**L: (T)**	**S**	**l: (Ja)**	**T**	**d2 L': (T)**
U	**l2: (Ja)**	**V**	**D2 L2: (T)**	**W**	**l2: (Jb)**	**X**	**L2: (T)**

Do Parity (if Exists)

Parity exists iff the number of corner letters is odd. In this case, need to do the parity alg (R U' R' U') (R U R D) (R' U' R D') (R' U2 R' U').

Solve Corners

Setup moves of corner swap should never touch UL, UB pieces. Here is the way to swap one corner and the buffer **E**:



(Y) = (R U' R' U') (R U R' F') (R U R' U') (R' F R)

Setup the corner to swapping spot **V**, do (Y) and undo setup moves

Corner Swap Algorithms

A	**buffer**	**B**	**R2': (Y)**	**C**	**F2 D: (Y)**	**D**	**F2: (Y)**
E	**buffer**	**F**	**F' D: (Y)**	**G**	**F': (Y)**	**H**	**D' R: (Y)**
I	**F R': (Y)**	**J**	**R': (Y)**	**K**	**R' D': (Y)**	**L**	**F2 R': (Y)**
M	**F: (Y)**	**N**	**R' F: (Y)**	**O**	**R2' F: (Y)**	**P**	**F D: (Y)**
Q	**R D': (Y)**	**R**	**buffer**	**S**	**D F': (Y)**	**T**	**R: (Y)**
U	**D: (Y)**	**V**	**(Y)**	**W**	**D': (Y)**	**X**	**D2: (Y)**

The final solution is:
x2 y // memo

// edges
(Jb) // C
L d' L: (T) // E
l2: (Jb) // W
l2: (Ja) // U
D l': (Jb) // G
d2 L': (T) // T
d' L': (T) // P
l: (Jb) // Q
(Jb) // C
L': (T) // L
d L': (T) // H
D2 L2: (T) // V
d' L: (T) // F

// parity
(parity)

// corners
R' F: (Y) // N
F2: (Y) // D
R2' F: (Y) // O
F': (Y) // G
D2: (Y) // X
R': (Y) // J
F R': (Y) // I
(Y) // V
F D: (Y) // P