**3x3x3: PLL Recognition Guide**

**EPLLs**

Category 0: Two 3x1 Blocks

solved:

I hope you can recognize this.

Category 1: One 3x1 Block

**Ua:****Ub:**  

When the block is on the left:

-It’s Ub when an opposite edge colour is on the right

-It’s Ua when an adjacent edge colour is on the right

When the block is on the right:

-It’s Ua when an opposite edge colour is on the left

-It’s Ub when an adjacent edge colour is on the left

Category 2: No 3x1 Blocks & One Opposite Colour Edge

**Ua:**   **Ub:**  **H:**

-It’s Ua when an opposite edge colour is on the right

-It’s Ub when an opposite edge colour is on the left

-It’s H when an opposite edge colour is on each side

Category 3: No 3x1 Blocks & No Opposite Colour Edge

**Ua:** **Ub:** **Z:**  

When a single colour appears three times:

-It’s Ua when the edge of that colour is on the right

-It’s Ub when the edge of that colour is on the left

Otherwise:

-It’s Z

**Diagonal CP**

Category 1: Two Blocks

**V:**  **Y:** **Na:****Nb:**

-It’s V when the blocks are both on the inside

-It’s Y when the blocks are both on the outside

-It’s Na when the inner corner is part of a left block

-It’s Nb when the inner corner is part of a right block

Category 2: One Block

**V:** **,** **Y:**  

-It’s V when there’s a block on the outside

-It’s Y when there’s a block on the inside

Category 3: No Blocks

**V:****Y:** **E:** 

-It’s V when there’s a checker pattern on the inside

-It’s Y when there’s a checker pattern on the outside

-It’s E when there’s no checker pattern at all

**Adjacent CP – Two Blocks**

Category 1: One 3x1 Block & One 2x1 Block

**Ja:**  **Jb:**  

When the 3x1 block is on the left:

-It’s Ja when the 2x1 block is on the inside

-It’s Jb when the 2x1 block is on the outside

When the 3x1 block is on the right:

-It’s Jb when the 2x1 block is on the inside

-It’s Ja when the 2x1 block is on the outside

Category 2: One Outer 2x1 Block and One Inner 2x1 Block

**Ja:**  **Jb:**

-It’s Ja when the 2x1 block on the outside is on the left

-It’s Jb when the 2x1 block on the outside is on the right

Category 3: Two Inner 2x1 Blocks

**Aa:** **Ab:** 

-It’s Aa when the outer corner on the right is opposite

-It’s Ab when the outer corner on the left is opposite

**Adjacent CP – Headlights, One Block**

Category 1: Inner Block

**T:****Ra:****Rb:** 

When the edge in between the headlights is adjacent:

-It’s Ra when the block is on the right

-It’s Rb when the block is on the left

Otherwise:

-It’s T

Category 2: Outer Block

**Aa:****Ab:****Ga:****Gc:** 

When only three unique colours are visible:

-It’s Aa when the block is on the right

-It’s Ab when the block is on the left

Otherwise:

-It’s Ga when the block is on the right

-It’s Gb when the block is on the left

**Adjacent CP – No Headlights, One Block**

Category 1: One 3x1 Block

**F:**

-It’s F

Category 2: Inner Block

**Ga:** **Gc:** **Gb:** **Gd:**

When the corner beside the block is adjacent:

-It’s Ga when the block is on the left

-It’s Gc when the block is on the right

Otherwise:

-It’s Gb when the block is on the left

-It’s Gd when the block is on the right

Category 3: Outer Block & Opposite Corner

**Gb:****Gd:** **Aa:** **Ab:**

When only three unique colours are visible:

-It’s Gb when the block is on the right

-It’s Gd when the block is on the left

Otherwise:

-It’s Aa when the block is on the left

-It’s Ab when the block is on the right

Category 4: Outer Block & Adjacent Corner

**Ra:****Rb:** **T:**

When only three unique colours are visible:

-It’s Ra when the block is on the right

-It’s Rb when the block is on the left

Otherwise:

-It’s T

**Adjacent CP – Headlights, No Blocks**

Category 1: Opposite Edge In Between Headlights

**Gb:**  **Gd**:  

When only three unique colours are visible:

-It’s Gb when the block is on the left

-It’s Gd when the block is on the right

Otherwise:

-It’s Gb when the block is on the right

-It’s Gd when the block is on the left

Category 2:Adjacent Edge In Between Headlights

**Ra:****Rb:**

**Ga:****Gc:**  **Aa:** **Ab:** 

When only three unique colours are visible:

-It’s Ra when the headlights are on the left

-It’s Rb when the headlights are on the right

Otherwise:

-It’s Ga when the headlights are on the right and the outer left corner is adjacent

-It’s Gc when the headlights are on the left and the outer right corner is adjacent

-It’s Aa when the headlights are on the right and the outer left corner is opposite

-It’s Ab when the headlights are on the left and the outer right corner is opposite

**Adjacent CP – No Headlights, No Blocks**

**F:**

**Ga:** **Gc:**  **Ra:****Rb:** 

When only three unique colours are visible:

-It’s F

Otherwise:

-It’s Ga when an opposite outer corner is on the right

-It’s Gc when an opposite outer corner is on the left

-It’s Ra when an opposite inner corner is on the right

-It’s Rb when an opposite innerr corner is on the left