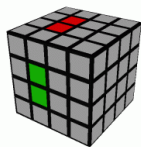


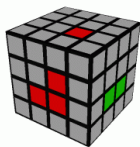
# Andy Klise's 4x4x4 Guide

## Centers (Pochmann Style)

1. Solve white centers
2. Rotate so white centers are on L face
3. Solve 2x1 blocks in Lw slice as seen below
4. Rotate so white centers are on D face
5. Shoot pieces on U face to proper side using algs below



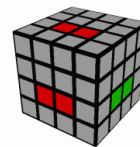
Solved 2x1 blocks in Lw slice



$Rw' F Rw$   
 $Lw' U Lw$



$Rw U' Rw'$   
 $Lw F' Lw'$



$Rw' F Rw^2 U' Rw'$

## Pair Edges



$Dw (R U') R' Dw'$   
See 2-Pair on reverse

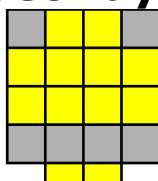


$Dw (R F') U (R' F) Dw'$   
 $Dw R U R' F R' F' R Dw'$



$L^2 Dw^2 [(R F') U (R' F)] Dw^2$

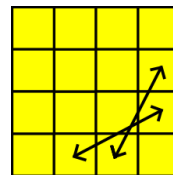
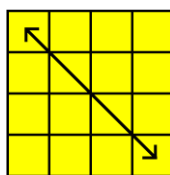
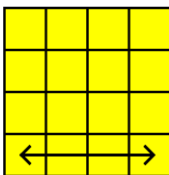
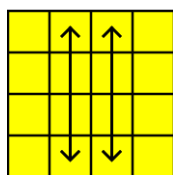
## Orient Last Layer Parity



$Rw^2 B^2 Rw' U^2 Rw' U^2 x' U^2 Rw' U^2 Rw U^2 Rw' U^2 Rw^2 U^{2*}$   
 $Lw' U^2 Lw U^2 Lw' U^2 Lw' U^2 Lw' U^2 Rw U^2 Lw' U^2 Lw U^2 x' U^2 Lw^{2*}$   
 $Rw U^2 x Rw U^2 Rw U^2 Rw' U^2 Lw U^2 Rw' U^2 Rw U^2 Rw' U^2 Rw'$   
 $Rw U^2 Rw U^2 Rw' U^2 Rw U^2 Lw' U^2 Rw U^2 Rw' U^2 x' Rw' U^2 Rw'$

\* - solves OLL + PLL parity simultaneously

## Permute Last Layer Parity











$Uw^2 Rw^2 U^2 (Rw^2 R'^2) U^2 Rw^2 Uw^2$   
 $(Rw^2 R^{2'}) U^2 (Rw^2 R^{2'}) Uw^2 (Rw^2 R^{2'}) Uw^2$

## Credits

**Chris Hardwick** - <http://www.speedcubing.com/chris/>  
**Frank Morris & Clancy Cochran** - <http://www.bigcubes.com/>  
**Josef Jelinek** - <http://software.rubikscube.info/icube/>  
**Stefan Pochmann** - <http://www.stefan-pochmann.info/>  
**Dan Harris, Frédéric Badie** and everyone else

For more guides just like this, visit my website -  
<http://www.kungfoomanchu.com/>

## Last Two Centers (Method 2)


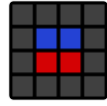
















			
Solved	$R' Dw' F Dw$	$F Dw R Dw^2 F^2 Dw$	$Dw R^2 Dw^2 F^2 Dw$
			
$Uw F' Uw' F Uw F^2 Uw'$	$Uw' R Uw R' Uw' R^2 Uw$	$R Dw' F Dw^2 R Dw'$	$R^2 Dw R^2 Dw'$

## Example 2 Pair Cases (Vertical)

			
$r U' R U Rw'$	$r F' U' F U Rw'$	$Rw F U' F' U Rw'$	$Rw U L' U' Rw'$

















## Example 32223 Pair Solve – the 3 part

Setup moves that move piece to U or B not included. You have to find the proper "Placement Move" (PM) to use. This is just an example.








								
								
$u'$ Offset the centers	Setup a piece on U or B that matches the lower left dedge (lld)	$R U' R'$ If setup ends up like this, then do a proper "Placement move" (PM)	$y$ Move to next pair of dedges	$F R F' R'$ Setup the piece that matches the lower left dedge (lld) on U or D (in this case U) then do proper PM	$y$ Move to next pair of dedges	$R' D R$ Setup the piece that matches the lower left dedge (lld) on U or D (in this case D) then do proper PM	$u$ Now makes 3 pairs with	Done Move to 2223

## Example 32223 Pair Solve – the 2223 part

Setup moves that move piece to U or B not included. You have to find the proper "Placement Move" (PM) to use. This is just an example.

							
							
$L D' L'$ Another PM example. You have to find the right setup and PM to use.	$u' F R' F R u$ Make 4 <sup>th</sup> pair with $u'$ , do PM, then make 5 <sup>th</sup> pair with $u$	$R' D R$ Setup the piece that matches the lld on U or D (in this case U) then do proper PM	$uU' F'L'FL u'$ Make 6 <sup>th</sup> pair with $u$ , do PM, then make 7 <sup>th</sup> pair with $u'$	$R U' R'$ Setup the piece that matches the lld on U or D (in this case U) then do proper PM	$uU' F'LFL' u'$ Make 8 <sup>th</sup> pair with $u$ , do PM, then make 9 <sup>th</sup> pair with $u'$	$L' U L$ Setup the piece that matches the upper right dedge to U or D (in this case U) then do proper PM	$uU' F'L'FL u'$ Make 10 <sup>th</sup> pair with $u$ , do PM, then make 11 <sup>th</sup> & 12 <sup>th</sup> pair with $u'$

## Notation

						
$R$	$R'$	$R^2$	$Rw$	$Rw'$	$r$	$r'$

