Beginner Fridrich Method or CFOP

Sides

[Bas.] UFRLDB [Adv.] MSE

ufrldb

Turns

[Bas.] UFRLDB [Adv.] MSE

U’F’R’L’D’B’M’S’E’

ufrldb

u’f’r’l’d’b’

Rotations

(x)(x’)(y)(y’)(z)(z’)

**C**ross (Top) (White Side Up)

= F2 = F = F’ = F U’ R U

= D R F’ R’ = U L’ U’ = U’ R U

Other Positions

 R’ D’ R Then use one of the above positions

 F2 Then use one of the above positions

**F**2L (First 2 Layers) Part 1 (Corners) (White Side Up)

 F D F’  R’ D’ R  R’ D2 R D R’ D’ R

D’ R’ D R D F D’ F’ F D2 F’ D’ F D F’

 F D F’ D’ F D F’  R’ D’ R D R’ D’ R

R’ D R F D F’ F D’ F’ R’ D’ R

Other Positions

 R’ D’ R Then use one of the above positions

**F**2L (First 2 Layers) Part 2 (Middle Layer) (Yellow Side Up)

 U R U’ R’ U’ F’ U F  U’ F’ U F U R U’ R’

(y) U F L’ U’ L U L F’ L’ U’ F’ R U R’ U’ R’ F R

 R U’ R’ d R’ U2 R U2 R’ U R [optional]

Other Positions

 U R U’ R’ U’ F’ U F Then use one of the above positions

**O**LL (Orientation of Last Layer)

1st Look – Edges

0 Edges

 F (R U R’ U’) F’ f (R U R’ U’) f’

f (R U R’ U’) f’ U F (R U R’ U’) F’

2 Adjacent Edges

 f (R U R’ U’) f’

2 Opposite Edges

 F (R U R’ U’) F’

2nd Look – Corners

 R U2 R2 U’ R2 U’ R2 U2 R

f (R U R’ U’) f’ F (R U R’ U’) F’

 (y) F (R U R’ U’) (R U R’ U’) (R U R’ U’) F’

R’ U’ R U’ R’ U R U’ R’ U2 R

 R U R’ U R U2 R’

 R U2 R’ U’ R U’ R

 R2 D R’ U2 R D’ R’ U2 R’

 r U R’ U’ r’ F R F’

 (x) U’ L U R’ U’ L’ U R

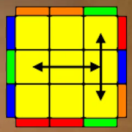
(y) l’ U’ L’ U R U’ L U

(y2 x’) R U’ R’ D R U R’ D’

**P**LL (Permutation of Last Layer)

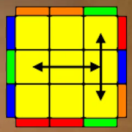
0 Headlights (Perform T Perm in Any Position; Then Refer to 1 Headlight)

T Perm

 (R U R’ U’) R’ F (R2 U’ R’ U’) (R U R’ F’)

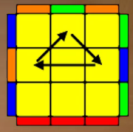
1 Headlight (Headlight Aligned on Left Face)

T Perm

 (R U R’ U’) R’ F (R2 U’ R’ U’) (R U R’ F’)

4 Headlights (Corners Aligned)

U(a) Perm

 R2 U (R U R’ U’) R’ U’ R’ U R’

U(b) Perm

 R U’ R U R U R U’ R’ U’ R2

H Perm

 M2 U M2 U2 M2 U M2

Z Perm

 M2 U M2 U M’ U2 M2 U2 M’ U2

(y) M2 U’ M2 U’ M’ U2 M2 U2 M’ U2