
Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, technical proofs (TP), and all of my past articles are available online at billiards.colostate.edu. The reference numbers used in the articles help you locate the resources on the website.

Do you have strategies when racking and breaking in 9-ball? Do you know what to do when you cannot get a tight rack? Do you know how to determine if an opponent is attempting to gain an unfair advantage through rack manipulation? If you do not have good or complete answers to these questions, you are in the right place.

Break Strategy

Let's begin with break strategy, assuming the rack of balls is aligned properly and tight, with all balls touching. If you have trouble achieving a tight rack, the "[racking](#)" FAQ page at billiards.colostate.edu offers lots of advice. With a tight rack, the best strategy is to pocket the wing ball (the 4 ball in **Diagram 1**). Breaking from the side, with the cue ball (CB) close to the long rail, using a square hit on the 1 is the most reliable way to do this. You should always strive to "squat the rock" ... in other words, park the CB close to the center of the table after the break. If you do not know how to do this, see the "[break squat](#)" FAQ page at billiards.colostate.edu. Online video [NV J.2](#) demonstrates the break illustrated in Diagram 1, where I show that break speed has little or no effect on wing ball direction. I also show that the wing ball goes over a wide range of hits on the 1.

Obviously, in addition to pocketing a ball on the break, you would also like to have an open shot after the break. As shown in Diagram 1, with a square hit from the side, the 1 ball tends to head above the side pocket. With slow speed, you can get a look at the 1 in the side; and with medium speed, you can get a look at the 1 in the top-left corner. Faster speed is also a good option, especially if the 3-point break rule is in effect, where you need to pocket and/or drive at least three object balls above the head string. With fast speed, you have a good margin for error to get a look at the 1 ball in the bottom-left corner, assuming you "squat the rock."

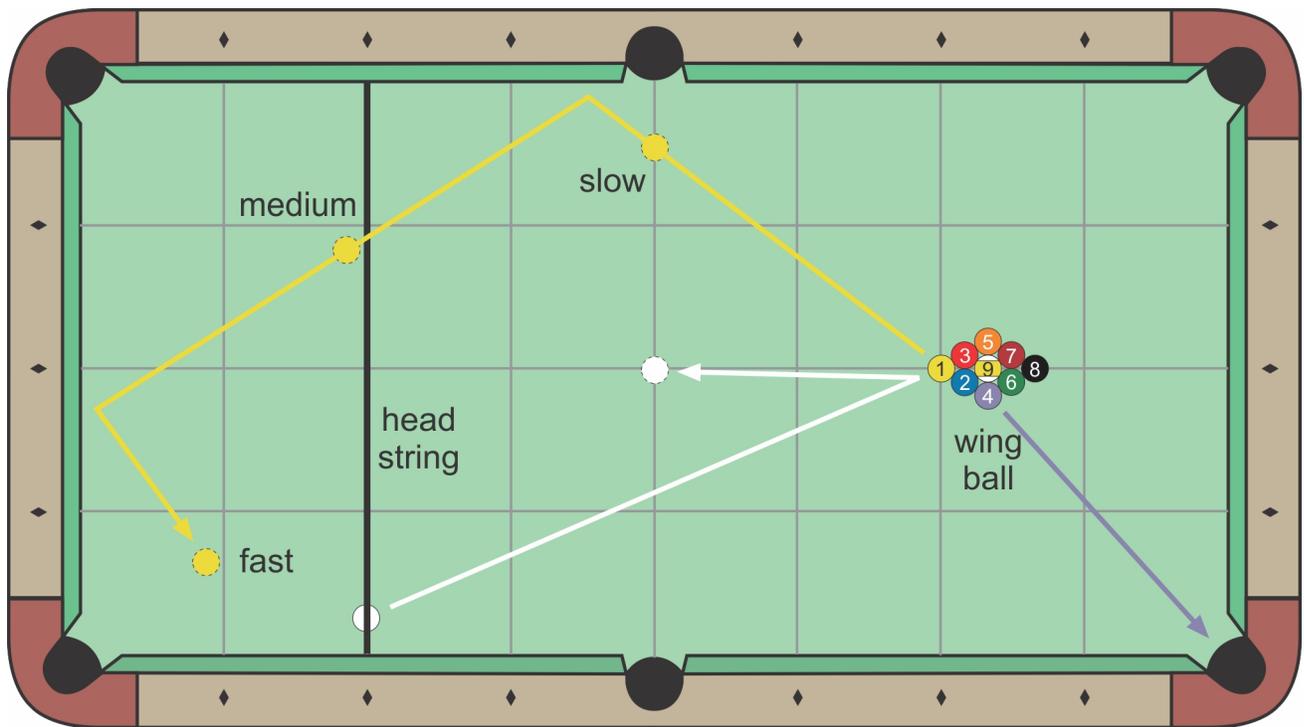


Diagram 1 Side break

Since the side break can be “too effective,” some tournaments require that you break from a limited-size “box” in the “kitchen” (behind the “head string”). Sometimes the “box” is a centered 2x2 diamond square; but, more often, it is only 18” wide as shown in **Diagram 2**. To pocket the wing ball on the break from the “box,” you need to use a cut break, where you hit the 1 off-center (on the wing-ball side) instead of square. You aim to hit the 1 in the same spot you target with a square hit using a side break. With a cut break, there is a limit to how much power you can use, because the CB can easily bounce off the table with too much speed. Therefore, with a 3-point break rule, the cut break can be a little risky because you might not drive enough object balls to the head string.

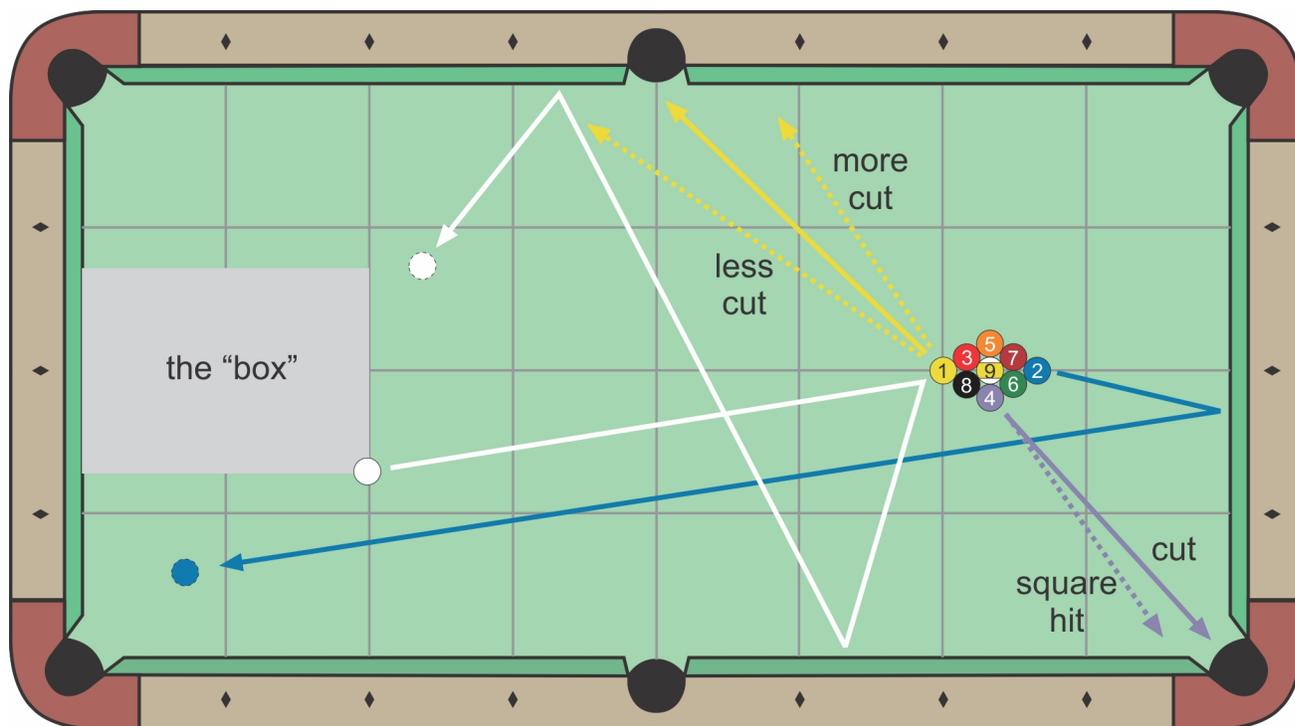


Diagram 2 Cut break from the “box”

With a cut break, the 1 also tends to head toward the side pocket with the right amount of cut (see Diagram 2). If you hit the 1 close to square from the “box,” the 1 will typically go above the side and the wing ball will typically go above the corner. If you cut the 1 too much, it heads below the side. The back ball, in this case the 2, usually heads up table for a shot after the break if you pocket the 1. Sometimes, it can even go into the bottom-left corner.

As we will see later, it is possible to pocket the 9 on the break (called a “golden break”) if there is a gap in the rack behind the 9 ball. **Diagram 3** shows a “more legitimate” way to do it with a tight and un-manipulated rack. Using a cut break, the CB can be bounced off the side rail and into the 9 which would still be in place, since it doesn’t move during the break with a tight rack. It is difficult to be precise with the exact CB direction off the rail, but the 9 has a chance to go in 4 different pockets with different hits on the 9. You need to be lucky with this approach; but if it works, you win the game on the break without needing to hit another shot. Even if you do not luck the 9 in, you still might pocket the wing ball or the 1 to continue shooting.

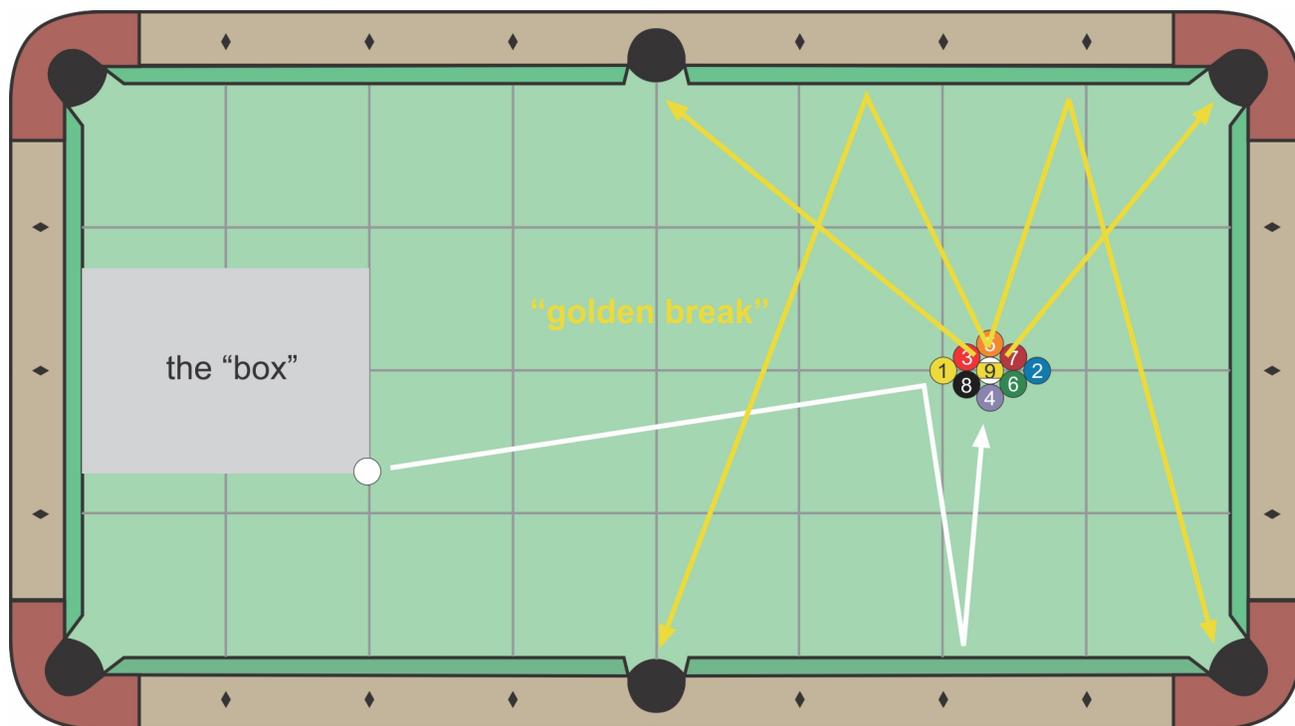


Diagram 3 Legitimate “golden break”

Because it is so easy to pocket the wing ball with a good rack, either from the side or from the “box,” some tournaments also require racking with the 9 (instead of the 1) on the foot spot as shown in **Diagram 4**. Because the rack is farther up table, the wing ball will go above the corner with a square hit, making it more difficult to pocket a ball on the break. With the 9 on the spot, a square hit will usually send the 1 fairly close to the side. In fact, pocketing the 1 in the side is one approach for defeating the 9-on-the-spot countermeasure. However, the 1-ball direction can be very sensitive to the square-ness of the hit and any gaps in the rack. Another option is to use a cut break to send the wing ball farther down table to the corner. Sometimes, you can also get the 1 to bank into the bottom-left corner.

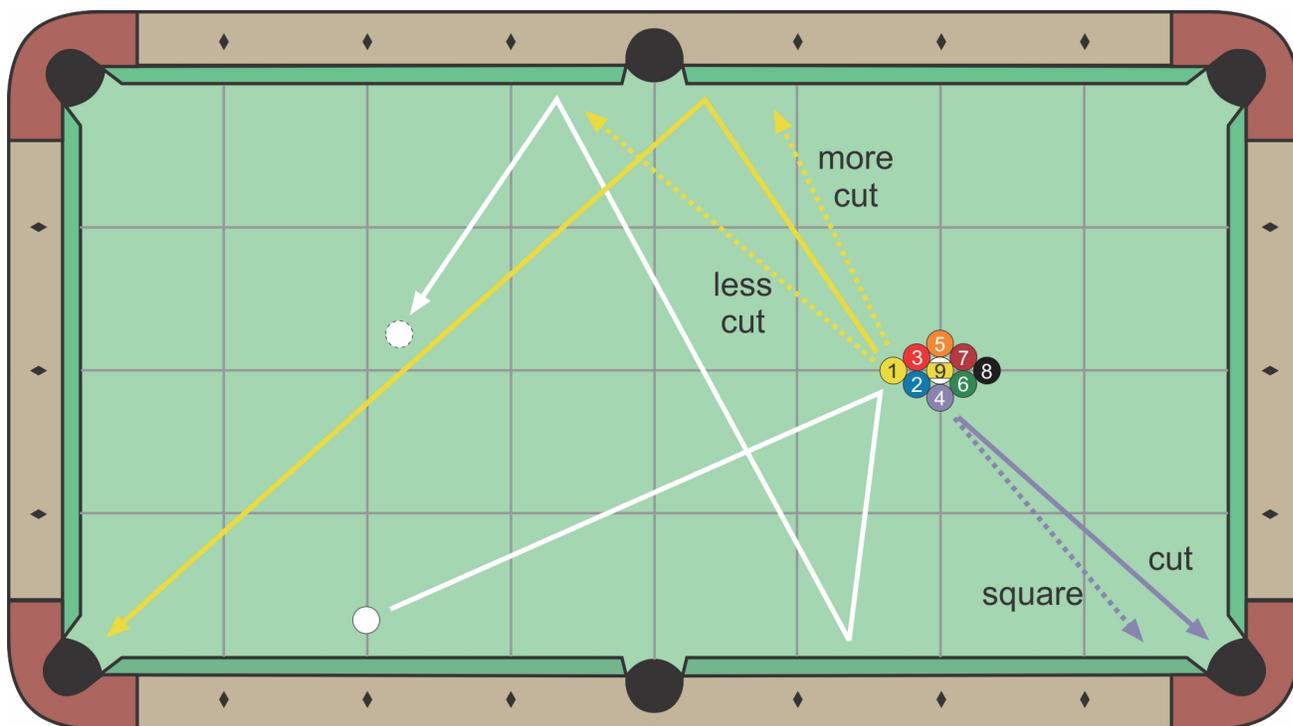


Diagram 4 9-on-the-spot cut break

Obviously, if you do not have an accurate and consistent break, you will not be able to take best advantage of the information and strategies in this article. If you want to improve your break technique, the “[break technique advice](#)” FAQ page at billiards.colostate.edu offers lots of tips and guidance.

Rack Manipulation

Everything above dealt with break strategy for a proper rack. Sometimes, conditions can make it difficult to achieve a proper rack, and some people cheat by purposely manipulating the rack to their advantage. One way to cheat, shown in **Diagram 5** is to tilt the rack alignment to one side. As we saw above, with a break from the “box,” the wing ball should go high with a square hit of a tight rack. As shown in Diagram 5, turning the rack slightly can allow the wing ball to be pocketed on one side, with the other wing ball going even higher. For a demonstration of the rack-tilt cheat, see online video [NV J.3](#).

One advantage of breaking from the “box” with a square hit, assuming the wing ball goes, is the 1 ball will head toward the corner pocket up table, usually resulting in a good look at the 1 after the break. Online video [NV J.2](#) provides convincing demonstrations of this technique.

Cheating the rack alignment might be a little obvious to an opponent or ref, especially if there are racking lines or marks drawn on the table. Nevertheless, another important message here is to be very careful with alignment when you are racking; otherwise, you will get inconsistent results.

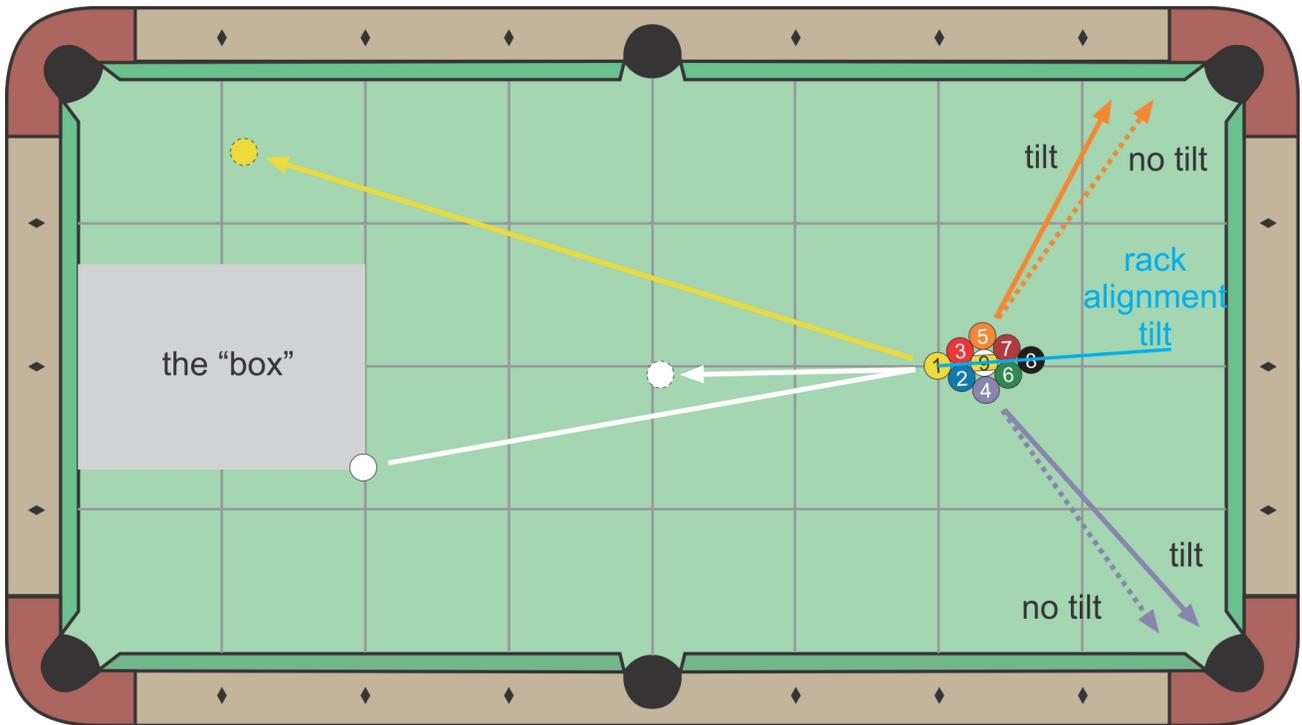


Diagram 5 Rack alignment tilt cheat

Now we will look at what happens when the rack is not tight, with gaps between some of the balls. This can occur on a worn table with old balls, where it might be impossible to get a tight rack, even by training the table (see online video [NV I.3](#)) or using a racking template. However, it can also occur because the racker is manipulating the rack to create intentional gaps in specific places. It is illegal and unethical to purposely create gaps when racking, for yourself or an opponent; but sometimes gaps are unavoidable, so it can help to understand the effects gaps create.

Diagram 6 shows an important example. If the rack is solid through the 1-3-9-6 path, and if there are gaps anywhere around the 4, the energy of the hit will move the 6 forward some before the 4 moves, allowing the 4 to go more forward than would occur with a tight rack. Here, there are gaps between the 2&3, 2&9, 2&4, 4&9, and 4&6. These gaps make it easy to pocket the wing 4 ball. In addition, as mentioned above, with a square hit from the “box,” it is easy to get a shot at the 1 in the corner after the break. For a demonstration of this wing-ball-gap cheat, see online video [NV J.3](#).

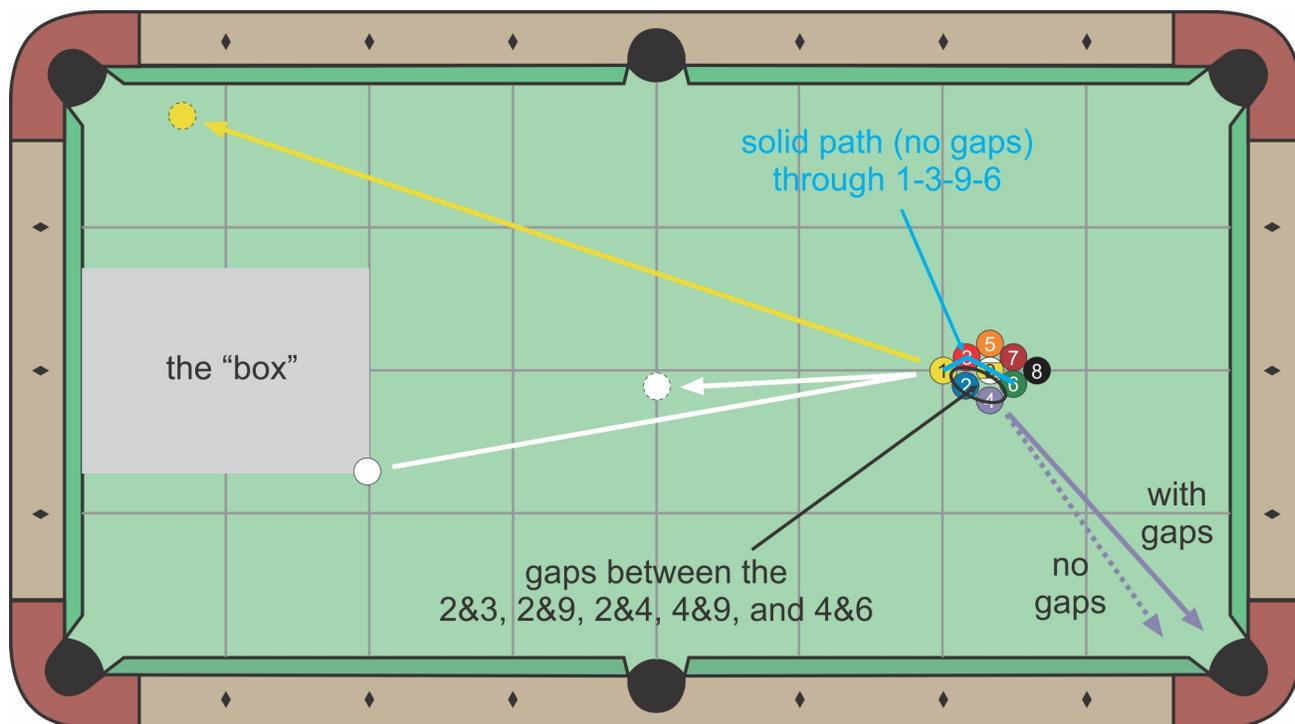


Diagram 6 Wing-ball-gap cheat from the “box”

Diagram 7 shows another common rack-manipulation cheat, where the back ball (the 8) is feathered away from the rack. Here, there is a gap between the 6&8. Just as with the wing-ball-gap cheat above, this allows the wing 4 ball to go more forward since there is less mass on the 6&8-ball side of the 4 providing less resistance to the 4 ball as the 2 ball drives it forward. In addition, again, as mentioned above, with a square hit from the “box,” it is easy to get a shot at the 1 in the corner after the break. For a demonstration of the back-ball-gap cheat, see online video [NV J.3](#).

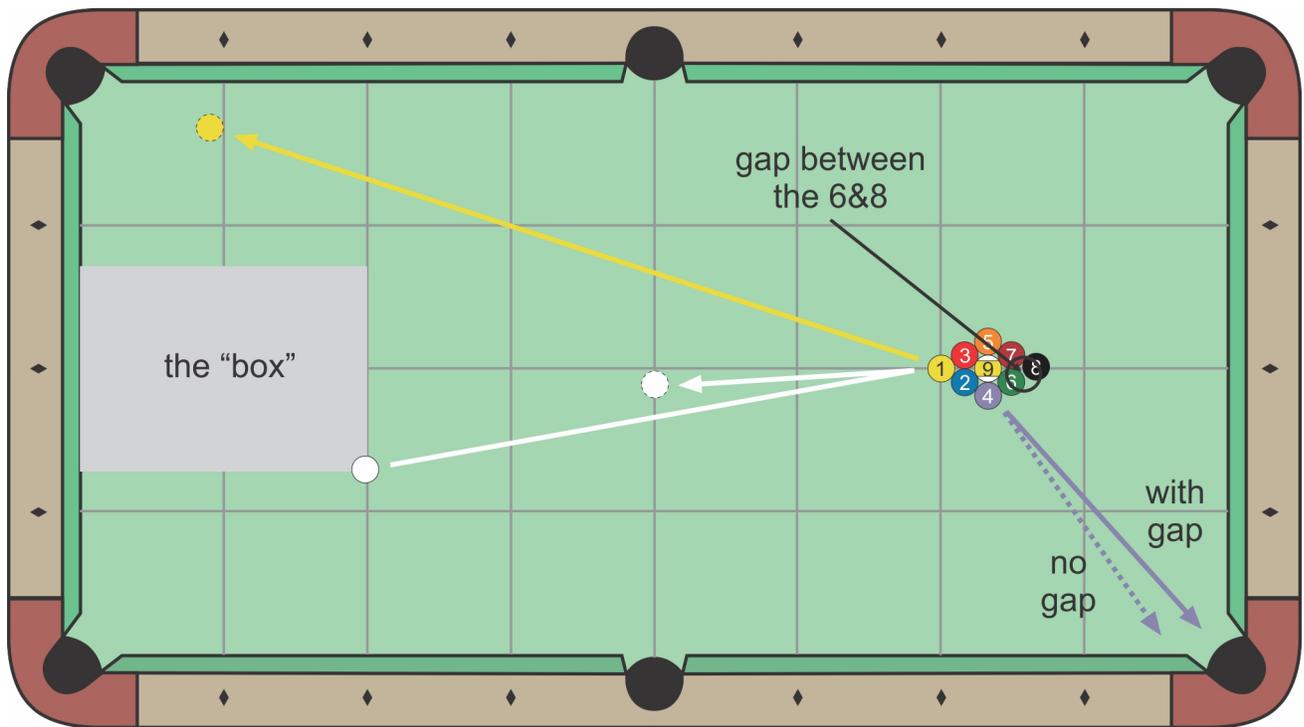


Diagram 7 Back ball gap cheat from the “box”

Diagram 8 shows another particularly sinister 9-ball racking cheat that allows one to achieve a “golden break” for the win. When there are no gaps in the rack, the 9 ball does not move from the rack area unless it is kissed by a moving ball. However, with gaps in the rack, that is no longer true. With a gap between the 6&9, the 9 ball has room to kiss off the 7 toward the corner. Breaking from the same side of the table as the gap, in this case on the 6 side, gives the best chance to pocket the 9. The CB will send energy through the 1 and 3 into the 9 so it can kiss off the 7. The gap between the 6&9 gives the 6 just enough time to clear. The ideal CB direction will depend on the gap size and other gaps in the rack; but in general, try shooting from the “box” along a line just past the 1st diamond, as shown in the diagram. As with the legitimate “golden break” in Diagram 3, the 9 will not go every time; but when it does, you get the easy “victory.”

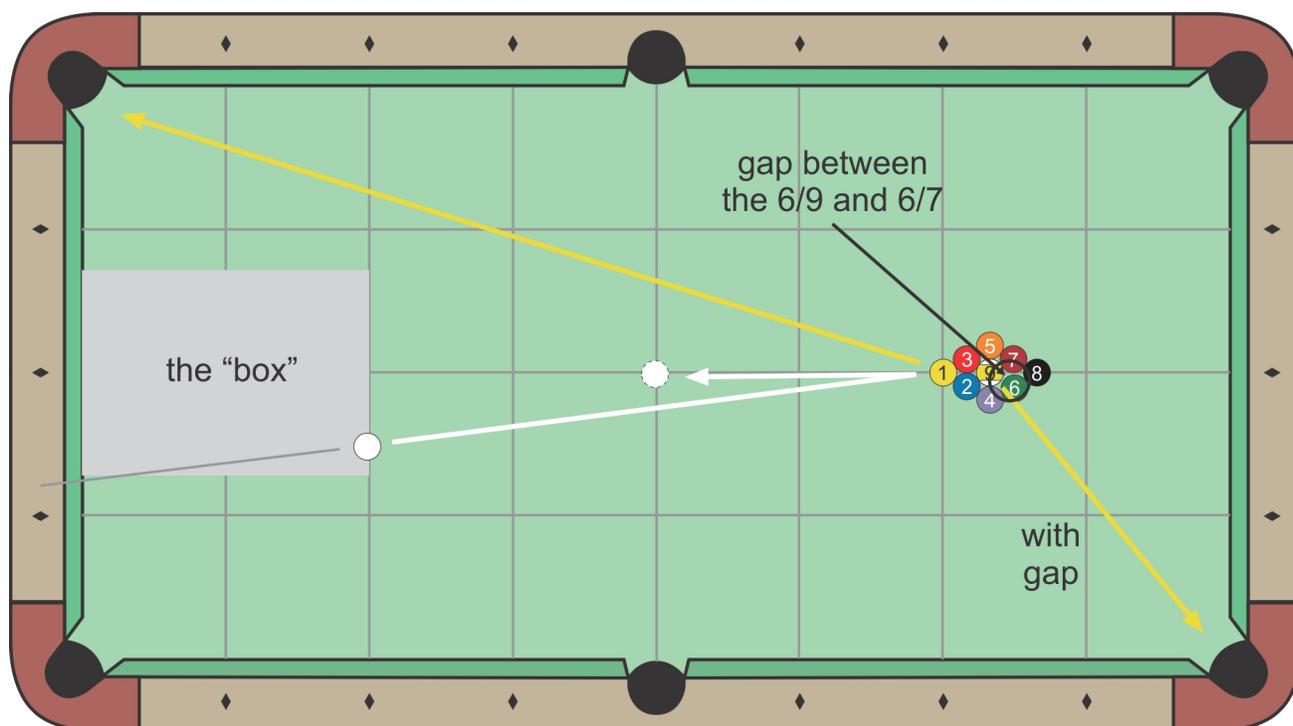


Diagram 8 “Golden break” gap cheat

Before you break, always inspect the rack to see if there are any gaps, and ask for a re-rack if there are. Moreover, if gaps are unavoidable, change your break strategy to take advantage of the gaps if possible, based on the effects and examples covered above. Here is a concise summary of good basic strategy:

- If the rack is tight, use a square hit from the side to pocket the wing ball.
- If required to break from the “box,” or if the 9 is on the spot, use a cut break to pocket the 1 in side or the wing ball in corner.
- If the rack alignment is tilted, or if there are gaps in one side of the rack, or if the rack is solid except for the back ball, break from the “box” with a square hit to pocket the wing ball and get easy shape on the 1.

All of the shots, strategies, and ball-path effects in this article, along with many others for both 9-ball and 10-ball are demonstrated and described in detail on Disc I of the Video Encyclopedia of Nine-ball and Ten-ball (VENT-I) available at DrDaveBilliards.com. If you want to explore the effects of gaps further, see Joe Tucker’s “Racking Secrets” books and DVDs (available at JoeTucker.info). Joe discovered many gap effects and rack-reading strategies over the years and has taught many players how to apply this knowledge to their benefit.

Another way to cheat with racking is to “pattern rack,” where you purposely put balls in certain positions to create an advantage. Corey Deuel has been famous for utilizing many of these strategies over the years. For numerous examples, see the “[pattern racking](#)” FAQ page at billiards.colostate.edu. Also see my October, 2017 BD article and online video [NV I.2](#) dealing with Corey’s 9-ball soft-break-pattern-rack cheat.

Derby City Classic Controversy

If you were at the Derby City Classic (DCC) this year, or if you have seen online videos [NV J.2](#) and [NV J.3](#), you will know that there was a huge controversy dealing with rack manipulation at the event. If you want to learn more, see the links in the YouTube video descriptions of [NV J.2](#) and [NV J.3](#) that provide easy access to a video of the last rack of the infamous match between Jayson Shaw and Shane VanBoening, the photo of

the suspect rack Jayson captured with his phone during the match, and Shane's Facebook reply to the accusations. Diagram 6 is the cheat Jayson was accusing Shane of using during their match. Dennis Orcollo was using the same cheat during the tournament. Shane and Dennis were the only players not breaking from the side, and they were fairly consistently pocketing the wing ball with a square hit from the "box" while also getting shape on the 1 in the upper corner. That creates a big advantage; although (maybe rightfully so), the advantage wasn't big enough for either of them to win the tournament.

If a referee racks for you and there are gaps in the rack, either by accident or because it is difficult or impossible to get a tight rack with given conditions, or if an unscrupulous opponent racks for you and purposely creates gaps that might be unfavorable, then the knowledge presented in this article, on VENT-I, and in Joe Tucker's material can help you choose the best CB position and type of hit to take advantage of the gaps. That is called "**reading the rack**." Obviously, you need to carefully inspect the rack before breaking, if that is allowed. This year's DCC was a "rack your own" event. If you are racking for yourself, and you purposely create gaps in certain positions, and break in a style that takes advantage of those gaps, rack after rack, then you are blatantly cheating with "**rack manipulation**," which is unethical and unprofessional.

Below is a pertinent entry from the official rules of pool (The WPA World Standardized Rules). The key phrases pertaining to both rack manipulation and pattern racking are bolded. I think it is crystal clear to most people reading this rule that it is illegal to manipulate rack gaps or ball patterns.

2.2 Nine Ball Rack

The object balls are racked **as tightly as possible** in a diamond shape, with the one ball at the apex of the diamond and on the foot spot and the nine ball in the middle of the diamond. The other balls will be placed in the diamond **without purposeful or intentional pattern**.

So how can we change 9-ball tournament rules to prevent rack manipulation and pattern racking? Obviously you cannot let the players rack for themselves or for each other. From many past examples of abuse, some (if not many) players cannot be trusted to rack honestly and fairly. There must be one or more neutral people (e.g., trusted referees or volunteers) who circulate among the tournament tables racking for all games, especially in the later rounds of a tournament. If neutral rackers are not available, it should be made perfectly clear in the pre-tournament players' meeting that pattern racking and rack manipulation are not allowed, will not be tolerated, and will result in severe penalties (for example, disqualification from the tournament).

The DCC has a reputation as a gamblers' event, and there is a long tradition and history with playing 9-ball the way it has always been played, without all of the new rules and breaking limitations. One option going forward is foster an "anything goes" attitude at the DCC. Allow rack your own, pattern racking, soft breaks, gap manipulation, etc. It would be interesting to see who can best master all of the cheats and execute them the most consistently, while still controlling the CB and getting a look at the 1 (or the 2). To go deep in the tournament, one would still need to be able to run out consistently and win safety battles when they arise. With a "winner breaks" format, the possibility of huge comebacks or a dominating performance with large "packages" of strung-together break&runs are also crowd-pleasing possibilities.

I think the best solution for most 9-ball tournaments is to use a combination of all of the measures developed to "fix" the 9-ball break. First of all, racking templates should be used or the tables should be trained, and a trusted neutral person should rack so everybody gets a fair and legal rack in every game. Also, if using templates, make sure the racking area is marked making proper alignment easy. Also require breaking from the narrow "box" with the 9 on the spot, and enforce the 3-point break rule. All of these measures will help ensure that the best and most well-rounded players go deep in the tournament.

Alternatively, we could propose something totally different like "shoot after the break" (even if you do not pocket a ball), "opponent shoot after the break," or "push out after the break." An "alternating break" format could also be used to prevent a large "packages" of runs due to any breaking advantage (due to skill or luck). However, it would be a shame to lose tournament historical continuity and miss out on the fun and excitement of watching "packages" of break&runs.

Well, I hope you see 9-ball racking and breaking with a keener eye in the future and do your best to help prevent abuses of the rules. It is time for the cheating to stop.

Good luck with your game,
Dr. Dave



[NV I.2](#) – 9-ball Side Soft Break, and Corey Deuel Pattern Racking, an excerpt from VENT-I

[NV I.3](#) – How to Train a Pool Table for Accurate and Consistent Ball Racking, an excerpt from VENT-I

[NV J.2](#) – 9-Ball Break Strategy and Effects

[NV J.3](#) – 9-Ball Rack Manipulation and Breaking Cheats

PS:

- I know other authors and I tend to use lots of terminology, and I know not all readers are totally familiar with these terms. If you ever come across a word or phrase you do not fully understand, please refer to the [online glossary](#) at billiards.colostate.edu.

Dr. Dave is a PBIA Advanced Instructor, Dean of the Billiard University, and author of the book: [The Illustrated Principles of Pool and Billiards](#) and numerous instructional DVD series, all available at: DrDaveBilliards.com.