



12.20 3x3 Ao5 Analysis

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<http://youtu.be/742hTTtCnRk>

Solve 1 - [11.60](#) 2018/7/5 Kunming 67 ETM – 5.78 TPS

x2 y F' U2 L F L2 D' B U' R2 D2 R2 B2 L' D2 R F2

y2 // inspection

L F2' D' R2 // cross

L' U L U' y L U' L' // 1st pair

U2 L' U L U' y L U' L' // 2nd pair

U L' U' L U2 L' U L // 3rd pair

U R U R' U2' R U R' // 4th pair

U r' R U R U R' U' r R2' F R F' // OLL

U' R2 U R' U R' U' R U' R2 D U' R' U R D' // PLL

U2 //AUF



Oh wow, this is a really funny scramble, with three F2L pairs connected.

For your cross solution, I would suggest doing the D' fingertrick with your right ring finger at the same time that you regrip your left hand, this should be pretty safe. In your solve, you did the first two moves, then regripped, then the last two, whereas it's definitely possible (and faster) to do the D' and regrip simultaneously.

I'm guessing you planned the first pair in inspection, and it was good that you solved it into the back. Second pair was also pretty smooth.

For the third pair, I'd definitely suggest doing a sledgehammer to insert it (L F' L' F), because it barely costs any time at all compared to the standard insertion.

OLL was quite smooth also.

PLL recognition cost a decent amount of time on this solve. As you're getting more advanced, you definitely want to avoid doing that big cube tilt to take a look at the back side of the cube, and really focus on 2 sided recognition. AUF mistake before the PLL also cost a little bit of time.

Overall the solve was pretty nice though, perhaps the other thing that could have been better here is lookahead between F2L pairs.

Solve 2 - [12.84](#) 2018/7/5 Kunming 66 ETM – 5.14 TPS

x2 y L B2 U2 R D2 L2 U2 L B2 L' B' D U' R' B' L2 R D U L'

y x // inspection

U2 L z' x' L D' L' F' D // cross

U' R U' R' y' L U L' // 1st pair

R U' R' U' R U' R' U R U' R' // 2nd pair

L' U' L U' L' U L // 3rd pair

U2 R' U R U2' R' U R // 4th pair

U R U R' U' r R' U R U' r' // OLL (CP)

U' R2 U R U R' U' R' U' R' U R' // EPLL

Again, too many regrips in this cross solution. Doing R2' F R D' R' B' D as an alternative solution is actually possible without the regrips, just using your right ring finger for the D' and B' moves.

So, the F2L on this solve is pretty simple to analyse. You only did one rotation (really good!), and your choice of F2L pairs was fine as well, as were your solutions for those pairs. However, the clear thing that's holding back the speed of this F2L were the pauses between your F2L pairs. Before pair 2, pair 3, and pair 4, there were almost 3 seconds of combined pauses. This indicates that you're not really looking ahead very well during your F2L, and if you're trying to, it probably means that you're turning too quickly for your current lookahead ability.

Particularly for pairs 3 and 4 in a rotationless solve, the lookahead is pretty straightforward and in order to reach sub 10 and beyond, the pauses need to be a lot smaller, or non-existent.

Also, this is a really big thing - you're doing those massive cube tilts before every pair. This is okay for intermediate cubers to help avoid rotations, but as you're getting faster and more advanced, you'll need

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to get rid of that habit because it's clearly costing you significant time.

Again for the PLL, 2-sided recognition was pretty simple because it's just a U permutation, and the tilt of the cube that you're doing is definitely unnecessary and wasting time. I bet even now you could easily recognise that U perm without looking at the back of the cube.

Solve 3 - [12.17](#) 2018/7/5 Kunming 64 ETM – 5.26 TPS

x2 y D2 B2 U' L2 U R' L D F U L2 U B2 D F2 U2 F2 L2 F2

L' D' R' D R D // cross

U' R U' R' U' L U L' // 1st pair

U L' U L U2 L' U L // 2nd pair

U2' y R U R' d R' U' R // 3rd pair

U' R U R' U2 R U' R2' F R F' // 4th pair

U2 r U R' U' r' R U R U' R' // OLL (CP)

R2 U' R' U' R U R U R U' R // EPLL

Cross is pretty simple here, no issues.

For your first pair - you recognised it and set it up quite quickly, but the final L U L' insertion was quite slow. This is slightly better than the previous solve, because it looks like this calmer finish to the F2L pair allowed you to look ahead and avoid the pauses before pair 2.

For pair 2, you shouldn't regrip. L' U L U2' L' U L can be done with the U2' double trigger, starting and finishing with your left thumb on the front face, without any regrips. Also, keyhole is applicable here - D U' R U R' D'

Lookahead was a bit poor before pair 3 and caused the rest of the F2L to be slower due to a bad pair choice. Both the red/green F2L pieces were on top before pair 2, and you could have solved them without a rotation directly afterwards.

Pair 4 execution could certainly have been improved. For example, the U2' that you did needed to be double flicked, and you finished off the pair with R U R' R' F R F' - the R' moves need to become an R2' so that the pair connection and insertion is just one long flowing algorithm rather than segmented parts. OLL was fine, but just for fun - M' U M U2 M' U M skips PLL here.

Again for PLL, work on 2 sided recognition. You seem to be automatically tilting the cube to see all 4 sides, even when the PLL recognition is literally the easiest possible case (correctly aligned U perm).

Solve 4 - [11.27](#) 2018/7/5 Kunming 47 ETM – 4.17 TPS

x2 y L2 F' D2 F2 D2 R2 F2 L2 U2 L2 B' R D U R U' R2 U B' F'

y // inspection

R D' L B F R2 D // cross

d' L U' L' // 1st pair

R U' R' // 2nd pair

L' U L U' y L U' L' // 3rd pair

U' R U R' // 4th pair

U2 R U2' R2' F R F' R U2' R' // OLL

U2 x R' U R' D2 R U' R' D2 R2 // PLL

Alternative cross solution might be: y x L R U R I (regrip) D L. Yours looked pretty decent though, but it looked a little bit too disjointed. I.e, you seem to be just doing the moves for the solution one after the other, without trying to make them flow and cut corners on your cube. Something to think about/work on.

F2L was great here! Given how easy the solutions were, your lookahead was a lot better than in the previous 3 solves. Particularly the last two pairs, they were very good.

OLL was quite nice, but again PLL recognition and setup was poor. It took you almost 2 full seconds from the point at which you finished OLL, to the point where you started executing the A permutation.

Solve 5 - [14.80](#) 2018/7/5 Kunming 62 ETM – 4.19 TPS

x2 y R2 B2 F2 U' L2 D R2 F2 D2 U R F D' U2 B' L' R' F L' B2 U'

F L U' R2 D2 F' D // cross

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y U' R U' R' L U' L' // 1st pair
R' U R U2 y' L U L' // 2nd pair
U2 R' U' R2 U R2' U' R // 3rd pair
U' R U2' R' d R' U' R // 4th pair
U2 F R U R' U' F' // OLL
U R2 U R' U R' U' R U' R2 D U' R' U R D' // PLL

Similar comments to the rest of the solves regarding the cross - it seemed very disjointed and had too many regrips. You should work on trying to plan out really good fingertricks for your cross, in addition to just the moves required. For example, a completely regripless way of executing that entire cross solution is: x' D r U' R2' D2 F' D.

First pair here after that relatively slow cross really didn't help. At your speed, if you don't see anything good in the top layer or front slots, then it's worth doing those cube tilts for the first pair to check out what's in the back slots. For example, red/blue was probably the best choice for the first pair, and it didn't require any rotations to solve.

Unfortunately, cross and first pair were finished at around 7 seconds, and even though the three pairs after that were quite decent, it wasn't enough to recover on this solve. Lookahead to pair 2 was excellent, the solution for pair 3 was great, and the execution of pair 4 was also very good.

The tilt on this PLL was the smallest of the lot, and I actually think this was your best last layer of all 5 solves, because of the strong recognition of both OLL and PLL.

Main tips/areas for improvement:

Too many regrips in your cross solutions, and your crosses seem very step-by-step, they don't appear to flow very well. Work on more speed-optimal cross solutions which flow more nicely from move to move. A large part of this is trying to plan good fingertricks in your inspection time.

For the first few solves, your lookahead in F2L was the main thing that stood out as an area of improvement. You can certainly slow down your turning a little bit as well, to help with that.

Occasionally, the poor lookahead led to poor F2L pair selections as well, which is something to be careful of.

Not enough use of U2 and U2' double flicks.

PLL recognition and pre-AUF was not very good. I suggest banning the tilt of the cube that you to and forcing yourself to work on 2 sided recognition. It seems that you're spending at least 1 second every solve trying to recognise PLL, which for someone who averages 12 seconds, is a large amount.