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description: History of the 2GLL step for Rubik's Cube.

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import TwistyPlayer from "@site/src/components/TwistyPlayer";

import Exhibit from "@site/src/components/Exhibit";

import YouTube from "@site/src/components/YouTube";

import ImageCollage from '@site/src/components/ImageCollage';

# 2GLL

<TwistyPlayer

alg="x2 R U2 R' U' R U' R'"

controlPanel="none"

/>

## Description

2GLL solves the last layer in one step when the corners have previously been permuted.

\*\*Proposer:\*\* [Lars Petrus](CubingContributors/MethodDevelopers.md#petrus-lars), [Bernard Helmstetter](CubingContributors/MethodDevelopers.md#helmstetter-bernard)

\*\*Proposed:\*\* 2000.

[Click here for more step details on the SpeedSolving wiki]( https://www.speedsolving.com/wiki/index.php?title=2GLL)

## Origin

### Petrus Method

In 1981, Lars Petrus developed the [Petrus method](3x3/Methods/Petrus.md). Upon reaching the last layer, the first step is to permute the corners [1]. The next two steps orient the corners then permute the edges [2].

### Bernard Helmstetter

Around the year 2000, Bernard Helmstetter generated all of the algorithms to combine the last two steps of the Petrus method [3]. This created a step that orients the four corners while permuting the four edges.

![](img/2GLL/Helmstetter.png)

### Lars Petrus

Petrus eventually developed the algorithm set as well and placed it on the Petrus website [4]. On this page, Petrus links to Helmstetter’s website with the original algorithm list.

![](img/2GLL/Petrus.png)

## Name Origin

The acronym 2GLL was created by Timothy Sun in July, 2007. Sun posted a message to twistypuzzles.com using the acronym and explaining what it stands for [5, 6].

![](img/2GLL/Name1.png)

![](img/2GLL/Name2.png)

# References

|  |  |
| --- | --- |
| [1] | L. Petrus, "Step 5," Petrus' Website, [Online]. Available: https://lar5.com/cube/fas5.html. |
| [2] | L. Petrus, "Solving Rubik's Cube for speed.," Petrus' Website, [Online]. Available: https://lar5.com/cube/. |
| [3] | B. Helmstetter, Helmstetter's Website, 2000. [Online]. Available: https://web.archive.org/web/20010428080630/http://www.ens-lyon.fr/~bhelmste/. |
| [4] | L. Petrus, "Step 6 - Final layer position index," Petrus' Website, 2002. [Online]. Available: https://lar5.com/cube/xMain.html. |
| [5] | T. Sun, "Speed Cubing Methods," TwistyPuzzles.com, 5 July 2007. [Online]. Available: https://www.twistypuzzles.com/forum/viewtopic.php?p=67102#p67102. |
| [6] | J. Gouly, "What Method Do you Use?," TwistyPuzzles.com, 10 September 2007. [Online]. Available: https://www.twistypuzzles.com/forum/viewtopic.php?p=73596#p73596. |