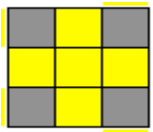
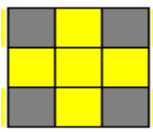
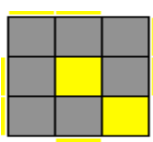
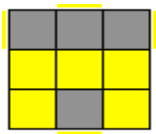
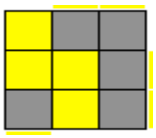
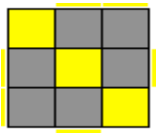
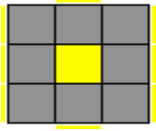
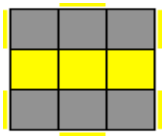
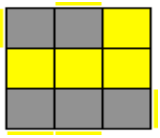
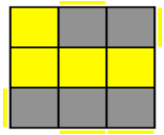
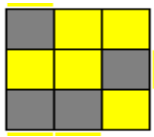
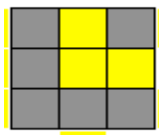
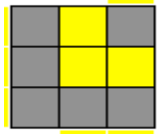
Number/Name	Diagram	Algorithm(s) (Recommended)
1 "Jet"		(M' U M) U2 (M' U M) y2 (r U R') U' (M U R U') R' To Create From Solved State: M' U' M U2 M' U' M
2 "H"		(R U R' U') (M' U R U') r' (R U R' U') L (R' F R F') L' To Create From Solved State: r U R' U' M U R U' R'
3 "Checker"		M U (R U R' U') M2 (U R U' r') r' (R U) (R U R' U' r2) (R2 U) (R U') r' To Create From Solved State: r U R' U' M2 U R U' R' U' M'
4 "Headlights"		(R' U2) (R F U') (R' U' R U) F' To Create From Solved State: F U' R' U R U F' R' U2 R
5 "Siren"		(l' U') (L U) (R U') (r' F) y2 (r U R' U') (r' F R F') To Create From Solved State: F' r U R' U' L' U l
6 "8"		(R' F) (R B') (R' F') (R B) y F' (r U R' U') (r' F R) To Create From Solved State: B' R' F R B R' F' R
7 "Sune"		(R U R' U) (R U2 R') To Create From Solved State: R U2 R' U' R U' R'
8 "Anti-Sune"		(R U2) (R' U' R U') R' y (L' U' L U') (L' U2 L) To Create From Solved State: L' U2 L U L' U L
9 "Long Cross" "P-T"		(R U2) (R2 U') (R2 U') (R2 U2 R) To Create From Solved State: R' U2 R2 U R2 U R2 U2 R'
10 "Short Cross"		(R' U' R) U' (R' U R) U' (R' U2 R) y F (R U R' U') (R U R' U') (R U R' U') F' y R U2 (R' U' R U) (R' U' R U') R To Create From Solved State: R' U2 R U R' U' R U R' U R
11 "Q" "P-U'-T"		[f (R U R' U') f] U' [F (R U R' U') F'] To Create From Solved State: F U R U' R' F' U f' U R U' R' f'

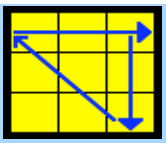
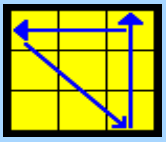
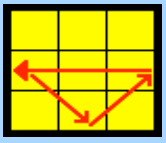
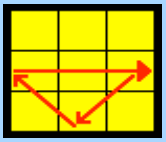
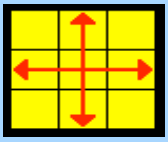
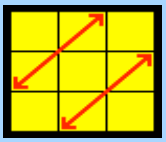
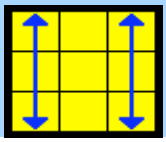
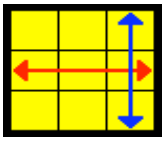
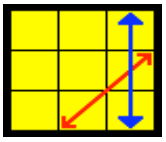
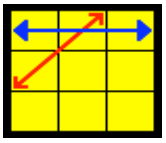
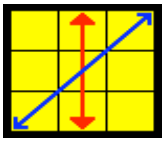
Number/Name	Diagram	Algorithm(s) (Recommended)
12 "Male" "P-U-T"		[f (R U R' U') f'] U [F (R U R' U') F'] To Create From Solved State: F U R U' R' F' U' f U R U' R' f'
13 "T-Mirror"		F (R U R' U') (R U R' U') F' To Create From Solved State: F U R U' R' U R U' R' F'
14 "P-Reflect Mirror"		F' (L' U' L U) (L' U' L U) F y2 B' (R' U') (R U R' U') (R U) B To Create From Solved State: F' U' L' U L U' L' U L F
15 "Zig" "Upstairs"		(R B') (R' U' R U) y (R U') F' or B U' R' To Create From Solved State: R U B' U' R' U R B R'
16 "Zag" "Downstairs"		R' [F (R U R' U') F'] U R y2 (L' B) (L U L' U') y' (L' U) F To Create From Solved State: R' U' F U R U' R' F' R
17 "House" "Headphones"		(R U R' U') B' R' F R F' B (R U R' U') x D' (R' U R U') D x' (R U R2 U') (R' F) (R U) (R U') F' To Create From Solved State: B' F R' F' R B U R U' R'
18 "Vice" "Clasp"		R' U' (R' F R F') U R y' B' (R' U' R) y (R U') (R' U2 R) To Create From Solved State: R' U' F R' F' R U R
19 "Down Square"		r' U2 (R U R' U) r y B' (R2 F) (R F' R B) To Create From Solved State: r' U' R U' R' U2 r
20 "Up Square"		r U2 (R' U' R U') r' y2 (l U2) (L' U' L U' l') To Create From Solved State: r U R' U R U2 r'
21 "Bolt Inverse" "Bolt Flip"		(r U R' U) R U2 r' y2 (l U L' U) (L U2 l') To Create From Solved State: r U2 R' U' R U' r'
22 "Long Bolt Reflect" "Right Bolt" "Big Q"		F (R U R' U') F' U F (R U R' U') F' To Create From Solved State: F U R U' R' F' U' F U R U' R' F'

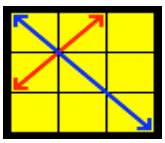
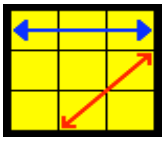
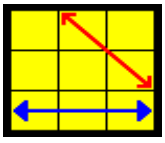
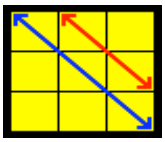
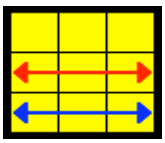
Number/Name	Diagram	Algorithm(s) (Recommended)
23 "Bolt"		(r' U' R U') (R' U2 r) To Create From Solved State: r' U2 R U R' U r
24 "Long Bolt" "Capital-P Reflect-U-T"		[F' (L' U' L U) F] U [F (R U R' U') F'] y (r U R' U) (R' F R F') R U2 r' y2 B' (R' U' R U) B U' [F (R U R' U') F'] To Create From Solved State: F U R U' R' F' y' F' U' L' U L F
25 "Escalator"		(R U R' U) (R' F R F') U2 (R' F R F') To Create From Solved State: F R' F' R U2 F R' F' R U' R U' R'
26 "Mickey Mouse"		M U (R U R' U') M' (R' F R F') (R' U2) F (RUR'U') y' (R2 U2) (R B) To Create From Solved State: F R' F' R M U R U' R' U' M'
27 "Olympics"		F (R U R' U) y' (R' U2) (R' F R F') To Create From Solved State: F R' F' R U2 R y U' R U' R' F'
28 "T-P"		[(F (R U R' U') F'] [f (R U R' U') f'] F (R U R' U') S (R U R' U') f' S = b' + B To Create From Solved State: f U R U' R' f F U R U' R' F'
29 "Center"		R U2 R' (R' F R F') U2 (R' F R F') (R U) B' (l U [l' R'] U') (R' F R F') To Create From Solved State: F R' F' R U2 F R' F' R2 U2 R'
30 "Short T"		F (R U R' U') F' To Create From Solved State: F U R U' R' F'
31 "Long T"		(R U R' U') (R' F R F') To Create From Solved State: F R' F' R U R U' R'
32 "P"		f (R U R' U') f' To Create From Solved State: f U R U' R' f'
33 "P-Reflect"		f' (L' U' L U) f To Create From Solved State: f U' L' U L f

Number/Name	Diagram	Algorithm(s) (Recommended)
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

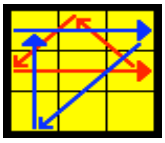
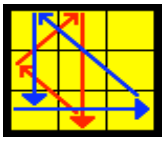
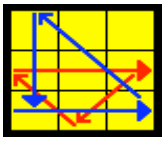
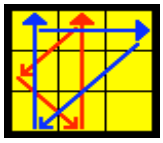
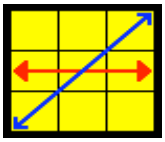
Number/Name	Diagram	Algorithm(s) (Recommended)
45 "Magnet" "Left Corner Overturn"		F (R U R' U' R) y' (R' F) (R B') (R' F') F (R U R' U' R) F' (r U R' U') r' To Create From Solved State: F R B R' F' R y R' U R U' R' F'
46 "Knight" "Split Overturn"		x' (R U' R' F') (R U R') xy (R' U R) y2 F U R U' R2 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

Number/Name	Diagram	Algorithm(s) (Recommended)
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

Number/Name	Diagram	Algorithm(s) (Recommended)
1 "A (a)"		(l' U R') D2 (R U' R') D2 R2 x [(R' U R') D2] [(R U' R') D2] R2 To Creat From Solved State: Use Your "A (b)" Algorithm
2 "A (b)"		R2 D2 [(R U R') D2] (R U' R) y x'[(R U' R) D2] [(R' U R) D2] R2 To Create From Solved State: Use Your "A (a)" Algorithm
3 "U (a)"		(R U' R U) (R U) (R U') (R' U') R2 To Create From Solved State: (R2 U) (R U R' U') (R' U') (R' U R')
4 "U (b)"		(R2 U) (R U R' U') (R' U') (R' U R') To Creat From Solved State: (R U' R U) (R U) (R U') (R' U') R2
5 "H"		(M2 U) (M2 U2) (M2 U) M2 To Create From Solved State: (M2 U) (M2 U2) (M2 U) M2
6 "Z"		U2 [(R U R' U) (R' U' R' U) (R U' R' U') R2 U R] Note: U2 Can Be Moved To The End (M2 U) (M2 U) (M' U2) (M2 U2) (M' U2) To Create From Solved State: Use Your Solution Algorithm
7 "E"		x' [(R U' R') D (R U R')] u2 [(R' U R) D (R' U' R)] x' x' [(R U' R') D (R U R')] D2 [(L' U L) D (L' U' L)] To Create From Solved State: Use Your Solution Algorithm
8 "T"		(R U R' U') (R' F) (R2 U') (R' U' R U) (R' F') To Create From Solved State: (R U R' U') (R' F) (R2 U') (R' U' R U) (R' F')
9 "J (b)"		(R U R' F') [(R U R' U') (R' F) (R2 U') (R' U')] Note: It's Just T Perm After (R U R' F') EASY! To Create From Solved State: (R U R' F') [(R U R' U') (R' F) (R2 U') (R' U')]
10 "J (a)"		(R' U L') U2 (R U' R') U2 (R L U') To Create From Solved State: (R' U L') U2 (R U' R') U2 (R L U')
11 "N (b)"		{[(R' U L') U2 (R U' L)] [(R' U L') U2 (R U' L)]} U' Note: U' At The End Can Be U In The Front To Create From Solved State: {[(R' U L') U2 (R U' L)] [(R' U L') U2 (R U' L)]} U'

Number/Name	Diagram	Algorithm(s) (Recommended)
12 "Y"		[F (R U') (R' U' R U) (R' F')] [(R U R' U') (R' F R F')] Note: "Kite" + "Long T" To Create From Solved State: [F(R U')(R' U' R U)(R' F')][(R U R' U')(R' F R F')]
13 "R (b)"		(R' U2) (R U2) (R' F) (R U R' U') (R' F') (R2 U') To Create From Solved State: (R' U2) (R U2) (R' F) (R U R' U') (R' F') (R2 U')
14 "R (a)"		(R U2) (R' U2) (l U') (l' U' R U) (l U) (R2 F) (R U2) (R' U2) (R B') (R' U' R U) (R B) (R2 U) y2 (L U2) (L' U2) (L F' L' U') (L U) (L F) (L2 U) To Create From Solved State: Use Your Solution Algorithm
15 "V"		(R' U R' d') (R' F') (R2 U' R' U) (R' F R F) y (L' U R) (U' L U L') (U R' U' L) (U2 R) (U2 R') To Create From Solved State: Use Your Solution Algorithm
16 "F"		(R' U2 R' d') (R' F') (R2 U' R' U) (R' F R U' F) (R' U2 R' d') x (l' U R' U') (l R U') (R' U) (l U' F) y' (l U F') (r U R') (L' U L U') (l U' R') (U L' U' F) y' (R B U') (L U R') (L' U L U') (R B' R') (B L' B' U) To Create From Solved State: Use Your Solution

For G's, two corners will be correctly oriented and in place. Put those corners on your L face. Find the pair. Now you know which G you have. The pair will be two squares without arrows in the diagram.

17 "G (a)"		(R2 u) (R' U R' U' R u') R2 y' (R' U R) To Create From Solved State: (R' U' R) y (R2 u R' U) (R U' R u' R2)
18 "G (b)"		(R' U' R) y (R2 u R' U) (R U' R u' R2) To Create From Solved State: (R2 u) (R' U R' U' R u') R2 y' (R' U R)
19 "G (c)"		(R2 u' R U') (R U R' u R2) y (R U' R') To Create From Solved State: (R U R') y' (R2 u' R U') (R' U R' u R2)
20 "G (d)"		(R U R') y' (R2 u' R U') (R' U R' u R2) To Create From Solved State: (R2 u' R U') (R U R' u R2) y (R U' R')
21 "N (a)"		(R U') (R' U) (l U) (F U') (R' F') (R U' R U) (l' U R') To Create From Solved State: (R U') (R' U) (l U) (F U') (R' F') (R U' R U) (l' U R')