Pooling for 6 Digits

Pooling philosophy and what I have learned about 100k-300k tournaments
By Quag

Pooling is one of the most important parts of the player experience in tournaments. Even if everything else is running smoothly, a bad pool will leave participants unhappy. Pooling is also deceptively challenging and a large time commitment. Many players see pooling as an opportunity to share their favorite maps with others, and while this is true to an extent, maps that are good for pooling are not always the maps that are the most fun to play casually. In this document, I will explain my general pooling attitudes, important facts about each mod category, notable things about each stat of a map, and an example pool putting it all together.

What Makes a Mappool?

The goal of a mappool is to give a selection of maps that each test a unique skill and to cover as wide a range of skills as possible. Every player should be able to find a map that they can do well on. It should be hard enough to challenge players but easy enough that they can play the maps. It is also important that the pool is fun to play and to listen to because most players participate in tournaments to have a good time. As a mappool selector, the goal is to find a good balance between these competing forces.

The Big Question: Why is it Here?

A question I often ask myself when pooling is "Why is it here?" Why did I put an AR 8 map in the hidden pool? Why does this map have a section with doubles? Why are there 4 DT maps instead of 3? No matter why I ask this question, there is only one good answer: "Because I *want* that aspect to be there." A low AR map is in the pool because I *want* to test low AR. It is not because I like the song or the map and want it to be there; I have to want the low AR specifically. You should ask yourself this about everything in the pool that is not comfortable. It is not so important to ask why a nomod map is AR 9, the standard AR, but much more important to ask why it is AR 8. You don't have to ask why a map is 175 BPM, but you might have to ask about 130 or 210 BPM. The important part of this question is that you *should* be putting things in a pool beyond simple jump maps at comfy BPMs, but all of these things should be intentional. I also find this a good principle to follow to prevent mod pools from becoming redundant, as I will explain later.

Occasionally, the answer to this question is "Because I couldn't find a better map that doesn't have it." We must remember that pooling requires us to find maps that someone else has made, and sometimes this means that there is not a map that perfectly does what we want. We try to resolve this by spending more time searching (osu!search can save you in a pinch), but eventually there will be a case where no map exists. When this happens, we need to make sure the sacrifices we take are not so large that the other aspects of the map are overshadowed.

What Makes a Mod Pool?

Each mod offers a unique set of challenges, so it is important to make pools that work with the mods. The HR and DT pool should not be an extended nomod pool. The FM pool should not be a second HD pool. The HD pool should not just have nomod rejects from earlier rounds. Within a single mod, each map should be quite different from each other map in the skills it tests. There should be a range of BPMs and a variety of lengths, though some overlap is okay if the maps vary enough. Across mods, it's okay to have some skills repeated. A stream map in nomod, HD, and HR will all play very differently and lean towards different skill sets if the pool has been done well. We will now look at each mod individually.

Nomod: Mixed Skills

The nomod pool is a place to test a wide variety of skills. It will be much larger than any of the other mod brackets, so you have more room to diversify the maps. There are many main categories of maps that could be in the pool, which I will list in order of importance. Depending on the size of the pool, you will probably only have some of these.

Consistency: A consistency map is a long map that is usually the highest star map in the pool but also the easiest map in the pool. It should not be difficult for any particular reason, the BPM should not be too fast, and there should be a good mix of jumps and short streams. While the map can have its difficulty change throughout the song, it is important that there is not one spike that gives most of the challenge of the map, or even a few short spikes that are significantly harder than the rest of the song. This sentiment applies to all maps but is important here because this map is often a "farm" style map that can lend itself to a jump spike.

Streams: A stream map can be long or short but should focus on streams for the majority of the playtime. There are many maps that have streams mixed in with jumps or technical patterns which do not make good stream maps. Worse choices have a few short sections focused on streaming in a map that doesn't have many other streams. Stream maps can be frustratingly hard to find at this range because sounds often get mapped with reverse sliders. The BPM should be fairly comfortable.

Technical: Technical maps are not a clear category and are even less well defined in the lower ranges where techniques used are much too hard. Look for something with some combination of sliders of varying slider velocity, slider tracking, and awkward rhythms. The BPM should be comfortable, usually a bit lower than the first two.

Alternating: This should be a map with a BPM in the 120-140 or 240-280 range with dense rhythm. It is flow-aim heavy with a nice AR. This is a pretty clear category at higher star ranges but it is hard to find good candidates here.

Speed: Speed is a concept I see used wrong all the time in pooling. The biggest problem is that a high BPM doesn't mean a map is a speed map, especially in this star rating, because they can often just become alternating maps. For this reason, I think speed maps should be in the 210-230 BPM range with mapping that encourages single tapping, usually with bursts. These maps should be straining to play on your tapping hand. The AR is often a little above 9 to be easy to read.

Control: This is a map with awkward rhythms that often requires you to play with a lot of focus. It might have doubles, mixes of ⅓ and ¼ rhythms, or many other things that are hard to play. It will usually be quite low star because the map is not hard due to conventionally hard aspects, rather it is hard because you have to play slower and more deliberately than usual. It may have lower AR or higher CS than a typical map.

Reading: This is a map that usually has low AR along with overlaps and rhythms that require some practice and memorization unless players are well practiced in low AR reading. Like with the control category, these maps will be very low star.

Hidden: Reading and Control

Hidden is a mod that can sometimes greatly increase the difficulty of a map and sometimes be almost inconsequential. While not every map should be a disgusting reading map, they should all feel intentionally in the hidden bracket due to the interaction with the mod. More than any other mod, I feel like there is flexibility in the types of maps you can pick.

Consistency: This map is mostly similar to the nomod consistency map. In order to take advantage of being a hidden map, I find it best to pick a map with a slightly below average BPM to emphasize control. You can also pick a slightly above average BPM so reading becomes slightly more challenging.

Reading Heavy: Usually, this is filled with an AR 8 pick, but anything below 8.5 can work if the reading challenge also comes from mapping. Low-density rhythms can be good because they put a strong emphasis on only reading. Slow streams are another good option.

Higher AR Reading: Putting a reading map in the pool which is more about pattern reading than low AR reading can be a good complement to any HD pool or even replace a boring consistency map in a small pool. Awkward aim, overlaps, and light tech work well in this slot.

Other Maps: After the other maps, you should round out the pool with a final map that complements the other maps. A technical, stream, or high BPM map works well in the hidden pool as long as it is not too similar to either of the other choices. Try to fill in what is missing from the pool with this map.

Hard Rock: Aim, Accuracy, and High AR

Hardrock is a unique mod for this range of players because few can play it well, but if you chose a map that lessens the blow of the stats then you end up with nomod maps. While you should be extra careful of stats in this mod, the most important one to be aware of is AR. I would strongly discourage putting AR 9.8 in the pool unless you are very early into the tournament or the map tests other aspects of HR (like precision). Any map below AR 9.8 should not be here under any circumstances. HR has three big areas to test

Consistency Aim: Unlike consistency maps in other pools, I would generally avoid maps with small streams mixed in and opt for maps that put more emphasis on aim. A higher BPM consistency map, 190-235, is often good here as it complements the stats of HR.

Finger Control: As a foil to a consistency map, a shorter, lower BPM map with technical rhythms like doubles and interesting sliders will test accuracy in a different way. As you reach

the higher end, you can even add some stream maps. This map is essential because it requires players to be much more comfortable on the high AR of HR to play this map well. The star rating of these maps can be deceptive so be careful to pick a map that is a similar difficulty to the consistency map and not just a similar number of stars.

Precision Aim: This is where the classic CS 6.5 map fits into the pool, though you can test similar skills with lower CS maps. The goal is to require the player to control their aim over smaller distances rather than the larger jumps in a regular aim map. Almost any BPM can work here, but the rhythms should be fairly simple.

<p align="center">**Double Time****: Speed and Speed Stamina**</p>

A big challenge of double time in any tournament is not letting the pool become an extended nomod pool. This is doubly hard for this range because the stats of maps you pick from can easily create a map that is AR 9 at a regular nomod BPM. In order to prevent this but also keep maps accessible to most players there a few things you should do. First, essentially every map should be between AR 7.5 and 8 before DT with maybe one or two in final rounds going above 8 when you want to test high AR specifically. Below 7.5 the maps have ARs that are too similar to a nomod map, so be very cautious when using them. **Never put an AR 7 map in the DT pool as it is AR 9 after DT.** The second is that every map should be testing speed in some way. The BPMs should usually be 190 to 260, with the bottom end having significant speed challenges coming from burst or finger control rhythms. Maps above 260 start to turn back into alternating maps, which should only be used when that is the goal of the map.

More than any other mod, diversity in BPMs is essential to making the maps feel different because you are essentially picking a bunch of low 3 star maps that have low variability in their elements so I will group BPM ranges with what you should usually try to have in each one, though you can play around with this a little bit to fit what you want the pool to be. Especially when you only have 2 DT maps, you can be more flexible with what maps you pick to cover the ideas of the categories more than filling each one exactly.

Speed Consistency (230-260): This should be a long map that is fairly constant difficulty throughout. There should not be many bursts, though a few triples here and there are okay. This pick is usually on the lower end of the ARs in this pool.

Speed Stamina (215-230): It might be a bit surprising that the speed map is a lower BPM than the consistency map, but that is because the map gets most of its speed from bursts or long sections of constant single taps without sliders to give you a short break. The goal of the map is to be draining. Speed stamina usually feels "faster" than a raw speed map, often because the patterns can be more complex at the star rating you choose.

Finger Control/Tech (190-215): This map uses complex rhythms and fast sliders but at a speed faster than most nomod maps. It might even have short streams. Because the stats on the map are usually close to a nomod map, the AR should be 8 or even a little higher so that the double time is noticeably part of the map.

Speed-Alt (275-300): A map to be saved for later rounds, this is a map that is so fast it almost can't be single tapped, though the rare brave player will do it anyway. There should be no bursts or triples into this map, and a lot of the rhythm should be broken into sliders. In order to avoid seeming too much like a nomod alternating map, this should be AR 8.

Aim Consistency (225-260): Like speed consistency, this map should be long but it can focus instead on holding the higher AR reading for a long time as well as simplified jump-favored rhythms. The BPM might be similar to your speed consistency map, but it should play like a very different map.

Freemod: Variability and Balancing

A good freemod pool should have some players plating each map with both mods. Finding a balance in maps so that hard rock plays can sometimes win is always a struggle, and it is much worse in this rank range when hard rock is uncomfortable for almost everyone. A poorly made freemod pool is sometimes just a second HD pool with the occasional map that is insanely HR favored. Early in the tournament, balancing is less important because players can overmod the picks to get more points, but later, when players are not FCing most maps, HR will go away. There are different FM rules to combat this in different ways, but a good pool should be balanced no matter what these rules are (balancing with EZ or FL is a whole different beast so I won't give you tips there). It is also important to be very aware of the stats of maps because they can make HR (or sometimes HD) almost unplayable. The best way to balance the pool is to make each map challenge a different skill with each mod choice so players will pick the skill they are better at. A generic consistency map is easier with HD for almost everyone, but a reading heavy map might cause more players to pick HR. I like to break the FM pool by AR, with AR 9 being added in only when you have 3 choices:

Antimod (AR 8): The goal of an antimod map is to make either mod player suffer. Some people like to choose a CS 5 AR 8 map for this, and I think this is good in higher rank tournaments, but in this range, CS 5 maps are often too simple with HD for players to pick HR and endure CS 6.5. I prefer maps with a higher OD that are very hard to acc because of strange rhythm choices, something that also makes the HD reading quite challenging.

Consistency (AR 8.5): At this slightly lower AR, some players will find comfort in HR while others will still be happy with HD. Like the consistency HR, if this map has too many streams it will be challenging for HR. Be careful when making sure this map is balanced.

Higher BPM (AR 9): Because AR 9 will be fairly comfy with HD, a map that is 220 BPM or higher negated this a little bit with the map's density. You have some flexibility with this one, but make sure this map is testing something different from the 8.5 map.

Freemod is not usually as defined as the other mods, and this gives you lots of flexibility in how you choose to fill things. I think it's most important in this pool to make something cohesive that covers lots of different categories with each pick.

Tiebreaker: Fair and Consistent

Tiebreakers are hard to find at this range because many marathon maps in this star rating are either low AR or much harder than the star rating suggests. The most important thing in a tiebreaker is that it is fair to most skillsets because the better overall player should win. For this reason, a tiebreaker should not get the majority of its difficulty from jumps, streams, tech, or speed. It should be a comfortable mix of different elements with variety. No player should feel like they lack a specific skill that causes the tiebreaker to be unnecessarily hard, just that they are not a good enough player overall to do better than their opponent.

A tiebreaker does not need to be the same difficulty throughout the entire map, as it is often somewhat boring when it's like this, but it should have multiple intense sections throughout the map with difficulty not concentrated on one section or a few patterns. Breaks should happen in multiple spots, so the point is not decided by who hits the one hard section. However, I think a map that builds in difficulty over the song and culminates in a slightly harder section than the rest of the map is fine as long as the map is not just a 2-minute song padded with 3 minutes of free combo before the hard part.

Example Pool

Hybrid of a few pools from NPC2.

Mod	#	Map ID	Artist - Title [Version] (Creator)	CS | AR | OD	Star	BPM	Length
NM	1	788468	AKINO with bless4 - Yuki no Youni [z1085684963's Insane] (Rizia)	4 | 9 | 7	4.66	184	4:17
NM	2	2276017	Loki - With Fire and Sword (2013) [TheMinorsonek's Insane] (TheShadowOfDark)	3.8 | 9 | 8	4.64	180	3:53
NM	3	1435453	tofubeats - CANDYYYLAND feat LIZ - Pa's Lam System Remix [Plaubbes' Light Insane] (ProfessionalBox)	3.8 | 9 | 7.5	4.45	160	3:36
NM	4	1445844	Street - Maritime Police [Lasse's Insane] (Mir)	4 | 9 | 7.4	4.55	132	3:25
NM	5	1346125	SiM - LET iT END [Insane] (Feb)	4 | 9.2 | 7	4.51	214	1:28
NM	6	2148398	twiddy - The Birds [The Eagle] (Striderin)	5.3 | 8.6 | 7.5	4.13	93	3:01
HD	1	947708	Goose house - Hikaru nara [Mikii's Insane] (ProfessionalBox)	4 | 9 | 8	4.52	160	4:04
HD	2	228549	An - Xhroria [Hyper] (Cherry Blossom)	4 | 8 | 7	4.03	200	2:02
HD	3	916627	USAO - Night sky [Insane] (sukiNathan)	4 | 9 | 7.5	4.45	192	1:51
HR	1	1038610	Yunomi - Mentai Cosmic [Hard] (alacat)	5.2 | 10 | 8.4	4.4	224	3:44
HR	2	667843	orangentle - HAELEQUIN [alacat's Light Insane] (Gamu)	5.2 | 10 | 9.1	4.3	167	2:16
HR	3	1531201	FELT - Rendezvous [Aeril's Hard] (UndeadCapulet)	6.5 | 10 | 9.1	4.14	94	3:26
DT	1	725164	Haruna Luna - Kimiiro Signal [Hard] (CelsiusLK)	4 | 9.3 | 8.4	4.41	246	3:05
DT	2	2268090	EmoCo. - MAGENTA POTION [Hyper] (Starfy)	4 | 9.7 | 8.4	4.35	225	1:35
DT	3	1662094	cYsmix - The Ballad of a Mindless Girl [Chaoz's Hard] (Mir)	3.8 | 9.7 | 8.4	4.29	192	2:28
FM	1	2306360	cosMo@bousouP feat. Hatsune Miku - The Disappearance of Hatsune Miku -DEAD END- [Hyper] (Hokichi)	3.1 | 9 | 6.5	4.21	240	2:51
FM	2	2151527	Camellia - Syzygia [d3n's Hard] (ScubDomino)	3 | 8.5 | 6	4.14	190	4:04
FM	3	74697	Infected Mushroom - The Legend Of The Black Shawarma [Insane] (La Cataline)	4 | 8 | 7	4	145	3:13
TB	1	1827700	Shimotsuki Haruka - Rinne no Ito [Eternity] (Cyndere)	4 | 9.2 | 8	4.62	156	5:27

While no pool is perfect, this has a map for almost every point I touch on in the above analysis (though not in the same order). Something missing a DT Speed-Alt map because this wouldn't be a good spot for one yet. This is a good example of one, but it is too hard to fit here.

Example Pool

Pools from NPC3.

Mod	#	Map ID	Artist - Title [Version] (Creator)	CS | AR | OD	Star	BPM	Length
NM	1	2106385	HO-KAGO TEA TIME - NO, Thank You! [Memories] (Trynna)	4 | 9 | 8	4.66	90	4:10
NM	2	568565	Memme - Chinese Restaurant [Hyper] (Muya)	4 | 9 | 8	4.59	175	1:38
NM	3	2377681	Ardhito Pramono - Trash Talkin' [Insane] (Agent_James)	4 | 9 | 7	4.27	250	1:59
NM	4	1951214	Ben Briggs - New Game Plus [Fearless Living] (Icekalt)	4.3 | 9 | 8	4.49	140	2:45
NM	5	799785	Yooh - LegenD. [EXHAUST] (toybot)	4 | 9 | 7	4.58	205	1:58
NM	6	1821817	Wang Yi Tao - Zi You Sheng Guang [Present's Insane] (Ryuusei Aika)	3.8 | 8.3 | 7.4	4.23	140	3:19
HD	1	1015365	senya - Arehateta Chijou no Uta [Giralda's Lunatic] (Satellite)	4 | 9 | 7.5	4.48	160	3:27
HD	2	2513012	Elroy - ANGEL 9 [SYLAS' INSANE] (jamesjan3)	4 | 8.8 | 8	4.18	100	1:46
HD	3	1245583	Eisyo-kobu - Oriental Blossom [Pata-Mon's Hyper] (Crystal)	3.8 | 8 | 6.5	4.02	180	1:50
HR	1	1738518	ABSOLUTE CASTAWAY - Shinsou Shintouron [Hard] (Lasse)	5.2 | 10 | 9.1	4.44	205	3:47
HR	2	1871257	Eagle - S!ck [Nemis' Hyper] (den0saur)	5.2 | 10 | 8.4	4.23	177	1:50
HR	3	2510677	MIMI - Shijima ni Saku [Hard] (Myxo)	6.5 | 10 | 8.4	4.04	88	2:06
DT	1	2381998	maras k feat. Yoko Takahashi - T.o.k.y.o [newton's Hard] (Skubi)	4.2 | 9.3 | 8.4	4.29	192	2:23
DT	2	2619226	ALEPH - The Evil Spirit [Hard] (Yugu)	4 | 9.7 | 8.4	4.21	210	1:43
DT	3	1319578	Okui Aki - Calendrier [Hard] (Kalibe)	4 | 9.3 | 8.4	4.39	246	2:27
FM	1	2680199	Gram (DJ Genki) - Nibelungen [Insane] (Sakura Blossom)	3.8 | 9 | 6	4.03	222	2:47
FM	2	2148691	TORIENA - RAT RACE [Team :3c's Hyper] (Acyl)	4 | 8.5 | 6	3.84	175	3:41
FM	3	1912048	Expander - subtractive [12] (anna apple)	3.7 | 8 | 6.5	3.59	180	1:48
TB	1	1353352	Mei Ayakura - Romantic Fall [Longing thoughts dyed in crimson] (felys)	4 | 9 | 8	4.85	175	5:46

Here is a second pool at about the same difficulty. You can see that the star rating for several of the map types is wildly different but the approximate difficulty of most maps is fairly similar. The freemod pool in this tournament had to be played with one HD and one HR so the maps are slightly easier than the previous pool to accommodate that.

On Stats

Here is a brief discussion of the different stats of a map and how much you should consider them when pooling.

BPM: Almost any BPM can work in the pool, though as I note for most picks, you should be very aware of the BPM for picks. One other thing to remember is that you can often double the BPM of slow maps. For example, a map that is 105 BPM with lots of jumps mapped to 1/4 and even some 1/8 streams feels almost the same as a 210 map mapped to 1/2 and 1/4. Watch out for the rare maps with lots of 1/3 snapping as the BPM "feels" like it is 1.5 times faster. A 140 BPM map with 1/3 (and 1/6) rhythms will also feel like a 210 BPM map.

Length: Try not to have too many maps of the same length in a single mod pool. Usually, a consistency map will be 3:30-5:00, a shorter, challenging map will be 1:30-2:00, mid-length maps are in between, and tiebreakers are 5-7 minutes. No map should ever be less than 1 minute.

Circle Size: CS is really only important when it is unusually high, like a 6.5 HR pick or even a 4.5 FM pick. Sometimes, low CS maps help balance HR in FM pools.

Approach Rate: For NM and HD, AR only matters when it is unusually low. For HR, AR should never be below 9.8, and 10 when possible. For DT, AR helps make the maps stand apart from the nomod pool. For FM, AR helps make HD less desirable. The AR on the TB should be comfy.

Overall Difficulty: OD isn't something you need to think about too much, but it is important to watch out for OD 9.8/10. This can be very hard for players to acc so use it cautiously in the HR pool and carefully in the FM pool so that HR is still an option.

HP: Hopefully, the tournament has rules where failed scores count or nofail is allowed so you don't have to think about HP. If not, you must consider HP for every map. Failing should be rare and only happen to players who did poorly throughout the entire map, not just in one section. Good luck and consider changing the rule.

Conclusion

Mappooling is a fun and rewarding experience which is not too hard if you have a good plan going in. It will require time and effort — I often spend 10+ hours on a pool when I am solo pooling — but it lets you share cool maps with other people.

This guide seems quite strict, and I think that following a strict guide helps reduce some mistakes, but you can be flexible with how you pick. There is no one right way to pool. Pools can get bland if they are all copy-pastes of each other. Mix some of your own creativity with this guide to make something personal and interesting but with enough structure to be fair and fun for everyone. I am also not an authority on pooling. I have done enough pooling that I have a good idea of what is going on, but there are tons of people who have done more than me even in the 6 digit space. This is simply a guide to help poolers to think more critically about the choices they are making

If you are quoting significant parts of this guide please credit me, but you can share as much of the guide as you like. I would love to hear feedback on this guide and if you use it for your tournament let me know that my effort was put to good use!

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Special Thanks
SmoothieWorld for [his own guide](#) that taught me how to pool and helped form this one.
DeflatedDolphin for letting me learn how to pool with him.
My irl dad for proofreading.