

Number/Name	Diagram	Algorithm(s) <u>(Recommended)</u>
45 "Magnet" "Left Corner Overturn"		$F (R U R' U' R) y' (R' F) (R B') (R' F')$ $F (R U R' U' R) F' (r U R' U') r'$ To Create From Solved State: $F R B R' F' R y R' U R U' R' F'$
46 "Knight" "Split Overturn"		$x' (R U' R' F') (R U R') xy (R' U R)$ $y2 F U R U' R2 F' R (U R U' R')$ To Create From Solved State: $R U R' U' R' F R2 U R' U' F'$
47 "Pipe" "Bolt Flip Overturn" "Bolt Inverse Overturn"		$(r U r') (R U R' U') (r U' r')$ To Create From Solved State: $r U r' U R U' R' r U' r'$
48 "Knight-Reflect" "Split Flip Overturn"		$R' F R U R' F' R y' R U' R'$ $y2 x' (L' U L F) (L' U' L) xy' (L U' L';)$ To Create From Solved State: $R U R y R' F R U' R' F' R$
49 "Pipe Reflect" "Bolt Overturn"		$(l' U' l) (L' U' L U) (l' U l)$ To Create From Solved State: $l' U' l U' L' U L l' U l$
50 "Sune-T"		$[(R U R' U) (R U2 R')] [F (R U R' U') F']$ $y2 (R U') (R' U2) (R U) y (R U') (R' U' F')$ To Create From Solved State: $F U R U' R' F' R U2 R' U' R U' R'$
51 "?" "T-Overturn"		$(R2 U R' B') (R U') (R2 U) (l U l')$ To Create From Solved State: $l U' l' U' R2 U R' B R U' R2$

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52 "?-Reflect" "P-Overturn"		$(R U R' U') (R U' R' F') U' F (R U R')$ $y' (L2 U' L B) (L' U) (L2 U' (r' U' r))$ To Create From Solved State: $R U' R' F' U F R U R' U R U' R'$
53 "Sune-T Reflect"		$x (R' U R U') (R' U R U') x' (R U R' U') (R U R')$ $y' (L' U) (L U2) (L' U') y' (L' U) (L U F)$ To Create From Solved State: $R U' R' U R U' R' x U R' U' R U R' U' R$
54 "Finger Flick"		$(r U) (R' U) (R U') (R' U) (R U2 r')$ To Create From Solved State: $r U2 R' U' R U R' U' R U' r'$
55 "Finger Flick Inverse"		$(r' U') (R U') (R' U) (R U') (R' U2 r)$ $y2 l' U' L U' L' U L U' L' U2 l$ To Create From Solved State: $r' U2 R U R' U' R U R' U r$
56 "Left Corner"		$R' F R2 B' R2 F' R2 B R'$ $y2 (R B' R B R2) U2 (F R' F' R)$ To Create From Solved State: $R B' R2 F R2 B R2 F' R$
57 "Right Corner"		$(R' F R' F' R2) U2 y (R' F R F')$ To Create From Solved State: $F R' F' R y' U2 R2 F R F' R$

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34 "q-Reflect"		R U B' U' R' U R B R' (R d) (L' d') (R' U) (l U l') To Create From Solved State: R B' R' U' R U B U' R'
35 "q"		R' U' F U R U' R' F' R y2 (L' d') (R d) (L U') (r' U' r) To Create From Solved State: R' F R U R' U' F' U R
36 "E-Tilt" "M"		(R U R' U) (R U' R' U') (R' F R F') To Create From Solved State: F R' F' R' U R U R' U' R U' R'
37 "3-Tilt" "W"		(L' U' L U') (L' U L U) (L F' L' F) To Create From Solved State: F' L F L' U' L' U' L U L' U L
38 "Kite"		F (R U') (R' U' R U) (R' F') To Create From Solved State: F R U' R' U R U R' F'
39 "Kite Flip"		(R U2 R') (R' F R F') (R U2 R') y2 (L U2) (L2 B) (L B' L U2 L') To Create From Solved State: R U2 R' F R' F' R2 U2 R'
40 "Split Flip"		R U R' U R' F R F' R U2 R' (R U R' U' R') (R' F R F') R U2 R' To Create From Solved State: R' U2 R2 U R2 y' R' U R y R2 U' R'
41 "Split"		(R' U' R) y' x' (R U') (R' F) (R U R') (R U R' U') R' F R2 U R' U' F' To Create From Solved State: R U' R' F' R U R' xy R' U R
42 "Tractor" "Tube" "P-Mirror"		f (R U R' U') (R U R' U') f To Create From Solved State: f U R U' R' U R U' R' f
43 "Bar" "Double Overturn"		(R U R' U R d') (R U' R' F') R' U' R U' R' d R' U R B To Create From Solved State: F R U R' d R' U' R U' R'
44 "Hallway" "Pole"		(R' U2) (R2' U) (R' U) (R U2') B' R' B or x' (U' R' U) To Create From Solved State: B' R B U2 R' U' R U' R2 U2 R

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12 "Male" "P-U-T"		$[F(RUR'U')F]U[F(RUR'U')F']$ To Create From Solved State: $FURUR'R'F'U'fURUR'R'f$
13 "T-Mirror"		$F(RUR'U')(RUR'U')F'$ To Create From Solved State: $FURUR'R'URUR'R'F'$
14 "P-Reflect Mirror"		$F'(L'U'LU)(L'U'LU)F$ $y^2B'(R'U')(RUR'U')(RU)B$ To Create From Solved State: $F'U'L'ULU'L'ULF$
15 "Zig" "Upstairs"		$(RB')(R'URU)y(RU)F'$ or BUR' To Create From Solved State: $RUB'U'R'URBR'$
16 "Zag" "Downstairs"		$R'[F(RUR'U')F']UR$ $y^2(L'B)(LU L'U')y'(L'U)F$ To Create From Solved State: $R'U'FURUR'R'F'R$
17 "House" "Headphones"		$(RUR'U')B'R'FRF'B$ $(RUR'U')xD'(R'URU)Dx'$ $(RU R^2U')(R'F)(RU)(RU)F'$ To Create From Solved State: $B'FR'F'RBURUR'$
18 "Vice" "Clasp"		$R'U'(R'FRF')UR$ $y'B'(R'URR)y(RU')(RU^2R)$ To Create From Solved State: $R'U'FR'F'RUR$
19 "Down Square"		$r'U^2(RUR'U)r$ $yB'(R^2F)(RF'R B)$ To Create From Solved State: $r'URUR'U^2r$
20 "Up Square"		$rU^2(R'UR'U)r'$ $y^2(lU^2)(L'U'L'U'l')$ To Create From Solved State: $rUR'URU^2r'$
21 "Bolt Inverse" "Bolt Flip"		$(rUR'U)RU^2r'$ $y^2(lUL'U)(LU^2l')$ To Create From Solved State: $rU^2R'URUR'r'$
22 "Long Bolt Reflect" "Right Bolt" "Big Q"		$F(RUR'U')F'UF(RUR'U')F'$ To Create From Solved State: $FURUR'R'F'U'FURUR'R'F'$